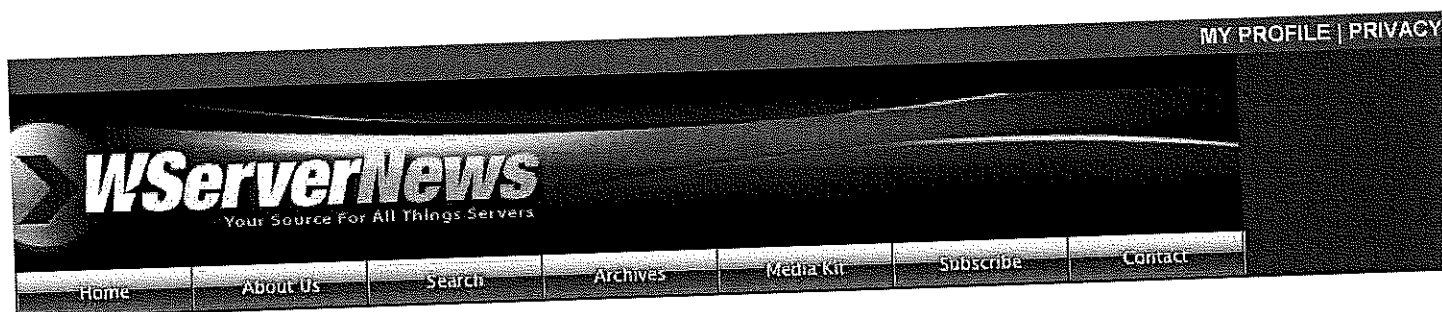


FACIAL RECOGNITION

05.01.2017 - 03.29.2019

Stone, Andrea

From: WServerNews.com <do_not_reply@wservernews.com>
Sent: Monday, May 01, 2017 2:58 PM
To: clandrau@springfieldpolice.net
Subject: Reader feedback: Reconsidering biometric security



Vol. 22, #18 - May 01, 2017 - Issue #1129



Reader feedback: Reconsidering biometric security

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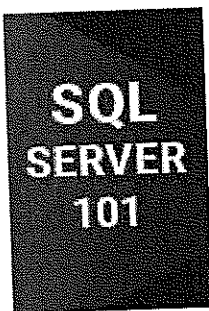
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 - What is SQL Server?

What is SQL Server?



This white paper is a FREE self-study guide for learning SQL Server fundamentals. It includes both the history of SQL and its technical basics. Concepts and definitions provided in this white paper will give you a solid foundation for your future DBA expertise. Learn about the most common SQL Server services running under your OS, database types and their specific roles, transaction logging and maintaining SQL Server security.

[Read Now.](#)

Editor's Corner

- **SAVE THIS NEWSLETTER** so you can refer back to it later for helpful tips, tools and resources!
- **SEND YOUR FEEDBACK** to wsn@mtit.com if you have any comments or suggestions!

This week's newsletter takes another look at issues surrounding biometric security by hearing some of the feedback we've received from readers concerning [Issue #1127 Reconsidering biometric security](#). And be sure to check out our **This Week's Tips** section for a couple of problems readers have encountered upgrading their PCs to Windows 10 Creators Update and how they resolved the problems. We also have some other tips, tools, and other stuff to fill the vacuum in your brain that results from staring at a computer screen all day long (which is not as bad though as the vacuum that fills the brains of smartphone addicts).

We know of course that "nature abhors a vacuum" but besides the dangers of the vacuum of outer space there are other even more sinister things that can happen when you encounter a vacuum as this Dilbert comic illustrates:

<http://www.wservernews.com/go/likn6pmg/>

Ask Our Readers - Support for HP Home Server?

From a reader named Jack came the following request:

I am probably one of many who invested in the HP Home Server/Microsoft Home Server a few years ago because it was very easy to understand and use (for us, computer illiterates). Then all of a sudden support became almost non-existent, the non-existent. Not even HP who manufactured the hardware supports it even though it is still on their website with no working links of course and no support even when you ask them about it. When mine no longer backs up anything completely, I tried to use another server system and NAS system but totally at a loss. Do you have any ideas on where or if there are any sites that still have forums or help on the Home Server?

Can any readers help Jack with his request? Email your suggestions to us at wsn@mtit.com

Ask Our Readers: WServerNews has almost 100,000 subscribers worldwide. That's a lot of expertise to tap into. Do you need help with some issue or need advice on something IT-related? Got a question you'd like us to toss out to our readers to try and answer? Email us at wsn@mtit.com

And now on to some of the feedback we've received concerning biometric security...

Reader feedback: Reconsidering biometric security

A number of our readers have voiced some concerns about the value and/or integrity of biometrics as an authentication platform. Here in no particular order is a sampling of the feedback we've received on this subject:

Biometrics do have a fundamental flaw for some security uses -- you cannot directly revoke them i.e. you can't chop my finger off and give me a new one. So systems have to be developed to deal with this in a different way. Many years ago (~30) I had a customer who did fingerprint recognition and proudly told me that they could tell whether it was a live finger or a dead finger. Various sorts of biometric recognition are used in passports in Europe. The first one they introduced is facial recognition using your passport photograph. The problem is that I wear glasses and some machines tell you to take them off. My experience is that the UK electronic passport gates recognize me less than 20% of the time; with other countries I only have a small sample size, but Barcelona seems not to recognize many people at all, and with only one manual agent it took an hour to get through, but Finland surprisingly has worked every time. I heard, but can't verify, that at one point the machines (I won't name where) were only actually recognizing about 30% of the people they were letting through so people had the impression they worked, but they didn't really. My own experience of the fingerprint recognition on my Android phone is that it doesn't work for a couple of minutes after I have washed my hands and when I had been stacking bricks for a few hours, it would not recognize my finger for a week. This latter problem could be solved by using the separate, different, sub-cutaneous fingerprint, but that would be a more expensive scanner. One of the problems with biometrics is that the fundamental premise is based on probabilities, unlike the certainty with say a password or code, which either matches or does not match. And with probabilities, no matter how small, what do you do about a false negative? How do you prove you are who you say you are when "the computer says no"? I suspect the answer is to use multiple biometrics e.g. facial recognition and fingerprints. Facial recognition could be improved in stages by first using both a face on picture and a profile picture, making it harder to fake, and then eventually going to a 3D scan of the face. Maybe we will end up with two factor authentication -- biometrics and an implanted coded chip; after all, we insist that dogs and some other animals have implanted chips to travel internationally. -- Tony from the UK

I have been hospitalized in the last month with pulmonary embolus, doing well, but the close call with the "Grim Reaper" has made my manager at work ask the question "What if something

happens to you?" As the lone IT guy, I have a password protected Word document of passwords for each website or application I access, but what if they could not get into my computer? Biometrics, especially voice recognition, would paralyze the organization due to lack of access to the "stuff" I find important. Not a great idea. I also noted that my health insurer is going the same way with biometric voice recognition. How would my survivors access my records? As it stands now, as long as they can get into my email account (or some web browser), they can access my information via my Norton Vault account, which fills in my account information and in you go. I understand the need to secure your devices, network, data, etc., but there has to be a workaround for some of this stuff. P.S. I have discovered that even within the same health organization, with massive amounts of information generated among many different health care providers, when I go to a different office my insurance card is requested (even if scanned into the system three times in fourteen days) and asked all kinds of questions that should be visible to the person looking at the computer screen. What happened to the "portability" promised when we went to electronic records for patients? They appear to be so secure as to be unusable! --David

Hacking biometrics has been around since the advent of the solutions, and as with all authentication, hacks with varying degrees of complexity and rates of success have been spawned. My biggest concern with biometric authentication is a legal problem, not a technical one. If you use biometric technology to lock or unlock something, US law enforcement can legally force you to present your credential because it is something you are. They cannot force you to divulge a password/passcode/passphrase because it is protected by the Fourth and Fifth amendments. For this reason alone, something you know should be a foundational part of authenticating yourself to any system capable of accessing high worth assets without regard for what those assets might be. I attended a card issuer convention once where Bruce Schneier was speaking, and he had drawn the ire of many vendors at this conference by stating their card systems don't solve the authentication problem. Moreover, Bruce said authentication is the most challenging subject in all of security. How do I know you are who you claim to be? Impersonation is as old as humanity, and despite the best efforts of bright minds over millions of years, it remains the most difficult security problem to address. Even if we could test DNA directly in real time, someone would find a way to cause Type 1 and Type 2 errors in the system or create a "sample in the middle" attack, or... Build a system of rules, and those who do not wish to follow them will immediately focus on finding a way to subvert them. It is truly fundamentally human. --Lance, CISSP, PCIP

I am no expert, but to my view (I do have graduate degrees in biz, engineering and CS...), it boils down to this simple fact: Biometric datasets are NOT changeable like an ID/PW pair. They are forever (until the plastic surgeons develop the methods)..... Re-codable, yes, encryptable (god, I hope so), yes, hashable, yes, but unlike passwords and other even multifactor techniques, they are not resettable. So once "in the open" there is an intractable violation of personal data. Where does this leave us for the future of the ultimate security (and convenience) of Bio-signatures as we are clearly not able to, as a society, government or corporation, preserving personal security and data. My iris (or you name the bio-marker) may be unique, but will it remain UNKNOWN to the scam-o-sphere? Will it go for the same \$1 that my VISA account info goes for on the Eastern European markets? I will tell you, as a special employee of the US Treasury Department, my entire personnel file was hacked about two years ago.And in it were my fingerprints (and a number of incredibly private things) -- in whatever hashed format they used (probably none, knowing the government). And for that violation I didn't even get a classic cheap Disneyland T-shirt.... Just a cold, anonymous apology from my government. Nice. So now my "unresettable" fingerprints are out there. My conclusion: you simply have to be nuts to give up any (ANY!) discretionary bio-ID info to any entity today. -- Erik from Seattle, USA

I think the wrong question is being asked. The question being asked is if we TRUST biometric systems and would we use them. I think the better question is: how do you authenticate users today and do you trust that? If today you are using simple username and password combinations. I would

think that is a VERY circumventable mechanism, especially in a non-technical user group with low education where password are often on sticky under the keyboard. I doubt there is a perfect mechanism but biometrics is an option on the table. I wish that this technology was available, inexpensively to many more organizations. I am on the board of a local non-profit community association. Many years ago, they did some fund-raising to replace all the interior building door locks with pin-pad activated door handles. However, without good documentation and processes, the situation has degraded into a state where 3 codes are shared freely with whomever needs them. The idea was to eliminate the need to manage physical keys but I think we have a worse situation today. Frankly, I love TouchID, it allows me easy, quick, painless access to my technology without complexity and gives me a "better" level of security than a 4-digit pin lock. Yes, this email has jumped about from physical door locks to mobility and again, proof that authentication is MORE than something to protect a network or server. -- Eldon

Many years ago I worked for a company that was considering a wide array of biometrics for secured access, etc. Facilities and IT received tons of pushback from HR as there can be certain privacy and HIPAA requirements for some of the more intrusive biometric devices. For example, retina scans. You can learn a lot about a person from scanning his/her retina. And if you have a union workplace. Woah boy! Watch out for the pushback. -- Peter, IT Availability & Production Manager for a company in Maryland, USA

The question "Do I really want an absolute biometric identification of me?" Once you have such an ID it is unchangeable and valid till you die; remember it was developed to be that way! And once this basically analog reading is in digital form on a computer it can go anywhere without the holders or your knowledge or permission. -- Stuart

Send us your feedback

Got feedback about anything in this issue of WServerNews? Email us at wsn@mtit.com

Recommended for Learning

VIDEO: An overview of Windows Defender Advanced Threat Protection for Windows 10

Senior Windows Product Manager, Heike Ritter offers a cohesive overview of Windows Defender Advanced Threat Protection for Windows 10. This includes new capabilities with the Windows Creators Update for detecting, investigating and containing breaches such as in-memory attacks and Kernel exploits. See how Windows Defender Advanced Threat Protection works at scale to expose otherwise undetected threats; investigate and understand the scope of breaches and contain and respond to threats.

<http://www.wservernews.com/go/g6mhfygi/>

Microsoft Virtual Academy

Planning for a Security Incident

Are you ready for a security incident? Would you like to explore real-world enterprise security threats, from the perspective of the Microsoft Global Enterprise Incident Response and Recovery team? Join senior team members Chris Ard and Lesley Kipling for an in-depth look, based on actual experience, with examples and stories from the field. Learn what customers need to be doing now to prepare for an incident. Get an in-depth look at the paradigm shift from "Are we secure?" to "Are we ready?" Modules focus on the three pillars that make up the Microsoft Security Framework: "Protect," "Detect," and "Respond." Consider the best approach for response—before an incident occurs. Find out how to improve detection, use threat modeling to understand the risks, and much more.

<http://www.wservernews.com/go/2qbr02rf/>

Factoid of the Week

Before we examine the feedback we received from last week's factoid let's visit a couple of earlier factoids from our newsletter.

In Issue #1126 we asked "When was the last time you saw a phonebooth? And when was the last time you *used* a phonebooth?" Craig, a Business Manager from Australia, replied:

A few years ago I went on a charity motorbike ride through the south west corner of Australia. Being a large country with a small population, there are significant areas that don't have decent mobile -- sorry, cell coverage. One tiny little town that consisted of a hotel and about 10 houses was one such place. Not getting reception I asked the publican if there was somewhere in town where reception was better and he said yes. He pointed me to a landmark a few hundred metres -- sorry, yards, to the top of the hill and you can get reception from the towers in the next town. What was the landmark? A public telephone box. That's right -- the only place in town you can use your mobile phone was just outside the public phone box. Either somebody has a delicious sense of irony or they simply don't get the point of a mobile phone.

In Issue #1127 we asked "How do you usually respond when someone asks, How are you? Why do you respond that way?" A reader named Michael analyzed this as follows:

The response is culturally-biased. In the American South, this is social butter -- that is, it is meant to smooth the interactions between individuals. This isn't any different than the (truthful) cliché about southern waitresses calling their customers darling and honey and sweetie. It makes someone feel comfortable and at home. In the American South, if I go to a fast food restaurant where the order-taker is not polite -- I will either complain to the manager or walk out. However -- we don't really want to know how you are. It's just social butter. The cultural bias.

In the American North-East, no one cares. A waitress walks up and says "what you want?". In a fast food restaurant, the order-taker just stands there until you blurt your order. As someone from North Carolina, I think this is just rude. They obviously don't give a crap about the customer, except for their money. The cultural bias.

In center and eastern Europe, if you ask someone "how are you?" -- they will tell you. In detail. That is their cultural bias.

Generally speaking, I have found that, for all the countries I have visited, that saying "hi" or "hello" is far better than saying "hi, how are you?" or "howdy?".

Now let's move on. Last week's factoid and question was this:

What was the most embarrassing thing you've ever seen yourself on a live TV show you were watching?

Some of the responses we received included the following:

On Fox9 Minneapolis/St Paul, weatherman Steve Fraizer was on air when he suddenly reached over his shoulder into the back of his suit and pulled out the hanger that his suit coat had been on. Another time, Steve Frazier was warning viewers how cold it was going to be and told everyone to be sure to cover their "cracks and crevices". This caused the anchors to absolutely lose control of their laughter. Steve had no clue and repeated the warning several times. -- Don

News coverage of the plane crash, Asiana Flight 214. When they announced the pilots: "Sum Ting Wong, Wi Tu Lo, Ho Lee Fuk, Bang Ding Ow..." -- another Don

Warren Beatty & Faye Dunaway at the 2017 Oscars -- Butch

Now let's move on to this week's factoid:

Fact: Canadians like myself have a reputation for being nice and polite. But just try saying something to us using a fake "Canadian accent" and you'll quickly raise our ire! Grrr...

Source: <http://www.wservernews.com/go/89suyo4r/>

Question: What might arouse a similar hostile response if someone from another country came to your own country and spoke with you? In other words, what word, phrase, or style of speaking would get an American / Brit / German / Aussie / etc VERY angry? :-)

Email your answer to us at: wsn@mtit.com

Until next week,

Mitch Tulloch

Admin Toolbox

Admin Tools We Think You Shouldn't Be Without

GOT ADMIN TOOLS or other software/hardware you'd like to recommend? Email us at wsn@mtit.com

Free webinar course: Learn PowerShell, a FREE guide through PowerShell basics. Find out about specific PowerShell extensions for different platforms and get an overview of cmdlets.

<http://www.wservernews.com/go/extn1tcd/>

AquaSnap is a tiling windows manager for Windows that can make you more productive:

<http://www.wservernews.com/go/cfbpm34i/>

SPDockKit is a SharePoint administration tool that helps you create SharePoint documentation and analyze it according to best practices as well as manage permissions, enforce governance policies, monitor farm health, and more:

<http://www.wservernews.com/go/9xsra2bs/>

TidyTabs is a terrific tabbed windows manager for Windows that lets you tabbify everything:

<http://www.wservernews.com/go/czldkug9/>

This Week's Tips

GOT TIPS you'd like to share with other readers? Email us at wsn@mtit.com

Windows 10 Creators Update - Problem upgrading over wireless network

Sam Garcia emailed us a week ago describing problems he was having upgrading some Windows 10 computers to the Creators Update version:

[The upgrade] seems to disable the network card and/or wireless connection also. So far 10 computers are victims, 60 are good. The oldest (2012) are really hurting, Thanks for the rollback function, but not easy to use.

A week later I asked Sam for an update on his situation and he replied:

Upgrading using cable not wireless solved the problem. How about that?

Readers who are planning on performing the upgrade might want to take note of Sam's experience. Have any readers out there experienced something similar? Email us at wsn@mtit.com

Windows 10 Creators Update - Problem upgrading due to installed device drivers

Tom Philo emailed us two weeks ago about his experiences upgrading to Creators Update:

Installed, via ISO, onto 3 year old Gateway with no issues. Cannot install on main desktop -- tried 3 times after removing peripherals, cleaning registry etc -- on my AMD system with it going into a hard wait at 14% install - requires hard reset then the resulting (after restore to prior Windows version) with the error message after logging back into my system "The installation failed in the SAFE_OS phase during APPLY_IMAGE operation". Error logs give no clue what really was going on during that phase or what caused it to hang."

I pinged Tom a week later to see whether he had resolved his problem and he replied:

Windows 10 Creator's Upgrade success - on 4th try! I figured out what they really meant by driver updates in that error message and went through all 167 devices in my device driver list within the system, one at a time, right clicked on it and told it to update driver by searching online.

Nine devices had updates - one (or more) of which was preventing W10CE to be installed. The longest driver update was for the Logitech W310 Web camera -- took a minute. The others only took 20 seconds, including search time, or so to update. I am on FIOS 25 megabytes down per second, so real fast.

Only one driver update stated that the system required a reboot, I did the reboot, went through the final set of devices to check, rebooted and then it finally installed from the ISO I had already downloaded onto one of my drives.

Their suggestion of disconnecting devices is bogus -- since the drivers for any device is still in the system even if the external item is not connected -- it still exists. Reading that made me think of the system device list and do check each driver one at a time to check for updates via that method.

Readers who are planning on performing the upgrade might want to take note of Tom's experience. Have any readers out there experienced something similar? Email us at wsn@mtit.com

Non-profit organizations (NPOs) - Get a donation of \$5000 towards an Azure subscription

From a reader named Bob comes news that Microsoft has a \$5000 donation to qualifying non-profits towards their annual Azure subscription. There's a link on the below page to TechSoup for a validation token so an NPO has to be registered on that site:

<http://www.wservernews.com/go/jkgn6l1i/>

Events Calendar

Microsoft Build in May 10-12, 2017 in Seattle, Washington.

<http://www.wservernews.com/go/qb9opurg/>

Microsoft Worldwide Partner Conference (WPC) on July 9-13, 2017 in Washington, D.C.

<http://www.wservernews.com/go/rumh37uq/>

Microsoft Ignite on September 25-29, 2017 in Orlando, Florida

<http://www.wservernews.com/go/rw1hxlnp/>

Add Your Event

PLANNING A CONFERENCE OR OTHER EVENT you'd like to tell our 100,000 subscribers about?
Contact info@techgenix.com

New on TechGenix.com

Keep those backdoors closed!

Whether you're dealing with hardware or software, as an administrator you need to be aware of potential backdoors and be sure you keep them firmly closed!

<http://www.wservernews.com/go/wrj7tqr7/>

Everything you need to know about Azure Search

Azure Search is a managed search feature from Microsoft that gives you complete control over what you want to display to users. Here's how to use it.

<http://www.wservernews.com/go/bz64mlar/>

Moving On to Hosted Exchange? Keep this Checklist Handy

Before the Exchange 2010 era, enterprises were not entirely convinced with the idea of Hosted Exchange.

<http://www.wservernews.com/go/gxwa239a/>

Citrix XenDesktop Essentials and XenApp Essentials now available in Azure marketplace

The Azure marketplace has welcomed two new Citrix products, XenApp Essentials and XenDesktop Essentials.

<http://www.wservernews.com/go/oguh9zxz/>

Top enterprise tech trends that should be on every CIO's radar

CIOs must identify the innovations that can help their origination achieve its IT goals. Here's a guide to the hottest strategic technology trends.

<http://www.wservernews.com/go/hjv677u0/>

Tech Briefing

Azure

Azure Template to deploy a forest with two domains, Part 3 - visualizing the template (Online memory of an Active Directory PFE)

<http://www.wservernews.com/go/5tpd38bh/>

Reduce running costs for your RDS Deployment in Azure using Auto-Scaling (Tip of the Day)

<http://www.wservernews.com/go/t4cekhdo/>

Citrix

Citrix to Help Move Windows 10 to the Cloud (myITforum)

<http://www.wservernews.com/go/q05bbbspn/>

How to install and configure Citrix XenDesktop 7.12 with Windows Server 2016 hosts running on Microsoft Azure (RobinHobo)

<http://www.wservernews.com/go/ifai9c9s/>

DevOps

Automatically build and deploy ASP.NET Core projects to Azure App Services (The Visual Studio Blog)

<http://www.wservernews.com/go/lw9wof0b/>

Documentation in a DevOps World (Premier Developer)

<http://www.wservernews.com/go/wmo7dy00/>

Office 365

From Office 365 To Azure Machine Learning, These Five MVPs Share Their Insights (Microsoft MVP Award Program Blog)

<http://www.wservernews.com/go/pizei4cg/>

10 time saving, productivity boosting Office tips for staff and students (Microsoft UK Schools blog)

<http://www.wservernews.com/go/ynqaioxw/>

PowerShell

PowerShell on Linux and Mac (Luís Henrique Demetrio)

<http://www.wservernews.com/go/30jx2lv6/>

PowerShell: How to add enhanced detection methods to deployment types (1705 TP) (Adam Meltzer's Configuration Manager Blog)

<http://www.wservernews.com/go/59qyjhlh/>

Other Articles of Interest

New tool translates Windows 10 Group Policy Objects into MDM policies

Windows 10 has a new migration tool that aims to provide organizations with a way to manage PCs more like mobile devices. Microsoft's new MDM Migration Analysis Tool (MMAT) can save IT admins a lot of work by inspecting an organization's Windows 10 GPOs and finding MDM policies that match. Learn more about this tool and what it has to offer.

<http://www.wservernews.com/go/lgj74yiw/>

NVIDIA, AMD, and Intel: How they do their GPU virtualization

With several companies now competing in the GPU market, use this resource to help compare vendors by taking a closer look at the features they offer, use cases for each and the approach they take to GPU virtualization.

<http://www.wservernews.com/go/632nwh28/>

How to craft the best mobile strategies for business

In today's mobile centric world, employees expect anytime, anywhere access to data and applications -from any device. Enterprises are faced with crafting EMM strategies that meet the flexibility needs of their workforce, while also keeping security and cost under control. Access this tip, for a few guidelines to optimize mobility for specific settings.

<http://www.wservernews.com/go/iylh9pr/>

Four questions to ask before choosing virtual or web-based apps

When it comes to delivering applications to end users, it can be difficult to choose between virtual or web-based apps. IT admins should be asking these 4 important questions about their networks, users, and applications before making a decision.

<http://www.wservernews.com/go/n7r1zpq5/>

WServerNews FAVE Links

This Week's Links We Like. Tips, Hints And Fun Stuff

GOT FUN VIDEOS or other fun links to suggest you'd like to recommend? Email us at wsn@mtit.com

FREE EBOOK	What is SQL Server SQL Server 101	VEEAM ▪ Read now
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Personal Electric Seaplane By Google Co-Founder Larry Page

The Kitty Hawk Flyer, which is backed by Google co-founder Larry Page, does not require a pilot's license. You can learn to fly it in minutes:

<http://www.wservernews.com/go/xr7kne5m/>

Extremely Low Flying Su-37 Jet

An extremely low flying Russian Su-37 jet - with an ending that will surprise you:

<http://www.wservernews.com/go/wam1ky6g/>

World's First Electric Vertical Takeoff And Landing Jet Completes Maiden Flight

Lilium Aviation from Munich, Germany successfully completed the first test flight of its all-electric, two-seater, vertical take-off and landing (VTOL) aircraft prototype:

<http://www.wservernews.com/go/fn1fkohq/>

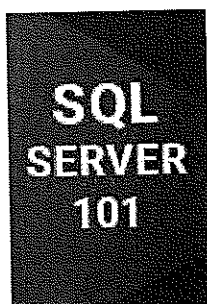
Climbing A Dam In A Land Rover

Richard Hammond has to climb Claerwen dam in a sixty four year old Land Rover. Can he do it?

<http://www.wservernews.com/go/emtycghx/>

WServerNews - Product of the Week

What is SQL Server?



This white paper is a FREE self-study guide for learning SQL Server fundamentals. It includes both the history of SQL and its technical basics. Concepts and definitions provided in this white paper will give you a solid foundation for your future DBA expertise. Learn about the most common SQL Server services running under your OS, database types and their specific roles, transaction logging and maintaining SQL Server security.

[Read Now.](#)

WServerNews - Editors

Mitch Tulloch is Senior Editor of WServerNews and is a widely recognized expert on Windows administration, deployment and virtualization. Mitch was lead author of the bestselling Windows 7 Resource Kit and has been author or series editor for almost fifty books mostly published by Microsoft Press. Mitch is also a ten-time recipient of Microsoft's Most Valuable Professional (MVP) award for his outstanding contributions in support of the global IT pro community. Mitch owns and runs an information technology content development business based in Winnipeg, Canada. For more information see www.mtit.com.

Ingrid Tulloch is Associate Editor of WServerNews and was co-author of the Microsoft Encyclopedia of Networking from Microsoft Press. Ingrid is also manages research and marketing for our content development business and has co-developed university-level courses in Information Security Management for a Masters of Business Administration program.

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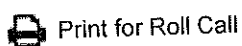
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Stone, Andrea

From: PoliceOne Roll Call <Newsletter@policeone.com>
Sent: Friday, May 19, 2017 4:57 PM
To: rcheetham@springfieldpolice.net
Subject: City mistakenly honors suspected cop killer; Lawmakers: Make rioting a felony

May 19, 2017 | View as webpage

POLICEONE.COM
Newsletter



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Dear PoliceOne Subscriber,

This week, we launched our [2017 Guide to Emerging Technologies](#) — a special coverage series focused on the tools shaping future law enforcement operations.

This special report features expert analysis on soundwave technology, facial recognition software, handheld narcotics analyzers, the future of traffic stops, how constitutional law impacts the collection of data for investigations, and how advancements in biometric technologies will help improve correctional facilities.

From crafting policy to tactical considerations, [this guide](#) will help your agency best prepare as adoption of these technologies becomes more widespread.

— *The PoliceOne Team*

TOP NEWS



Suspect in deadly Times Square mayhem charged with

murder



Video: Deputy shoots armed man who charged at him during traffic stop



LA sheriff says feds should restore military gear for police

- **Ga. deputy injured in head-on crash:** There is no word on the deputy's condition
- **Man plows through immigration checkpoint, shoots at border agents:** Agents returned fire and shot the suspect
- **NY trooper seriously injured during traffic stop:** The trooper was conducting a traffic stop when the patrol vehicle was struck by a pickup truck

- **US: Immigrant arrests soar under Trump, fewer deported**
- **Grand jury declines to indict Texas cop who fatally shot armed inmate**
- **Black judge refuses to step down from white officer's trial**
- **City mistakenly honors man suspected of killing officer**
- **Chicago police release final version of use-of-force policy**
- **Wis. lawmakers: Rioting should be a felony**

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POLICE TRAINING

20 leadership tips for firearms instructors



By Quinn Cunningham, PoliceOne Contributor

Having the rapport and respect of your students will help you deliver effective firearms instruction.

[Give up control to gain control >](#)

PRODUCT VIDEOS



Stun-Cuff Institutional Single Dual Cuff Video
Deputies, SWAT team members and even a sheriff taking hits.

FEATURED JOB

Metro Transit Police Officer
Washington, DC
Entry level: \$53,012 annual

POLICING MATTERS PODCAST

Should cops shoot at moving vehicles?

FINANCIAL PLANNING

Financial fitness for law enforcement officers



By Matthew Loux, American Military University

The financial health of officers is extremely important to help reduce stress, alleviate ethical issues, maintain security clearances, and stop living paycheck-to-paycheck.

[Planning for the future >](#)

FEATURED DEALS



TYR Tactical® Basic Plate Carrier-M Law Enforcement Kit A
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More Featured Deals



By Jim Dudley and Doug Wyllie, P1 Columnists

Jim and Doug discuss why they feel "no shooting at vehicles, ever" policies don't make sense.

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P1 PHOTO OF THE WEEK

Through rain, snow, sleet and hail



By PoliceOne Members

Members of the West Hartford (Conn.) Honor Guard performed a funeral detail for the mother of a retired officer in February of 2017.

[Enduring all conditions >](#)

ORIGINAL VIDEO

Reality Training: Lessons in tactical medicine



Cops are often first on the scene of a medical emergency, and sometimes the nature of the call does not allow time to wait for paramedics or fire to arrive.

[Watch >](#)

MORE ON POLICEONE

Video: Police, firefighters rescue horse stuck in thick mud



Photos: Australia cop, baby kangaroo fight crime in the outback



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





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POLICEONE ON FACEBOOK

-  11K Milwaukee Sheriff Clarke takes job with Homeland Security
-  9.3K Jury finds Tulsa cop not guilty in fatal shooting of Terence Crutcher
-  3.8K Video: Southwest honors slain cops' families, colleagues on flight
-  2.3K Chicago cop's daughter rammed to death by car
-  2K Slain Phoenix cop's family, colleagues visit Oval Office for Police Week

BRANDFOCUS

Capture, manage and share multimedia with Motorola Solutions Digital Evidence Management Solution



Learn how this system will help you successfully capture and manage the overwhelming deluge of video evidence your department is becoming more reliant on.

[Read the full article >](#)

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Stone, Andrea

From: The IACP <TheLead@iacp.bulletinmedia.com>
Sent: Monday, August 07, 2017 7:27 AM
To: jbarbieri@springfieldpolice.net
Subject: IACP's The Lead: Minnesota Mosque Rocked By Saturday Morning Explosion

If you are unable to see the message or images below, [click here to view](#)



IACP'S THE LEAD

The News You Need as a Law Enforcement Leader

Greetings John Barbieri
Monday, August 7, 2017









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NATIONAL SECURITY

Minnesota Mosque Rocked By Saturday Morning Explosion.

The [New York Times](#)   (8/5, Corasaniti) reports the Dar Al Farooq mosque in Bloomington, Minnesota was rocked by a blast on Saturday as worshipers were gathering for morning prayers. No injuries were reported, though the "building sustained damage to its front." Police said that a "preliminary investigation indicates the explosion was caused by a destructive device." The FBI is taking the lead on the investigation, with assistance from the Bureau of Alcohol, Tobacco, Firearms and Explosives.



The [Minneapolis Star Tribune](#)   (8/6, Olson) reports that Minnesota Gov. Mark Dayton called the explosion "an act of terrorism" during a visit on Sunday. Dayton said of the blast, "What a terrible, dastardly, cowardly act was committed," and he called the attack "a hate crime," adding, "Anything I can do to put a stop to it, I would gladly do." [Newsweek](#)   (8/5, Miere) reports that "police initially said it was too early to call the incident a hate crime," but "the FBI, including members of the agency's Joint Terrorism Task Force, were quickly on the scene at the building."

Many Convicted Of Terrorism-Related Crimes Post-9/11 Are Set For Release From Prison.

The [AP](#)   (8/6, Riechmann, Press) reports that, according to the Bureau of Prisons, US prison currently hold 380 inmates "linked to international terrorism and 83 tied to domestic terrorism" – and the Congressional Research Service said "50 'homegrown violent jihadists' were to be released between last January and the end of 2026." Eric Rosand of the Global Center on Cooperative Security says "not enough is known about the mindset of the prisoners being released." However, Karen Greenberg, director of the Center on National Security at Fordham University's School of Law, "doesn't think the public should panic." The [Daily Caller](#)   (8/6) drew attention to the AP's reporting.

POLICING & POLICY

GOP Governors Deploying State Troopers In Response To Rise In Violent Crime.

In an analysis, the Washington Post   (8/6, Craig, Ockerman) reports Republican governors around the country are responding to rising homicide rates in major cities by dispatching additional state troopers to violent areas. The Post highlights Missouri Gov. Eric Greitens' recent deployment of state troopers to St. Louis highways – an effort that has received support from Democratic city officials – and also examines similar efforts in Arkansas, Texas, and South Carolina. The Post adds, however, that “the implementation of the state response can clash with local policing strategies” and that some on the left “fear a shift away from Obama-era initiatives such as community policing, fewer mandatory minimum sentences and limits on the militarization of police units.”

FROM IACP

Each year, individual members, committees, sections, and divisions are given the opportunity to submit resolutions for the membership's consideration. The resolutions process is the cornerstone of IACP's policy development. Through this process, the association membership addresses critical issues facing law enforcement. The resolution binds the official actions of the IACP staff and activities and serves as the guiding statement in accomplishing the work of the association.

The deadline to submit all 2017 resolutions for consideration is **August 22, 2017**. To view previously passed resolutions, please visit the resolutions page on the IACP website at <http://www.theiacp.org/Resolutions>. If you wish to submit a resolution or if you have any questions, please contact resolutions@theiacp.org.

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CRIME & DRUGS

MS-13 Carries On Feud With Rival Gang Barrio 18.



Fox News   (8/4) reports on Barrio 18, a Salvadoran gang that rivals MS-13. According to Fox, “both have members covered in head-to-toe tattoos, are well known for their murderous tactics and originated in some of the same Los Angeles neighborhoods.” Fox says the two gangs “are bitter rivals whose ongoing feud is responsible for the deaths of thousands across the U.S., Mexico and Central America.” Barrio 18 is “believed to operate in around 120 cities in 30 states, but has made its presence most felt in its home state of California.” Fox News, adds, “Much of the street crime in Los Angeles County is believed to be related to the gang and federal law enforcement said that while street-level drug dealing is Barrio 18's main income source, the group has been linked to murders, assaults, arson, copyright infringement, extortion, human trafficking, illegal immigration, kidnapping, prostitution, robbery and weapons trafficking.”

FDA To Bolster Fentanyl Detection Efforts At Mail Facilities.



The Washington Post   (8/4, McGinley) reports Food and Drug Administration commissioner Scott Gottlieb said Thursday he plans to install approximately “three dozen employees to international mail facilities” operated by the US Postal Service “to help detect and analyze suspicious packages,” as part of an increased effort to prevent opioids from entering the country. The article quotes Gottlieb as saying, “Given the scope of the opioid crisis, and the risk posed by these synthetic drugs, it's my belief that we need to devote even more resources and attention to these risks.” The FDA also plans to deploy employees “to the FDA's cybercrime and forensic-chemistry units,” the Post adds.

TECHNOLOGY



Smart Gun Advocates Urge Public Not To Be Worried About Hacked Firearms.

CNET News   (8/5, Ng) reports, “Even after a hacker at Defcon showed that smart guns aren’t all that smart, advocates for new firearm technology aren’t worried.” At the Smart Gun Symposium in Washington D.C. on Thursday, supporters of the technology “discussed how upgrading firearms with gun-locking features like fingerprint scanners and radio-frequency identification tags could help protect police and prevent shootings,” and “also dismissed concerns that hackers could find ways to trick the features.” CNET adds, “Safety and reliability are key issues when it comes to the potential for widespread adoption of high-tech firearms. Nearly 60 percent of police officers told the symposium they’d be interested in using smart guns, once the weapons prove reliable from a security and effectiveness perspective.”

London Police To Use Facial Recognition Software At Upcoming Festival.



The Guardian (UK)   (8/5, Dodd) reports London Metropolitan Police “will use facial recognition software to scan the faces of tens of thousands of revellers at this year’s Notting Hill carnival even though civil liberties groups believe such an action would be discriminatory.” The agency “has described the planned deployment as a pilot project intended to look for suspected troublemakers to keep those attending safe.” Police at the two-day event “will use the facial recognition system and match faces in the crowd against databases of people they suspect will cause trouble, comparing them with images of people previously arrested or under bail conditions to keep away from the event.” The Met released a statement that said, “The technology involves the use of overt cameras which scan the faces of those passing by and flag up potential matches against a database of custody images. The database will be populated with images of individuals who are forbidden from attending carnival, as well as individuals wanted by police.”

Chicago Police Use New Technology To Fight Violent Crime.

Reuters   (8/5, McLaughlin) reports Chicago police on the city’s South Side are “using technology to try to rein in a surging murder rate.” With the city’s murder rate up by 3 percent overall, the 7th District saw a 39 percent drop in the rate from January through July of this year over the same period last year. Three other districts using the same technology also saw “between 15 percent and 29 percent fewer shootings, and 9 percent to 18 percent fewer homicides, according to the department’s data.” The technology involves police “scan[ning] digital maps on big screens to see where a computer algorithm predicts crime will happen next.” It is “part of a roughly \$6 million experiment,” which is “aimed at complimenting traditional police work” and overhauling “the force of some 12,500 officers.”

LAW ENFORCEMENT AT WORK

Wisconsin Officer Donates Kidney To Child After Seeing Facebook Post.

CNN   (8/4, Moghe) reports, in its weekly “beyond the call of duty” segment, about Milton, Wisconsin, Police Department Officer Lindsey Bittorf, who donated a kidney to a 8-year-old child after seeing a Facebook post. The boy’s mother Kristi Goll, turned to Facebook to make the “desperate plea” for her child Jackson, after finding out that no family members were a match to donate a kidney. Goll’s Facebook post was “shared more than 1,400 times,” but after a month “there were no matches.” In mid-March, Bittorf saw the Facebook post and contacted Goll. Bittorf is quoted as saying, “If roles were reversed and it were my kid, I would move hell and earth for my kid, too.” Bittorf began the testing to see if she was a match for the kidney donation. After finding out the good news, Bittorf showed up to Goll’s home “in uniform” to surprise the family. Bittorf said, “I took an oath to serve and protect my community and now my kidney will serve and protect you.” CNN adds that Bittorf’s “resolve to help Jackson was similar to her drive to become a police officer: She simply wants to help people.”

[Click here](#) to suggest an article for inclusion in the *Law Enforcement at Work* section of The Lead.

FRIDAY'S LEAD STORIES

- WPost Analysis: Police Departments Often Forced To Rehire Officers Fired For Misconduct.
- Minnesota County Launching Plan To Help Homeless Youths.
- European Police Bust Human Trafficking Ring.
- New York Holding Smart Gun Competition.
- Foiled Australian Terror Plot May Be “Game Changer” For Aviation Security.

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This complimentary copy of *The Lead* was sent to jbarbieri@springfieldpolice.net as a member benefit. View Bulletin Media's [privacy policy](#).

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Stone, Andrea

From: Jim Hanson <jim@cognitec.com>
Sent: Tuesday, August 08, 2017 9:51 AM
To: wschwarz@springfieldpolice.net
Subject: Real Time Facial Recognition
Attachments: FaceVACS-DBScan-5-1-flyer.pdf; MobileExaminerer.pdf; references-lawenforcement.pdf; facevacs-videoscan-5-3-flyer.pdf

Greetings Bill,

We met at IACP last year in San Diego where we discussed your interest in evaluating FaceVACS-VideoScan and FaceVACS-DBScan.

FaceVACS-VideoScan uses world-leading face recognition technology to detect and identify persons of interest while computing demographic and behavioral data in real time. The FaceVACS-VideoScan Enterprise Solution combines the FaceVACS-VideoScan software and a pre-configured hardware package specific to the software requirements and architecture. The solution allows for the installation of up to 50 cameras and a throughput of 30,000 people per day. The ready-made solution enables quick deployment and operation of the system at the premises of the client.

Kindly let me know if we can schedule a call to continue our discussion from last year.

Best regards,

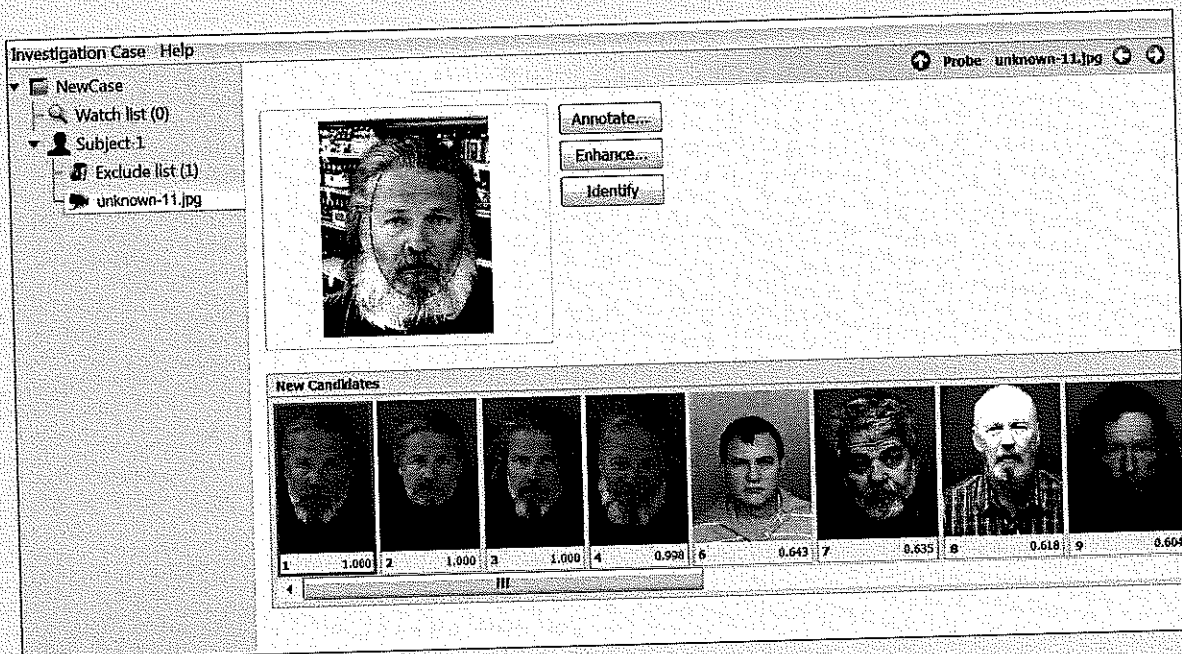
Jim Hanson
Professional Services Consultant

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200 Ledgewood Place · Suite 100 · Rockland, MA 02370
Phone +1-781-616-0600 x66 · Fax +1-781-881-0456 · www.cognitec.com
Cell +1-781-600-1309 · jim@cognitec.com

Face recognition technology

for matching facial images in large databases

- compare facial images from different sources to those stored in multi-million image databases
- instantly view match lists with the most similar identities
- control thresholds and match list sizes
- use Examiner tools and filters to enhance images and compare them side by side
- manage demographics and other case-related data
- run as a ready-to-use application or integrate into your applications and infrastructure



Applications

Law enforcement and criminal investigation

- identify suspects
- create match lists
- search for missing persons

Photo indexing and sorting

- search or index collections of digital photos by face

ID fraud prevention and detection of clerical errors (search for multiple identities)

- ePassport
- eVisa
- driver's license
- health card
- corporate ID card
- voter registration



Examiner

Investigators rely on our innovative technology to match crime scene photos and surveillance video images against the agency's mug shot repository and immediately act upon the search results.

Probe enhancement filters

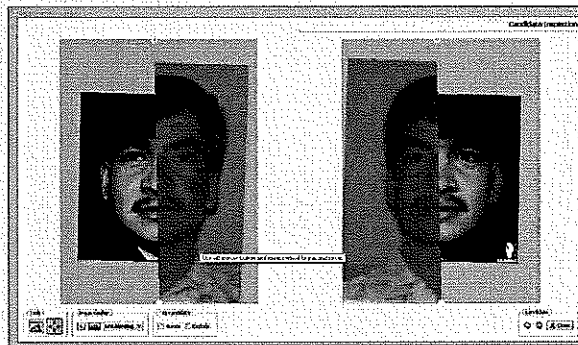
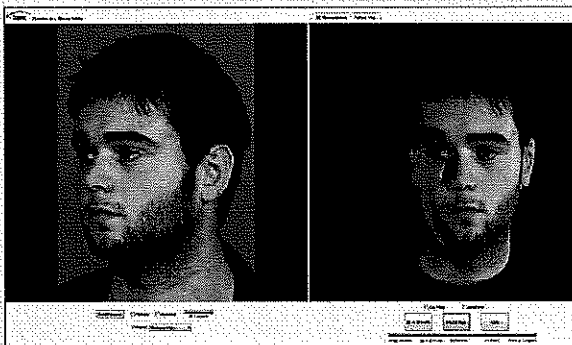
- pose normalization using 3D technologies to create frontal views
- de-interlace filter for images from interlaced video
- median filter to remove noise
- histogram to correct contrast
- aspect ratio filter to correct lens distortion
- face cropping filter

Detail inspection

- superposition probe and candidate image
- measure angles and distances
- use single or side-by-side line blending tool

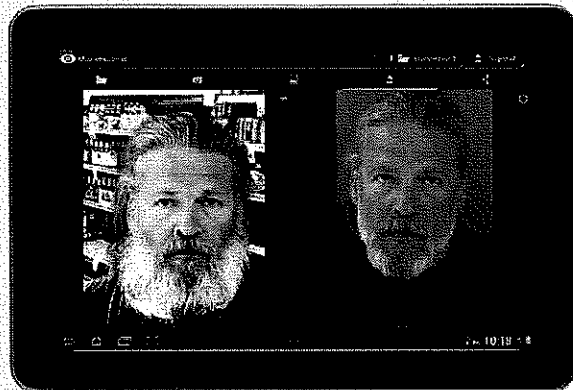
Investigation management

- create investigation case and add probe images
- generate and maintain candidate lists, along with demographic data
- inspect image pairs
- manage watch lists and exclude lists
- print reports

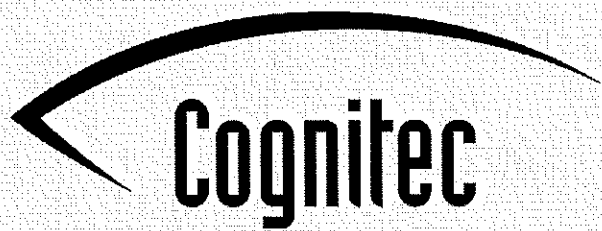


Mobile Examiner

- use cameras in mobile devices to take suspect photos at the scene
- search central databases and instantly receive candidate lists
- view person demographics and other related information
- intuitive user interface
- flexible display options for candidate lists and data



Cognitec develops market-leading face recognition technologies and applications for enterprise and government customers around the world. Various independent evaluation tests have proven the premier performance of the FaceVACS® software. Cognitec's portfolio includes products for facial image database search, video screening and analytics, border control, ICAO compliant photo capturing and facial image quality assessment. Corporate headquarters are located in Dresden, Germany; other offices in Rockland, MA, USA and Sydney, Australia.



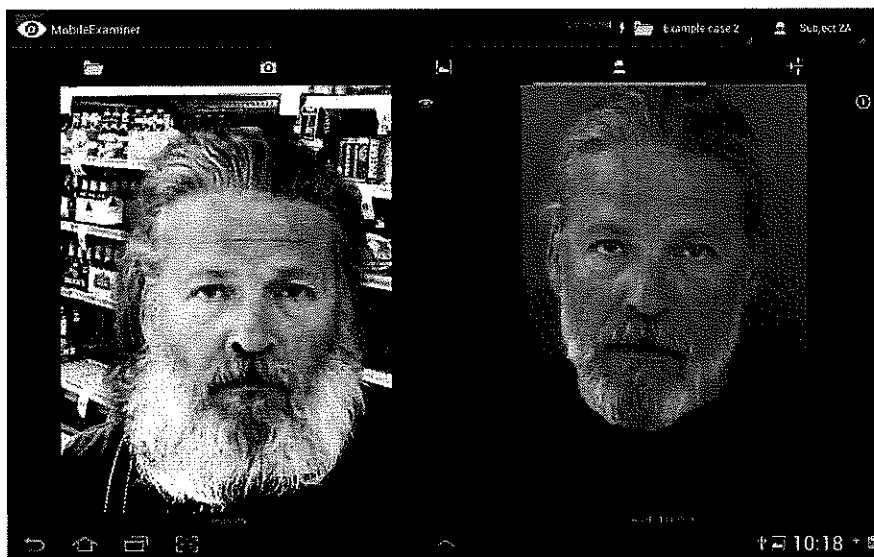
Cognitec

The face recognition company

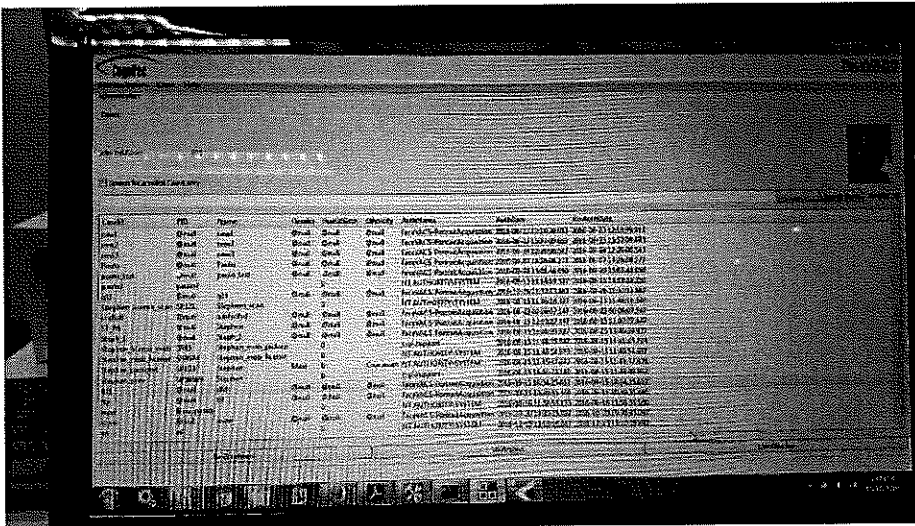


Mobile Examiner

- take suspect photos at the scene
- search central databases and instantly receive candidate lists
- view person demographics and other related information



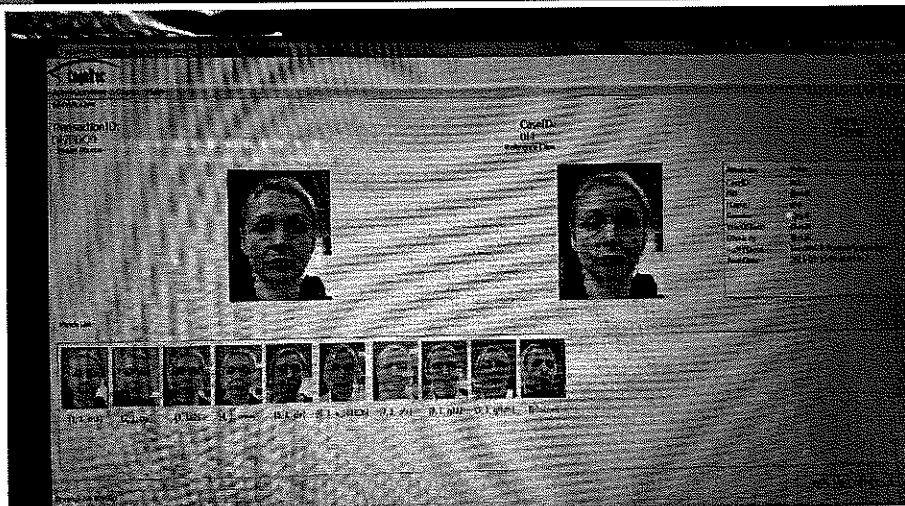
Central Database (FaceVACS-DBScan)



The screenshot displays the main interface of the FaceVACS-DBScan software. It features a large table with multiple columns, including 'Image', 'Name', 'Gender', 'Age', 'Height', 'Weight', 'Eye Color', 'Hair Color', 'Skin Color', 'Mouth Color', 'Nose Color', 'Ear Color', 'Face Shape', 'Face Orientation', 'Face Expression', 'Face Pose', 'Face Angle', 'Face Distance', 'Face Size', 'Face Quality', 'Face Clarity', 'Face Contrast', 'Face Brightness', 'Face Sharpness', 'Face Focus', 'Face Blur', 'Face Noise', 'Face Artifacts', 'Face Defects', 'Face Scars', 'Face Tattoos', 'Face Piercings', 'Face Jewelry', 'Face Accessories', 'Face Clothing', 'Face Background', 'Face Location', 'Face Scale', 'Face Resolution', 'Face Format', 'Face File Name', 'Face File Path', 'Face File Size', 'Face File Date', 'Face File Time', 'Face File User', 'Face File Group', 'Face File Permissions', 'Face File Metadata', 'Face File Comments', 'Face File Tags', 'Face File Keywords', 'Face File Categories', 'Face File Subcategories', 'Face File Tags', 'Face File Keywords', 'Face File Categories', 'Face File Subcategories'. The table contains numerous rows of data, representing a large database of facial images.

FaceVACS-DBScan product compares facial images from various sources to large image databases, supporting the biometric identification, comparison, and verification of persons.

In our example there are few face images were enrolled into the DBScan database.



Identification was run and a list of 10 candidates with matching scores from the highest to the lowest has been returned.

This is just to see that we have the face images in the Central database.

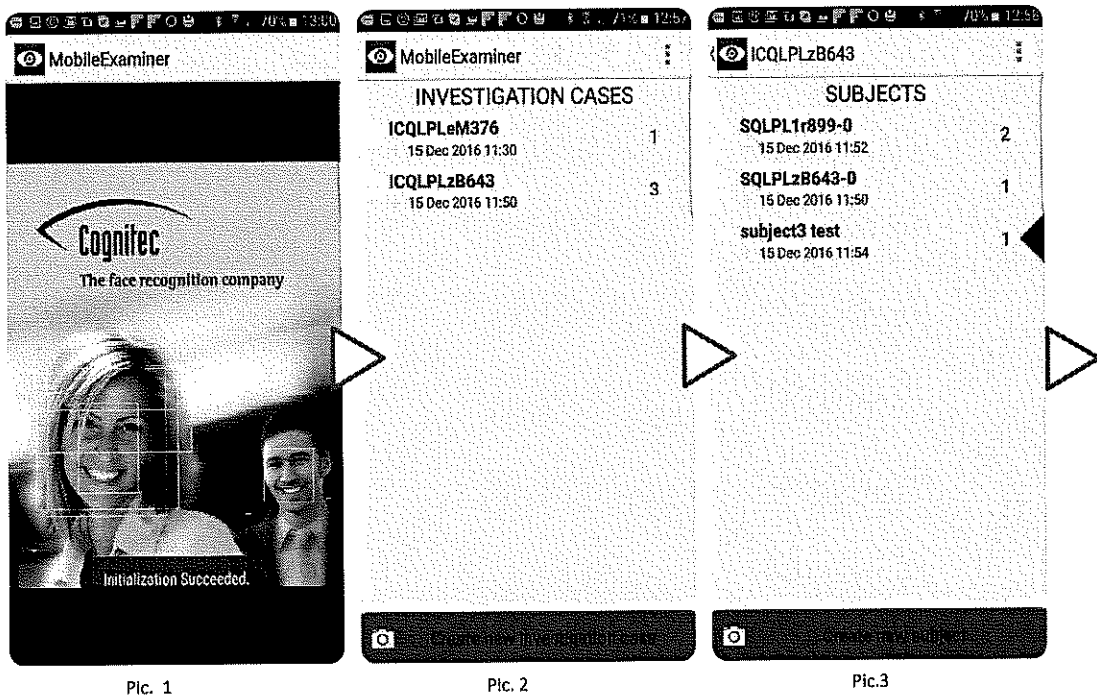
Mobile Examiner

Mobile Examiner application is installed on the Android mobile device.
When the application started:

Pic.1: Initialization

Pic.2: Create New Investigation Case

Pic.3: Each Investigation case can have multiple Subjects, containing probes for investigations



Mobile Examiner

Pic.4: Under Each Subject probe image is taken (by mobile device camera or from image file)

Pic.5: Create New Investigation Case

Pic.6: As soon as the Probe is taken – it shows the list of candidates (as result of Identification against the Central database)



Pic. 4

Pic. 5

Pic.6

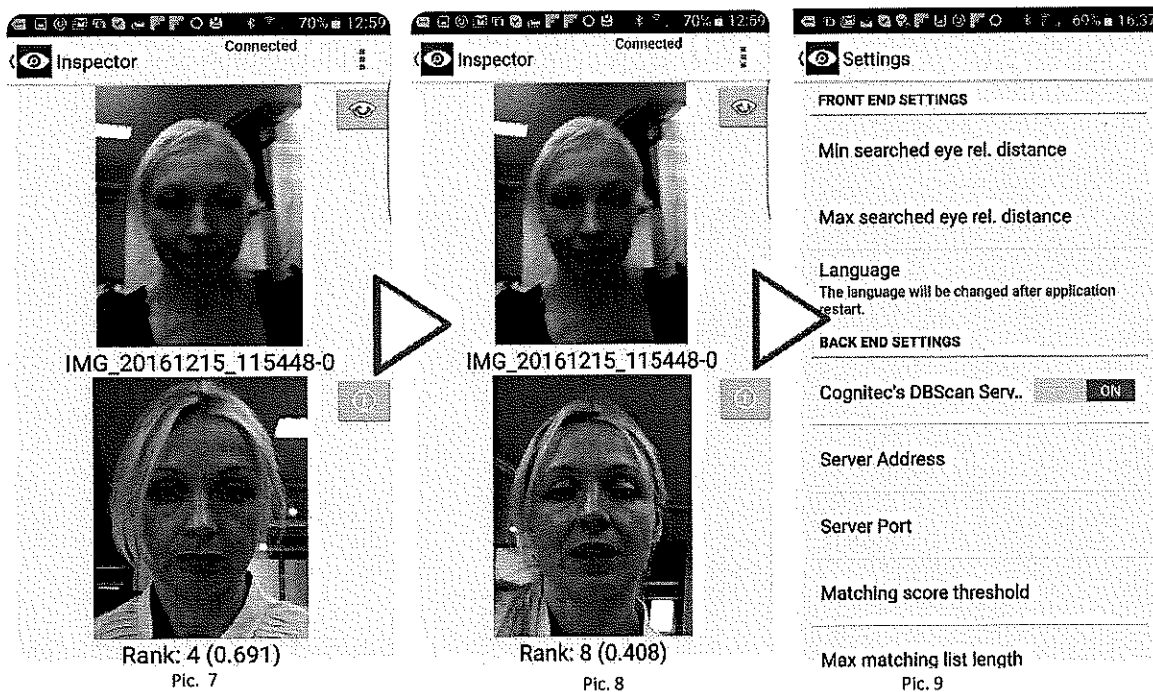
Mobile Examiner

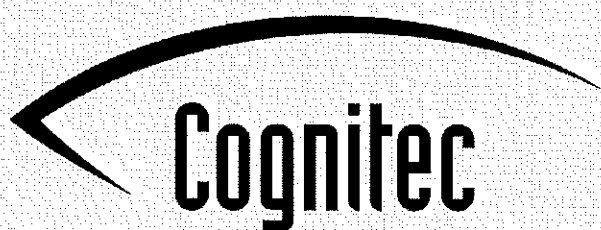
Mobile Examiner application is installed on the Android mobile device.
When the application started:

Pic.7: Scrolling through list of Candidates (Candidate number 4)

Pic. 8: Candidate #8, etc.

Pic. 9: Settings to configure connection to the Central database, candidates list thresholds, etc.





The face recognition company

Thank you!

www.cognitec.com
info@cognitec.com

We are committed to deliver the
best face recognition performance
available on the market.

Key References for Image Database Search Applications

Germany: Federal Police Agency (Bundeskriminalamt – BKA)

BKA is using FaceVACS-DBScan to identify suspects from photographs and videos, current database size is 10 million images.

Germany: State Police Agency of Saxony (Landeskriminalamt – LKA Sachsen)

LKA Sachsen is using FaceVACS-DBScan to identify suspects from photographs and videos, current database size 0.5 million images.

France: Direction Générale de la Gendarmerie Nationale

Gendarmerie Nationale is using FaceVACS-DBScan to identify suspects from photographs and videos; current database size is 5 million images.

Netherlands: Forensisch Instituut (Ministry of Justice)

The institute uses the application for law enforcement, performing databases searches for investigations.

Georgia: Ministry of Internal Affairs

The Ministry uses FaceVACS-DBScan for investigations purposes, current database size: 15 million images.

Law Enforcement USA

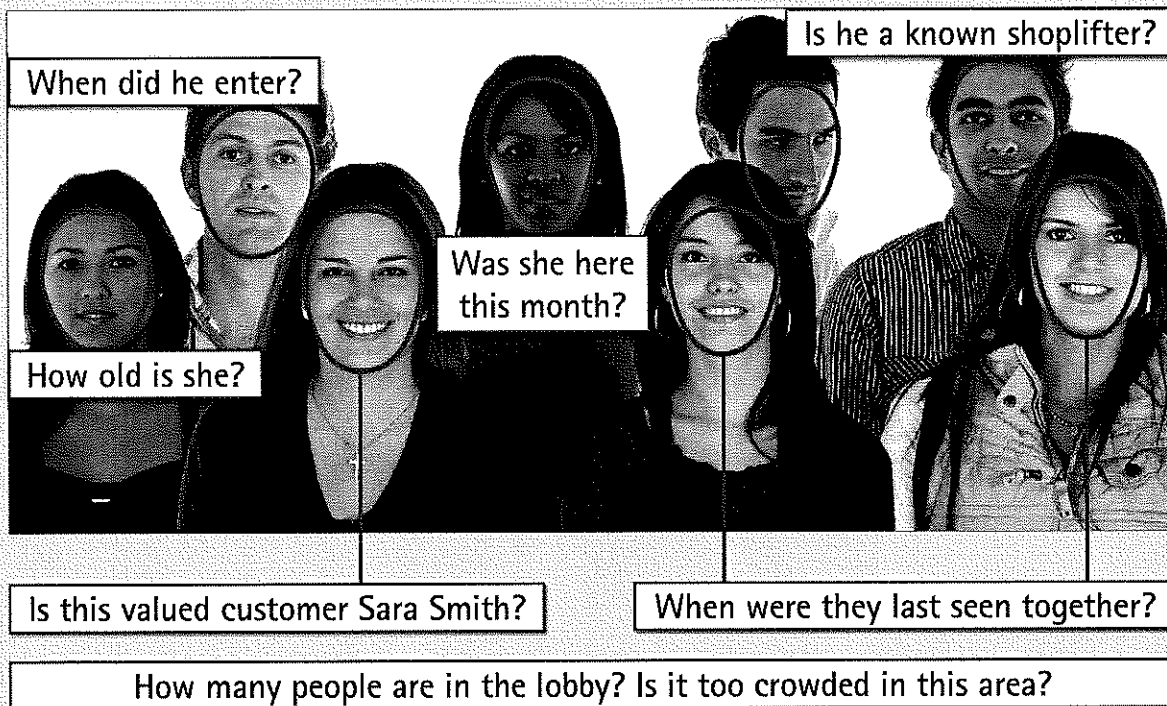
The following law enforcement agencies use FaceVACS-DBScan to identify suspects from photographs and videos, listed with current image database size.

Michigan State Police: 3 million images
Pennsylvania JNET: 3.5 million
Los Angeles County Sheriff's Department: 7 million
Lane County Sheriff's Office: 250,000 images
Riverside County Sheriff's Department: 1.25 million
Chicago Police Department: 5 million

San Mateo County Sheriff's Office: 1.25 million images
San Joaquin County Sheriff's Office: 750,000
San Diego County Sheriff's Department: 1.75 million
Collier County Sheriff's Office: 200,000
Sacramento County Sheriff's Department: 1.3 million
Hennepin County Sheriff's Department: 1.25 million

Face recognition technology for real-time video screening and anonymous people analytics

- instantly detect, track, recognize and analyze people in live video streams or video footage
- store and view face streams for each appearance of a person over time
- use anonymous face recognition to compute people analytics while protecting privacy
- perform real-time comparisons to image databases and watch lists
- receive real-time signals when user-defined events occur
- define, view and export statistics about people flow, visitor demographics and client behavior



Applications

Surveillance

- screen public or private places (e.g. shopping malls, airports, casinos, hospitals and banks) and identify known individuals in real time
- search recorded media files for unknown persons or persons enrolled in a database
- recognize authorized personnel
- monitor access to restricted areas

Recognition of valued customers and frequent visitors

- alert staff to provide special treatment to valued customers

People analytics, people flow and business intelligence

- use anonymous demographical data for marketing and operational decisions, and to tailor advertisements

- analyze traffic patterns and times to change interior design, place advertising and plan staffing
- detect crowds and manage waiting/transit times in specific areas
- alert security staff, direct traffic and enhance customer experience

Features

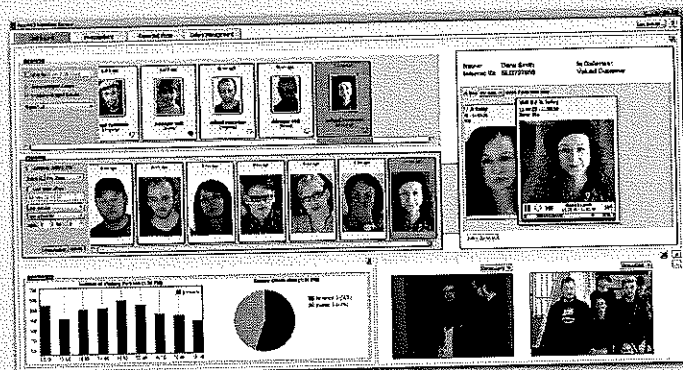
General

- stores high-resolution video sequence of the cropped face (face stream) of each appearance in front of a camera
- compares all appearances of persons against each other in real time to determine and cluster identities
- supports anonymous face recognition for people analytics, intelligent signage and people flow applications
- sends signals and statistics to mobile devices
- uses Cognitec's latest face recognition algorithm
- provides a clear graphical user interface with expandable pop-up screens to view data details and live video streams
- supports interactive enrollment from still image and live video stream
- runs as a stand-alone application or integrates into third-party solutions

Real-time event display

FaceVACS-VideoScan installs with a pre-defined catalog of event types. The application shows events and/or sends mobile event notifications if, for example:

- a person is matching a facial image in a gallery
- a person is matching certain criteria (e.g., male, Asian, 30-40 years old)
- a person is first seen within one zone (defined area that includes n number of cameras) and later within another zone (transit)
- more than n persons are seen within a zone during a certain time span (crowd)
- a person visiting a site more than n times during the last n days (frequent visitor)
- a person matching a facial image in a gallery is seen without a person from a second gallery (unattended person)



Statistics

For example, users can configure statistics and data display for:

- count of individuals during a respective time window
- count of visits in relation to length of visit
- average transit time for the last n transits
- distribution of age groups
- distribution of male and female visitors
- distribution of ethnicities

Mobile event notification

Receiving event notifications and statistics on mobile devices allows users to act within the immediate vicinity of a suspect, security threat or valued customer.



Detailed investigations

FaceVACS-VideoScan allows users to perform complex searches on persons appearing in real-time camera streams and/or stored media files. Investigators can find a person enrolled in an image database or search for an unknown person. Person searches can make use of filters that specify time, location, age range, gender, ethnicity and glasses.



Recorded media import

FaceVACS-VideoScan features a user-friendly interface to quickly import sets of video/image files and then carry out detailed investigations. As various media files are uploaded into the system, the technology detects faces in videos and still images, creates a face stream for each appearance, and groups all appearances of the same person (identity clustering). FaceVACS-VideoScan processes recorded video files even faster than live camera streams.

Media Set	URL	Absolute start time	Status
Crime Scene 1: 10	file:///E:/Videos/Case001/101/101_Audio_WholeGroup_Shoots.mp4	Mon May 20 11:43:51 2014	Queued for processing...
Crime Scene 1: 11	file:///E:/Videos/Case001/101/111_Stairs_Single_Jockey.mp4	Mon May 20 11:43:51 2014	Extracting Evidence: 712102sec
Crime Scene 1: 12	file:///E:/Videos/Case001/101/121_Evidence_Single_Threat.mp4	Mon May 20 11:43:51 2014	Done
Crime Scene 1: 13	file:///E:/Videos/Case001/101/131_Audio_WholeGroup_Shoots.mp4	Mon May 20 11:43:51 2014	Extracting Evidence: 1051400sec
Crime Scene 1: 14	file:///E:/Videos/Case001/101/141_Stairs_WholeGroup_Shoots.mp4	Mon May 20 11:43:51 2014	Done
Crime Scene 1: 15	file:///E:/Videos/Case001/101/151_Stairs_Single_Jockey.mp4	Mon May 20 11:43:51 2014	Extracting Evidence: 6577sec

FaceVACS-VideoScan C5

Face detection/tracking and camera technology in a single device

- provides high image quality of machine vision cameras while using bandwidth and network structures for surveillance cameras
- optimal integration with FaceVACS-VideoScan; migrates video processing intelligence of the stream processor into the input device
- performs real-time, gapless face detection/tracking of multiple faces
- generates lossless, cropped video streams (face streams) for all faces appearing in front of the camera
- offers integrated camera control for optimized exposure on the face area
- supports RTSP/H.264 video streams for integration with digital video recording systems
- not a stand-alone product; sold with FaceVACS-VideoScan software
- lens not included



Editions

Depending on your requirements, Cognitec will recommend a product edition with the optimal feature set:

E1	E2	E4	
Use cases include:			
<ul style="list-style-type: none">■ intelligent signage (display of messages/ advertising based on the demographics of the person(s) looking at the camera)■ people counting■ analysis of visitor demographics	<ul style="list-style-type: none">■ analysis of visitor demographics■ counting individual visitors, excluding personnel or other groups of people	<ul style="list-style-type: none">■ security and customer relations: receive match list signals when known person appears in front of camera or a crowd gathers■ counting individual visitors in multiple zones■ people flow management	<ul style="list-style-type: none">■ investigation of any person appearing in real-time camera streams and/or stored media files based on facial image, time, location, gender, age range, etc. (includes ability to import sets of video/image files)

Cognitec develops market-leading face recognition technologies and applications for enterprise and government customers around the world. Various independent evaluation tests have proven the premier performance of the FaceVACS® software. Cognitec's portfolio includes products for facial image database search, video screening and analytics, border control, ICAO compliant photo capturing and facial image quality assessment. Corporate headquarters are located in Dresden, Germany; other offices in Rockland, MA, USA and Sydney, Australia.

Stone, Andrea

From: The IACP <mailing@theiacp.org>
Sent: Wednesday, October 18, 2017 10:01 AM
To: jbarbieri@springfieldpolice.net
Subject: Our Sponsors Enhance Your IACP 2017 Experience

Problem viewing this email? [Click here](#) for our online version.



Sponsors Enhance Your Conference Experience

IACP 2017 sponsors bring exciting activities, promotions, and education sessions to attendees. Check out just a few of the things they have to offer:



Axon is excited for this year's IACP conference. Swing by Axon's booth (2825) to take part in the Axon experience, which will showcase their latest technologies, including the new AI-powered apps, new products, and the unveiling of a new campaign. And don't miss CEO Rick Smith's session on Monday, October 23.

Innovations and Ethics in AI for Public Safety
Monday, October 23 at 3:00 p.m. in Room 105AB



FirstNet Learning Core booth (2437). Staff will take you through the evolution of FirstNet, built for public safety by public safety. FirstNet will tell you about the benefits for first responders and the tools designed to help you do what you do best – keep our communities safe. Shows begin on the hour starting at 11:00 a.m.
FirstNet Ecosystem booth (2149) Immerse yourself in hands-on demonstrations. Experience some of the purpose-built solutions that are part of the FirstNet ecosystem. Learn while you play and let the experts answer your questions.



QoS, Priority and Preemption on LTE Wireless Networks
Sunday, October 22 at 2:00 p.m. in Room 105AB

Visit the Motorola Solutions booth (3037) to participate in their golf putt challenge. The award-winning Si500 body-worn camera will be mounted on the green in the booth to capture your triumphant putt. Swing over to the Digital Evidence Management area to see your shot in action. If you get a hole-in-one, you'll receive a sleeve of Motorola Solutions branded golf balls and the opportunity to win other exclusive prizes.

Today's Officers Will Work with Tomorrow's Bots: How Artificial Intelligence Will Help Keep Streets and Officers Safe

Monday, October 23 at 8:00 a.m. in Room 105AB

Technology is helping law enforcement agencies to improve citizen and community connection, increase collaboration, and capture data in new ways. Visit Microsoft's booth (2125) to experience the Microsoft patrol car and to see new solutions from their partners in the Microsoft Public Safety Innovation Theater. [Click here](#) to learn more.



Digital Transformation for Safer Citizens, Communities, and Responders

Tuesday, October 24 at 8:00 a.m. in Room 105AB

Visit NEC in Independence Ballroom III at the Marriott to learn about NEC's Advanced Recognition Systems solutions. Whether in the field, at the crime scene or in the office, the unparalleled identification matching accuracy and speed of NEC's facial recognition and fingerprint solutions provide the technology required for accurate real-time and post-event investigations. Stop by to learn how they are innovating in the biometrics sector and what successes they've had supporting their law enforcement clients. Questions? Contact Brenda.Barrett@necam.com.



Advanced Recognition Systems: Biometrics and Video Analytics

Monday, October 23 at 1:00 p.m. in Room 105AB

When seconds matter, take command with software from Superior. Visit their booth (2513), and enter to win their grand prize. You'll hear first-hand experience about the power and strength of the Superior CAD withstanding even the most crushing demands of unprecedented call volumes. As a proud platinum sponsor, Superior hopes you'll join them Sunday at their booth for football, popcorn, and drinks, and Monday at Chiefs Night for beer tasting. Mention @SuperionLLC on Twitter with #IACP2017 for a chance to win even more prizes!



Leading through the Storm: Is Your Agency Ready for Your 'Harvey' or 'Irma'? Local Texas and Florida Agency Leaders Discuss Systems and Communications that Helped Power Acts of Heroism

Sunday, October 22 at 2:00 p.m. in Room 201C

And Don't Miss Out on These Other Activities



Walking Challenge sponsored by pwc. Sync your tracker and earn prizes as you walk to sessions and visit the Expo Hall.



Philadelphia Photo compliments of WatchGuard Video. Get your photo taken in front of your favorite Philadelphia backdrop and take the picture home. Located on the 200 level, outside Exhibit Hall C.

IACP 2017 Sponsors: Solutions for a Safer Society



The International Association of Chiefs of Police
44 Canal Center Plaza, Suite 200 Alexandria, VA 22314
800.THEIACP
www.theIACP.org


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Stone, Andrea

From: NECToday News <news@nectoday.com>
Sent: Wednesday, November 15, 2017 9:55 PM
To: William Schwarz
Subject: NECToday: As Seen on TV - NEC Provides Powerful Crime Solving Face Recognition Software to Law Enforcement

Display problems? [View this newsletter in your browser.](#)

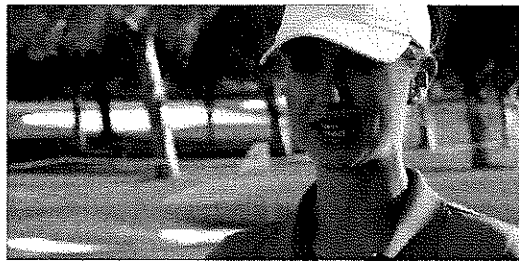
NEC Today 

As Seen on TV: NEC Provides Powerful Crime Solving Face Recognition Software to Law Enforcement



If you're a fan of any of the detective shows available on television and streaming services, you've probably seen an episode or two where a crucial part of solving the fictional crime is using face-recognition software to identify potential suspects. It's the digital version of an old-fashioned police lineup. The scenario usually involves detectives finding an old photo, or obtaining ...

[Read more.](#)



Biometrics Enhances LPGA Fan Experience

Ladies Pro Golf Association (LPGA) founded in 1950 is a premier professional women's sports association that provides programs, instruction, tournament play, as well as charitable events through its foundation. Recently, at the ANA Inspiration Tournament in Palm Springs, California, the LPGA and NEC worked together to pilot a program that provided facial recognition solutions for safety and security of its ...

[Read more.](#)

Protecting critical infrastructure and the fan experience with biometric face recognition



From concert halls to sports stadiums, nothing ruins an outing like a public safety incident. Whether it's due to a fan's reaction to an unpopular ruling

Stone, Andrea

From: PoliceOne Special Coverage <Newsletter@PoliceOne.com>
Sent: Thursday, December 07, 2017 7:43 PM
To: rcheetham@springfieldpolice.net
Subject: Virtual reality, AI and the future of video in policing

December 7, 2017 | View as webpage
Ensure delivery, add Newsletter@PoliceOne.com to your safe sender list

POLICING IN THE VIDEO AGE

What is the future of video in policing?



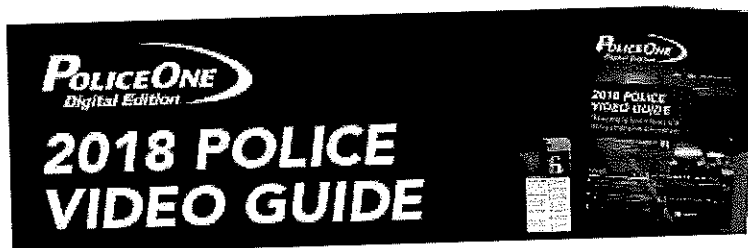
Dear PoliceOne Member,

The last few years have seen a technological revolution in policing with the use of video leading the way. Throughout 2017, we have examined how video is shaping policy, training and community relations as part of our four-part coverage series, **"Policing in the Video Age."**

In the conclusion to our yearlong coverage, we take a look into the future of video in law enforcement, including how the incorporation of artificial intelligence software, augmented reality and live scan facial recognition will transform policing; how FirstNet will aid police use of mobile video technologies; and how virtual reality could transform law enforcement operations and training.

Also be sure to check out our latest PoliceOne Digital Edition – **2018 Police Video Guide: The emerging tech, training and tactics shaping law enforcement** – in which we explore how departments can best utilize emerging video technologies to enhance police officer safety and improve operational efficiencies.

— The PoliceOne Team

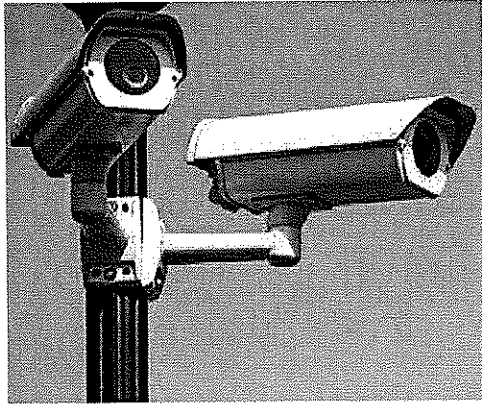


READ NOW



POLICING IN THE VIDEO AGE

How AI software could monitor
real-time camera feeds to
detect crime



By Doug Wyllie, P1 Senior Contributor
Using AI and facial recognition software for real-time crime reporting is the next logical progression in how police are already using existing technology.

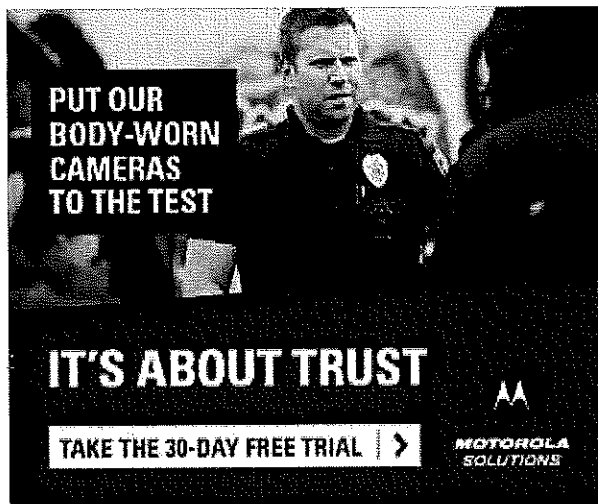
How AI will evolve >

What is the future of body-worn cameras in policing?



By Tim Dees, P1 Columnist
There may come a day when a central station will be able to activate a BWC by remote command and obtain a video stream when an officer is under duress.

Augmented reality >



POLICE TRAINING

How virtual reality could transform law enforcement



By Cole Zercoe, P1 Associate Editor
Virtual reality headsets are becoming increasingly affordable, and the technology's evolution shows no signs of slowing down.

Endless possibilities >

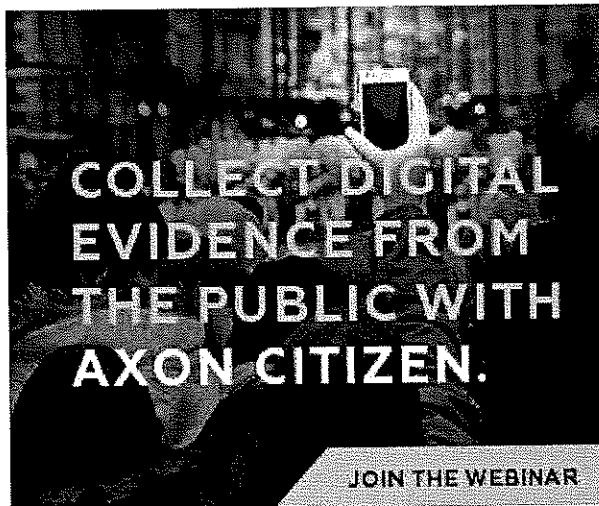
LEGAL ISSUES

LE implications for commercial use of facial recognition



By Val Van Brocklin, P1 Columnist
If citizens permit widespread use of FRT outside of LE, you could argue they no longer have any reasonable expectation of facial privacy.

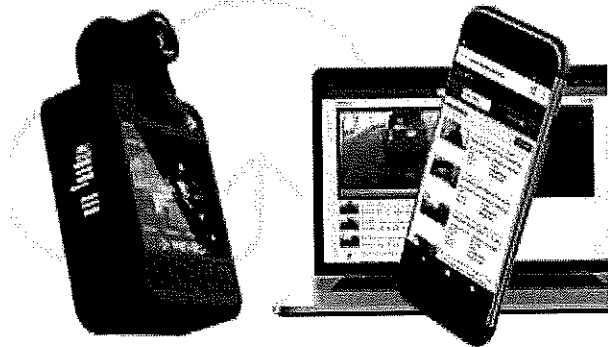
A look ahead >



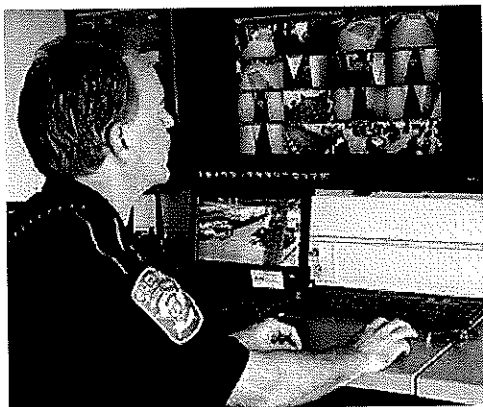
CASE STUDY

How FirstNet helped a Texas agency improve use of mobile video tech

Leading the way.



> reveal

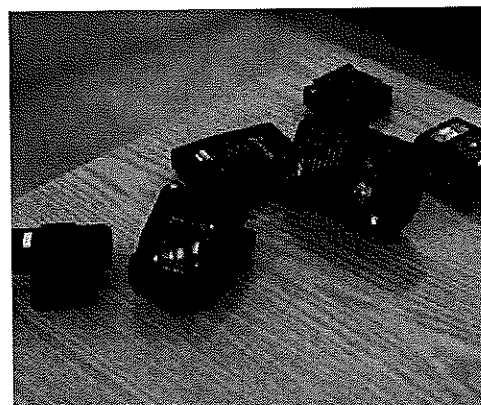


By Jacque Miller-Waring, P1 Contributor
In order for police to reap the full benefits of mobile video technologies, public safety must have access to a robust and reliable network.

Why interoperability is key >

COPS WEIGH IN

How police agencies are training LEOs on the use of body cameras



By P1 Staff
As PDs look toward the inevitable future of every cop carrying a BWC, it's important to consider the level of training required to ensure success.

Training methods >

**Accelerate
Investigations
and Solve
Cases Faster**



VERITONE
government

**LAW
ENFORCEMENT
WEBINAR SERIES**

**Rights & Limitations to
Record Peace Officers**
Thurs., Dec. 14 from 1-2pm (ET)



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PD BRANDFOCUS

How Axon's Signal Sidearm alerts nearby Axon body cameras to begin recording

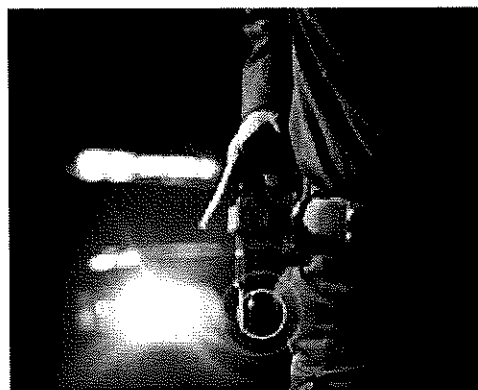


4 ways the new LE5 body-worn camera from Safariland VIEVU supports transparency for police agencies



New, configurable features enhance connectivity and enable users to customize the body-worn cameras according to agency needs and policies.

[Read the full article >](#)



A new wireless technology from Axon is a game changer. Signal Sidearm is a smart sensor that attaches to most firearm holsters currently used by law enforcement.

[Read more on this game changer >](#)



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Stone, Andrea

From: Morgan, Kretonia <kretonia.morgan@ext.us.panasonic.com>
Sent: Tuesday, December 12, 2017 4:54 PM
To: jbarbieri@springfieldpolice.net
Subject: Panasonic Security Solutions for the Springfield Police Department
Attachments: WHY ADVIDIA.pdf; 2017 Panasonic Video Surveillance Catalog.pdf; VI7 Key Features 2017.pdf; PANASONIC PTZ PDF NEW FOLDER 08-1PTZ Facial Recognition.pdf

Importance: High

Commissioner Barbier,

Panasonic Company leading IP video surveillance management software powered by Video Insight is used by over 25,000 customers in the financial, government, retail, and transportation sectors with a very strong presence in the education market consisting of 5,000 K-12 school/college customer. Video Insight is the easiest and most cost-effective enterprise VMS with support for over 3,000 camera models and integration with the top access control solutions in the market. Panasonic can upgrade your existing video surveillance system or design a new one altogether. We can work with you directly or through your systems integrator, as we have excellent working relationships with technology professionals nationwide. We would love for you to consider the Panasonic Security Solution for any current or upcoming projects.

Download | Panasonic Security System

security.panasonic.com

Welcome to Panasonic Security System support site. Find solutions and help for your Panasonic Security System products from our online information. Download manual ...

Video Insight software provides a sophisticated, yet, easy-to-manage system that allows you to record and monitor live video from a centralized location, the internet, or even from a Smartphone or device (iPhone/iPad, Blackberry, Droid). Because Video Insight is designed for multi-facility use, it is perfect for governmental entities which can often have dozens of buildings, sometimes in different cities and states.

Operating on your existing network infrastructure, Video Insight makes efficient use of bandwidth, and is typically less taxing on your system than our competitors, freeing up much-needed space for other computer network functions. In the aftermath of an incident – a theft, confidentiality breach, vandalism employee conflict situation – exporting recorded video to burn on a cd or email to law

enforcement/security is so simple that virtually no training is required for employees to be up and running on the system shortly after installation.

We offer a U.S.-based technical support staff which operates on a one-hour call back guarantee so your organization will never be without the dedicated customer service you deserve.

<http://security.us.panasonic.com/>

Video Management Software and Surveillance System ...

security.us.panasonic.com

Panasonic provides IP video management software and surveillance system.

- * – Learn why Video Insight is the premier VMS provider for across the US
- * – Review the full catalog of cameras provided by Advidia; No license fees if used in conjunction with Video Insight Management software
- * – See what some of our largest customers have to say about VI
- * – Download and install our VMS software completely free of charge for 60 days with use for up to 99 cameras
- * – Play around with a live stream of cameras from our office
- * – A basic introduction to our software's features and functionality.

If you have any questions, please don't hesitate to contact me directly at (713) 581-9248.

We have many vendors in the local market area that I would be more than happy to get you in contact with. Please let me know if you have any questions.

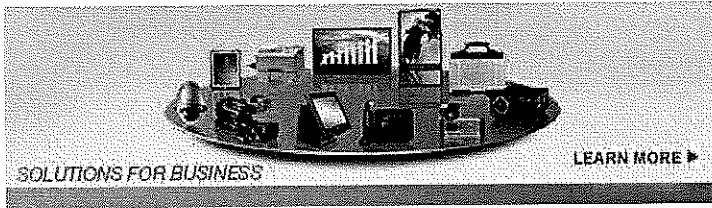
Request your free pilot here!

(Download our [iPhone](#) or [Android](#) mobile app and instantly connect to our demo server!)

KreTonia Morgan

Customer Engagement Specialist - North Territory
Surveillance and Security Solutions
Panasonic North America
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Houston, Texas 77024
E: kretonia.morgan@ext.us.panasonic.com
Telephone: 713-581-9248

Panasonic     



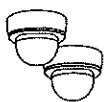


IP cameras for all application needs

Why Advidia?

The Advidia line of IP network video surveillance products provides a wide range of affordable IP camera models and encoders that are perfect for video surveillance projects of any size. **Each network camera and encoder includes a free enterprise Video Management Software (VMS) license, a 3-year warranty, and FREE software updates for the life of the product.**

Since its introduction to the market in 2006, Advidia has been deployed by a large number of campuses across North America looking for a complete video surveillance solution that's cost effective, reliable, and easy to use. Advidia's world-class, U.S. based technical support, advance replacement, and robust features like health monitoring, automated Failover, and video wall add yet another layer of value to its already rich product offering.



- Wide Range of Professional Camera Models with Free Video Insight VMS Software License

Advidia cameras are preconfigured with a free license of Video Insight enterprise VMS software, 3 years of advance replacement warranty, and free SUP for the life of the camera.



- Pricing – Lower Total Cost of Ownership (TCO)

Advidia offers the most cost-effective solution for any video surveillance project.



- Powerful Enterprise VMS Software Included

Each Advidia camera includes a free license of Video Insight VMS software. A powerful enterprise VMS solution that supports over 2,400 camera models from more than 100 manufacturers and integrates with most popular access control models.



- A Warranty Like No Other

The Advidia line of IP video surveillance cameras is backed by a 3-year warranty with advance replacement. Your replacement product ships as soon as you contact support.



- ONVIF

The Advidia cameras are ONVIF Compliant, which ensures interoperability between IP-based physical security products – regardless of brand. This allows system integrators and end users to easily design and build network video systems with devices from different vendors.



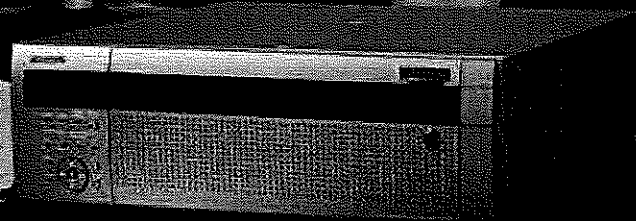
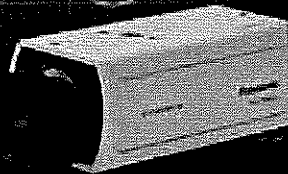
- World-Class U.S.-Based Tech Support

Advidia products are backed by a world-class, U.S.-based technical support team that operates on a One-Hour Callback Guarantee.

Panasonic

i-PRO
EXTREME

EXTREME PERFORMANCE UNDER EXTREME CONDITIONS



2017 VIDEO SURVEILLANCE CATALOG

Panasonic

WHY PANASONIC?

From the company that brought you the first security camera in 1957 and invented over a dozen industry standards, Panasonic provides industry-leading solutions to capture, record, manage and analyze surveillance video. Panasonic provides a comprehensive lineup of video surveillance products and solutions that offer the industry's highest picture quality, mission-critical reliability and the industry's lowest total cost of ownership. When it counts, you can count on Panasonic video surveillance products and systems to deliver.



SURVEILLANCE AND MONITORING SYSTEMS LINEUP

NEW

i-PRO Extreme ■ 2-3
 Aero PTZ ■ 4-5
 Smart Coding ■ 4-7
 True 4K ■ 8-9
 Video Insight ■ 10-11
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Key Benefits of Panasonic Video Surveillance Cameras ■ 20-25

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Sign up today and enjoy the free benefits

Panasonic's new i-PRO Preferred Program provides added value to your i-PRO video surveillance camera purchase without adding cost. i-PRO Preferred strengthens your warranty, expedites service response, and includes a bundled Video Insight camera license. New and current owners of select i-PRO camera models* are eligible upon registration for a free upgrade to this preferred service status.

5 YEAR
WARRANTY

Enjoy these benefits.

Add a two-year extended warranty to your existing three-year factory warranty upon registration.

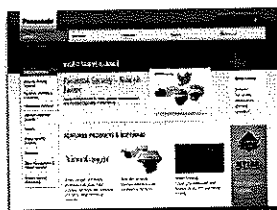
VIDEOINSIGHT
UNLIMITED LICENSE

While competitive manufacturers charge an annual camera license fee for each camera connected to their VMS, you'll enjoy a bundled Video Insight camera license with each eligible i-PRO camera.



Receive replacement units shipped the same day with overnight delivery.

Sign up today at www.us.panasonic.com/ipropreferred.



Visit www.panasonic.com/security
for the most up-to-date news on
Panasonic video surveillance products.

*U.S. surveillance equipment. Panasonic i-PRO cameras are manufactured after October 13, 2012. For more information, visit www.us.panasonic.com/ipropreferred.

NEW

PANASONIC UNVEILS AERO PTZ CAMERA FOR EXTREME ENVIRONMENTS

Panasonic has introduced the Aero PTZ, a new, environmentally rugged pan/tilt/zoom (PTZ) camera built to deliver high-performance surveillance in extreme weather conditions. Lightweight at approx. 17.64 pounds, the Aero PTZ is designed to operate in mission-critical applications including vital infrastructure in cities, ports, airports, traffic, highways, railways and more.

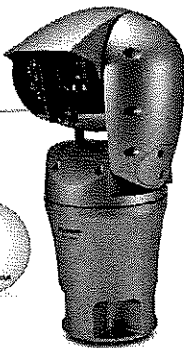
AeroPTZ

FULL HD RESOLUTION WITH 360-DEGREE VIEWING

- The Aero PTZ delivers Full HD resolution of 1080p at 60 fps with a 30X optical zoom lens
- Hybrid image stabilization suppresses vibrations between 1 to 30 Hz, to keep images stable
- 360-degree Sphere Vision 3D viewing provides 360-degree continuous panning and +/- 90-degree tilt range
- IR Illuminator is integrated with a zoom interlocking lens, which provides up to an additional 500 feet of visibility in complete darkness (Optional)
- Integrated with Smart Coding technology that reduces bandwidth up to 80% without sacrificing image quality
- Super Dynamic Light Range Compensation ensures a wider dynamic range compared to conventional cameras

HIGHLY RUGGED, SLEEK BODY DESIGNED FOR EXTREME CONDITIONS

- High strength, sleek fiber glass body and borosilicate glass provides salt and air corrosion protection, making it highly durable in even the toughest weather conditions from salty wind gusts, to harsh sunshine to the severe arctic cold.
- Unique intelligent-radius bodyline minimizes wind drag for more stability and prevents snow and dirt accumulation
- Fully water and dust proof conforming to IP67, NEMA-4X compliant and IK10 environmental specifications
- Operates in the hottest and coldest conditions from -58°F to +149°F
- Wind load durability at 135mph (operational)
- Built-in wiper and defroster



AERO PTZ CAMERA ACCESSORIES



Panasonic

EXTREME PERFORMANCE UNDER EXTREME CONDITIONS

WV-SUD638
RUGGED PTZ CAMERA FOR
EXTREME ENVIRONMENTS
1080p 60fps
30X Optical Zoom

360° Spherical profile withstands
hurricane force winds up to 135mph

Provides up to 500 feet
of visibility in complete
darkness (Optional)

360° continuous panning,
up to 200° per second and
+/- 90-degree tilt range

Light weight body approx. 17 lbs that resists
salt air corrosion, conforms to ISO14793
and is IK10 compliant

Operates from 100 to 240 volts AC
or PoE (60W)

AeroPTZ

INTEGRATED WIPER & DEFROSTER
Keeps lens clear of snow and ice

INTEGRATED WITH SMART CODING
Advanced compression technology that
reduces bandwidth up to 80% without
sacrificing video quality

Gyro-dram technology suppresses
vibrations between 1 to 30 Hz to
keep images stable

Delivers high performance in
extreme hot or cold environments
-58°F to +149°F

Conforms to IP67, IP67, NEMA-4X
corrosion

Pre-engineered pole mount,
wall mount, and corner mounts
are available



Shown with optional IR Illuminator

UPDATED

PANASONIC INTRODUCES SMART CODING TECHNOLOGY – REDUCE BANDWIDTH WITHOUT SACRIFICING VIDEO QUALITY

Introducing Panasonic Smart Coding, an in-camera surveillance technology that reduces bandwidth usage up to 80% without sacrificing video quality. It delivers the resolution and frame rates you demand, while substantially lowering storage and networking costs.

Smart Coding is available on all standard new 1, 3, 5, 6 & True 4K Series cameras.

And Smart Coding is available on all new i-PRO Extreme (H.265) cameras.

UP TO 80%*
BANDWIDTH REDUCTION

HOW DOES SMART CODING WORK?

Smart Coding combines 2 Encoding Load Reduction technologies & 2 Noise Reduction technologies together to provide a bit rate reduction of up to 80%, in the video without losing image quality.

NOISE REDUCTION

3D-MNR reduces grainy noise generated in low-illumination environments.

FDF reduces line noise that is generated at slightly low illuminance.

ENCODING LOAD REDUCTION

GOP Control reduces encoding data by using p-frame in place of i-frame when no motion is detected.

Auto-VIOS can automatically determine areas with and without motion and reduce the data volume of those without motion.

Panasonic

NOISE REDUCTION

FREQUENCY DIVIDED FILTER (FDF)

To remove line noise from low-light footage, FDF separates camera output by frequency, removes noise and then recomposes the data, resulting in crisper, cleaner video.



3D-MULTI-PROCESS NOISE REDUCTION (3D-MNR)

3D-MNR reduces bit rates by reducing video noise and grain. The result: cleaner final images that stream at significantly lower bit rates.



ENCODING LOAD REDUCTION

GROUP OF PICTURE (GOP) CONTROL

GOP Control strips out data related to motionless elements in the scene, lowering bit rates. When moving objects enter the frame, the bitrate increases to capture the action.



AUTO-VARIABLE IMAGE QUALITY ON SPECIFIED AREA (VIOS)

Auto-VIOS finds moving areas automatically and reduces image quality of less motion area to save bandwidth.



*3D-MNR & FDF are not available on Panasonic True 4K cameras.

FOR MORE INFORMATION, VISIT: info.panasonic.com/smart-coding

ULTRA-HIGH 4K PICTURE QUALITY FOR DETAILED, WIDE-AREA MONITORING WITH A SINGLE CAMERA

Now Featuring H.264 Smart Coding GOP Technology.
Up to 80% lower bandwidth with the same image quality.

4K
ULTRA HD

TRUE 4K



WV-SPV781L
4K Vandal Resistant
Weatherproof Network Camera



WV-SFV781L
4K Vandal Resistant
Weatherproof Dome Network Camera

ULTRA-HIGH-DEFINITION, 4K PICTURE QUALITY

Ultra HD 4K cameras offer 27 times the resolution of conventional analog cameras (VGA), nine times that of standard HD (1,280 x 720) and four times that of Full HD (1,920 x 1,080). This means that the finer details of images remain clear even when you need to magnify only a part of the image.

The high performance lens used by Panasonic's 4K cameras provides uniformly high-resolution images from the center out to the edges.



CROPPING FUNCTION

A given area within a single image can be selected, cropped and displayed. For example, areas with high monitoring priority, such as a parking garage entrance or a hallway, can be selected and displayed for easy viewing. You can still keep an eye on the overall image while also focusing on specific areas. With PTZ cameras, when the lens is pointed in a single direction, other areas go out of view during that time, but with a 4K camera you can monitor the entire area while also watching specific areas requiring more focused monitoring.



WIDE-AREA MONITORING

A single 4K camera can effectively monitor a wider area, which allows you to reduce the total number of cameras while also eliminating blind spots. Monitoring can be performed not only at vertical and horizontal angles, but for deeper depths as well.

And, even when monitoring within the same area, 4K's increased range means that the number of units required is reduced substantially compared to that of conventional cameras. This translates into reduced costs for the cameras themselves, less installation time and labor, and lower maintenance costs.

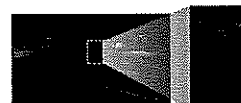
4K-ready monitors can also reduce the number of monitors needed in the control room.



4K
Monitoring range of 4K cameras

LOW LIGHT READY

The camera's ultra-high 4K resolution allows it to capture color images in dim, low-light conditions. In even darker conditions, the camera can use its monochrome inversion function to switch to black-and-white images, and in zero-light conditions it can accurately display what is happening in front of it using infrared LED vision.



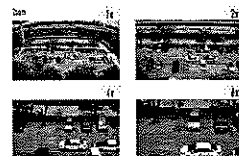
Light near subject: 1 lx

HIGH-POWER 6X ZOOM LENS WITH AN ULTRA-WIDE ANGLE OF 100°

An optical 6x zoom lens comes standard. The viewing angle range and zoom power can be set in line with conditions where the camera is installed.

Using a proprietary 3-drive lens system, Panasonic has developed a high-power 6x zoom lens with an ultra-wide viewing angle of 100°, a type of lens that is extremely difficult to produce using conventional optical design methods.

The lens is capable of capturing an extremely wide area, allowing effective 4K coverage of outdoor areas.



- Ultra wide-angle 100° wide-angle monitoring of parking lots, stadiums etc. utilizing 4K resolution
- Captures 177° monitoring of individuals or crowds from a distance

PANASONIC'S TRUE 4K TECHNOLOGY



Panasonic's Proprietary 3-Drive Lens System

The i-PRO TRUE 4K HW Camera is equipped with Panasonic's proprietary 3-drive lens system, which simultaneously drives two zoom lenses and one focus lens. Having three lenses all driven independently allows them to be smaller and their drive areas reduced, and has thus enabled us to make the camera compact enough to fit in a standard camera body while providing a high-power 6x zoom with high 4K picture quality viewed from an ultra-wide-angle of 100°.

Refined Resolution and Superior Contrast for a Higher Level of Video Imaging

In order to create a sharp, clear texture, 12 lenses in four groups are used to provide the ultra-high resolution expected of 4K in every part of the image, from center to edge. Both a higher level of representational precision and a more compact lens system are achieved. Plus, all lenses are glass, while aspheric lenses are also used extensively to reduce aberrations to the ultimate degree. The clear depiction, sharp resolution and beautiful color reproduction necessary for true 4K monitoring have all been successfully achieved.

EASY INSTALLATION

Various design features have been added to shorten installation times. The camera has also been designed to be capable of pointing in the preferred direction at the preferred location.

Dome Type WV-SFV781L

When attached to the mounting plate, the camera's direction can be easily changed at intervals of 90°. Rotating the viewing area around the lens further allows the lens to be pointed in the desired direction. The combination of a 6x optical zoom and autofocus also shortens the amount of time required for fine tuning the installation.



Box Type WV-SPV781L

A total of three adjustment points on the camera base and arms enables its position to be fine-tuned to allow accurate pointing.

Panasonic

VIDEO INSIGHT v6 – VIDEO MANAGEMENT SOFTWARE NOW BUNDLED WITH MONITORCAST (ACCESS CONTROL)



Now Supporting i-PRO Extreme H.265 Cameras
Including Bundled VI Software License on all Panasonic and Advitia Cameras.

Panasonic acquired Video Insight, a leading developer of video management software, to expand its surveillance recording and monitoring capabilities and fulfill the company's ongoing strategy of delivering choice and flexibility to end users.

Video Insight is a member of the Panasonic Group and a leading IP video surveillance management software used by over 25,000 customers in the financial, government, retail, and transportation sectors with a very strong presence in the education market consisting of 5,000 K-12 school/college customers. Video Insight is the easiest and most cost-effective Enterprise VMS with support for over 3,000 camera models and integration with the top access control solutions in the market.

Panasonic is including a bundled camera license with all recent-model i-PRO and Advitia cameras in combination with Video Insight software. For a list of Panasonic camera models bundled with a unlimited camera license, visit us.panasonic.com/VideoInsight.

MONITORCAST

MonitorCast is an enterprise access control product that comes bundled with VI Monitor 6. MonitorCast v3.5 features compliant most facilities, allowing them to access to the most used features in the access control industry. In addition, MonitorCast is designed to support Mercury access control boards.



VI TV

VI TV is a security camera video management app on Apple TV that allows users access to live and recorded video from any camera on any Video Insight server.



PRE-CONFIGURED SERVERS

Video Insight Servers come pre-loaded, activated, and tested with the full Video Insight Software Suite. The "plug and play" servers are ready immediately out-of-the-box for a quick start to record and view your cameras. We have a wide variety of NVR configurations available based on the number of IP cameras, the amount of storage, and the processing capacity. Both towers and rack mounts are available. For a full list of pre-configured servers, please visit business.panasonic.com/products-video-surveillance-servers.

ADVIDIA

The Advitia brand is a solid performing yet cost effective product set that when coupled with the Video Insight Recording Solution, offers a perfect complement to the Panasonic brand of highly featured products and solutions. Advitia cameras come in many different form factors (bullet, dome & PTZ) to meet your needs. Visit business.panasonic.com/advitia for more information.

advitia

YOUR SYSTEM SCALES WITHOUT LIMITATIONS

Video Insight's 64-bit VMS supports an industry-leading number of cameras per server, unlimited scalability, client workstations, users with simple integration to legacy systems, centralized administration of the system and more.

LOWER TOTAL COST OF OWNERSHIP (TCO) THAN ANY OTHER ENTERPRISE VMS

Affordability, flexibility and a simple licensing model are what sets Video Insight apart. VI provides the most cost-effective enterprise-class VMS solution on the market. With Video Insight, end users receive a perpetual license that includes a wide range of enterprise features—and no hidden fees.

EASY INTEGRATION WITH EXISTING SYSTEMS

Video Insight easily integrates with your existing systems, including access control and building management. Our robust SDK and API make it easy to integrate video or alarms into a centralized console.

MAXIMIZE UPTIME AND PROTECTION

Maximize protection with redundant recording to multiple Network Video Recorders (NVRs), Health Monitor, automated failover, and easy-to-use load balancing allow migration of cameras between servers. All of these features can provide high system availability for both live and recorded video at all times. User access privileges and security features ensure tamper-free protection of all your video, data and audio.

VI MOBILE—SURVEILLANCE ANYWHERE

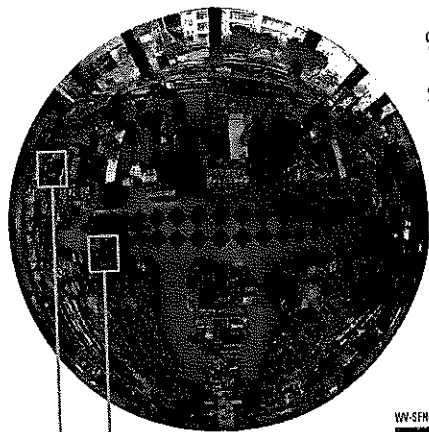
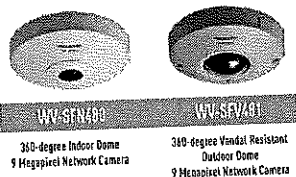
VI Mobile is a video management system app that allows authorized "on the go" users to access live and recorded video from any camera on any server. Users can view and control PTZ cameras, and view images in full resolution and high frame rates with H.264. The app imports all settings from a single address, providing users access to individual cameras or groups of cameras in predefined layouts. Users can save or email snapshots, view recorded images by alarm or specific times and view thumbnail images on facility maps. Users can also trigger events to display customized actions on Monitor Station/VI Monitor directly from mobile devices.



DELIVERING SHARPER IMAGES WITH HIGHER SENSITIVITY

Presenting a 9 Megapixel 360-degree Network Camera with Built-In Analytics.

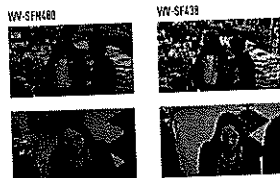
ULTRA 360
4K



9M (3K x 3K) HIGH-RESOLUTION
H.264 PERFORMANCE ENABLES
SHARP RENDERING OF OBJECTS
AND PEOPLE'S FACES AT THE
EDGE SECTIONS OF THE FISHEYE

NOW WITH SMART CODING

UP TO 80%
BANDWIDTH REDUCTION



Panasonic

COMPLETE WITH POWERFUL ANALYTICS BUILT-IN

HEAT MAP*

This provides visualization of the traffic patterns by people and how long they stay in one place. For example, you can place products based on how people tend to flow within the store and arrange objects so that they do not interfere with the movement of people.

*Requires WV-SFV431 camera.

PEOPLE COUNTING

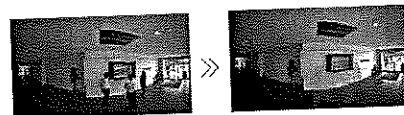
This counts the number of people passing through a selected preset location. The People Counting function can provide statistics on the number of people entering and leaving a specific zone and other useful data.



MOVING OBJECT REMOVAL (MOR)

Enables monitoring of changes only to the surrounding environment by removing people and other moving objects from the video. This function can be used with camera images for confirming how products placed in a salesroom are selling while also respecting the privacy of customers in store surveillance.

*Requires WV-SFV431 camera.



The ULTRA 360-degree lineup features the "Three Ultras" for establishing a new standard for video monitoring.

ULTRA HIGH RESOLUTION

Includes a 12-megapixel high-sensitivity sensor capable of 4K image output for producing high-resolution images up to 9M (3K x 3K) in Fisheye mode. Detailed monitoring in all directions using the wide range of distribution modes and Multi-stream. (Fisheye mode, Panorama mode, Double Panorama mode, Quad PTZ mode, Single PTZ mode, 4 Stream mode).

ULTRA HIGH SENSITIVITY

Provides natural-looking, crystal-clear images even in dim locations. Includes a new powerful image sensor and new lens. Automatic switching between day/night shooting modes and the linked Auto Back Focus enables monitoring even in dim environments.

ULTRA INTELLIGENT

Heat-map / People Counting (Cross line) / MOR (Moving Object Removal). Focuses on the movement of people for providing a video-based intelligent solution for use in marketing.

Panasonic

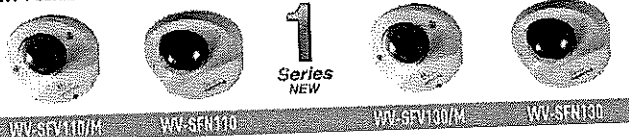
STANDARD H.264 LINE-UP FEATURES HIGH PERFORMANCE & NEW SMART CODING TECHNOLOGY



The next-generation UniPhier® Camera Platform is the heart of Panasonic's top-of-the-line 6 Series, midrange 5 Series, 3 Series and now entry-level 1 Series camera lines. Featuring a newly developed high-sensitivity MOS Sensor and Shadow H.264 Compression Engine, the powerful UniPhier® Platform delivers sharp and natural color images with exceptional low-light performance capability (down to .01 lux). The new Codec Engine attains the best video compression performance to provide superb image quality while providing savings on bandwidth and the recording system.

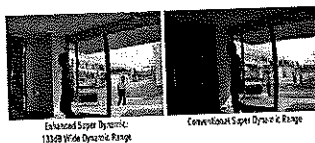
The UniPhier® Platform—developed exclusively by Panasonic for use in its 6, 5, 3 and 1 Series cameras—offers innovative functions like Enhanced Super Dynamic Range (133dB) video dynamic range and 60-frames-per-second performance in 1080p and 720p, delivering outstanding performance even in the most dynamic and challenging lighting conditions. The cameras have the ability to encode up to four H.264 streams to ensure simultaneous real-time monitoring, high-resolution recording and mobile access.

NEW 1 SERIES MODELS NOW AVAILABLE



ENHANCED SUPER DYNAMIC LIGHT RANGE COMPENSATION

Featuring industry-leading 133dB (1 Series up to 122dB) Enhanced Super Dynamic and Adaptive Black Stretch (ABS) technologies, the new 1/3/5/6 Series cameras allow you to see images that you couldn't see before.



EXCEPTIONAL IMAGE QUALITY

The 3/5/6 Series cameras' ultrafast frame rate of 60 fps combines with their high-resolution video quality to ensure crisp, smooth motion for applications in casinos, airports, stadiums and much more.



SMART CODING REDUCES BIT RATES UP TO 80% WITHOUT SACRIFICING IMAGE QUALITY

Smart Coding is the only in-camera surveillance technology that reduces bandwidth usage up to 80% without sacrificing video quality. This more efficient, fully compliant H.264 implementation delivers the same high quality resolution and frame rates to preserve forensic detail, while substantially lowering your storage and network costs.

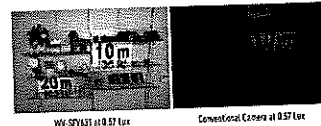
Panasonic combines three advanced signal processing technologies—Group of Picture Control, 3D-Multi-Process Noise Reduction and Frequency Divided Filter—which together provide a bit rate reduction of up to 80%, in the video without losing image quality.

This breakthrough innovation comes standard on all new 1, 3, 5 and 6 Series cameras, or as a free upgrade for these models.

UP TO 80%
BANDWIDTH REDUCTION

HIGH SENSITIVITY WITH MULTIPROCESSING NOISE REDUCTION

With a combination of 3D noise reduction and multiprocess noise reduction (MNR), both the bright area and the dark area of an image are faithfully reproduced with minimum noise in high-sensitivity image recording.

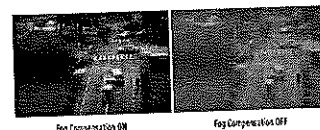


EASE OF INSTALLATION

The 1/3/5/6 Series cameras are easy to install, with six patterns of holes for various gang boxes, a 4-point locking mechanism to simplify the mounting direction, a non-screw lock PTZ mechanism to enable quicker angle adjustment and a flat-bottom body to enable installation without a surface mounting unit.

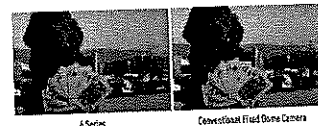
WEATHER COMPENSATION

To help improve the captured image in poor weather conditions, such as smog, fog or smoke, the visibility of the 1/3/5/6 Series cameras can be enhanced in any weather condition.



SMART DOF (DEPTH OF FIELD)—6 SERIES ONLY

With this new feature, a 6 Series camera controls both the iris and the shutter to deliver a deeper depth of field. The depth of field (DOF) is automatically optimized to enhance focus for both near and far objects within the camera's view.

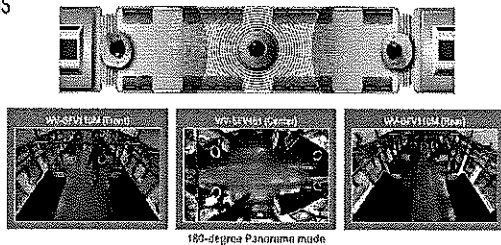


FOR MORE INFORMATION ON 6, 5, 3, AND 1, VISIT www.us.panasonic.com/uniphier

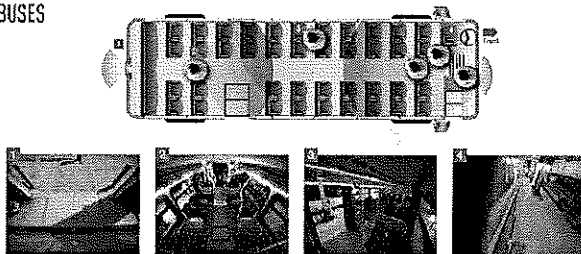
TRANSIT SURVEILLANCE SOLUTIONS

Our NEW i-PRO Transit solution equips transit agencies with the tools to provide a safer environment for bus passengers and drivers while protecting the vehicles from theft and vandalism and reducing expensive manpower requirements to manually upload video data. The system provides complete video surveillance of the inside and outside of the bus—improving response times to incidents as well as increasing the chances of arrest and conviction should a crime occur, helping reduce time spent in litigation.

IN TRAINS



IN BUSES



Wide Coverage without Blind Spots

The application of rain-wash coating to the dome cover provides clearer visibility, allowing good security to be maintained even when the camera is installed in an environment subject to rain or water splashing. In addition, the coating resists attachment of dirt to the dome cover, and also allows dirt to be washed off easily during rainfall or other exposure to water.

Compatible with EN50155 "Railway applications" and EN45545 "Fire safety on rolling stock"

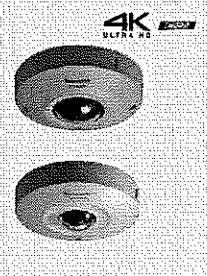
EN50155 "Railway applications": Electronic equipment used on rolling stock
EN45545 "Fire safety on rolling stock": Preventive fire protection in railway vehicles - Fire behavior and fire side effects of materials and parts.

Panasonic

TRANSIT SOLUTION RELATED PRODUCTS

340-degree Dome Network Cameras

- VV-SFV41**
 - 340° monitoring with a wide variety of transmission modes: Panorama, Double Panorama, Quad P12, Single P12, and Quad streams (H.264)
 - 9 mega (1,920x1,080) pixel images up to 15 fps by new 4K ULTRA HD engine
 - Compatible with EN50155 "Railway applications" and EN45545 "Fire safety on rolling stock"
 - Low profile design for discrete installation
 - Vandal resistant mechanism for high reliability
 - IP66 rated water and dust resistant. Compatible with IEC60529 measurement standard, Type 4X (UL50), NEMA 4X compliant



- VV-SW40MA**
 - 340° monitoring with a wide variety of transmission modes: Panorama, Double Panorama, Quad P12, Single P12, and Quad streams (H.264/H.265)
 - 1080p Full HD images up to 30fps
 - Compatible with EN50155 "Railway applications" and EN45545 "Fire safety on rolling stock"
 - Low profile design for discrete installation
 - Vandal resistant mechanism for high reliability
 - IP66 rated water and dust resistant. Compatible with IEC60529 measurement standard, Type 4X (UL50), NEMA 4X compliant

Compact Size Dome Network Camera

- VV-SFV136H/110H**
 - 1080p Full HD images (VV-SFV136H, 720p HD images (VV-SFV110H) up to 30 fps
 - High sensitivity with Day/Night (Btechnical) function: 8.04 lx (Color), 0.01 lx (B/W) at F2.1 (VV-SFV136H)
 - Compatible with EN50155 "Railway applications" and EN45545 "Fire safety on rolling stock"
 - Low profile design for discrete installation
 - Vandal resistant mechanism for high reliability
 - IP66 rated water and dust resistant. Compatible with IEC60529 measurement standard, Type 4X (UL50), NEMA 4X compliant



Rugged Mobile Network Camera

- VV-SBV131M / VV-SBV11M**
 - 1080p Full HD images (VV-SBV131M, 720p HD images (VV-SBV11M) up to 30 fps
 - High sensitivity with Day/Night (Btechnical) function: 8.04 lx (Color), 0.01 lx (B/W) at F2.1 (VV-SBV131M)
 - The camera conforms to the IP66, Type 4X (UL50) and IP67, is compliant with NEMA 4X ratings, and provides high dust resistance and waterproof performance
 - Achieves high shock resistance with EN50155 and MIL-STD-883C compliance
 - Adoption of a scratch resistant dome cover with a compact and sleek design is optimal for cameras installed on the outside of a vehicle
 - Vandal resistant mechanism for high reliability

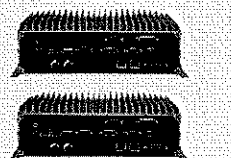


Transit Recorders

- i-PRO TRANSIT NETWORK VIDEO RECORDER**
 - Powered by the latest "Core i7" Processor for high-speed performance
 - Runs Windows® 7/8 for optimal software compatibility
 - Supports two SATA Ethernet connections

RECOMMENDED MOBILE RECORDER FOR BUS (LVIC7110)*

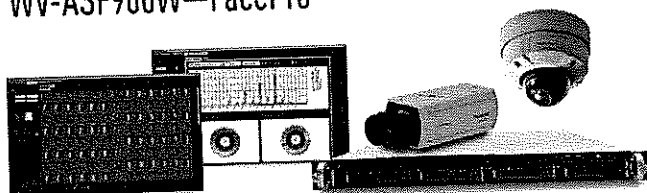
- Bring unrivaled computing power and exceptional video graphics handling onto the bus with this rugged, mobile-ready recorder. With its ability to record and wirelessly transmit HD video from up to four IP cameras (up to 16 with an optional expansion switch), transit control rooms can be given complete situational awareness of the vehicle in real time.



* This is a product from Panasonic International Co., Ltd. Contact a local representative for purchase.

Panasonic

WV-ASF900W—FacePro™



Windows® server-based face recognition and analytics platform featuring high-speed face searching and matching.

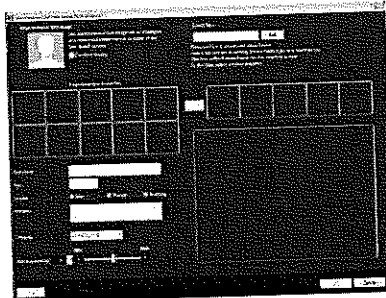
The WV-ASF900W FacePro™ Facial Recognition is a software solution and software engine that automatically performs verification of a person's face using live video streams or digital images from Panasonic i-PRO cameras to match against a database of enrolled faces and perform notification and alerting of face matches. Boasting a real-time processing capacity of up to 20 cameras per server, FacePro can execute high-speed searches of up to 1,000 registered reference faces on both live and recorded video, and each server can store up to 10 million detected face images depending on configuration.

For flexibility, reference face images can be registered from source video or imported via BMP, JPG and PNG files and can be searched for a match in a matter of seconds. FacePro also provides advanced age and gender analytics reporting and the ability to set flexible alarm triggers on matched faces using live cameras. The platform can support multiple simultaneous client sessions with Panasonic's WV-ASM200W and WV-ASM970W software applications.

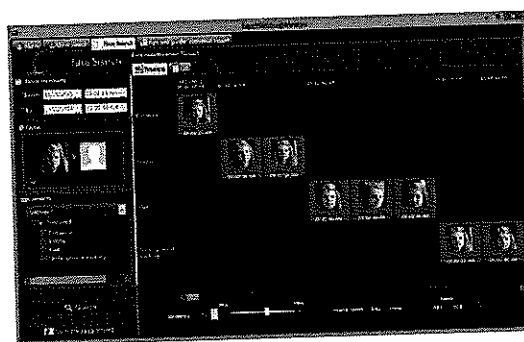
In addition to live-camera face matching, FacePro features the ability to perform searches and display face matches from a database of historical captured faces. Face match results are displayed for each camera in the system and in chronological order, enabling you to quickly track a person of interest moving through your facility. More refined face searching can be performed by specific camera or date.

How Do I Benefit from FacePro Facial Recognition?

It reduces costs by eliminating personnel to monitor entrances; it provides instant notification and lowers your risk by reducing and preventing violent confrontations during capture, as well as by instantly alerting you of unwanted persons entering your facility. It's simple and easy to use and does not require physical contact, and it's the only feasible solution to use with large crowds in your facility. In addition, it improves your service and sales potential by recognizing customers.



Its analysis capabilities permit you to count the number of detected faces and evaluate their age and gender, displaying the results on the screen as a statistical graph. This graphical view of a visitor's age and gender can be provided with a 15-minute, 30-minute, hourly, daily, weekly and monthly view for retail and marketing applications. This statistical data can be saved as a CSV file for analytical use.



- Fast multicamera face matching on both live and previously captured video
- Real-time processing capacity of up to 20 cameras* per server with a 10 million-face database capacity
- Enrollment of 1,000 "Known Faces" into "Watch Lists" for Instant Match Alerts
- High-speed search of video recordings based on reference faces (5 million captured faces searched in about 3 seconds)
- Utilizes Face Best-Shot option (SAE-ASF), available for Panasonic i-PRO cameras (WV-SP306, WV-SP305 and WV-SC385 models and WV-SPN631, WV-SPN611, WV-SPN531, WV-SPN311 models and WV-SFV631LT model)
- Flexible alarm triggers on matched faces using live cameras
- Requires ASM300/ASM200/ASM970 client software
- Ideal for Panasonic customers who have either WJ-ND400 or WJ-KV200/300 NVR

*10 cameras or more not available for FacePro server 100.

KEY BENEFITS OF PANASONIC VIDEO SURVEILLANCE CAMERAS

HIGH PICTURE QUALITY, HIGH SENSITIVITY

Providing natural looking, sharp video optimized for a wide range of installation environments and conditions.

HIGH RESOLUTION

The Panasonic F-PRO SmartHD Series of network cameras are high definition (HD) cameras capable of shooting video at Full HD (1,920x1,080) and HD (1,280x720). These cameras can record up to 60 images per second (60 fps), even at Full HD resolution for the capture of exceptionally clear images of moving objects. The resolution, frame rate, and other parameters can be adjusted for the installation location and subject for obtaining the optimum settings for your specific environment.



Smart Def Depth Field
The F-PRO SmartHD Series cameras are ideal for shooting in locations with depth. When recording areas with depth, such as airports, passageways or walkways, the optimum images can be captured with back points simultaneously at both the near and far ends of the image.

ENHANCED SUPER DYNAMIC

In installation environments with differences in brightness, the Super Dynamic (SD) function lightens dim areas with low visibility and reduces the brightness of areas where strong light highlights can occur. Due to over-brightness, providing a natural image that is easy to view. In building entrances and similar locations, this enables the capturing of sharp images of people's faces as they enter from the outside when exposed to direct sunlight.

With the Super Dynamic (SD) function, the camera can be installed without worrying about lighting conditions that vary based on the time of day and season.



DAY/NIGHT AUTOMATIC MODE SWITCHING

In stores, warehouses, and other locations where it is bright during the day but dark at night, the camera can automatically determine the brightness of the area and record video under the optimum conditions. During nighttime hours, the camera automatically switches to black-and-white video for providing footage with high visibility.



0 LUX PITCH DARK LOCATIONS

Cameras with a Smart IR LED can be used to monitor environments that are completely dark. This enables areas without the level of illumination required to be monitored to prevent graffiti, illegal dumping, and property destruction.

Smart IR LED can illuminate a wide area so that monitoring is not limited to a specific part of the image. The built-in IR LED of the 4 Series can capture subjects up to 30 meters away. Light levels are automatically adjusted for blown-out highlights and screen whitening when the IR LED shines on a subject close-by, making the right areas highly visible. The IR LED is covered to make it difficult to detect from the outside or to know which way the lens is pointing.



STRONG LOW LIGHT PERFORMANCE IN COLOR

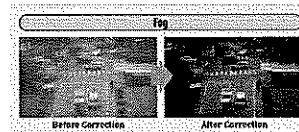
Monitoring is possible even in dim locations. Panasonic's proprietary technology enables high-sensitivity shooting that enables distinguishing of color lines even in dimly-lit locations.



IMAGE COMPENSATION

FOG / SANDSTORM COMPENSATION

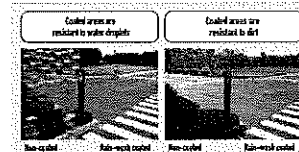
A full array of features are provided for optimum shooting in fog, sandstorms, and other hazy environments. Hazeiness due to fog or a sandstorm is automatically removed by this function providing clear, sharp video footage.



VISIBILITY ENHANCEMENT COATING

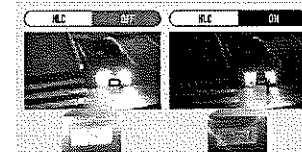
Water droplets from rain can adhere to the dome cover of the camera and hinder the shooting of clear images. In our Rain-Wash Coated models, a special coating is applied so that water droplets are repelled allowing clear images to be recorded even during rainfall. This coating is also effective at repelling dirt so that cleaning of the dome cover is required less frequently.

* SEE SPECIFICATIONS AND SAMPLES FOR DETAILS AND CAPABILITY. CAPABILITY MAY VARY.



HIGH LIGHT COMPENSATION

For cameras installed at locations along roads or at entrances and exits to parking lots, the glare of headlights and other strong light sources shining into the camera lens can prevent the recording of license plates and surrounding areas. Enabling the HLC (High Light Compensation) function reduces the brightness of strong light sources and enhances the surrounding areas for optimum video recording.



* The appearance of the image is subject to change depending on the camera model, lens, and the location of the camera.

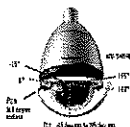
* The appearance of the image is subject to change depending on the camera model, lens, and the location of the camera.

MONITORING WITHOUT BLIND SPOTS

PTZ (Pan-Tilt-Zoom) cameras and omnidirectional cameras enable wide-area monitoring. Multiple cameras can be combined for more efficient monitoring and to eliminate blind spots.

PTZ CAMERA FOR WIDE RANGE MONITORING AND A HIGH ZOOM RATIO

Normal fixed lens cameras can only monitor in a certain direction, but the lens of a PTZ camera can be operated remotely to switch to the direction you want to view. Detailed areas can also be zoomed in to a maximum of 90x. Since the cameras can be infinitely rotated 360 degrees at a high speed of 300 degrees/sec, you will not miss the subjects you want to monitor.



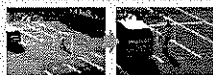
Pre-set Position / Pre-set Sequences

If the locations you want to monitor are fixed, you can register them in advance and move to them with a single touch or automatically patrol the registered locations. Data can be saved for a month when automatically patrolling the registered locations, without intervention by an operator. Angles that cannot be covered with a single fixed lens camera can be covered by patrolling.



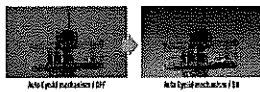
Advanced Auto Tracking

The pan, tilt, and zoom functions can be combined for automatically tracking the movement of a subject. If the tracked subject moves out of the camera's detectable range, automatic tracking is suspended and the tracking process can be carried on without interruption.



AUTO EYE-UP MECHANISM (AEM)

When the direction of the camera lens is tilted upward from the horizontal plane, the video image can appear cut off due to the decreasing effect of the time speed and other causes. The Panasonic WV-SW6000 uses an AEM function to reduce this double image effect and enables shooting of images up to 15° upward from the horizontal plane. This allows the use of auto tracking and other functions over a wider movement range of the subject.



360-DEGREE MONITORING

The 360-degree Network Camera can capture images around the camera in its local direction. Available models include Fisheye, Omnidirectional, Panorama, Dual PTZ, and 4-Stream, and the camera can display video images based on the selected video mode for reduced loads on the viewing system.



DE-WARPING

The 360-degree Network Camera can generate and output video images for each mode within the camera unit. Also, the Network Data Recorder (NDR) NDR200 or NDR200 Management Software (NDR MGMT) can be used as 360° omnidirectional images captured by Fisheye Mode to convert to a format that is easier to view, such as Dual PTZ. Because the 360° omnidirectional video image is stored in the recorder, nothing is missed within the viewing area.

In addition, the area that you want to view can be reflected using a coordinate or image to allow you to automatically move the viewing spot for patrolling the area. Even during patrolling, areas not visible on the screen are all stored by the recorder in Fisheye Mode so that nothing is left unseen. The Pan-Tilt of the 360-degree Network Camera does not use mechanical components, and so provides a smooth movement without the mechanical wear that could adversely affect camera longevity.



SUPPORT FOR VARIOUS INSTALLATION ENVIRONMENTS

Panasonic network cameras are available in a full lineup of products custom-tailored for a wide range of installation environments. Their specialized design also helps to reduce the work required for installation.

SELECT THE SPECIALIZED MODEL FOR YOUR INSTALLATION ENVIRONMENT

Waterproof protection for outdoor installations

The outdoor models have a waterproof and dustproof structure that is rated IP66 for outdoor installations without requiring installation in a special housing or other weatherproofing protection.



Temperature protection for outdoor installations

Models can be selected to match your specific installation conditions and can be installed in environments with temperatures ranging from +55°C to -55°C. *The supported temperature range varies depending on the specific model.



DEHUMIDIFICATION DEVICE

The network camera outdoor models have a built-in dehumidifier device to lower the internal humidity by generating heat during the day. This eliminates blurry video images caused by condensing of the camera lens cover when installed in locations with high humidity or extreme temperature changes over the course of the day.



Vandal Resistant

When installed in locations that are prone to vandalism and tampering, measures are required for preventing damage to the camera. Models featuring the Vandal Resistant mechanism are ideal for installation in these types of locations.



VANDAL RESISTANT MECHANISM

Models featuring the Vandal Resistant mechanism include a shock absorber around the internal lens. Even if the camera is subjected to a potentially damaging impact, the shock absorber will absorb the impact to protect the internal structure from damage.



*Temperature range and dehumidification effect may vary depending on the models. See the instruction manual for each model.

*Supports all languages and codes. Codes are not necessary in this manual. See the instruction manual for each model.

Onboard Model

Reduced Installation Time

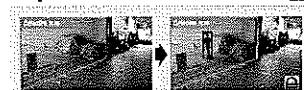
Mount on the Outside of the Vehicle

AEF (Auto back Focus)

INTELLIGENT VIDEO MOTION DETECTION

INTRUDER DETECTION

Crossing over the fence



Debits

DIRECTION DETECTION*

Objects moving in a specified direction



Abstract

OBJECT DETECTION 7

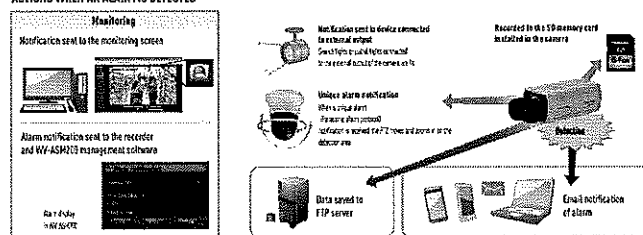
Removed Object Detection



Defects

- 20% of the population are left-handed
- 20% of the population are right-handed




ACTIONS WHEN AN ALARM IS DETECTED






¹⁰ See, e.g., *United States v. Galt*, 2008 WL 1020006 (S.D. Cal. Mar. 11, 2008) (finding that the defendant's use of a computer to access a website constituted a violation of the Computer Fraud and Abuse Act, 18 U.S.C. § 1030(a)(2)(A)).

NETWORK PRODUCTS



Panasonic

COLLECTIVE		PART NUMBER		
Appearance				
Sensor		1/3" CMOS	1/3" CMOS	1/3" CMOS
Color and Transmittance	Video Codec	H.264 / JPEGS	H.264 / JPEGS	H.264 / JPEGS
	B.264 multi stream	4	2	2
	JPEGS multi stream	6 (4+2+0)	4	4
Max. Resolution		1920 x 1080	1920 x 1080	1920 x 1080
Max. FPS		30 fps (1080p)	30 fps (1080p)	30 fps (1080p)
Max. FPS		30 fps (1080p)	30 fps (1080p)	30 fps (1080p)
Super Dynamic / WDR / HLC		Super-0	Super-0	Super-0
Day/Night		Yes (ICR)	Yes (ICR)	Yes (ICR)
AFB (Auto Back Focus) / Focus Assist		Auto Focus	Auto Focus	Auto Focus
Min. Illumination	Color	0.04 lx (0.1 lx)	0.15 lx (0.1 lx)	0.2 lx (0.1 lx)
	Color (Sens up)	0.04 lx (0.1 lx)	0.05 lx (0.1 lx)	0.05 lx (0.1 lx)
	B/W	0.01 lx (0.1 lx)	0.01 lx (0.1 lx)	0.01 lx (0.1 lx)
Lens		4-12 mm, F1.8	4-12 mm, F1.8	4-12 mm, F1.8
Angular Field of View		11.3°	11.3°	11.3°
Pan		Range: 0° to 355°	Range: 0° to 355°	Range: 0° to 355°
Tilt		Range: 0° to 90°	Range: 0° to 90°	Range: 0° to 90°
Zoom		Speed: 200 deg/sec	Speed: 200 deg/sec	Speed: 200 deg/sec
360° Pan-Tilt		Yes	Yes	Yes
Number of Preset Positions		256	256	256
Pattern		Yes	Yes	Yes
Auto Tracking		Yes	Yes (Advanced)	Yes (Advanced)
Optical Zoom		30x	30x	30x (4x with Extra Zoom in HLC)
Digital Zoom		12x	12x	12x
I-VMD (Video Motion Detection)		Yes (1-axis)	Yes (1-axis)	Yes (1-axis)
I-VMD (Intelligent VMD) (with version software)		Yes (1-axis)	Yes (1-axis)	Yes (1-axis)
VMD		Yes (1-axis)	Yes (1-axis)	Yes (1-axis)
Max. Connection		16	16	16
Audio	In (Built)	Yes	Yes	Yes
	In (Built-in MIC)	Yes	Yes	Yes
	Out	Yes	Yes	Yes
Audio Detection Alarm		Yes	Yes	Yes
SD memory Card		Yes	Yes	Yes
External I/O		Yes (1x1)	Yes (1x1)	Yes (1x1)
Monitor Out		Yes (1x1)	Yes (1x1)	Yes (1x1)
Weather Resistance		Yes (IP66)	Yes (IP66)	Yes (IP66)
Temperature		-30°C to +60°C	-30°C to +60°C	-30°C to +60°C
Power Source		AC100 to 240V / ACW / PoE+	AC100 to 240V / ACW / PoE+	AC100 to 240V / ACW / PoE+
Dehumidification device		Yes	Yes	Yes
Other Functions		Built-in WDR, Defogger	Built-in heater, Auto wash coating, Auto type of protection	Built-in heater, Auto type of protection, Rain wash coating (WV-SW597B)
Mounting Options		See page 50	See page 50	See page 50

P.10 Only to P.10C P.10C: New to Onvif 1.0, New to Onvif 1.0, New to Onvif 1.0, New to Onvif 1.0, New to Onvif 1.0

COLLECTIVE		PART NUMBER		
Appearance				
Sensor		1/3" CMOS	1/3" CMOS	1/3" CMOS
Color and Transmittance	Video Codec	H.264 / JPEGS	H.264 / JPEGS	H.264 / JPEGS
	B.264 multi stream	2	2	2
	JPEGS multi stream	4	4	4
Max. Resolution		1920 x 1080	1920 x 1080	1920 x 1080
Max. FPS		30 fps (1080p)	30 fps (1080p)	30 fps (1080p)
Max. FPS		30 fps (1080p)	30 fps (1080p)	30 fps (1080p)
Super Dynamic / WDR / HLC		Super-0	Super-0	Super-0
Day/Night		Yes (ICR)	Yes (ICR)	Yes (ICR)
AFB (Auto Back Focus) / Focus Assist		Auto Focus	Auto Focus	Auto Focus
Min. Illumination	Color	0.15 lx (0.1 lx)	0.15 lx (0.1 lx)	0.15 lx (0.1 lx)
	Color (Sens up)	0.05 lx (0.1 lx)	0.05 lx (0.1 lx)	0.05 lx (0.1 lx)
	B/W	0.01 lx (0.1 lx)	0.01 lx (0.1 lx)	0.01 lx (0.1 lx)
Lens		4-12 mm, F1.8	4-12 mm, F1.8	4-12 mm, F1.8
Angular Field of View		11.3°	11.3°	11.3°
Pan		Range: 0° to 355°	Range: 0° to 355°	Range: 0° to 355°
Tilt		Range: 0° to 90°	Range: 0° to 90°	Range: 0° to 90°
Zoom		Speed: 200 deg/sec	Speed: 200 deg/sec	Speed: 200 deg/sec
360° Pan-Tilt		Yes	Yes	Yes
Number of Preset Positions		256	256	256
Pattern		Yes	Yes	Yes
Auto Tracking		Yes	Yes (Advanced)	Yes (Advanced)
Optical Zoom		30x	30x	30x (4x with Extra Zoom in HLC)
Digital Zoom		12x	12x	12x
I-VMD (Video Motion Detection)		Yes (1-axis)	Yes (1-axis)	Yes (1-axis)
I-VMD (Intelligent VMD) (with version software)		Yes (1-axis)	Yes (1-axis)	Yes (1-axis)
VMD		Yes (1-axis)	Yes (1-axis)	Yes (1-axis)
Max. Connection		16	16	16
Audio	In (Built)	Yes	Yes	Yes
	In (Built-in MIC)	Yes	Yes	Yes
	Out	Yes	Yes	Yes
Audio Detection Alarm		Yes	Yes	Yes
SD memory Card		Yes	Yes	Yes
External I/O		Yes (1x1)	Yes (1x1)	Yes (1x1)
Monitor Out		Yes (1x1)	Yes (1x1)	Yes (1x1)
Weather Resistance		Yes (IP66)	Yes (IP66)	Yes (IP66)
Temperature		-30°C to +60°C	-30°C to +60°C	-30°C to +60°C
Power Source		AC100 to 240V / ACW / PoE+	AC100 to 240V / ACW / PoE+	AC100 to 240V / ACW / PoE+
Dehumidification device		Yes	Yes	Yes
Other Functions		Built-in WDR, Defogger	Built-in heater, Auto type of protection, Rain wash coating (WV-SW598A)	Built-in heater, Auto type of protection, Rain wash coating (WV-SW597A)
Mounting Options		See page 50	See page 48, 49	See page 48, 49

P.10 Only to P.10C P.10C: New to Onvif 1.0, New to Onvif 1.0, New to Onvif 1.0, New to Onvif 1.0, New to Onvif 1.0

Camera Type		Page 10 of 20	
Appearance		 OmniV H WV-SC385 W0775P	 OmniV H WV-SC384 W0774P
Sensor		1/3 MOS	1/3 MOS
Color and Format/Resolution	Video Codec	H.264 / MPEG-4 / JPE	H.264 / MPEG-4 / JPE
	Color and Format/Resolution	M-JPEG (stream)	M-JPEG (stream)
	JPEG mode stream	5	5
	Smart Coding	--	--
Max. Resolution	16:9	1280 x 720	1280 x 720
	4:3	1024 x 768	1024 x 768
Max. FPS	M-JPEG	30 fps (12.5 FPS)	30 fps (12.5 FPS)
Optim. Resolution	JPEG	30 fps (12.5 FPS)	30 fps (12.5 FPS)
Support Dynamic I/PMB / H.264		Yes (H.264)	Yes (H.264)
Day/Night		Auto focus	Auto focus
AIM (Auto Back Focus) / Focus Assist		Yes (H.264)	Yes (H.264)
	Focus	0.5 to 0.01 ft	0.5 to 0.01 ft
	Color (H.264)	0.03 to 1 ft	0.03 to 1 ft
	AIM	0.03 to 0.01 ft	0.03 to 0.01 ft
	AIM (Smart)	0.03 to 1 ft	0.03 to 1 ft
Lens		5-13 to 64.4 mm, F1.8	5-13 to 64.4 mm, F1.8
Angular field of view	16:9	H: 31 to 55.2 deg, V: 1.9 to 33.9 deg	H: 33 to 55.2 deg, V: 1.9 to 33.9 deg
	4:3	H: 32 to 55.2 deg, V: 2.4 to 47.1 deg	H: 32 to 55.2 deg, V: 2.4 to 47.1 deg
Pan	Range	0 to 350 deg	0 to 350 deg
	Speed	300 deg/sec	300 deg/sec
	Range	-30 to +90 deg	-30 to +90 deg
Tilt	Range	100 deg/sec	100 deg/sec
	Speed	Yes	Yes
Self Pan-Tilt		Yes	Yes
Number of Preset Positions		16	16
Preset		Yes	Yes
Auto Tracking		Yes	Yes
Digital Zoom		16x	16x
Digital Zoom		Yes (H.264)	Yes (H.264)
Video (Video Motion Detection)		Yes	Yes
I/O (H.264, MPEG-4, JPE, H.264, JPE, H.264, JPE)		Yes	Yes
VGA		Yes	Yes
Face Connection		Yes	Yes
Audio	In (In)	Yes	Yes
	In (H.264, JPE)	Yes	Yes
	Out	Yes	Yes
	Out	Yes	Yes
Audio Detection Alarm		Yes (H.264)	Yes (H.264)
Tilt		Yes (H.264)	Yes (H.264)
SD Memory Card		Supported	Supported
External I/O		Yes (H.264)	Yes (H.264)
Monitor Out		Yes (H.264)	Yes (H.264)
Updte Resolution		Yes (H.264)	Yes (H.264)
Water and Shock Resistance		Yes (H.264)	Yes (H.264)
Temperature		-10 to +55 deg	-10 to +55 deg
Power-Save		Yes (H.264)	Yes (H.264)
Access (Access On device)		Yes (H.264)	Yes (H.264)
Other Functions		Yes (H.264)	Yes (H.264)

[illegible]

NETWORK PRODUCTS

[illegible][illegible]





NETWORK PRODUCTS

Camera Type	OmniView WV-SF8531 807122P	OmniView WV-SF8531A 807122P	OmniView WV-SF8531A 807122P	OmniView WV-SF8531L 807122P
Series	WV-SF8531	WV-SF8531A	WV-SF8531A	WV-SF8531L
Color and Transmission	Video Output H.264/H.265 2/10/100/1000 Smart Coding Yes	Video Output H.264/H.265 2/10/100/1000 Smart Coding Yes	Video Output H.264/H.265 2/10/100/1000 Smart Coding Yes	Video Output H.264/H.265 2/10/100/1000 Smart Coding Yes
Max. Resolution	10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")	10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")	10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")	10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")
Max. FPS @ Max. Resolution	30FPS 30FPS (10.8MP) 30FPS (10.8MP)	30FPS 30FPS (10.8MP) 30FPS (10.8MP)	30FPS 30FPS (10.8MP) 30FPS (10.8MP)	30FPS 30FPS (10.8MP) 30FPS (10.8MP)
Super Dynamic / WDR / BLC	Enhanced SD Yes (SD)	Enhanced SD Yes (SD)	Enhanced SD Yes (SD)	Enhanced SD Yes (SD)
Day/Night	Yes (SD)	Yes (SD)	Yes (SD)	Yes (SD)
AIH (Auto Back Focus) / Focus Assist	Yes (SD)	Yes (SD)	Yes (SD)	Yes (SD)
Min. Illumination	Color 0.01 lx @ 1/3 Color (Sens. up) 0.001 lx @ 1/3 0.01 lx @ 1/3 0.001 lx @ 1/3	Color 0.01 lx @ 1/3 Color (Sens. up) 0.001 lx @ 1/3 0.01 lx @ 1/3 0.001 lx @ 1/3	Color 0.01 lx @ 1/3 Color (Sens. up) 0.001 lx @ 1/3 0.01 lx @ 1/3 0.001 lx @ 1/3	Color 0.01 lx @ 1/3 Color (Sens. up) 0.001 lx @ 1/3 0.01 lx @ 1/3 0.001 lx @ 1/3
Lens	1/3" 9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")	1/3" 9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")	1/3" 9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")	1/3" 9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")
Angular Field of View	10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")	10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")	10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")	10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")
Adjusting Angle	Yes 10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")	Yes 10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")	Yes 10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")	Yes 10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")
Optional Lens	Yes	Yes	Yes	Yes
Digital Zoom	Yes	Yes	Yes	Yes
WDR (Wide Dynamic Range)	Yes (10-9)	Yes (10-9)	Yes (10-9)	Yes (10-9)
WDR (Wide Dynamic Range) (Software)	Yes (10-9)	Yes (10-9)	Yes (10-9)	Yes (10-9)
WDR	Yes (10-9)	Yes (10-9)	Yes (10-9)	Yes (10-9)
Max. Connection	Yes	Yes	Yes	Yes
Audio	In (Line) In (Built-in MIC) Out Codec Audio Detection Alarm Yes Yes (SD)	In (Line) In (Built-in MIC) Out Codec Audio Detection Alarm Yes Yes (SD)	In (Line) In (Built-in MIC) Out Codec Audio Detection Alarm Yes Yes (SD)	In (Line) In (Built-in MIC) Out Codec Audio Detection Alarm Yes Yes (SD)
SD Card Slot	Yes	Yes	Yes	Yes
External I/O	Yes (10-9)	Yes (10-9)	Yes (10-9)	Yes (10-9)
Monitor Out	Yes (10-9)	Yes (10-9)	Yes (10-9)	Yes (10-9)
Weather Protection	Yes	Yes	Yes	Yes
Water and Dust Resistance	Yes	Yes	Yes	Yes
Power Source	12V DC / PoE	12V DC / PoE	12V DC / PoE	12V DC / PoE
Other Functions	Yes	Yes	Yes	Yes

Camera Type	OmniView WV-SF8531 807122P	OmniView WV-SF8531A 807122P	OmniView WV-SF8531A 807122P
Series	WV-SF8531	WV-SF8531A	WV-SF8531A
Color and Transmission	Video Output H.264/H.265 2/10/100/1000 Smart Coding Yes	Video Output H.264/H.265 2/10/100/1000 Smart Coding Yes	Video Output H.264/H.265 2/10/100/1000 Smart Coding Yes
Max. Resolution	10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")	10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")	10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")
Max. FPS @ Max. Resolution	30FPS 30FPS (10.8MP) 30FPS (10.8MP)	30FPS 30FPS (10.8MP) 30FPS (10.8MP)	30FPS 30FPS (10.8MP) 30FPS (10.8MP)
Super Dynamic / WDR / BLC	Enhanced SD Yes (SD)	Enhanced SD Yes (SD)	Enhanced SD Yes (SD)
Day/Night	Yes (SD)	Yes (SD)	Yes (SD)
AIH (Auto Back Focus) / Focus Assist	Yes (SD)	Yes (SD)	Yes (SD)
Min. Illumination	Color 0.01 lx @ 1/3 Color (Sens. up) 0.001 lx @ 1/3 0.01 lx @ 1/3 0.001 lx @ 1/3	Color 0.01 lx @ 1/3 Color (Sens. up) 0.001 lx @ 1/3 0.01 lx @ 1/3 0.001 lx @ 1/3	Color 0.01 lx @ 1/3 Color (Sens. up) 0.001 lx @ 1/3 0.01 lx @ 1/3 0.001 lx @ 1/3
Lens	1/3" 9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")	1/3" 9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")	1/3" 9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")
Angular Field of View	10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")	10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")	10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")
Adjusting Angle	Yes 10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")	Yes 10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")	Yes 10-9 4-3 25.4 x 15.6 (1") 6.4 x 3.6 (0.5") 3.2 x 1.8 (0.4")
Optional Lens	Yes	Yes	Yes
Digital Zoom	Yes	Yes	Yes
WDR (Wide Dynamic Range)	Yes (10-9)	Yes (10-9)	Yes (10-9)
WDR (Wide Dynamic Range) (Software)	Yes (10-9)	Yes (10-9)	Yes (10-9)
WDR	Yes (10-9)	Yes (10-9)	Yes (10-9)
Max. Connection	Yes	Yes	Yes
Audio	In (Line) In (Built-in MIC) Out Codec Audio Detection Alarm Yes Yes (SD)	In (Line) In (Built-in MIC) Out Codec Audio Detection Alarm Yes Yes (SD)	In (Line) In (Built-in MIC) Out Codec Audio Detection Alarm Yes Yes (SD)
SD Card Slot	Yes	Yes	Yes
External I/O	Yes (10-9)	Yes (10-9)	Yes (10-9)
Monitor Out	Yes (10-9)	Yes (10-9)	Yes (10-9)
Weather Protection	Yes	Yes	Yes
Water and Dust Resistance	Yes	Yes	Yes
Power Source	12V DC / PoE	12V DC / PoE	12V DC / PoE
Other Functions	Yes	Yes	Yes

WV-SF8531 is a 1080p camera. WV-SF8531A is a 4K camera. WV-SF8531L is a 4K camera. WV-SF8531 is a 1080p camera. WV-SF8531A is a 4K camera. WV-SF8531L is a 4K camera.





WV-SF8531 is a 1080p camera. WV-SF8531A is a 4K camera. WV-SF8531L is a 4K camera. WV-SF8531 is a 1080p camera. WV-SF8531A is a 4K camera. WV-SF8531L is a 4K camera.






CAPABILITY		ENVIRONMENTAL			
Appearance					
		OmniView 100 WV-SPW310L 4K Single	OmniView 100 WV-SPW311LT HD1080P	OmniView 100 WV-SPW431L HD1080P	OmniView 100 WV-SPW511L HD1080P
Encoder		12/1 MMS	12/1 MMS	12/1 MMS	12/1 MMS
	Video Codec	H.264 / JPEK	H.264 / JPEK	H.264 / JPEK	H.264 / JPEK
Encoder and Compression	H.264 main stream	4	4	4	4
	JPEK main stream	2	6 (in 4x4)	6 (in 4x4)	6 (in 4x4)
	Export Coding	Yes (H.264/4x4)	Yes	Yes	Yes
Max. Resolution	16:9	3840 x 2160	1920 x 1080	1920 x 1080	1920 x 1080
	4:3	4096 x 3000	2048 x 1536 (1:1)	2048 x 1536 (1:1)	1280 x 512
Max. FPS	H.264	30fps (4x4)	60fps (1080i)	60fps (1080i)	60fps (1080i)
Dynamic Resolution	JPEK	12/1 (12 MP)	30fps (3 MP)	30fps (3 MP)	30fps (3 MP)
Super Dynamic / HDR / DRC		WDR	Enhanced SD	Enhanced SD	Enhanced SD
Max. Input		Yes (DCN)	Yes (DCN)	Yes (DCN)	Yes (DCN)
MSR (Auto Track Focus) / Focus Lock		ASR	ASR	ASR	ASR
	Color	0.31 to 0.71 f	0.04 to 0.91 f	0.04 to 0.91 f	0.01 to 0.91 f
	Color (Range up)	0.02 to 1.0 f	0.004 to 1.0 f	0.003 to 1.0 f	0.002 to 1.0 f
	AW	0.01 to 0.91 f (2x/3)	0.01 to 0.91 f (2x/3)	0.01 to 0.91 f (2x/3)	0.01 to 0.91 f (2x/3)
	AW (Range up)	--	--	--	--
Zoom		1.4-2.1 (2.7x to 3.1x) Mechanical	1.4-19.2 (13.7x to 13.8x) Motorized	1.4-28.0 (19.8x to 19.9x) Motorized	1.4-2.8 (1.9x to 1.9x) Motorized
Adjustable Field of View	16:9	H: 17 to 67 deg. V: 9 to 65 deg.	H: 13 to 65 deg. V: 7.2 to 64 deg.	H: 8.3 to 65.4 deg. V: 17 to 63.2 deg.	H: 8.2 to 64.2 deg. V: 17 to 62.8 deg.
	4:3	H: 19 to 67 deg. V: 13 to 74 deg.	H: 15 to 67 deg. V: 8.5 to 63 deg.	H: 15 to 64 deg. V: 11.3 to 63 deg.	H: 15 to 64 deg. V: 11.3 to 62.8 deg.
Adjusting Angle	Pan	--	--	--	--
	Tilt	--	--	--	--
Optical Zoom		--	2.4x	3.6x	3.6x
Digital Zoom		4x	4x	4x	4x
Video Motion Detection		Yes (16-areas)	Yes (16-areas)	Yes (16-areas)	Yes (16-areas)
110dB (Max. gain) VMD (Watchdog subunit)		--	Yes (12x/3)	Yes (12x/3)	Yes (12x/3)
VMD		Yes (16-areas)	Yes (16-areas)	Yes (16-areas)	Yes (16-areas)
Wire. Connection		Yes	Yes	Yes	Yes
	In (Local)	Yes	Yes	Yes	Yes
	In (IP) (to H.4C)	--	--	--	--
Audio		Yes	Yes	Yes	Yes
	Out	--	--	--	--
	Codec	G.711 / G.726 / AAC / 12C	G.711 / G.726 / AAC	G.711 / G.726 / AAC	G.711 / G.726 / AAC
	Audio Detection Alarm	--	Yes	Yes	Yes
	Shot	Yes (SDC)	Yes (SDC + 2)	Yes (SDC + 2)	Yes (SDC + 2)
120-frames Card		--	--	--	--
	Flameless & Alarm Detection	--	--	Yes	Yes
	Audio REC	--	--	Yes	Yes
External I/O		Yes (10/1)	Yes (10/1)	Yes (10/1)	Yes (10/1)
Monitor Out		Yes (H.264)	Yes (H.264)	Yes (H.264)	Yes (H.264)
Internal Monitor		Yes (H.264)	Yes (H.264)	Yes (H.264)	Yes (H.264)
Water and Dust Resistance		IP67, IP68	IP67 / NEMA 4x	IP67 / NEMA 4x	IP67 / NEMA 4x
Temperature		-40°F to +122°F	-40°F to +122°F	-40°F to +122°F	-40°F to +122°F
Power Source		12V DC / PoE	12V DC / PoE	12V DC / PoE	12V DC / PoE
Other functions		Yes	Yes	Yes	Yes
	IR-Light Sensor, Face Lock Sensor, Built-in IR LED	IR-Light Sensor, Face Lock Sensor, Built-in IR LED	IR-Light Sensor, Built-in IR LED	IR-Light Sensor, Built-in IR LED	IR-Light Sensor, Built-in IR LED
Maximum Distance		500m (max.)	500m (max.)	500m (max.)	500m (max.)

[illegible]

NETWORK PRODUCTS

Panasonic

VARIABLE TYPE		SPECIFICATIONS			
Appearance		 Onvif i00 VV-SPH31A 107120P	 Onvif i00 VV-SPH31A 107120P	 Onvif i00 VV-SPH31A 107120P	 Onvif i00 VV-SPH31A 107120P
Series		107120P	107120P	107120P	107120P
Code and Transmission	Video Code	H.264 / JPE	H.264 / JPE	H.264 / JPE	H.264 / JPE
	H.264 multi stream	4	4	4	4
	JPE multi stream	4 (H.264)	4 (H.264)	4 (H.264)	4
	Smart Coding	Yes	Yes	Yes	Yes
Max. Resolution	16:9	1920 x 1080	1920 x 1080 (1/1) / 1280 x 720	1920 x 1080 (1/1) / 1280 x 720	1280 x 720
Min. Resolution	4:3	2048 x 1536	1280 x 960	1280 x 960	1280 x 960
Max. FPS	H.264	30fps (1080)	30fps (1080)	30fps (1080)	30fps (1080)
Min. FPS	JPE	30fps (1080)	30fps (1080)	30fps (1080)	30fps (1080)
Super Dynamic / WDR / BLC		Enhanced SD	Enhanced SD	Enhanced SD	BLC
Daylight		Yes (Electrical)	Yes (Electrical)	Yes (Electrical)	Yes (Electrical)
IR (In-line Back Illumination) / Focus Assist		Yes	Yes	Yes	Yes
Min. Illumination	Color	0.01 lx (0.1 lx)	0.01 lx (0.1 lx)	0.01 lx (0.1 lx)	0.01 lx (0.1 lx)
	Color (Electrical)	0.001 lx (0.1 lx)	0.001 lx (0.1 lx)	0.001 lx (0.1 lx)	0.01 lx (0.1 lx)
	IR	0.01 lx (0.1 lx)	0.001 lx (0.1 lx)	0.001 lx (0.1 lx)	0.01 lx (0.1 lx)
	IR (Electrical)	0.001 lx (0.1 lx)	0.001 lx (0.1 lx)	0.001 lx (0.1 lx)	0.01 lx (0.1 lx)
Lens		CS Mount	CS Mount	CS Mount	CS Mount
Angular field of view	16:9	—	—	—	8.3 deg.
	4:3	—	—	—	8.3 deg.
	—	—	—	—	8.3 deg.
	—	—	—	—	8.3 deg.
Adjusting Angle	Yes	—	—	—	—
Optical Zoom		4x	4x	4x	4x
Digital Zoom		Yes (4x)	Yes (4x)	Yes (4x)	Yes (4x)
WDR (Wide Motion Detection)		Yes (4x)	Yes (4x)	Yes (4x)	Yes (4x)
WDR (Intelligent WDR) (Adjustment software)		Yes (4x)	Yes (4x)	Yes (4x)	Yes (4x)
WDR		Yes (4x)	Yes (4x)	Yes (4x)	Yes (4x)
Power Connection		1A	1A	1A	1A
Audio	In (Line)	Yes	Yes	Yes	Yes
	In (2ch in MIC)	Yes	Yes	Yes	Yes
	Out	Yes	Yes	Yes	Yes
	Codec	G.711 / G.726 / AAC	G.711 / G.726 / AAC	G.711 / G.726 / AAC	—
Audio Detection Alarm		Yes	Yes	Yes	Yes
Audio	Yes	Yes	Yes	Yes	Yes
SP memory Card		Yes (AAC)	Yes (AAC)	Yes (AAC)	—
External SD		Yes (10/1)	Yes (10/1)	Yes (10/1)	—
Monitor Out		Yes (10/1)	Yes (10/1)	Yes (10/1)	—
Monitor In		Yes (10/1)	Yes (10/1)	Yes (10/1)	—
Water and Dust Resistance		—	—	—	—
Temperature		+10°C to +32°C	+10°C to +32°C	+10°C to +32°C	+10°C to +32°C
Power Source		12V DC / PoE	12V DC / PoE	12V DC / PoE	12V DC / PoE
Dehumidification device		—	—	—	—
Other Functions		—	—	—	—
Mounting Options		See page 51	See page 51	See page 51	See page 51

VARIABLE TYPE		SPECIFICATIONS				
Appearance		 Onvif i00 VV-SW175 107120P	 Onvif i00 VV-SW175 107120P	 Onvif i00 VV-SW175 107120P	 Onvif i00 VV-SW175 107120P	 Onvif i00 VV-SW175 107120P
Series		107120P	107120P	107120P	107120P	107120P
Code and Transmission	Video Code	H.264 / JPE	H.264 / JPE	H.264 / JPE	H.264 / JPE	H.264 / JPE
	H.264 multi stream	2	2	2	2	2
	JPE multi stream	2	2	2	2	2
	Smart Coding	—	—	—	—	—
Max. Resolution	16:9	1280 x 720	1280 x 720	1280 x 720	1280 x 720	1280 x 720
Min. Resolution	4:3	1280 x 960	1280 x 960	1280 x 960	1280 x 960	1280 x 960
Max. FPS	H.264	30fps (1.3 MP)	30fps (1.3 MP)	30fps (1.3 MP)	30fps (1.3 MP)	30fps (1.3 MP)
Min. FPS	JPE	30fps (1.3 MP)	30fps (1.3 MP)	30fps (1.3 MP)	30fps (1.3 MP)	30fps (1.3 MP)
Super Dynamic / WDR / BLC		BLC	BLC	BLC	BLC	BLC
Daylight		Yes (Electrical)	Yes (Electrical)	Yes (Electrical)	Yes (Electrical)	Yes (Electrical)
IR (In-line Back Illumination) / Focus Assist		—	—	—	—	—
Min. Illumination	Color	0.1 lx (0.1 lx)	0.1 lx (0.1 lx)	0.1 lx (0.1 lx)	0.1 lx (0.1 lx)	0.1 lx (0.1 lx)
	Color (Electrical)	0.01 lx (0.1 lx)	0.01 lx (0.1 lx)	0.01 lx (0.1 lx)	0.01 lx (0.1 lx)	0.01 lx (0.1 lx)
	IR	0.1 lx (0.1 lx)	0.01 lx (0.1 lx)	0.01 lx (0.1 lx)	0.01 lx (0.1 lx)	0.01 lx (0.1 lx)
	IR (Electrical)	0.01 lx (0.1 lx)	0.01 lx (0.1 lx)	0.01 lx (0.1 lx)	0.01 lx (0.1 lx)	0.01 lx (0.1 lx)
Lens		CS Mount	CS Mount	CS Mount	CS Mount	CS Mount
Angular field of view	16:9	—	—	—	—	—
	4:3	—	—	—	—	—
	—	—	—	—	—	—
	—	—	—	—	—	—
Adjusting Angle	Yes	—	—	—	—	—
Optical Zoom		4x	4x	4x	4x	4x
Digital Zoom		Yes (4x)	Yes (4x)	Yes (4x)	Yes (4x)	Yes (4x)
WDR (Wide Motion Detection)		Yes (4x)	Yes (4x)	Yes (4x)	Yes (4x)	Yes (4x)
WDR (Intelligent WDR) (Adjustment software)		Yes (4x)	Yes (4x)	Yes (4x)	Yes (4x)	Yes (4x)
WDR		Yes (4x)	Yes (4x)	Yes (4x)	Yes (4x)	Yes (4x)
Power Connection		1A	1A	1A	1A	1A
Audio	In (Line)	Yes	Yes	Yes	Yes	Yes
	In (2ch in MIC)	Yes	Yes	Yes	Yes	Yes
	Out	Yes	Yes	Yes	Yes	Yes
	Codec	G.711 / G.726	G.711 / G.726	G.711 / G.726	G.711 / G.726	G.711 / G.726
Audio Detection Alarm		Yes	Yes	Yes	Yes	Yes
Audio	Yes	Yes	Yes	Yes	Yes	Yes
SP memory Card		Yes (AAC)	Yes (AAC)	Yes (AAC)	Yes (AAC)	Yes (AAC)
External SD		Yes (10/1)	Yes (10/1)	Yes (10/1)	Yes (10/1)	Yes (10/1)
Monitor Out		Yes	Yes	Yes	Yes	Yes
Monitor In		Yes	Yes	Yes	Yes	Yes
Water and Dust Resistance		—	—	—	—	—
Temperature		+10°C to +32°C	+10°C to +32°C	+10°C to +32°C	+10°C to +32°C	+10°C to +32°C
Power Source		12V DC / PoE	12V DC / PoE	12V DC / PoE	12V DC / PoE	12V DC / PoE
Dehumidification device		—	—	—	—	—
Other Functions		—	—	—	—	—
Mounting Options		See page 51	See page 51	See page 51	See page 51	See page 51

107120P: 107120P (107120P) 107120P (107120P) 107120P (107120P) 107120P (107120P) 107120P (107120P) 107120P (107120P)

107120P: 107120P (107120P) 107120P (107120P) 107120P (107120P) 107120P (107120P) 107120P (107120P) 107120P (107120P)

EMBEDDED RECORDING SOLUTIONS AND VMS

Network Disk Recorder

WJ-ND400

1784K, 1024, 2048, 4096, 8192



- H.264/MPEG-4 and H.265/HEVC format
- Up to 44 network cameras can be connected and recorded (Video and Audio)
- Various Recording Mode: Manual, Schedule (including Event (Pre/Post), Emergency)
- Video search works with a HDD camera or WJ-ND400
- Up to 54 HDD slots with 9 HDD slots in the equipment and five WJ-ND400
- Optional External Units: 16 HDD slots
- RAID0/RAID5, Embedded OS: Data is encrypted for reliability
- Optional HDD: 4TB HDD Camera (HDD), 4TB HDD Camera (HDD), 4TB HDD Camera (HDD), 4TB HDD Camera (HDD)

Optional Accessory

4TB HDD Camera (HDD)



Network Disk Recorder

WJ-NV300

1784K, 1024, 2048, 4096, 8192



- H.264 and H.265/HEVC format
- H.265/HEVC network cameras can be connected and recorded as data up to 32 "H.265/HEVC" network cameras can be connected and recorded.
- Quick setup by automatic camera detection and simple set-up wizard on the web or PC
- Simple mouse control via the Web GUI without the use of PC
- Supports the full H.265/HEVC format
- HDD capacity is expandable up to 20 HDD slots (2 HDD slots in the main unit and 18 optional WJ-NV300 Hard Disk Expansion Units each with 4 HDD slots)
- Supports 1080p/60fps in the main unit and 1080p/30fps in the expansion unit

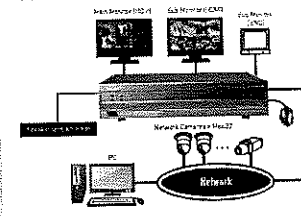
Additional Encoder: WJ-NV300

Optional Accessory

WJ-NV300



Easy Operation and Setup without PC



VIDEOINSIGHT v6

Server based recording and video management platform



Scalable enterprise VMS solution that captures, manages and stores video surveillance across a network - on a single or multiple locations - and supports the broadest range of IP and analog camera models. Video Insight is the perfect solution for multi-facility configurations including schools, universities, hospitals, healthcare providers, law enforcement and SMBs.

NO LICENSE REQUIRED FOR SELECT PANASONIC CAMERAS

Unlimited Video Insight software license is available with the purchase of select Panasonic cameras manufactured after October 2014.

SURVEILLANCE FROM ANYWHERE

Monitor Station, Web Client and Mobile App share powerful features that allow you to access live and recorded video no matter where you are.

SUPPORT FOR 3,000 CAMERAS FROM 100+ MANUFACTURERS

WIDE ACCESS CONTROL INTEGRATION

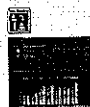
Video Insight supports single and bi-directional integration of access control alarms from the leading vendors.

SUPPORT FOR OVER 130 ENCODERS

Integration to over 130 encoders so that our customers can affordably convert analog-to-IP and maximize the use of existing resources by turning their analog video system into a network video system.

Additional Features Intelligence (A.I.) is a feature that improves the usefulness of Network Disk Recorder WJ-NV300 / WJ-NV300.

Additional Features Intelligence (A.I.) is a feature that improves the usefulness of Network Disk Recorder WJ-NV300 / WJ-NV300.

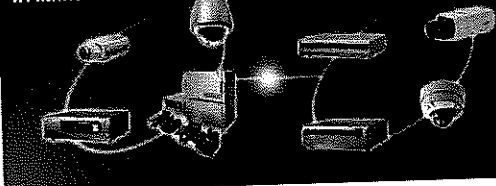


- New statistical processing functions such as "People counting" and "Face matching (Age & Gender Judgment)"
- The number of detected human faces can be displayed on a statistical chart (grouped by age & gender) for a single day or a specified time period.
- Age & gender group are displayed by separate colors.
- The statistical data can be saved as a CSV file on a SD/HD/SSD memory card or as a PDF attached over a network.
- CSV file is saved on the server and can be accessed via the Web GUI.

Video Insight is a powerful video management platform that can be used for a wide range of applications. It is a powerful tool for managing video surveillance data and can be used for a wide range of applications.

MANAGEMENT SOFTWARE

WV-ASC970 / WV-ASM970



PMPU3000 NEW IP MATRIX APPLIANCE

- Easy and smooth integration from analog to IP system
- Flexible system design: analog, IP and hybrid analog/IP
- Up to 64 recorders, 1,824 monitors and 2,048 cameras (in case with recorder) can be registered
- Camera/sequence/monitor selection, camera control and recorder control can be made with the optional system controller WV-CU950

- Supported recorders: WV-HD400 series, WV-ND300 series, WV-HD700 series, WV-NV200 series, WV-HD300 series, WV-RV414 series, WV-HD414 series
- Redundant function supported (Redundant function can consist of two WV-ASC970 servers as main server and standby server)
- Up to 64 HD/SD recorders can be registered as standby recorder for backup purpose of analog problems on main recorders

WV-ASM970W NEW IP MATRIX CLIENT SOFTWARE

- Multi-monitor option enables simultaneous use of operation screen and monitor screen (1/4, 1/2, 1/3, 1/4, 1/5, 1/6 split) on a dedicated monitor; two-monitor operation is also available
- Up to 30 ip/camera can be displayed in 16 split screens in H.264 4.2 Mbps mode (depending on the camera, camera setup and PC performance)
- Up to 30 ip/camera can be displayed in 16 split screens in H.264 1.5 Mbps mode with VGA (depending on the camera, camera setup and PC performance)
- Image resolution dynamically changes depending on the screen mode: VGA for quad screen, DWSA for 16 split screen, enabling optimum network usage (depending on the camera model)
- Decoder mode supported (WV-ASM970W can be used as PC-based decoder instead of WV-GD400)
- WV-ASE970W: Max. 16 screen x 4 monitor support



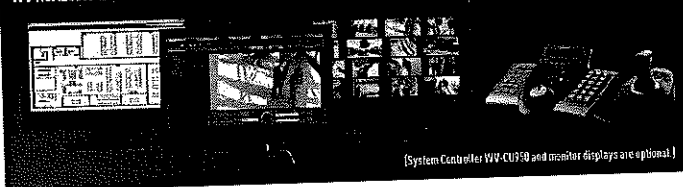
WV-ASM200W

I-PRO MANAGEMENT SOFTWARE

- Supports 16.9 video stream and 16.9 HD monitor; displays 16.9 and 4:3 videos from IP cameras on the same screen
- H.264 recording data in the SD/SDHC memory card can be downloaded
- Convert file format from file (proprietary format) to MP4 and WMV
- Up to 100 recorders, 64 encoders and 256 directly connected cameras can be registered
- Up to 4, 4GB cameras registered in the recorders and 256 cameras registered in the encoders are automatically registered in the WV-ASM200W (the number of cameras depends on the recorder and encoder)

- Up to 16x30 ip/camera images can be displayed in H.264 1.5 Mbps mode
- Filetype image correction/undo-wrap
- Software License Products
 - WV-SAC100W: Face Detection XML
 - WV-SAC200W: WMD

WV-ASM200W with WV-ASE201W



(System Controller WV-CU950 and monitor displays are optional.)

WV-ASE201W / ASE202W / ASE203W / ASE204W / ASE205W / ASE231W

EXTENSION SOFTWARE

- WV-ASE201W: Three monitors, system controller (WV-CU950) support
- WV-ASE202W: Max. 64 screen support
- WV-ASE203W: Increases number of recorder registration
- WV-ASE204W: Supports WV-GD400
- WV-ASE205W: Image compensation (Reg.Slave)
- WV-ASE231W: Client for WV-ASF900W

FACEPRO - WV-ASF900W

FACIAL RECOGNITION ANALYTICS PLATFORM NEW

FACIAL RECOGNITION ANALYTICS PLATFORM RUNNING IN THE VIDEO SURVEILLANCE SYSTEM

- Add-on face matching function: Add the face matching function by simply adding the necessary devices and the software
- Up to 20 cameras can be connected to each server

FACE SEARCH

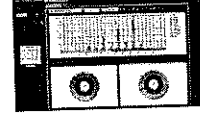
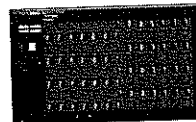
- Face images that the camera detects are stored and can be searched later
- By searching the face database, you can display the results of each camera in chronological order and find movement and location of persons
- Specify camera or date in detected face images and display the result in the list in similar order

FACE MATCHING

- When faces are matched with registered people, alarm of face matching is output in real time, and an alarm history is displayed in the list
- Real-time clicking on facial alarm notification can play back video segment on the control monitor

PEOPLE COUNTING, AGE AND GENDER STATISTICS

- Count people with detected faces and evaluate their age and gender
- Display the result on the screen with statistical graph
- The statistical data can be saved as a CSV file for analytical use



FACEPRO SYSTEM COMPONENTS



ASV9001 (ASV901) IALC
1-Track 17.5MB Camera Interface Software
with 4-Channel Decoder



WV-ASF901W
Facial Display Client Extension

WV-ASF901W
Facial Display Client Extension

ANALOG PRODUCTS







Panasonic





STATUS ITEM		OUTDOOR		INDOOR	
Indoor / Outdoor		SR		SR	
Appearance					
		WV-CV584A		WV-CS584	
Sensor		1/3" type interline transfer CCD		1/4" type interline transfer CCD	
Resolution		480 TV Lines		480 TV Lines	
Super Dynamic / NOIR / BLC		Super-0		Super-0	
Day/Night		Yes (ICR)		Yes (ICR)	
Focus Adjustment		Auto Focus		Auto Focus	
Built-in IR LED		—		—	
Min. Illumination	Color	0.5 lx		0.5 lx	
	Color (Sensitivity)	0.016 lx		0.016 lx	
	B/W	0.04 lx		0.04 lx	
	B/W (Sensitivity)	0.0013 lx		0.0013 lx	
Lens		f=3.3 to 117 mm, F1.4		f=3.3 to 117 mm, F1.4	
Angular field of view		H: 1.7° (Horizontal) to 68.2° (Vertical) V: 1.2° (Horizontal) to 14.6° (Vertical)		H: 1.7° (Horizontal) to 68.2° (Vertical) V: 1.2° (Horizontal) to 14.6° (Vertical)	
Adjusting Angle	Pan	360° endless		360° endless	
	Tilt	-5° to 165° (Horizontal: vertical - horizontal)		-5° to 165° (Horizontal: vertical - horizontal)	
	Optical Zoom	36x		36x	
	Digital Zoom	24x		24x	
VMD (Video Motion Detection)		Yes		Yes	
I-VMD (Intelligent VMD)		Same Change		Same Change	
Camera (See 0600)		Yes		Yes	
External I/O		4 inputs (ALARM IN 1 - ALARM IN 4) 2 outputs (ALARM / AUDIO, RV / AUDIO)		4 inputs (ALARM IN 1 - ALARM IN 4) 2 outputs (ALARM / AUDIO, RV / AUDIO)	
Vandal Resistant		—		—	
Water and Dust Resistance		IP66		—	
Defunctionalization device		—		—	
Temperature		-50°F to +121°F		-14°F to +122°F	
Power Source		24 V AC		24 V AC	
Other Functions		WV-CV584A: Rain wash coating		—	
Options	Smoke Dome Cover	—		Smoke Dome Cover WV-CV584A	
	Bracket	Wall Mount Bracket WV-0107A		Ceiling Mount Bracket WV-0107A	
	Bracket	Ceiling Mount Bracket WV-0107B		Pendant Mount Bracket WV-0107A	
	Bracket (B3)	—		Wall Mount Bracket WV-0107B	
Mounting Options		See page 50		See pages 42, 43	

STATUS ITEM		OUTDOOR		INDOOR	
Indoor / Outdoor		NEW SR		SR	
Appearance					
		WV-CW434S, WV-CW434F		WV-CF434	
Sensor		1/3" type interline transfer CCD		1/3" type interline transfer CCD	
Resolution		720 TV Lines or more		480 TV Lines	
Super Dynamic / NOIR / BLC		Super-0		Super-0	
Day/Night		Yes (ICR)		Yes (ICR)	
Focus Adjustment		AFD		AFD	
Built-in IR LED		—		—	
Min. Illumination	Color	0.6 lx		0.6 lx	
	Color (Sensitivity)	0.0025 lx		0.0025 lx	
	B/W	0.003 lx		0.003 lx	
	B/W (Sensitivity)	0.00024 lx		0.00024 lx	
Lens		f=3.3 to 8.8 mm, F1.4		f=3.3 to 8.8 mm, F1.4	
Angular field of view		H: 32.4° (Horizontal) to 74.4° (Vertical) V: 19.2° (Horizontal) to 35.2° (Vertical)		H: 32.4° (Horizontal) to 74.4° (Vertical) V: 19.2° (Horizontal) to 35.2° (Vertical)	
Adjusting Angle	Pan	±180°		±180°	
	Tilt	±95°		±95°	
	Optical Zoom	2.1x		2.1x	
	Digital Zoom	2x		2x	
VMD (Video Motion Detection)		Yes		Yes	
I-VMD (Intelligent VMD)		Same Change		Same Change	
Camera (See 0600)		Yes		Yes	
External I/O		R/C (GND-2, 7) and RS, RSU		—	
Vandal Resistant		—		—	
Water and Dust Resistance		IP66		—	
Defunctionalization device		—		—	
Temperature		+14°F to +167°F -10°F to 100°F (With optional heater)		+14°F to +122°F	
Power Source		24 V AC or 12 V DC		24 V AC or 12 V DC	
Other Functions		—		—	
Options	Smoke Dome Cover	Smoke Dome Cover WV-CW434S		—	
	Bracket	Mount Bracket (for WV-CW434S) WV-0115A		Embedded Ceiling Mount Bracket (for WV-CF434) WV-0107A	
	Bracket	Embedded Ceiling Mount Bracket WV-0107A		Embedded Ceiling Mount Bracket (for WV-CF434) WV-0107A	
	Mount Unit	Mount Unit WV-CW434S		—	
Mounting Options		See pages 44, 47		See pages 44, 47	

ANALOG PRODUCTS

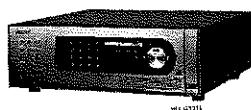
Panasonic

CAMERA TYPE		P-1			
Indoor / Outdoor		P-10000			
Appearance					
		VV-CF344	VV-CF354	VV-CF364	VV-CW314L
Sensor		1/3" type interline transfer CCD	1/3" type interline transfer CCD	1/3" type interline transfer CCD	1/3" type interline transfer CCD
Resolution		450 TV Lines	450 TV Lines	450 TV Lines	450 TV Lines
Super Dynamic / WDR / BLC		BLC	BLC	BLC	BLC
ImageLight		Yes (Elect/Coil)	Yes (Elect/Coil)	Yes (DCI)	Yes (DCI)
Focus Adjustment		Focus Assist	AF	AF	AF
Built-in IR LED		—	—	Yes (10 m)	Yes (10 m)
Vis. Illumination	Color	0.01 lx	0.01 lx	0.01 lx	0.01 lx
	Color (Sens up)	0.0075 lx	0.0075 lx	0.0075 lx	0.0075 lx
	BCV	0.05 lx	0.05 lx	0 lx (with IR LED)	0 lx (with IR LED)
	AW (Sens up)	0.0014 lx	0.0014 lx	—	—
Lens		f=2.8 to 18 mm, F1.4	f=2.8 to 18 mm, F1.4	f=2.8 to 18 mm, F1.3	f=2.8 to 18 mm, F1.3
Angular field of view		h: 29.4° (Hd) to 100.2° (Vd) v: 20.5° (Hd) to 73.8° (Vd)	h: 27.8° (Hd) to 102.2° (Vd) v: 20.5° (Hd) to 73.8° (Vd)	h: 22.45° (Hd) to 100.8° (Vd) v: 20.5° (Hd) to 73.85° (Vd)	h: 22.45° (Hd) to 100.8° (Vd) v: 20.5° (Hd) to 73.85° (Vd)
Adjusting Angle	Pan	180° to -180°	180° to -180°	180° to -180°	—
	Tilt	±10°	±10°	0 to 75°	—
	Optical Zoom	3.6x	3.6x	3.6x	3.6x
	Digital Zoom	2x	2x	2x	2x
VMS (Video Motion Detection)		Yes	Yes	Yes	Yes
I-VMS (Intelligent VMS)		Scene Change	Scene Change	Scene Change	Scene Change
Camera tilt (OSD)		Yes	Yes	Yes	Yes
External I/O		—	—	—	—
Vertical Protection		—	—	—	PF6
Weather and Dust Protection		—	—	—	—
Mechanical Shock device		—	—	—	—
Temperature		+14°F to +122°F	+14°F to +122°F	+14°F to +122°F	+14°F to +122°F
Power Source		24 V AC or 12 V DC	24 V AC or 12 V DC	24 V AC or 12 V DC	24 V AC or 12 V DC
Other Functions		—	—	—	—
Options	Control Box Cover	—	—	—	—
	Bracket			—	—
	Monitor Unit	—	—	—	—
	Mounting Options	See pages 41, 47	See pages 41, 47	See pages 41, 47	See page 51

CAMERA TYPE		P-1			
Indoor / Outdoor		P-10000			
Appearance					
		VV-CP430/VV-CP434	VV-CP420/VV-CP424	VV-CP300/VV-CP304	VV-CP310/VV-CP314
Sensor		1/3" type interline transfer CCD	1/3" type interline transfer CCD	1/3" type interline transfer CCD	1/3" type interline transfer CCD
Resolution		700 TV Lines	450 TV Lines	450 TV Lines	450 TV Lines
Super Dynamic / WDR / BLC		Super-B	Super-B	BLC	BLC
ImageLight		Yes (DCI)	Yes (DCI)	Yes (Elect/Coil)	Yes (DCI)
Focus Adjustment		AF	Focus Assist	Focus Assist	Focus Assist
Built-in IR LED		—	—	—	—
Vis. Illumination	Color	0.01 lx	0.01 lx	0.01 lx	0.01 lx
	Color (Sens up)	0.0075 lx	0.0075 lx	0.0075 lx	0.0075 lx
	BCV	0.003 lx	0.003 lx	0.05 lx	0.003 lx
	AW (Sens up)	0.0003 lx	0.0003 lx	0.0014 lx	0.0003 lx
Lens		optional	optional	optional	optional
Angular field of view		—	—	—	—
Adjusting Angle	Pan	—	—	—	—
	Tilt	—	—	—	—
	Optical Zoom	—	—	—	—
	Digital Zoom	—	—	—	—
VMS (Video Motion Detection)		Yes	Yes	Yes	Yes
I-VMS (Intelligent VMS)		Scene Change	Scene Change	Scene Change	Scene Change
Camera tilt (OSD)		Yes	Yes	Yes	Yes
External I/O		ALARM IN - 1 (OFF / ALARM / SPD) RELAYS / BUS ALARM OUT - 1 (OFF / ALARM / BUS)	Alarm IN type, Alarm OUT type	—	—
Vertical Protection		—	—	—	—
Weather and Dust Protection		—	—	—	—
Mechanical Shock device		—	—	—	—
Temperature		+14°F to +122°F	+14°F to +122°F	+14°F to +122°F	+14°F to +122°F
Power Source		VV-CP430: 120 V AC VV-CP434: 110 V AC or 24 V AC	VV-CP420: 120 V AC VV-CP424: 110 V AC or 24 V AC	VV-CP300: 120 V AC VV-CP304: 110 V AC or 24 V AC	VV-CP310: 120 V AC VV-CP314: 110 V AC or 24 V AC
Other Functions		—	—	—	—
Options	Control Box Cover	—	—	—	—
	Bracket	—	—	—	—
	Monitor Unit	—	—	—	—
	Mounting Options	See page 51	See page 51	See page 51	See page 51

DIGITAL VIDEO RECORDERS

SYSTEM CONTROLLERS



WJ-HD716 (120V AC; NTSC)
16 CH REAL-TIME H.264 DIGITAL DISK RECORDER

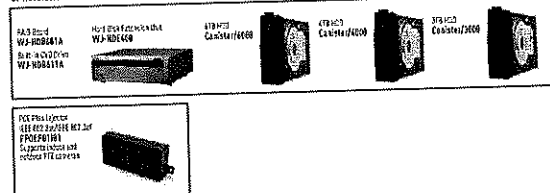
WJ-HD616 (120V AC; NTSC)
16 CH H.264 DIGITAL DISK RECORDER

- Dual HDMI Full HD 1080i (1920 x 1080) display
- H.264 High profile codec reduces bandwidth by up to 40% compared with MPEG-4
- SD5 Link (Super Dynamic S Link) with intelligent Video Motion Detection (V-Motion) alarm
- Real-time recording (WJ-HD716) and 16CH 2x monitors real-time live
- Up to 31 HDD slots with four HDD slots in the main unit and three WJ-HDX400 optional extension units, each with nine HDD slots

SD5 Link
Super Dynamic S Link

HDMI UniPhier

OPTIONAL ACCESSORIES



WV-CU950
ETHERNET SYSTEM CONTROLLER
WITH 3D-JOYSTICK AND JOG/SHUTTLE












- For smooth operation of Ethernet/PS data interface devices, WV-AS4100/WV-AS2700 and System518/519/520/521/522/523/524/525 (VU-SX150A version 2.0 or higher)
- Integrated system control: camera, recorder and switcher
- User-level management and user-assignable buttons
- Universal design for right- or left-handed users
















WV-CU650
RS-485 SYSTEM CONTROLLER WITH
3D-JOYSTICK AND JOG/SHUTTLE

















- For smooth operation of PS data interfaced devices and System518/519/520/521/522/523/524/525 (VU-SX150A version 2.0 or higher)
- Integrated system control: camera, recorder and switcher
- User-level management and user-assignable buttons
- Universal design for right- or left-handed users

COMPATIBILITY CHARTS
















CAMERA ACCESSORIES			
MODEL	DESCRIPTION/TYPE	COMPATIBILITY	IMAGE
WV-CF59A	Smoke Dome	WV-SF5301/511L, WV-SF5304/511L, WV-SF5331	
WV-C545	Smoke Dome	WV-C5584	
WV-C55C	Clear Dome	WV-SF5304, WV-SF5307A	
WV-C55S	Smoke Dome	WV-SF5304, WV-SF5307A	
WV-CR15	Smoke Dome	WV-SF5301/511L, WV-SF5304/511L, WV-SF5331	
WV-CW4C	Clear Dome	WV-KW5015, WV-CW5045, WV-CW5045/5345	
WV-CW4SA	Smoke Dome	WV-KW5015, WV-CW5045, WV-CW5045/5345	
WV-CW7S	Smoke Dome	WV-SF5301/511L/511L, WV-SF5304/511L, WV-SF5331	
WV-CW6SA	Smoke Dome	WV-SF5301/511L/511L, WV-SF5304/511L, WV-SF5331	
WV-Q7110	Extended Shade Cover	WV-SF5301/511L/511L, WV-SF5304/511L, WV-SF5331	
WV-CW5HA	Optional Heater	WV-CW5045/5345	

HOUSING AND MOUNTING BRACKETS FOR DOME CAMERAS						
			CAMERA TYPE			
			OUTDOOR VANDAL		INDOOR DOME	
MODEL NO.	PICTURE	DESCRIPTION/TYPE	WV-SF5301/511L, WV-SF5304/511L, WV-SF5331	WV-CW5045, WV-SF5045	WV-CW5045/5345, WV-SF5045/5345	WV-SF5045/5345, WV-SF5045/5345
WV-Q169A		Indoor Embedded Ceiling Mount Bracket	Yes		Yes	
WV-Q174B		Indoor Embedded Ceiling Mount Bracket				Yes (Except WV-Q211L)
PRCH1		Indoor Embedded Ceiling Mount Bracket	Yes		Yes	Yes
PPMS1		Indoor Pendant Mount Housing, Black				Yes (Except WV-SF5045/5345)
PPMS1B		Indoor Pendant Mount Housing, Beige				Yes (Except WV-SF5045/5345)
PS484S		Outdoor Vandal-resistant Shroud	Yes	Yes	Yes	
PPM484S		Outdoor Vandal-resistant Pole Mount	Yes	Yes	Yes	
PCM484S		Outdoor Vandal-resistant Corner Mount	Yes	Yes	Yes	
PHM484S		Outdoor Vandal-resistant Hanging Mount	Yes	Yes	Yes	
PWM484S		Outdoor Vandal-resistant Wall Mount	Yes	Yes	Yes	
WV-Q7110		Outdoor Extended Sun Shade	Yes		Yes	
WV-Q124		Outdoor Shroud Bracket requires WV-Q122A	Yes	Yes	Yes	
PWM781		Outdoor Wall Mount & Shroud			Yes	














HOUSING AND MOUNTING BRACKETS FOR INDOOR PTZ CAMERAS











			CAMERA TYPE		
			PTZ		
MODEL NO.	PICTURE	DESCRIPTION/TYPE			
WV-Q117		Indoor/Pendant Suspended Ceiling Mount			Yes
WV-Q118B		Indoor/Wall Wall Mount Bracket, Silver			Yes
WV-Q119		Indoor/Wall Wall Mount Bracket, White	Yes		
WV-Q126 WV-Q126A		Indoor/Ceiling Embedded Ceiling Mount Bracket	Yes (WV-Q126A)		Yes
WV-Q164C		Indoor/Wall Wall Mount Bracket—Clear Dome		Yes	
WV-Q164S		Indoor/Wall Wall Mount Bracket—Smoke Dome		Yes	
WV-Q165C		Indoor/Ceiling Embedded Ceiling Mount Bracket—Clear Dome		Yes	
WV-Q165S		Indoor/Ceiling Embedded Ceiling Mount Bracket—Smoke Dome		Yes	
WV-Q166C		Indoor/Ceiling Ceiling Mount Bracket—Clear Dome		Yes	
WV-Q166S		Indoor/Ceiling Ceiling Mount Bracket—Smoke Dome		Yes	
WV-Q167		Rear Dome Cover		Yes	
PISH5V		Indoor/Pendant/Clear 5" Indoor/Vandal-Resistant Housing		Yes	
PIDV7CN		Indoor/Ceiling/Vandal 7" Indoor Reversed Ceiling Housing with Clear Dome	Yes	Yes	Yes

HOUSING AND MOUNTING BRACKETS FOR INDOOR PTZ CAMERAS (CONT.)

			CAMERA TYPE		
			PTZ		
MODEL NO.	PICTURE	DESCRIPTION/TYPE			
PIDV7SN		Indoor/Ceiling/Vandal 7" Indoor Reversed Ceiling Housing with Smoke Dome	Yes	Yes	Yes
PDM9		Indoor/Ceiling 9" Indoor Perforated Ceiling Housing (Dome not included)			Yes
PID9		Indoor/Ceiling 9" Indoor Perforated Ceiling Housing (Dome not included)	Yes	Yes	Yes
PDSH5V		Outdoor/Ceiling—5" Outdoor Vandal-Resistant Housing, 24V AC to 12V DC Converter		Yes	
PDDV9CPTA		Outdoor/Ceiling—9" Outdoor Vandal-Resistant Dome Housing with Pendant Mount—Clear/RSB	Yes	Yes	Yes
PDDV9CWTA		Outdoor/Ceiling—9" Outdoor Vandal-Resistant Dome Housing with Wall Mount—Clear/RSB	Yes	Yes	Yes
PDD9CA		Outdoor/Reversed—9" Outdoor Dome Housing with Pendant Mount, Silver—Clear/RSB	Yes	Yes	Yes
PDD9CWA		Outdoor/Wall—9" Outdoor Dome Housing with Wall Mount, Silver—Clear/RSB	Yes	Yes	Yes
PDD9CTA		Outdoor/Pendant—9" Outdoor Dome Housing with Pendant Mount, White—Clear/RSB	Yes	Yes	Yes
PDD9CWTA		Outdoor/Wall—9" Outdoor Dome Housing with Wall Mount, White—Clear/RSB	Yes	Yes	Yes
PPFD9C		Outdoor/Pendant—9" Outdoor Perforated Dome Housing for Looking Camera—Clear/RSB			Yes
PPFD9CN		Outdoor/Pendant—9" Outdoor Perforated Dome Housing for Network Camera—Clear/RSB	Yes	Yes	

















COMPATIBILITY CHARTS

HOUSING AND MOUNTING BRACKETS FOR OUTDOOR PTZ CAMERAS					
MODEL NO.	PICTURE	DESCRIPTION/TYPE	CAMERA TYPE		
			PTZ		
			 WV-SW588A/ WV-SW337B	 WV-SW335A	 WV-CW58CA
PPRM30G		Outdoor Parapet Mount Short, Black	Yes	Yes	Yes
PPRM30GB		Outdoor Parapet Mount Short, Beige	Yes	Yes	Yes
PWM30C		Outdoor Parapet Mount Long, Black	Yes	Yes	Yes
PWM30GB		Outdoor Parapet Mount Long, Beige	Yes	Yes	Yes
PWM20G		Outdoor Boonneck Wall Mount, Black	Yes	Yes	Yes
PWM20GB		Outdoor Boonneck Wall Mount, Beige	Yes	Yes	Yes
PWM20GS		Outdoor Boonneck Wall Mount, Silver	Yes	Yes	Yes
PSRCW2000B		Outdoor Parapet Rooftop Hook, Black	Yes	Yes	Yes
WV-Q122A		Outdoor Wall Mount Bracket	Yes	Yes	Yes
WV-Q121		Outdoor Ceiling Mount Bracket	Yes	Yes	Yes








HOUSING AND MOUNTING BRACKETS FOR OUTDOOR PTZ CAMERAS (CONT.)						
			CAMERA TYPE			
			PTZ			
MODEL NO.	PICTURE	DESCRIPTION/TYPE	 WV-SW588A/ WV-SW337B	 WV-SW335A	 WV-CW59CA	 WV-SUD05B
PB24B		Outdoor Heavy Duty Junction Box	Compatible with PVM20G series, PVM63B	Compatible with PVM20G series, PVM63B	Compatible with PVM20G series, PVM63B	Compatible with PVM20G series, PVM63B
PACA4 PACA4B		Outdoor Corner Mount Adapter PACA4-Black, PACA4B-Beige	Compatible with PVM20G series, WV-Q121A, WV-SF4000 series, PVM63B	Compatible with PVM20G series, WV-Q121A, WV-SF4000 series, PVM63B	Compatible with PVM20G series, WV-Q121A, WV-SF4000 series, PVM63B	Compatible with PVM20G series, WV-Q121A, WV-SF4000 series, PVM63B
PAPM4 PAPM4B		Outdoor Pole Mount Adapter PAPM4-Black, PAPM4B-Beige	Compatible with PVM20G series, WV-Q121A, WV-SF4000 series, PVM63B	Compatible with PVM20G series, WV-Q121A, WV-SF4000 series, PVM63B	Compatible with PVM20G series, WV-Q121A, WV-SF4000 series, PVM63B	Compatible with PVM20G series, WV-Q121A, WV-SF4000 series, PVM63B
PAPM6		Outdoor Wall/Pole Mount Adapter	Compatible with PVM20G series, PVM63B	Compatible with PVM20G series, PVM63B	Compatible with PVM20G series, PVM63B	Compatible with PVM20G series, PVM63B
PPMF12D		Outdoor Pendant Mount	Yes	Yes	Yes	No
PWM63B		Outdoor Wall Mount Bracket	No	No	No	Yes

COMPATIBILITY CHARTS





HOUSING AND MOUNTING BRACKETS FOR FIXED CAMERAS

			CAMERA TYPE			
			FIXED			
MODEL NO.	PICTURE	DESCRIPTION/TYPE	 WV-SP711L WV-SP711L/SP711LH WV-SP711L/SP711LH WV-SP711L/SP711LH	 WV-SP711LH WV-SP711LH/SP711LH WV-SP711LH/SP711LH	 WV-SP711LH WV-SP711LH/SP711LH WV-SP711LH/SP711LH	 WV-SP711LH WV-SP711LH/SP711LH WV-SP711LH/SP711LH
WV-0120A		Outdoor Adapter Box	Included (Except WV-SP-711L/SP711LH)			
PUM6		Indoor/Wall Universal Camera Mount (Max. Weight 3 lbs.)		Yes	Yes	Yes
POD8CF		Outdoor/Pendant 8" Outdoor Dome Housing for Fixed Camera with Pendant Mount - Clear/AB		Yes	Yes	Yes
POD8CWF		Outdoor/Wall 8" Outdoor Dome Housing for Fixed Camera with Wall Mount - Clear/AB		Yes	Yes	Yes
POH1100		Outdoor/Wall 11" Outdoor Hemispherical Wall Mount Included				Yes
POH1100HB		Outdoor/Wall 11" Outdoor Hemispherical Wall Mount with Heat Sink and Fan - R/SB				Yes
POH1100NWH		Outdoor/Wall 11" Outdoor Hemispherical Wall Mount with Heat Sink and Fan - R/SB		Yes	Yes	
POH1100NWM		Outdoor/Wall 11" Outdoor Hemispherical Wall Mount with Heat Sink and Fan - R/SB		Yes	Yes	
PACA4		Outdoor Pole Mount Adapter PAPH4-Black, PAPH4B-Beige	Yes			
PAPH4		Outdoor Pole Mount Adapter PAPH4-Black, PAPH4B-Beige	Yes			
NEW		Indoor/Kiosk Emergency Housing Breakdown Mount/Temporary Glass Mount				
NEW		Indoor/Kiosk Emergency Housing Breakdown Mount/Temporary Glass Mount Includes WV-SP711L camera				

VARIABLE FOCAL LENSES FOR HD CAMERAS










SIZE	MODEL NO.	PICTURE	COMPANY	FOCAL LENGTH (MM)	APERTURE RATIO @ WIDE	AUTO IRIS	WV-SPW311/SP500/SP500	WV-SPW311/SP500/SP500
1/3"	PLAMP2286		Fujicon	2.2-8.0	F1.3	Yes	Yes	Yes
1/3"	PLAMP2406		Tamron	2.4-6.0	F1.2	Yes	Yes	Yes
1/3"	PLAMP2808		Fujicon	2.8-8.0	F1.2	Yes	Yes	Yes
1/3"	PLAMP2812		Fujicon	2.8-12.0	F1.4	Yes	Yes	Yes
1/2"	PLAMP0722		Ricon	7.0-22.0	F1.4	Yes	Yes	Yes
1/3"	PLAMP0550		Tamron	5.0-50.0	F1.4	Yes	Yes	Yes
1/3"	PLZ15/33		Fujicon	15.0-50.0	F1.5	Yes	Yes	Yes

MY2 LENSES FOR HD CAMERAS












SIZE	MODEL NO.	PICTURE	COMPANY	FOCAL LENGTH (MM)	APERTURE RATIO @ WIDE	AUTO IRIS	WV-SW115/SF115	WV-SW115/SF115	WV-SW115/SF115	WV-SW115/SF115
1/3"	PLM12MP028/1		Evetar	2.8	F2.0	No	Yes	Yes	Included	Yes
1/3"	PLM12MP040/1		Evetar	4.0	F1.8	No	Yes	Yes	Yes	Yes
1/3"	PLM12MP120/1		Evetar	12.0	F1.6	No	Yes	Yes	Yes	Yes
	PLM12MP010/1		Sony	1.55	F2.2	No	Included	Included	Yes	Included

COMPATIBILITY CHARTS












VARIABLE FOCAL LENGTH LENSES FOR SD CAMERAS

SIZE	MODEL NO.	PICTURE	COMPANY	FOCAL LENGTH (MM)	APERTURE RATIO @ WIDE	AUTO IRIS	WV-CW634 SERIES	WV-CW635 SERIES WV-CW636 SERIES WV-CW637 SERIES
1/2"	PLAHS1770		Fujinon	7.8-70.0	F1.8	Yes		
1/3"	WV-LZA61/25		Panasonic	3.8-8.0	F1.4	Yes		Yes
1/3"	WV-LZ62/85		Panasonic	5.0-48.0	F1.4	Yes		Yes
1/3"	PLA2273DN		Toscon	2.2	F1.2	Yes	Yes	Yes
1/3"	PLZ27/5DN		Fujinon	2.7-13.5	F1.3	Yes		Yes
1/3"	PLZ29/27		Fujinon	2.9-8.8	F8.95	Yes	Yes	Yes
1/3"	PLZ5/10		Fujinon	5.0-50.0	F1.4	Yes		Yes
1/3"	PLZ15/33		Fujinon	15.0-55.0	F1.5	Yes	Yes	Yes
1/3"	PLZ20/5		Toscon	20.0-100.0	F1.4	Yes		Yes








READY-TO-GO PACKAGES

	CAMERA	LENS	HOUSING
			
	Camera	Lens	Housing
WV-CW634F		WV-CW634F	Factory 3.8-8mm Factory Flush Mount
WV-CW634F/09		WV-CW634F	PLAMP0722 7-22mm Factory Flush Mount
WV-CW634F/15		WV-CW634F	PLZ15/33 15-55mm Factory Flush Mount
WV-CW634F/22		WV-CW634F	PLAMP2106 2.2-6mm Factory Flush Mount
WV-CW634S		WV-CW634S	Factory 3.8-8mm Factory Surface Mount
WV-CW634S/09		WV-CW634S	PLAMP0722 7-22mm Factory Surface Mount
WV-CW634S/15		WV-CW634S	PLZ15/33 15-55mm Factory Surface Mount
WV-CW634S/22		WV-CW634S	PLAMP2106 2.2-6mm Factory Surface Mount

READY-TO-GO PACKAGES (CONT.)

		CAMERA	LENS	HOUSING
				
		Camera	Lens	Housing
POC314L2		WV-CP314	PLAMP2812 2.8-12mm	POH1000H
POC314L5		WV-CP314	PLZ3510 5.8-50mm	POH1000H
POC434L2		WV-CP434	PLAMP2812 2.8-12mm	POH1000H
POC434L5		WV-CP434	PLZ3510 5.8-50mm	POH1000H
POC5PN311L2		WV-SPN311A	PLAMP2812 2.8-12mm	POH1000H
POC5PN311L5		WV-SPN311A	PLAMP2550 5.8-50mm	POH1000H
POC5PN531LMP05		WV-SPN531	PLAMP2550 5.8-50mm	POH1000H
POC5PN531LMP24		WV-SPN531	PLAMP2465 2.4-6.8mm	POH1000H

MONITORS

MODEL	TYPE	INFO	IMAGE	DESCRIPTION	COMPATIBLE WITH
PLCD9C	Monitors	LCD Monitors		9" LCD monitor, 800 x 600	
PLCD9C/2	Monitors	LCD Monitors		2-9" LCD monitor, 800 x 600 with rack mount	
PLCD15V	Monitors	LCD Monitors		15" LCD monitor, 1024 x 768, 4:3 aspect ratio, two built-in speakers, 2x BNC input, S-Video input/output, RGB input	
PLCD19P	Monitors	LCD Monitors		19" LCD, 1280 x 1024, 5:4 aspect ratio, two built-in speakers, 2x BNC input, S-Video input/output, RGB input, DVI input, HDMI input	
PLCD24HDA	Monitors	LCD Monitors		24" Full HD LCD, 1920 x 1080, 16:9 aspect ratio, two built-in speakers, 2x BNC input, S-Video input/output, RGB input, DVI input, HDMI input	
PLCD27HDA	Monitors	LCD Monitors		27" Full HD LCD, 1920 x 1080, 16:9 Aspect Ratio, two built-in speakers, 2x BNC input, S-Video input/output, DVI input, HDMI input	
PLCD42HDA	Monitors	LCD Monitors		42" Full HD LCD, 1920 x 1080, 16:9 aspect ratio, two built-in speakers, 2x BNC input, S-Video input/output, DVI input, HDMI input, pedestal stand	
PRMK08	Monitors	Accessories	Image Not Available	Rack mount kit for PLCD19P, PLCD24P monitors	PLCD15V PLCD19P

W	V	-	S					
Customer ID	Invoice #/Date	Invoice Date	Invoice Type	Invoice Status	Invoice Amount	Invoice Due Date	Invoice Due Time	Invoice Due Day

PARAGONIC IS PROVIDING VIDEO INSIGHT SOFTWARE LICENSES WITH THE PURCHASE OF PARAGONIC CAMERAS INSTALLED AFTER OCTOBER 2016 TO SOME SELECTED PROFESSIONALS AT NO ADDITIONAL COST.

PTI BOMB

545818/545819 545820/545821 545822/545823 545824/545825
545826/545827 545828/545829 545830/545831 545832/545833

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STROTH, STROTH

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S14510, S14511, S14531, S1453, S1453, S14511, S14511
S14511, S1451, S1455, S1452, S1453, S1453, S14511
S14510

SPV700, SPV600LT, SPV700L, SPV600, SPV600L, SPV700L
SPV700, SPV600LT, SPV700L, SPV600, SPV600L, SPV700L

SPIR01, SPIR02, SPIR03, SPIR04, SPIR05, SPIR06, SPIR07, SPIR08,
SPIR09, SPIR10, SPIR11, SPIR12, SPIR13, SPIR14

ST/61 SERIALIZED BY 589 SWAGEMA, SF445, SF40

SW16, SW17W, SW17Z, ST15, ST16Z, BL-V16W, BL-V16Z,
BL-V16W, BL-V16Z, BL-V16Z

01550 015100

How to tell if your Panasonic camera was manufactured after October 2014:

1. Read the serial number of your camera and/or camera box.
 2. The first letter of the serial number code indicates the year of production, where H=2012, N=2014, G=2016.
 3. The second letter indicates the month of production, where A=January, B=February, C=March, etc.
- For example, October 2016 will be H160901.

For more information, visit:
us.panasonic.com/products/video/surveillance-video/might

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This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Panasonic

Your Full-service Partner in Surveillance

Transforming surveillance system solutions from concept to completion requires the utmost attention to detail throughout every phase of the process. You can trust Panasonic to be your single-source provider for all your facility's needs, from system design to installation to post-implementation support. Offering seamless integration, superior cost efficiency and increased ROI, we will configure your surveillance system to best fit your requirements and budget, while offering a fully integrated solution with the best third-party partners in the business. Plus, Panasonic's product warranty and service network ensure your system will continually perform to its highest expectations for years to follow.

Panasonic Security Services

Design and Build

- Needs assessment
- System design
- Third-party integration
- Hardware and software
- Customer training

Installation Support with Trusted Partners

- On-site / remote technical support

System Implementation with SI Partners

Post-implementation Support

- Extended warranties are available

FOR TECHNICAL SUPPORT
1.800.528.6747
psditech@us.panasonic.com

FOR SALES/INQUIRY
1.847.888.7000
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Elgin, IL 60120-1620

FOR B2B SALES/INQUIRY
1.877.803.8492
us.panasonic.com/security
B2BSales@us.panasonic.com

VI Monitor Plus Key Features

Panasonic

Recorded Video Management:

- Intuitive access to recorded video from any camera in system regardless of location.
- Frame-by-Frame or variable playback speeds up to 32X.
- View single camera or drag and drop up for Full Layout Synchronized Playback.
- View groups of cameras via drag and drop.
- Slider bar provides quick access to events.
- Digital zoom on Live and recorded video.
- Synchronized video and audio playback.
- Instant replay of last 30 seconds of recorded video (Via Rule)
- Create a clip with use of guides marking time interval
- Save clip to local client or server.
- Continuous, motion activated, scheduled, event or Trigger based recording.
- Record up to 30 FPS or as little as 1 image per second, hour or day.
- Record always at low FPS and transition to higher FPS on motion events or alarm.
- Pre- and Post-motion recording.
- Support for camera and server side motion detection.
- Create sensitivity zones in Windows client or camera configuration.
- Motion Event logs provide quick review of video associated with motion or alarm events.
- Access recorded video from other non-local servers added to the server list.
- Graphical timeline highlights motion events.
- Progressive download speeds for slow-speed connection.
- Automatically manages files and disk space.
- Specify maximum Storage retention by camera.
- Enhanced Timeline with Motion vs Fulltime Indications.
- Most complete Panoramic/360° De-warped support of any VMS manufacturer.

Video Exporting:

- Intuitive Viewing Clients require little to no End-user training.
- Clips can include Optional 128bit encrypted watermark, server based date/time stamp, and camera name.
- Recorded video is saved in cameras native compression format and placed in AVI or EXE container for easy universal playback.
- Improved Video Exporter: with central options.
- Exported clips include audio.
- Multiplex video export of up to 9 video streams in single AVI file.

Live Video:

- Full-featured Windows, Web, and Mobile Clients included for free.
- iPhone and iPad Vi Mobile app available for free through Apple App store.
- Android Vi Mobile app available for free through the Google Play.
- Mobile App support, live and recorded video streaming, Maps, and Control
- functionality, and PTZ camera control. Browser agnostic Web Client works with many popular browsers, and has full support for Chrome and IE.
- VI MonitorPlus: Workspace Home Screen with Custom Quick Launch options.
- Workspaces : Tabs which allow for easy multi-tasking.
- Dynamic aspect ratio control for complete camera layout from 16:9 or 4:3.
- High Speed Video Viewing via Active X for IE only.
- VI Monitor for MAC
- Quickly navigate between cameras from any server using Windows Explorer tree structure
- Unlimited user seats for viewing clients

- Create customized layouts and layout groups (MOVE)
- Create custom layout by dragging and dropping cameras.
- Predefined layouts stored in the database can pull cameras from multiple servers, restricted by security level
- Camera touring or Layout sequencing
- 180° stitched layouts for supported cameras.
- Single, Quad and Panorama views for fisheye 360° cameras
- Advanced camera features from Panasonic, Axis, Sony, Sentry360, Pelco and ImmerVision.
- Easy PTZ control options included on-screen overlay Via collapsible right menu bar.
- Cycle PTZ presets, pausing for specified interval
- PTZ control with USB Joysticks
- Option to lock down non-admin users from PTZ controls
- PTZ Prioritization – Users can be ranked to determine who has PTZ operations at a specific time.
- Search box allows quick access to any camera or server - search by partial name or IP address. (WEB CLIENT only)
- Push live video pop-up windows to other logged in users.
- 2Way audio allows operators to interact with video.
- Create Covert cameras by removing from navigation.
- High Performance option renders video in real time.
- Run in Full Screen mode with limited menus.
- Multi monitor support Via Free floating Workspaces.
- Video Wall app supports up to 64 monitors.
- Operators can push single camera or layout to a Video Wall.
- Motion alerts displayed for each camera.
- Option to play sound on motion alarm.
- Launch clients in full screen mode to predefined layouts.
- Public View App displays live images directly from camera without connecting to a server.
- Lane Viewer App displays live images along with card holder picture and information to verify identity.

Facility Maps:

- Easy Map creation. Setup requires a JPEG, BMP or GIF images of layout, which can be populated by drag and drop icons of doors, camera, and panels available on server.
- Create Multilevel mapping provides quick access to multi-level layouts.
- Live icons provide system info such as door states or live views with a click of a mouse.
- Zoom into maps or navigate between multiple layers.
- Quick access to recorded video from facility maps.
- Launch specified facility map on startup.
- View maps from Windows, Mobile, or Web Clients.
- Mouse over Layout icons to switch live displays to groups of cameras in the area.
- Access Control dynamic menu through Facility Maps, provide detailed information through one central location.

Notifications & Automation:

- Pop-up live windows of alarmed cameras.
- Red outline in camera layout on alarm conditions.
- Play audio file on alarm to alert operator customizable per user.
- Pop-up window with detailed instructions for operator.
- E-mail or send Custom Messages text Flashback Images, Interval snapshots, or Video Clips.
- Alerts can be directed to specific users or groups.
- Powerful Rules Wizard allows easy configuration to take actions after an event.
- Motion alerts displayed for each camera.
- Option to play a sound on motion alarm.

- Send JPEG snapshots on an interval or on motion.
- Alter operators of camera side Analytic events.
- Using Camera Analytic, such as Tripwire, count people.
- Video Bookmarking, for tracking events on timeline with notations attached.
- entering and exiting facility to keep running total and alert if threshold exceeded.

Enterprise Functionality

- Support for unlimited cameras and recording servers.
- Developed from open technologies based around Microsoft .Net and SQL platforms, allowing easy integration with 3rd party application via the well-defined SQL tables.
- Distributed login to any server prevents single point of failure
- Optimized for Centralization: Includes centralization of Servers,
- User database, cameras, layouts, and full system management
- Support for both centralized and distributed architectures
- Use existing SQL Server infrastructures or included SQL Express
- Centralized Management for all camera configurations & all servers are done from one easy-to-use setup screen.
- Clients can connect to a single IP address to access the entire system.
- Assign individual camera permissions to users or groups.
- All system and user settings are stored in SQL database.
- Automatic Failover.
- Health Monitor – comprehensive monitoring and alerting of system status.
- Audit Trail: User logins & configuration changes tagged in a SQL.
- Custom application Plugins: IE Point of Sales, GPS Location, and More.
- Automatic upgrade of client applications.
- Complete system performance statistics including – Storage, Bandwidth, resolution, format and frame Rate.
- Hidden Views: Users only see assigned views regardless of number of servers.
- Export camera and server information in Excel format.
- Camera Maintenance logging and tracking .Net-based.
- Software Development Kit.
- Multi Languages Available.
- Camera Setup Template Support.
- Review recorded events across Multiple cameras quickly Via smart
- Thumbnails search for precise investigation. (7.1)
- Customizable Server and Cameras Groups.
- Customizable Facility Maps and View Groups.
- Deep integration for over 4,100 camera models from 154+ manufacturers.
- Universal camera driver provides support for almost all other cameras via ONVIF, RTSP or HTTP
- Multi-streaming
- Camera auto discovery
- Send live video to Axis Decoders
- Rules and events can Trigger Digital Inputs and Outputs along with .exe applications or batch files.
- Robust scalable design, with a pure 64-bit Server and Client application that allows server & client software to efficiently take advantage of full machine memory.
- Email support for SSL and alternate ports, supporting Gmail and Hotmail.
- VI includes MonitorCast : a fully integrated, enterprise level, Mercury based, access control platform at no cost.
- VI has full support for Virtualization: Includes VMware, Hyper-V, XenServer.
- Action Center for all: recorded video logs, notifications, and system alerts.

Security:

- Video Tampering & Validation built within the Software.
- Privacy Zones for sensitive areas for any camera in layout.
- SSL certification needed to secure web client transmissions
- Multi-level security including restriction of setup, management, live and recorded viewing, PTZ operation, access to layouts, facility

maps, rules and clip creation.

- Enterprise-wide user management tool for local users.
- Authenticate users with a Video Insight user database or with integration of users and groups imported from Active Directory, & LDAP. Assign individual camera permissions to users or groups.
- Comprehensive log of all changes to system
- Option to restrict users from logging in from multiple locations
- Limit users to a single login per username.
- Server Software runs as a Windows Service, for easy log retention.
- IP Server connects to all cameras; viewing clients in turn are connected to the IP Server to prevent direct camera connection
- Option to restrict users from accessing system from multiple locations.

Storage:

- Flexible Open storage design with no limits on support for internal or external storage arrays such as NAS, SAN, and iSCSI drives.
- Support for Pivot3 Cloudbank failover architecture and Dell EqualLogic solutions.
- Option to move recorded video from either cameras or servers, on a set schedule, for long term storage or Archiving needs.

Performance

- Full Support for GPU transcoding, and Hardware acceleration for greater stability, expandability, and higher video quality.
- 4Gbs bandwidth throughput per OS, for unprecedented system scalability and performance.
- System resource load balancing for optimized performance.
- Support for multiple 4k camera loadout and 30 FPS playback.
- System Support for 40 Megapixel IP cameras at 30FPS playback.
- No limitations on software for number of viewing client connections.

Easy Licensing

- Simple Per camera licensing structure, available in single camera increments.
- No extra licensing costs for client applications, or annual maintenance fees.
- No base or server license fees when using genuine Video Insight servers.
- Individual camera's MAC address not required for easy servicing and replacements.
- Multi-stream connections from one camera only require one license.
- Only 1 license needed for most 180° and 360° multi-sensor cameras.
- Panasonic i-Pro and Advitia cameras require no camera licensing.

Support

- Lifetime U.S Based technical support included: Monday- Saturday for trouble shooting, configuration support, and remote assistance.
- Unlimited Live Web-Based training included with Video Insight.
- Unlimited software updates included for version.

Access Control Integration:

- | | | |
|------------------|---------------------|------------------|
| • Maxxess | • RBH Axiom V (AX5) | • Isonas |
| • MonitorCast4.X | • Gallagher | • AMAG |
| • Badge Pass | • Open Options | • DSX |
| • Wren Solutions | • Infinias | • RS2 |
| • Paxton | • Lenel | • S2 |
| • Sureview | • Secure | • Blackboard |
| • IMRON | • Continental | • Software House |

Panasonic
BUSINESS

Anti-severe weather
PTZ network camera
WV-SUD638

AeroPTZ



High durability under arctic -to- desert weather conditions and salty gust winds for tough operations

Key Feature

- Full HD (1080p) 60 fps, x30 zoom lens
- **Built-in wiper and Auto defroster**
- Wind load durability **60 m/s (135 mph)** (operation)
80 m/s (180 mph) (non-destructive)
- **Video SAS (Stability Augment System)** for high-class image stabilization
- "Sphere vision" provides **360° 3D viewing** (Pan : 360° endless, tilt : 90° to -90°)

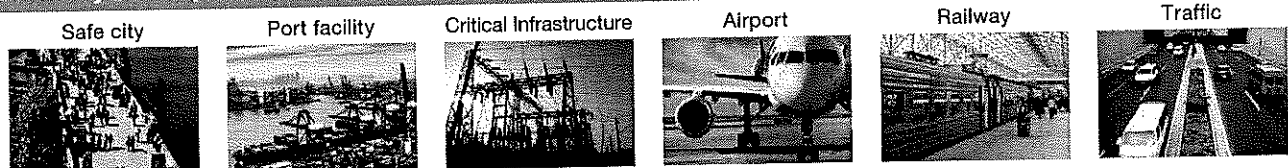
- Temperature **-50 °C to +60 °C (-58 °F to +140 °F)***
- **IP67, IP66, IK10 certified**
- **Optional IR LED light** (up to 150 m/500 feet, zoom interlocking)
- **Anti-salt air corrosion protection** ideal for seaside operations
- **Smart coding mode** for additional compression

* Natural Silver model only. Not available IR LED Unit when the temperature is over 55 °C.
Grey & Brown model : up to +55 °C.

Design Concept Camera Aerodynamics

- 1 Aerodynamic Spheroid** "360 deg. aerodynamic spherical design" minimizing interference drag for more visual stability.
- 2 Intelligent Radius** Unique radius bodyline keeps snow and dirt off.
- 3 Glass fiber body** Deliver excellent strength, and anti-corrosion

Industry examples



Specifications

Camera	Image sensor	Approx. 1/3 type MOS image sensor
	Minimum illumination	Color : 0.06 lx (F1.6, Maximum shutter : Off(1/30 s), AGC : High) 0.004 lx (F1.6, Maximum shutter : max. 16/30 s, AGC : High)* BW : 0.02 lx (F1.6, Maximum shutter : Off(1/30 s), AGC : High) 0.001 lx (F1.6, Maximum shutter : max. 16/30 s, AGC : High)* 0 lx (F1.6, Maximum shutter : Off(1/30 s), AGC : High, when the IR LED (Optional) is lit) * Converted value
	Super Dynamic ¹	Dynamic Range 105 dB typ.
	Image settings	Gain (AGC), White balance
	Image compensation	Adaptive black stretch, Back light compensation (BLC), Fog compensation, High light compensation (HLC), Digital noise reduction
	Shutter speed	(2 mega pixel [16 : 9] (60 fps mode)) Off(1/60) to 1/10000 Other than (2 mega pixel [16 : 9] (60 fps mode)) Off(1/30) to 1/10000
	Day/Night (ICR)	Off / On / Auto1(Normal) / Auto2(IR Light) / Auto3(SCC)
	IR LED Light (Optional)	Off / Auto (High / Mid / Low) Irradiation distance : 150 m (500 feet)
	Image stabilization	On / Off *Hybrid image stabilizer
	Privacy zone	Gray / Mosaic / Off (up to 32 zones available)
	Camera title on screen	Up to 20 characters (alphanumeric characters, marks)
	Video Motion Detection (VMD)	On / Off, 4 areas available
	Zoom Ratio	30x / 45x with HD extra optical zoom (at 1280 x 720) (Motorized zoom / Auto Focus)
	Digital (electronic) zoom	x1, x2, x4
Lens	Focal length	4.3 mm - 129 mm (3/16 inches - 5-3/32 inches)
	Maximum Ratio Aperture	1 : 1.6 (WIDE) - 1 : 4.7 (TELE)
	Focus range	2.0 m - ∞
	Aperture range	F1.6 (WIDE) - Close
	Angular field of view	[16 : 9 mode] Horizontal : 2.3° (TELE) - 64° (WIDE) Vertical : 1.3° (TELE) - 38° (WIDE) [4 : 3 mode] Horizontal : 1.8° (TELE) - 50° (WIDE) Vertical : 1.3° (TELE) - 38° (WIDE)
	Panning Range	360° endless
	Panning Speed	Manual : approx. 0.065°/s to 100°/s Preset : up to approx. 200°/s (Except when IR LED Unit is equipped, forward tilt mount, frozen.)
	Tilting Range	Upright : -45° to +90° Forward tilt : -80° to +90° Hanging : -90° to +30°
	Tilting Speed	Manual : approx. 0.065°/s to 100°/s Preset : up to approx. 200°/s (Except when IR LED Unit is equipped, forward tilt mount, frozen.)
	Preset Positions	255 positions
Pan/Tilt unit	Auto Mode	Auto track / Auto pan / Preset sequence / 360 map-shot / Preset map-shot / Patrol
	Self Return	10 s to 60 min
	Tilt flip	On / Off
	Map Shot	360° map shot / preset map shot
	Map Shot	360° map shot / preset map shot
	Network IF	10Base-T / 100Base-TX, RJ45 connector
	Image Resolution	*2 mega pixel [16 : 9] (60 fps mode / 30 fps mode) H.264 : Minimum 1,920 x 1080 JPEG : Minimum 1,920 x 1080
	Image compression method	*1.3 mega pixel [4 : 3] (30 fps mode) H.264 : Minimum 1,280 x 960 JPEG : Minimum 1,280 x 960
	Image compression method	H.264 Transmission Mode : Constant bit rate / Variable bit rate / Frame rate priority / Best effort / Advanced VBR Transmission type : Unicast / Multicast JPEG Image Quality : 10 steps Multiple streams individually configurable
	Intelligent compression	Smart coding, VICS (ROI)
Network	Audio compression	G.726 (ADPCM) 32 kbps / 16 kbps G.711 64 kbps AAC-LC ² 64 kbps, AAC-LC(High quality) ² 64 kbps / 96 kbps / 128 kbps
	Protocol	IPv6 : TCP/IP, UDP/IP, HTTP, HTTPS, FTP, SMTP, DNS, NTP, SNMP, DHCPv6, RTP, MLD, ICMP, ARP IPv4 : TCP/IP, UDP/IP, HTTP, HTTPS, RTSP, RTP, RTCP, FTP, SMTP, DHCP, DNS, DDNS, NTP, SNMP, UPnP, IGMP, ICMP, ARP
	Maximum concurrent access number	Up to 14 users (Depends on network conditions)
	Mobile terminal compatibility	iPad, iPhone, iPod touch (OS 4.2.1 or later)
	Mobile terminal compatibility	Android TM mobile terminals
	Mobile terminal compatibility	(As of September, 2016)
	Mobile terminal compatibility	
	Mobile terminal compatibility	
	Mobile terminal compatibility	
	Mobile terminal compatibility	

Environment	Water and Dust Resistance	Main body : IP66, IP67, IEC60529 measuring standard compatible, Type 4X(UL50), NEMA 4X compliant Waterproof RJ45 connector, Waterproof power connector, Waterproof I/O connector
	Shock resistance	Compliant with IEC 60068-2-27
	Salt damage resistance	ISO14983 compliant
	Resistance to wind	60 m (135 mph) (Operation) / 80 m (180 mph) (installation limit)
	Power source	AC100 to 240 V, 50 Hz / 60 Hz Tested PoE Injector* (60 W) *with limitations
	Operating environment	Ambient operating temperature : -50 °C to +60 °C (-58 °F to 140 °F) (When using AC100 to 240 V) -30 °C to +60 °C (-22 °F to 140 °F) (When using tested PoE Injector) (Power on range : -30°C to +55 °C(-22 °F to 158 °F)) *Natural Silver model only. Not available IR LED Unit when the temperature is over 55 °C. Gray & Brown model : up to +55 °C. Ambient operating humidity : 10 % to 100 %
	External I/O terminals	ALARM IN 1(DAY/NIGHT IN, Auto time adjustment), ALARM IN 2(ALARM OUT), ALARM IN 3(AUX OUT), Relay connection (x1 for each)
	Line input	Ø3.5 mm monoaural mini jack Input Impedance : Approx. 2 kΩ (unbalanced) For line input Input level : Approx. -10 dBV
	Audio output	Ø3.5 mm stereo mini jack (monoaural output) Output Impedance : Approx. 600 Ω (unbalanced) Using Amplifier built-in external speaker Output level : -20 dBV
	Dimensions	220 mm (W) x 450 mm (H) x 266 mm (D) (8-21/32 inches (W) x 1 ft 5-23/32 inches (H) x 10-15/32 inches (D))
General	Mass (approx.)	Approx. 8 kg (17.64 lbs)
	Finish	Main body : High-strength resin of salt damage resistance WW-SUD638 : Natural Silver WW-SUD638-H : Gray (N7) WW-SUD638-T : Brown (Environmental color) Front glass : Glass, Clear

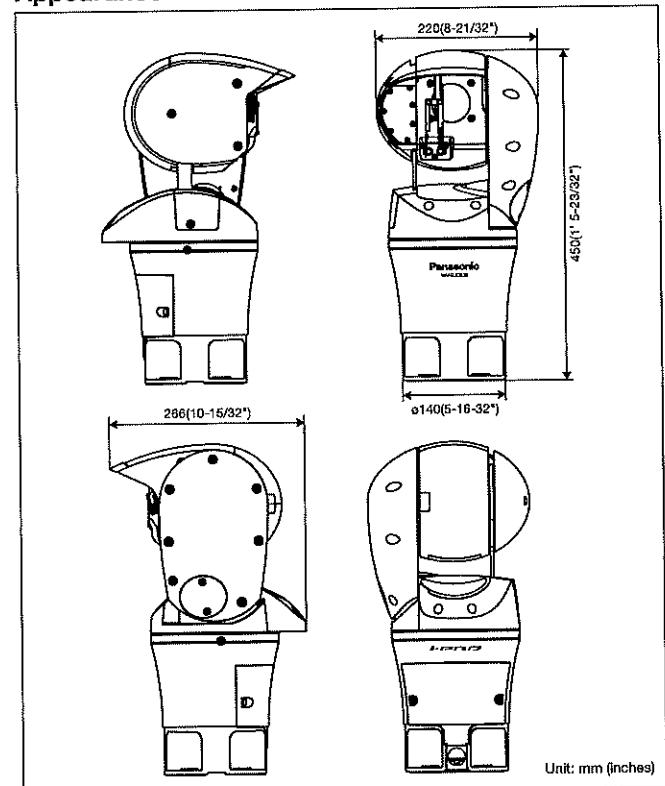
*1 Super Dynamic function is automatically set off on 60 fps mode.

*2 When "AAC-LC (HIGH QUALITY)" is selected, there are limitations about the following function.
- HTTPS is not available.

- The maximum concurrent access number is limited to 5

*3 Only when Installation work specified in Installation Guide is properly performed and appropriate waterproof treatment is performed.

Appearance



Unit: mm (inches)

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Important

- Panasonic cannot be responsible for the performance of the network and/or other manufacturers' products used on the network.

- Design and specifications are subject to change without notice.
- Masses and dimensions are approximate.

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(2A-167EL)

Stone, Andrea

From: Barbieri, John <JBarbieri@springfieldpolice.net>
Sent: Wednesday, December 13, 2017 10:30 AM
To: Schwarz, William J
Subject: FW: Panasonic Security Solutions for the Springfield Police Department
Attachments: WHY ADVIDIA.pdf; 2017 Panasonic Video Surveillance Catalog.pdf; VI7 Key Features 2017.pdf; PANASONIC PTZ PDF NEW FOLDER 08-1PTZ Facial Recognition.pdf

Importance: High

FYI

John R. Barbieri
Police Commissioner
130 Pearl Street
Springfield, MA 01101
413.787.6313

From: Morgan, Kretonia [mailto:kretonia.morgan@ext.us.panasonic.com]
Sent: Tuesday, December 12, 2017 4:54 PM
To: Barbieri, John
Subject: Panasonic Security Solutions for the Springfield Police Department
Importance: High

Commissioner Barbier,

Panasonic Company leading IP video surveillance management software powered by Video Insight is used by over 25,000 customers in the financial, government, retail, and transportation sectors with a very strong presence in the education market consisting of 5,000 K-12 school/college customer. Video Insight is the easiest and most cost-effective enterprise VMS with support for over 3,000 camera models and integration with the top access control solutions in the market. Panasonic can upgrade your existing video surveillance system or design a new one altogether. We can work with you directly or through your systems integrator, as we have excellent working relationships with technology professionals nationwide. We would love for you to consider the Panasonic Security Solution for any current or upcoming projects.

Download | Panasonic Security System

security.panasonic.com

Welcome to Panasonic Security System support site. Find solutions and help for your Panasonic Security System products from our online information. Download manual ...

Video Insight software provides a sophisticated, yet, easy-to-manage system that allows you to record and monitor live video from a centralized location, the internet, or even from a Smartphone or device (iPhone/iPad, Blackberry, Droid). Because Video Insight is designed for multi-facility use, it is perfect for governmental entities which can often have dozens of buildings, sometimes in different cities and states.

Operating on your existing network infrastructure, Video Insight makes efficient use of bandwidth, and is typically less taxing on your system than our competitors, freeing up much-needed space for other computer network functions. In the aftermath of an incident – a theft, confidentiality breach, vandalism employee conflict situation – exporting recorded video to burn on a cd or email to law enforcement/security is so simple that virtually no training is required for employees to be up and running on the system shortly after installation.

We offer a U.S.-based technical support staff which operates on a one-hour call back guarantee so your organization will never be without the dedicated customer service you deserve.

<http://security.us.panasonic.com/>

Video Management Software and Surveillance System ...

security.us.panasonic.com

Panasonic provides IP video management software and surveillance system.

- * – Learn why Video Insight is the premier VMS provider for across the US
- * – Review the full catalog of cameras provided by Advidia; No license fees if used in conjunction with Video Insight Management software
- * – See what some of our largest customers have to say about VI
- * – Download and install our VMS software completely free of charge for 60 days with use for up to 99 cameras
- * – Play around with a live stream of cameras from our office
- * - A basic introduction to our software's features and functionality.

If you have any questions, please don't hesitate to contact me directly at (713) 581-9248.

We have many vendors in the local market area that I would be more than happy to get you in contact with. Please let me know if you have any questions.

Request your free pilot here!

(Download our iPhone or Android mobile app and instantly connect to our demo server!)

KreTonia Morgan

Customer Engagement Specialist - North Territory

Surveillance and Security Solutions

Panasonic North America

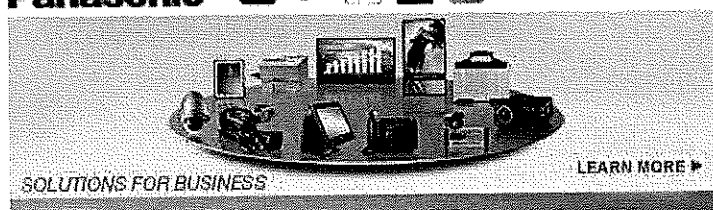
800 Gessner Road Suite 700

Houston, Texas 77024

E: kretonia.morgan@ext.us.panasonic.com

Telephone: 713-581-9248

Panasonic     



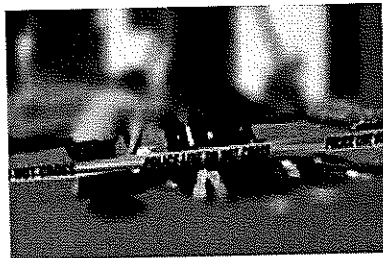
Stone, Andrea

From: Joel Griffin, Editor, SecurityInfoWatch.com <SIW@news.southcommmail.com>
Sent: Tuesday, January 23, 2018 3:01 PM
To: clandrau@springfieldpolice.net
Subject: Security Frontline: Inside NFPA's new active shooter standard, How AI could be used to thwart spear phishing, more

[View online.](#)



FEATURED STORY



NFPA strives to develop minimum requirements for active shooter response

By Joel Griffin

Private security, first responders and other professionals collaborate on provisional standard fast-tracked by...

TOP NEWS

AI may be a new weapon against spear phishing attacks

AI has the ability to learn and analyze an organization's unique communication pattern and flag inconsistencies

Perimeter intrusion detection: The first line of defense

Integration with other security technologies is key to any effective perimeter defense system

Disrupting the attacker's path to the target is a key to preventing a breach

massacre

New policy also allows a hotel employee to enter a room if housekeeping is unable to gain access to it

After mauling, Delta tightens emotional support animal restrictions

Airline will now require a 'confirmation of animal training' form, proof of vaccinations 48 hours in advance

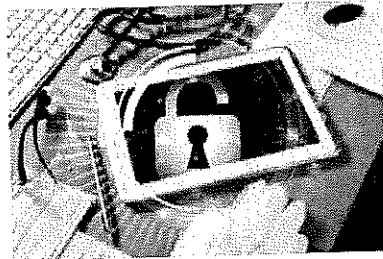
Union questions video surveillance at Chicago hotel

UNITE HERE Local 1 wants to know if the Hyatt Regency Chicago has used facial recognition software to track...

Kansas university gun case points to potential loophole for criminals in campus carry

Current law forbids police from stopping and questioning someone with a firearm unless they're a suspect in another...

BEST OF SECURITY TECHNOLOGY EXECUTIVE



8 Lessons Learned on Perimeter Security for all Healthcare Executives

By Clyde Hewitt, CISSP, CHS

Overconfidence in your plan and an underestimated threat can spell disaster

PRODUCT WATCH



**Arecont Vision's
AV NVR All-in-
One Network
Video Recorder
Series**

**IndigoVision's Control Center
v15.1**

**Nedap's MACE Smart Slim Mobile
Access Control Reader**

**Potter's AFC Series Addressable
Fire Panels**

MEDIA CENTER



**Video: Victims of Las Vegas
concert shooting suing Mandalay
Bay over security failures**

Survivors of massacre claim hotel failed to take the proper precautions

EVENT WATCH



ISC West 2018

04/10/18 7:00 AM CT - 04/13/18 4:00 PM CT

Las Vegas, NV

www.iscwest.com

ISC West is the largest security industry trade show in the U.S. At ISC West you will have the chance to network with over 29,000 security professionals through: New Products & Technologies encompassing everything from access control to unmanned...

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SecurityInfoWatch
SouthComm Business Media, LLC
1233 Janesville Ave
Fort Atkinson, WI 53538

Stone, Andrea

From: Brian Pennington <bpennin@us.ibm.com>
Sent: Thursday, January 25, 2018 11:41 AM
To: rdaniel@springfieldpolice.net
Subject: IBM - IACP Event October 21 - Follow up

Dear Daniel,

I am following up on the International Association Chief of Police event. I want to thank you for visiting our booth. Please let me know if we can help you with the management of your digital evidence.

Advanced data analytics - Turn internal, external, and open source data into intelligence. Uncover hidden connections between persons, places, vehicles, and more.

Content management - Manage vast quantities of data, automatically classify and search documents, parse and understand officer narratives, quickly share evidence.

Video analytics - Facial and tattoo recognition, object and vehicle detection and tracking, attribute search (e.g., hair color, skin tone), auto redaction, motion and activity analysis.

Audio analytics - Keyword/phrase search, monitor tone of voice, transcription, language detection, speaker identification, personality insights, search specific sounds.

Social Media analytics - Quickly sort through social posts, detect mass changes in user sentiment, monitor accounts with criminal links, identify crime scene witnesses.

Thank you,

Brian

Brian Pennington
Business Development Manager
IBM Software Group
972-906-3087
bpennin@us.ibm.com

Stone, Andrea

From: Tony Cutillo <tony@cognitec.com>
Sent: Tuesday, March 27, 2018 11:07 AM
To: wschwarz@springfieldpolice.net
Subject: Springfield Police -Cognitec -Face Recognition
Attachments: FaceVACS-DBScan-LE-1-0-flyer (1).pdf; FaceVACS-DBScan-LE-1-0-presentation (1).pdf; references-law-enforcement (3).pdf

Hi Bill:

It was nice talking to you today. I've attached some material on our latest release of DBScan LE for your review. Per our discussion, let me know what your "enrollee" count so we can determine budgetary pricing for 2019. I've also provided an overview below of the DBScan LE.

Best Regards,
Tony Cutillo
508-250-3246 cell

DBScan LE Overview

FaceVACS-DBScan LE combines Cognitec's renowned image database search technology with powerful video inspection tools for a multitude of investigation use cases.

The market-leading technology helps law enforcement staff to increase the speed and accuracy of criminal investigations, allowing them to act upon match results in the critical time period after a crime has been committed.

After importing video material, agents can find known or unknown persons in multiple videos to quickly narrow down suspect investigations. The technology then compares the facial images from video material or from any other source to smaller local or multi-million central image databases, and instantly displays a candidate list of possible matches.

The Investigation toolset includes various filters to enhance image quality and improve match results. It also provides a set of inspection tools to compare images side by side and measure facial features. Operators can develop watch lists of potential matches while recording a full audit trail for each step in the process.

Features

- supports investigation of faces in video footage, still images and sketches
- provides instant match results for comparisons with local and central image databases
- allows for match list sorting, rearranging, browsing, filtering and more
- enrolls images from video material
- enables flexible management of additional case-related data
- installs as a ready-to-use application and integrates into existing systems

Use cases

Video investigation

- view all appearances of a person in multiple videos
- search appearances and view persons in video footage to find a) unknown persons, b) frequently seen persons or groups, c) person appearing together, and d) persons seen together frequently
- find persons enrolled in image galleries/watchlists

Image search

- select images from file or from imported video material
- create investigation cases
- quickly search local or central image databases
- view candidate lists

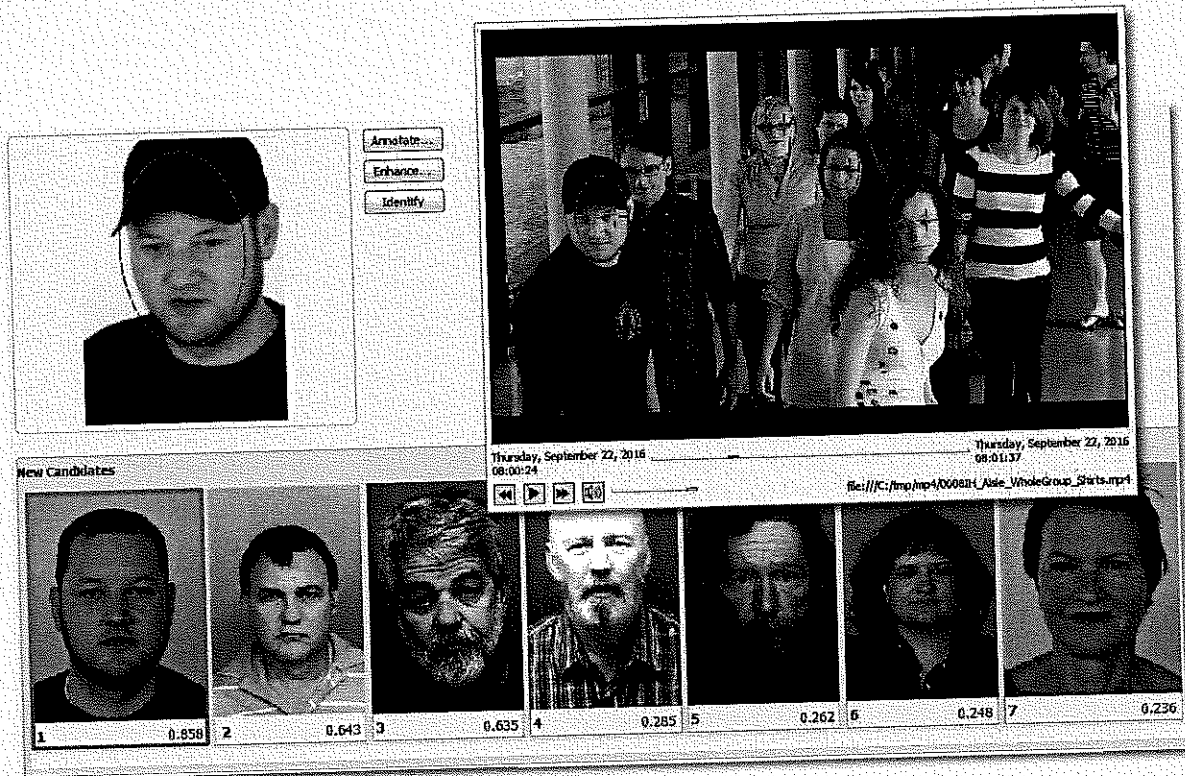
Image search at the crime scene

- take photos with mobile devices
- search central databases
- view match candidates and related case information

Face recognition technology

for image and video investigations, and large database matching

- investigate faces in video footage, still images and sketches
- find known or unknown persons in multiple videos to quickly narrow down suspect investigations
- enroll images from video footage
- quickly compare faces to one or multiple local image galleries
- match facial images with multi-million images in central databases
- instantly view match candidate lists
- enhance image quality and compare images side by side
- install as a ready-to-use application or integrate into your infrastructures



Use cases

Video investigation

- view all appearances of a person in multiple videos
- search appearances/videos to find:
 - unknown persons
 - frequently seen persons or groups
 - persons appearing together
 - persons seen together repeatedly
- find persons enrolled in galleries

Image search

- select still images from file or from imported video material
- create investigation cases
- quickly search local and central facial image databases
- inspect candidate images

Image search at the crime scene

- take photos with mobile devices
- search central databases
- view match candidates and related case information

Appearances and identities

During the import of video material, FaceVACS-DBScan LE detects, extracts and stores high-resolution video sequences of the cropped faces (face stream) of each appearance. The technology compares the appearances of all persons against each other to determine and cluster identities, and then displays them together.

Events for video search

In the Events module, agents can use various criteria and filters to quickly search through media sets and find:

- a person enrolled in a local image databases
- all persons in a specified age range
- all male or all female persons
- all persons with glasses
- all persons seen during a specific time span
- all persons seen in one location



Image investigation

FaceVACS-DBScan LE includes Cognitec's market-leading matching engine and provides investigators with a powerful toolset to match crime scene photos and surveillance video images against local or central facial image databases.

Probe enhancement filters

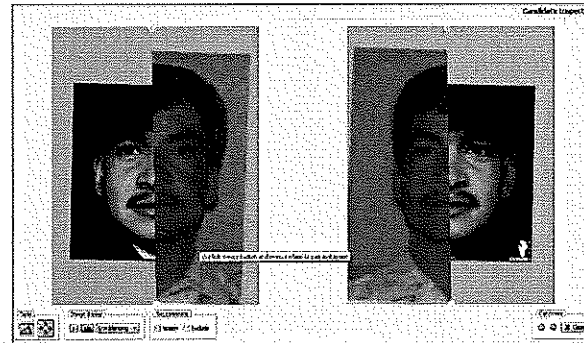
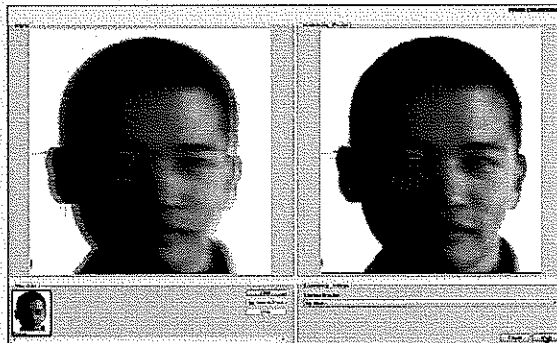
- de-interlace filter for images from interlaced video
- median filter to remove noise
- histogram to correct contrast
- aspect ratio filter to correct lens distortion
- face cropping filter

Detail inspection

- inspect image pairs
- superpose probe and candidate image
- measure angles and distances
- use single or side-by-side line blending tool

Investigation management

- create investigation case and add probe images
- generate and maintain candidate lists, along with demographic data
- manage watch lists and exclude lists
- document investigation results



Cognitec develops market-leading face recognition technologies and applications for enterprise and government customers around the world. Various independent evaluation tests have proven the premier performance of the FaceVACS® software. Cognitec's portfolio includes products for facial image database search, video screening and analytics, border control, ICAO compliant photo capturing and facial image quality assessment. Corporate headquarters are located in Dresden, Germany; other offices in Rockland, MA, USA and Sydney, Australia.



The face recognition company

FaceVACS-DBScan LE

Face recognition technology for image and video investigations, and large database matching

FaceVACS-DBScan LE

combines Cognitec's renowned image database search technology with powerful video inspection tools for a multitude of investigation use cases.

Investigators can compare facial images from various sources to distinct image databases, and instantly receive a candidate list of possible matches.

Product Value

- helps law enforcement staff to increase the speed and accuracy of criminal investigations by quickly identifying a face in photographs and video footage
- allows agents to act upon the search results in the critical time period after a crime has been committed
- saves investigation costs
- supports time-saving recording and reconstruction of investigation steps over time

Features

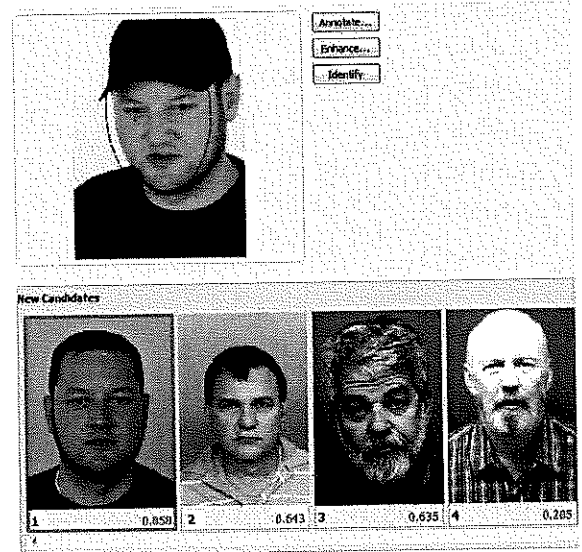
The FaceVACS-DBScan LE face recognition system enables users to

- investigate faces in video footage, still images and sketches
- find known or unknown persons in multiple videos to quickly narrow down suspect investigations



Features

- enroll images from video footage
- quickly compare faces to one or multiple local image galleries
- match facial images with multi-million images in central databases
- instantly view candidate lists
- enhance image quality and compare images side by side
- install a ready-to-use application or integrate it into their infrastructures



Use Cases

Video investigation

- view all appearances of a person in multiple videos
- search face streams and view persons in video footage to find
 - unknown persons
 - frequently seen persons or groups
 - persons seen together
 - persons appearing together repeatedly
- find persons enrolled in smaller local image databases or large-scale central databases
- navigate from subject appearances to the full-frame video, and from all faces within a video frame to their appearances

Use Cases

Image search

- select still images from file or from imported video material
- create investigation cases
- quickly search local galleries or
- connect to central image databases and instantly receive candidate lists

Image search at the scene

- take photos with mobile devices
- search central databases



Investigator

Media Tab

create media sets and import video footage and/or still images

The screenshot displays the 'Investigator' application window. The 'Media' tab is selected in the top navigation bar. The interface is divided into two main sections: 'Media Sets' on the left and 'Media Files' on the right.

Media Sets Panel:

- Buttons: New..., Rename..., Remove...
- Table:

	1	2
Aisle	1	2
VerificationImage	2	1
Entrance	3	1

Below the table are buttons for 'Select All' and 'Newest', followed by 'Add Media Files...' and 'Remove Selected Media'.

Media Files Panel:

Media Set	URL Id	URL	Absolute start time	Status
Crime Scene 1	18	file:///E:/Videos/Coded/0008DH_Aisle_WholeGroup_Shirts.mp4	Mo Mai 30 11:03:52 2016	Queued for processing ...
Crime Scene 1	17	file:///E:/Videos/Coded/0007LB_Stairs_Single_Jackets.mp4	Mo Mai 30 11:03:52 2016	Extracting Evidence: 71/102rec
Crime Scene 1	16	file:///E:/Videos/Coded/0007K9_Entrance_Single_Shirts.mp4	Mo Mai 30 11:03:52 2016	Done
Crime Scene 1	15	file:///E:/Videos/Coded/0007FB_Aisle_TwoGroups_Shirts.mp4	Mo Mai 30 11:03:52 2016	Extracting Evidence: 105/400rec
Crime Scene 1	14	file:///E:/Videos/Coded/0006QL_Stairs_WholeGroup_Shirts.mp4	Mo Mai 30 11:03:52 2016	Done
Crime Scene 1	13	file:///E:/Videos/Coded/0005R7_Stairs_Single_FirstTest.mp4	Mo Mai 30 11:03:52 2016	Extracting Evidence: 65/74rec
Crime Scene 1	12	file:///E:/Videos/Coded/0005E0_Signage2.mp4	Mo Mai 30 11:03:52 2016	Done
Crime Scene 1	11	file:///E:/Videos/Coded/0004PL_Signage1.mp4	Mo Mai 30 11:03:52 2016	Queued for processing ...
Crime Scene 1	10	file:///E:/Videos/Coded/0004PJ_Aisle_Single_Shirts.mp4	Mo Mai 30 11:03:52 2016	Queued for processing ...
Crime Scene 1	9	file:///E:/Videos/Coded/0003HC_Stairs_Single_Shirts.mp4	Mo Mai 30 11:03:52 2016	Queued for processing ...

Subjects Tab

- view a high-resolution video sequence of the cropped face (face stream) for each appearance
- click through the clustered appearances of the same person/identity



Events Tab

use various criteria and filters to quickly search through media sets and find:

- a person enrolled in a local image databases
- all male or all female persons
- all persons:
 - in a specified age range
 - with glasses
 - seen in a specific time span and/or location



Galleries Tab

create multiple, locally administrated galleries for images enrolled from video footage or from file

The screenshot displays the 'Galleries' tab in a software application. The interface is divided into several sections:

- Top Navigation:** Includes tabs for Media, Subjects, Events, Galleries (selected), and Investigations.
- Left Panel:** Shows a list of galleries, including 'Seat Gallery' and 'VIP'.
- Main Table:** Displays a list of cases in the 'Seat Gallery'. The table has columns for Case ID, Introduced, Name, and Property. The data is as follows:

Case ID	Introduced	Name	Property
M9G2J10-1H	9/26/17 10:20 AM		
M9G2J20-1H	9/26/17 10:20 AM		
M9G2J30-1H	9/26/17 10:20 AM		
M9G2J40-1H	9/26/17 10:20 AM		
M9G2J50-1H	9/26/17 10:20 AM		
M9G2J60-1H	9/26/17 10:20 AM		
M9G2J70-1H	9/26/17 10:20 AM		
M9G2J80-1H	9/26/17 10:20 AM		
M9G2J90-1H	9/26/17 10:20 AM		

On the right, a detailed view of a case is shown, featuring four images of a person. Each image is timestamped '2h 58min ago'. Below the images, there is a button labeled 'Enroll this Person to Gallery...' and a link 'Show Visits of Person 07ZNBIN'.

Investigations Tab

Provides identification experts with a toolset to:

- match crime scene photos and surveillance video images against local or central facial image databases
- enhance low-quality images to improve search results
- document investigation steps and results

- NewCase
 - Watch list (0)
 - Subject-1
 - Exclude list (1)
 - unknown-11.jpg










set eye position
to achieve better
match results

- Annotate...
- Enhance...
- Identify

use filters to enhance
image quality

low-quality
surveillance
image matches
with mug shot
database images

New Candidates

								
1	2	3	4	5	6	7	8	9
1.000	1.000	1.000	0.998	0.643	0.635	0.610	0.504	

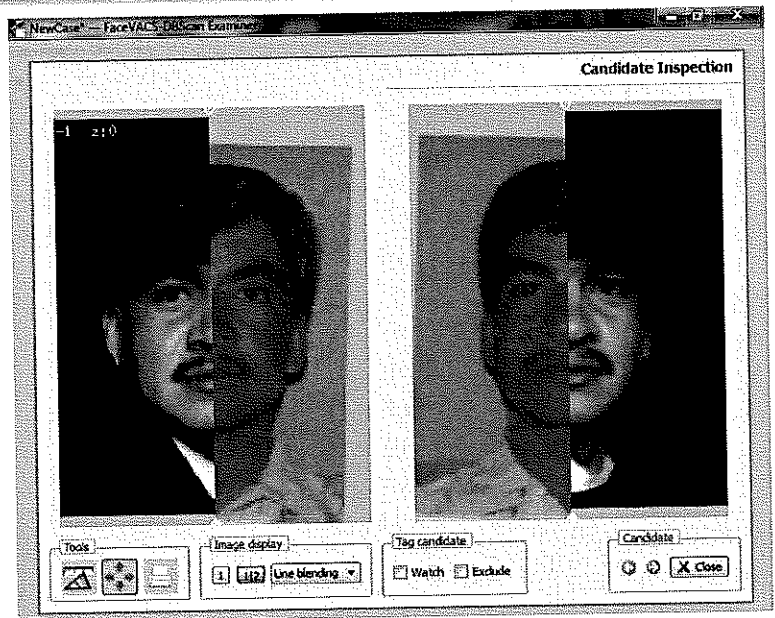
Probe Enhancement Filters

- de-interlace filter for images from interlaced video
- aspect ratio filter to correct lens distortion
- face cropping filter
- median filter to remove noise
- histogram to correct contrast



Detail Inspection

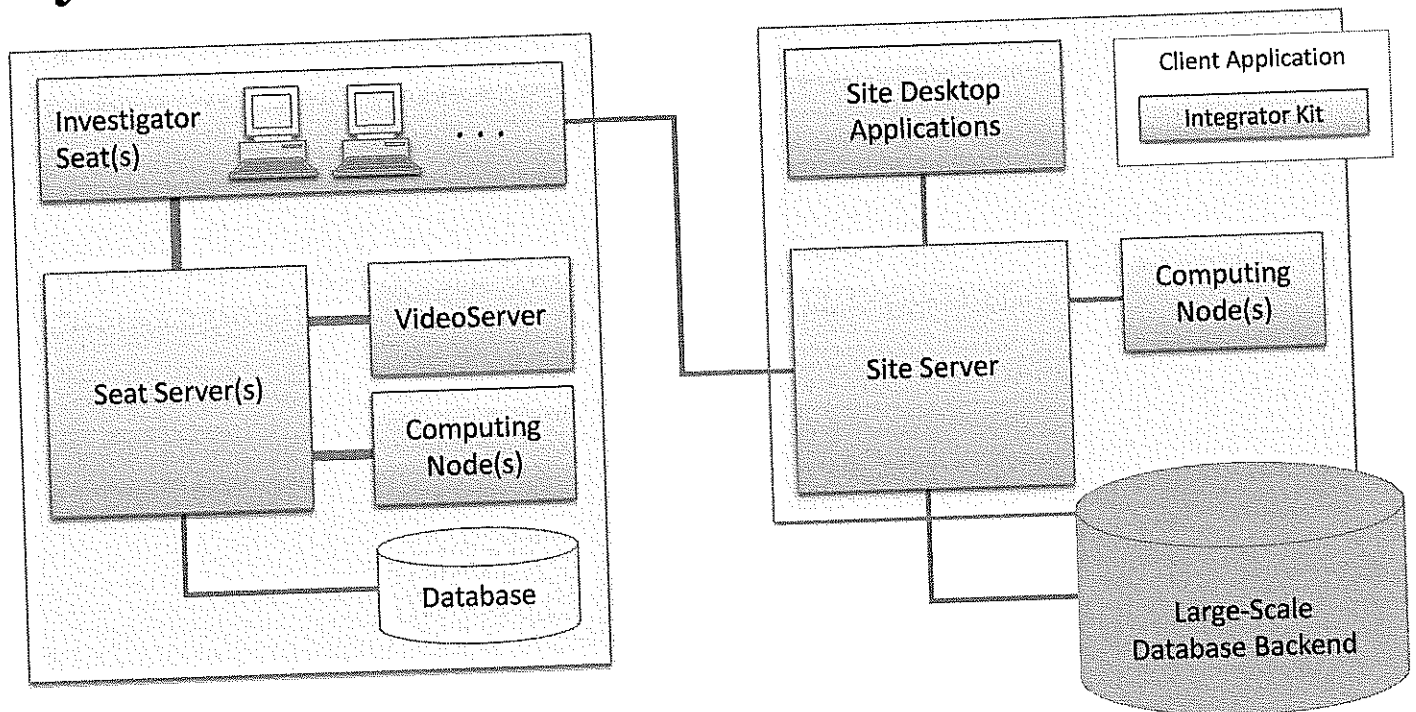
- superpose probe and candidate image
- measure angles and distances
- use single or side-by-side line blending tool



Case Management

- create investigation case and add probe images
- generate and maintain candidate lists, along with demographic data
- inspect image pairs
- manage watch lists and exclude lists
- print reports

System Architecture



Technology

Cognitec's algorithms are set to work with:

- partial face occlusions
- beard and hairstyle changes
- glasses
- lighting changes
- image noise
- low-resolution images
- blurred images
- pose deviation
- little contrast/dynamic range in the face area
- drawings of suspects (composite images)

Sizing and Performance

close to 1 million comparisons per second on one CPU core

designed for scalability in large galleries

self-balancing architecture

systems with 100 million images in operation

extension of computing resources possible during operation

Technical Details

Engine: incorporates B10 engine

Biometric identity search

- customizable candidate list size
(by number of images or by a score threshold)
- candidate list sorted by score

Technical Details

Systems

- Seat Server with clients:
Windows 8.1 and 10, Windows Server 2012 and 2012 R2
- Windows Site Server with clients:
Windows Server 2012 and 2012 R2
- Linux
- large-scale databases: Oracle, MSSQL, others upon request
- ready for installation on virtual machine clusters

Technical Details

Integrator kit

- extendable database model
- web service interfaces for:
 - image quality check (with ICAO compliance check)
 - 1:1 verification
 - 1:n identification
 - still image enrollment

Success Story

Australian state police agency

- audit of 6630 taxi drivers
- face recognition was used to match cab license images with:
 - image databases for standard drivers' licenses
 - court documents
 - criminal match lists
- cross-check revealed a number of drivers with serious convictions
- agency conducted a complete overhaul of the system
- implementation of Cognitec's technology to automate the criminal assessment process

Call to Action

- benefit from Cognitec's long-time experience developing and deploying high-performance face recognition technology
- make use of a market-driven, innovative product for law enforcement applications
- use the power of Cognitec's renowned image database search technology, along with powerful video investigation tools
- request more informational materials and product training
- find out about Cognitec's evaluation licences



The face recognition company

Thank you!

www.cognitec.com
info@cognitec.com

We are committed to deliver the
best face recognition performance
available on the market.

Key References for Image Database Search Applications

Germany: Federal Police Agency (Bundeskriminalamt – BKA)

BKA is using FaceVACS-DBScan to identify suspects from photographs and videos, current database size is 10 million images. Investigators are using the Examiner toolset to view candidate lists and for image enhancement and comparison techniques.

Germany: State Police Agency of Saxony (Landeskriminalamt – LKA Sachsen)

LKA Sachsen is using FaceVACS-DBScan to identify suspects from photographs and videos, current database size 0.5 million images.

France: Direction Générale de la Gendarmerie Nationale

Gendarmerie Nationale is using FaceVACS-DBScan to identify suspects from photographs and videos; current database size is 7 million images.

Netherlands: Forensisch Instituut (Ministry of Justice)

The institute uses the application for law enforcement, performing databases searches for investigations.

Georgia: Ministry of Internal Affairs

The Ministry uses FaceVACS-DBScan for investigations purposes, current database size: 15 million images.

Law Enforcement USA

The following law enforcement agencies use FaceVACS-DBScan to identify suspects from photographs and videos, listed with current image database size.

Michigan State Police: 3 million images

Pennsylvania JNET: 3.5 million

Los Angeles County Sheriff's Department: 7 million

Lane County Sheriff's Office: 250,000 images

Riverside County Sheriff's Department: 1.25 million

Chicago Police Department: 5 million

San Mateo County Sheriff's Office: 1.25 million images

San Joaquin County Sheriff's Office: 750,000

San Diego County Sheriff's Department: 1.75 million

Collier County Sheriff's Office: 200,000

Sacramento County Sheriff's Department: 1.3 million

Hennepin County Sheriff's Department: 1.25 million

Stone, Andrea

From: caron@paulcaron.org
Sent: Friday, May 25, 2018 8:58 AM
To: Domenic J. Sarno; John Barbieri
Cc: Denise Jordan
Subject: Amazon Pushes Facial Recognition to Police. Critics See Surveillance Risk. - The New York Times

Commissioner,

I wanted to make sure that you were aware of Amazon's push in the 'Facial Recognition' software field. I truly believe that the city of Springfield should reach out to Amazon and their Amazon Web Services and explore the possibility of having them become a strategic partner in enhancing the capability of Springfield's Crime Analysis Center. Included in this article is a video clip of **AMAZON's Amazon Web Service (AWS)** recent conference in Korea where a company official spoke about the company's facial recognition system. (Of interest is a portion at the 30.00 minute mark which speaks about the technologies' Public Safety application's! CreditVideo by Amazon Web Services Korea
As you may be Aware, on April 26, Amazon announces its entry into the 'Home Security Industry.

<https://mobile.nytimes.com/2018/05/22/technology/amazon-facial-recognition.html>

Amazon Pushes Facial Recognition to Police. Critics See Surveillance Risk.

May 22, 2018



Amazon promotes its facial recognition technology on the company's website, saying that the service can track people in a video even when their faces are not visible. Amazon

SEATTLE — In late 2016, Amazon introduced a new online service that could help identify faces and other objects in images, offering it to anyone at a low cost through its giant cloud computing division, Amazon Web Services.

Not long after, it began pitching the technology to law enforcement agencies, saying the program could aid criminal investigations by recognizing suspects in photos and videos. It used a couple of early customers, like the Orlando Police Department in Florida and the Washington County Sheriff's Office in Oregon, to encourage other officials to sign up.

But now that aggressive push is putting the giant tech company at the center of an increasingly heated debate around the role of facial recognition in law enforcement. Fans of the technology see a powerful new tool for catching criminals, but detractors see an instrument of mass surveillance.

On Tuesday, the American Civil Liberties Union led a group of more than two dozen civil rights organizations that asked Amazon to stop selling its image recognition system, called Rekognition, to law enforcement. The group says that the police could use it to track protesters or others whom authorities deem suspicious, rather than limiting it to people committing crimes.

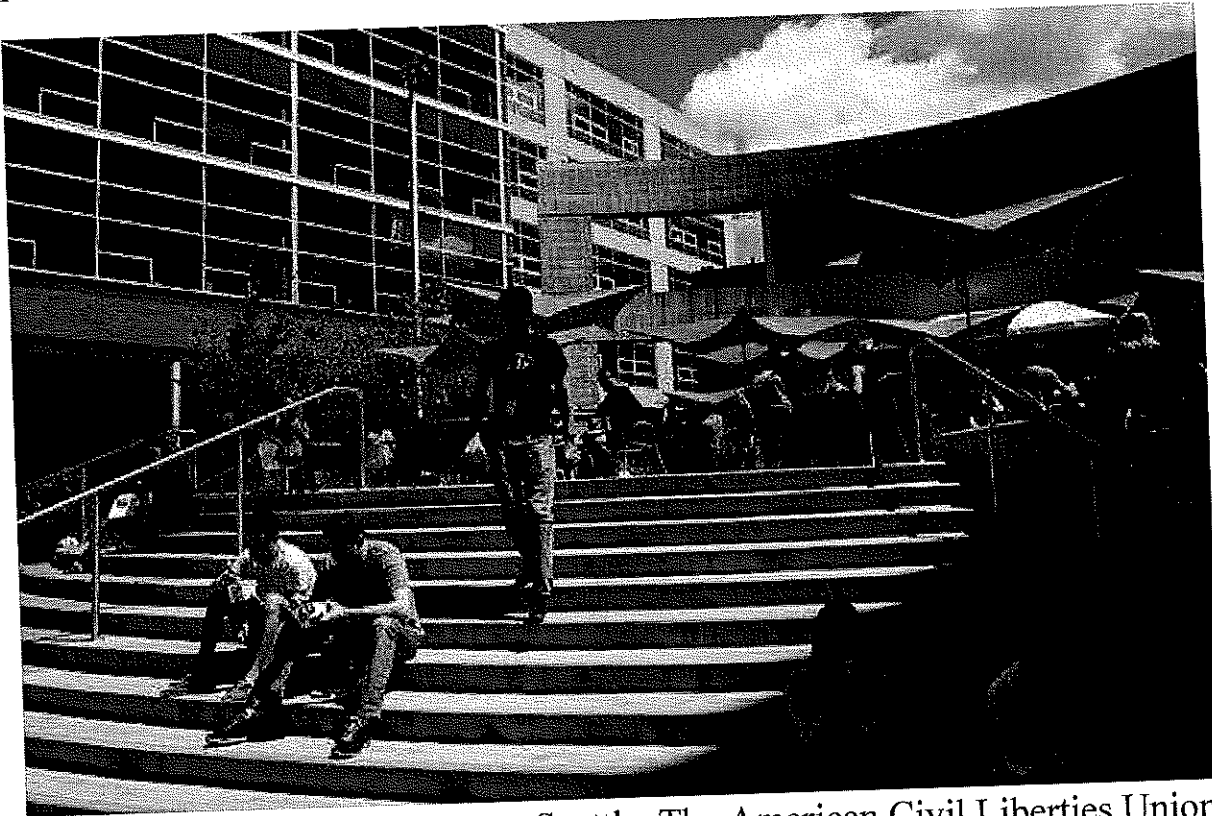
Facial recognition is not new technology, but the organizations appear to be focusing on Amazon because of its prominence and what they see as a departure from the company's oft-stated focus on customers.

"Amazon Rekognition is primed for abuse in the hands of governments," the group said in the letter, which was addressed to Jeff Bezos, Amazon's chief executive. "This product poses a grave threat to communities, including people of color and immigrants, and to the trust and respect Amazon has worked to build."

With the letter, the A.C.L.U. released a collection of internal emails and other documents from law enforcement agencies in Washington County and Orlando that it obtained through open records requests. The correspondence between Amazon and law enforcement officials provides an unusual peek into the company's ambitions with facial recognition tools, and how it has interacted with some of the officials using its products.

Many of the companies supplying the technology are security contractors little known to the public, but Amazon is one of the first major tech companies to actively market technology for conducting facial recognition to law enforcement. The efforts are still a tiny part of

Amazon's business, with the service one of dozens it offers through Amazon Web Services. But few companies have Amazon's ability to effectively push widespread adoption of tech products.



Amazon's campus in downtown Seattle. The American Civil Liberties Union and other civil rights groups are asking the company to stop selling its image-recognition system, Rekognition, to law enforcement authorities. Ruth Fremson/The New York Times

"The idea that a massive and highly resourced company like Amazon has moved decisively into this space could mark a sea change for this technology," said Alvaro Bedoya, executive director at the Center on Privacy & Technology at the Georgetown University Law Center.

In a statement, a spokeswoman for Amazon Web Services stressed that the company offered a general image recognition technology that could automate the process of identifying people, objects and activities. She said amusement parks had used it to find lost children, and Sky News, the British broadcaster, used it last weekend to automatically identify guests attending the royal wedding. (The New York Times has also used the technology, including for the royal wedding.)

The spokeswoman said that, as with all A.W.S. services, the company requires customers to comply with the law.

The United States military and intelligence agencies have used facial recognition tools for years in overseas conflicts to identify possible terrorist suspects. But domestic law

enforcement agencies are increasingly using the technology at home for more routine forms of policing.

The people who can be identified through facial recognition systems are not just those with criminal records. More than 130 million American adults are in facial recognition databases that can be searched in criminal investigations, the Center on Privacy & Technology at Georgetown Law estimates.

Facial recognition is showing up in new corners of public life all the time, often followed by challenges from critics about its efficacy as a security tool and its impact on privacy. Arenas are using it to screen for known troublemakers at events, while the Department of Homeland Security is using it to identify foreign visitors who overstay their visas at airports. And in China, facial recognition is ubiquitous, used to identify customers in stores and single out jaywalkers.

There are also concerns about the accuracy of facial recognition, with troubling variations based on gender and race. One study by the Massachusetts Institute of Technology showed that the gender of darker-skinned women was misidentified up to 35 percent of the time by facial recognition software.

“We have it being used in unaccountable ways and with no regulation,” said Malkia Cyril, executive director of the Center for Media Justice, a nonprofit civil rights organization that signed the A.C.L.U.’s letter to Amazon.

The documents the A.C.L.U. obtained from the Orlando Police Department show city officials considering using video analysis tools from Amazon with footage from surveillance cameras, body-worn cameras and drones.

Amazon may have gone a little far in describing what the technology can do. This month, it published a video of an Amazon official, Ranju Das, speaking at a company event in Seoul, South Korea, in which he said Orlando could even use Amazon’s Rekognition system to find the whereabouts of the mayor through cameras around the city.

Video from an Amazon event where a company official spoke about the company's facial recognition system. Video by Amazon Web Services Korea

In a statement, a spokesman for the Orlando Police Department, Sgt. Eduardo Bernal, said the city was not using Amazon’s technology to track the location of elected officials in its jurisdiction, nor did it have plans to. He said the department was testing Amazon’s service now, but was not using it in investigations or public spaces.

“We are always looking for new solutions to further our ability to keep the residents and visitors of Orlando safe,” he said.

Early last year, the company began courting the Washington County Sheriff’s Office outside of Portland, Ore., eager to promote how it was using Amazon’s service for recognizing faces, emails obtained by the A.C.L.U. show. Chris Adzima, a systems analyst in the office, told Amazon officials that he fed about 300,000 images from the county’s mug shot database into Amazon’s system.

Within a week of going live, the system was used to identify and arrest a suspect who stole more than \$5,000 from local stores, he said, adding there were no leads before the system identified him. The technology was also cheap, costing just a few dollars a month after a setup fee of around \$400.

Mr. Adzima ended up writing a blog post for Amazon about how the sheriff’s office was using Rekognition. He spoke at one of the company’s technical conferences, and local media began reporting on their efforts. After the attention, other law enforcement agencies in Oregon, Arizona and California began to reach to Washington County to learn more about how it was using Amazon’s system, emails show.

In February of last year, before the publicity wave, Mr. Adzima told an Amazon representative in an email that the county’s lawyer was worried the public might believe “that we are constantly checking faces from everything, kind of a Big Brother vibe.”

“They are concerned that A.C.L.U. might consider this the government getting in bed with big data,” Mr. Adzima said in an email. He did not respond to a request for comment for this article.

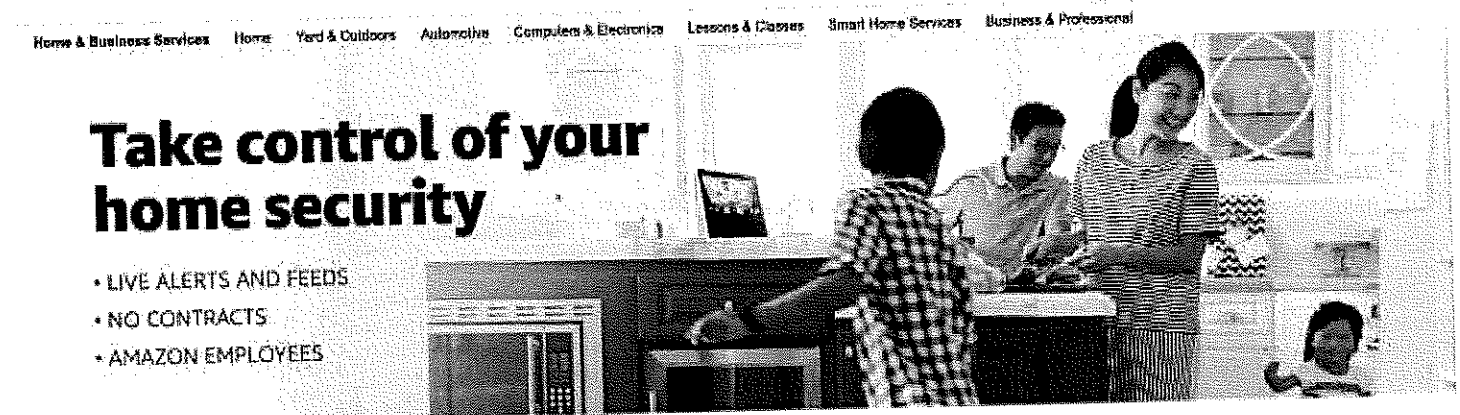
Deputy Jeff Talbot, a spokesman for the Washington County Sheriff’s Office, said Amazon’s facial recognition system was not being used for mass surveillance by the office. The company has a policy to use the technology only to identify a suspect in a criminal investigation, he said, and has no plans to use it with footage from body cameras or real-time surveillance systems.

“We are aware of those privacy concerns,” he said. “That’s why we have a policy drafted and why we’ve tried to educate the public about what we do and don’t do.”

As reported in TechCrunch.com on April 26, 2018:

Amazon is now selling home security services, including installations and no monthly fees

Ingrid Lunden@ingridlunden / Apr 26, 2018









The image is a screenshot of an Amazon webpage for home security services. At the top, there is a navigation bar with links: Home & Business Services, Home, Yard & Outdoors, Automotive, Computers & Electronics, Lessons & Classes, Smart Home Services, and Business & Professional. Below the navigation bar, the main headline reads "Take control of your home security" in large, bold, black letters. To the left of the headline, there is a list of bullet points: "• LIVE ALERTS AND FEEDS", "• NO CONTRACTS", and "• AMAZON EMPLOYEES". To the right of the headline, there is a photograph of a family (a man, a woman, and a child) standing in a kitchen, looking at a laptop on a counter. Below the photograph, there is a sub-headline: "Five smart security packages designed for peace of mind".

Five smart security packages designed for peace of mind

Amazon's made a slew of acquisitions in the area of smart home services, and now it's offering a product that brings them together under one roof — your roof.

Amazon has quietly launched a portal offering home security services — which include all the equipment you would need and in-person visits from Amazon consultants to advise and install the kit. The packages are being sold in five price tiers, at a flat fee — no monthly service contracts, a significant disruption of how many home security services are sold today.

The least expensive, \$240 for Outdoor Base, gives you an Echo Dot plus indoor and outdoor lighting designed "to make it look like you're home." The most expensive tier, \$840 for Smartest, includes an alarm siren, motion sensors, safety sensors, a camera, and Echo Dot, the lighting and a video doorbell — potentially rolling in previous security launches from the company like Amazon Key and Cloud Cam. All include two visits from Amazon employees to consult you and help with the installation.

SMART SECURITY FEATURES	OUTDOOR BASE \$240 total	OUTDOOR PLUS \$490 total	INDOOR BASE \$320 total	SMART \$575 total	SMARTTEST \$840 total
 Siren			✓	✓	✓
 Motion/Contact Sensors			✓	✓	✓
 Safety Sensors					✓
 Camera			✓		✓
 Echo Dot	✓	✓		✓	✓
 Indoor Lighting	✓	✓			
 Video Doorbell		✓		✓	✓
 Outdoor Lighting	✓	✓			✓

Last July it emerged that Amazon was quietly working on its own answer to Best Buy's Geek Squad — offering repairs and installations of home WiFi, smart home devices, Alexa installations, and other hardware-related services.

Amazon never appeared to confirm it at the time, but that service now officially seems to be called “Smart Home Services” and it has expanded to Washington, Oregon, California, Arizona, Texas, Nevada, North Carolina, Georgia, Illinois, New Jersey, Washington D.C. and Florida.

The security offering we are describing here — which was initially flagged to us by a reader — falls under that general banner, and it is being promoted at the top of the Smart Home Services homepage. Judging by the user reviews of the consultants, it appears to have been around since at least December.

Giving consumers the option of a more full-service security offering, beyond selling alarms and other devices a la carte, makes sense for a couple of reasons.

The first is that while there are some early adopters who might like the challenge of installing these services themselves, there will be many middle and later adopters who will not be interested in facing that learning curve.

Amazon has positioned itself in the smart home security space as more than just a reseller of third-party devices — although it sells those, too — with acquisitions of the smart doorbell startup Ring and the smart camera and doorbell startup Blink.

The second is that most often, home security systems are coupled with service installations in your home that include maintenance contracts. So if Amazon hopes to eat up some of that market, it needs to offer something comparable.

It's an interesting development also of the company's wider strategy to move into selling services, beyond physical products. Services is one of Amazon's various efforts to diversify its business by targeting different categories of commerce and different demographics.

Another foray into human-powered services was its Thumbtack-style competitor Amazon Home Services, a marketplace it launched back in 2015 for finding tradespeople and other freelance service providers like

masseurs and language tutors. (Notably, Amazon makes a big deal on its security pages of using Amazon employees to install its security systems.)

Earlier this month, it also emerged that Amazon was stealing a march on Apple in smart homes, specifically by inking deals with smart home builders, who were opting for Amazon as their preferred supplier for consulting and installing such services for their home buyers.

A report in The Information noted that one such home builder, Lennar, was “prioritizing Amazon” in its recommendations, while still working with Apple, in part because of the former company’s stronger efforts to integrate with more third-party products, giving buyers a wider range of choices.

Ramping up into security services fits with this, too. Lennar, as it happens, is directly linked now on Amazon’s security homepage, but to be clear, the offering is not exclusive to Lennar homeowners.

We’ve asked Amazon about the security service pages, and the company has acknowledged the question but still has not replied. We’ll update this post as and if we learn more.

Paul E. Caron
President
Paul E. Caron Associates
15 Crestview Road
East Longmeadow, MA 01028
caron@paulcaron.org
413/427-7630 Cell Phone

Sent from my iPhone

Stone, Andrea

From: Vigilant Solutions <bevigilant@vigilantsolutions.com>
Sent: Thursday, October 04, 2018 8:06 AM
To: rcheetham@springfieldpolice.net
Subject: Vigilant Solutions Acquires Edesix, Ltd.



ABOUT SOLUTIONS CONTACT



**INTRODUCING
VIDEOBADGE™ &
VIDEOMANAGER™**

BODY WORN CAMERAS AND VIDEO EVIDENCE MANAGEMENT SYSTEM



VIGILANT SOLUTIONS ACQUIRES EDESIX, LTD.

Dear Robert,

We are very excited to announce today that Vigilant Solutions has acquired Edesix Ltd, the number one manufacturer of body-worn cameras in the United Kingdom.

Founded in Edinburgh in 2002, Edesix has a global footprint of customers across industries ranging from law enforcement and airline security to fire safety, rail

safety, university security and healthcare. Its body worn video system – VideoBadge™ – employs footage encryption and a wire-free design that make it extremely versatile for various types of users and applications.

Similarly, its VideoManager™ software solutions enable web-based viewing and editing of incidents and preparation of evidence packages. The software is designed to control and manage cameras, their footage and footage from other sources in a highly efficient and secure manner. Additionally, its in-car cameras will seamlessly integrate with our suite of technologies.

So, what does this mean for you, our customers?

1. Anyone who works with Vigilant Solutions knows that we are passionate about the fact that our solutions help to keep communities and law enforcement safe. And, by providing you with body worn cameras, we are able to achieve both goals by aiding you in promoting transparency in your engagements with the public.
2. You no longer need to keep your automated license plate recognition, facial recognition, ballistics analysis, gun crime mapping and body worn/in-car camera images siloed in multiple systems. All the images you capture can easily be integrated into our investigative platform, so we can provide you with a single platform for securely managing your images all in one place.
3. There is a new player in the body worn camera market. And, that means increased competition for your law enforcement dollars, which translates to competitive pricing and continued innovation in technology development.

If you are interested in learning more about our body worn camera and video management solutions, please reach out to your Account Manager or contact us at Sales@VigilantSolutions.com.

Be Safe. Be Smart. Be Vigilant.

Shawn Smith
Founder and President, Vigilant Solutions

What new products are you most looking forward to learning more about? **We want to hear from you!** Complete this two question survey and let us know!



BE SAFE. BE SMART. BE VIGILANT.



Vigilant Solutions, 1152 Stealth Street, Livermore, CA 94551, 925-398-2079

Stone, Andrea

From:
Sent:
To:
Subject:

Gemalto Cogent <noram@communication.gemalto.com>
Thursday, October 04, 2018 10:30 AM
cclapprood@springfieldpolice.net
See Gemalto's Facial Recognition in Action at IACP!



Discover How Gemalto's Facial Recognition Solutions Can Benefit Your Agency



**Visit Gemalto Cogent at IACP 2018, October 6-9 |
Booth 706**

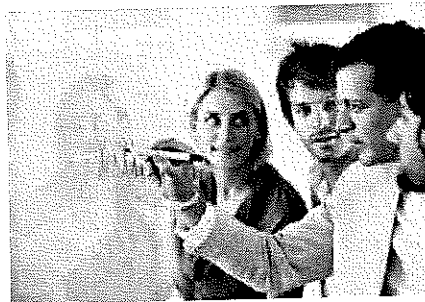
Gemalto's Cogent biometric identification solutions help law enforcement agencies perform their jobs more efficiently,

allowing them to focus on making the public safer.

Visit us at booth **706** for a demonstration of our **Live Face Identification System (LFIS)**, a video-based facial recognition system that automatically recognizes faces in a crowd -- even in dynamic, uncontrolled environments. LFIS also has an investigative mode, where users can import footage and still images from other surveillance systems for search against the agency's criminal database and leverage the speed and accuracy of LFIS.

We will also be showcasing our Mobile Identification solutions including our Mobile ID 5 software and the BlueCheck and Credence handheld biometric capture devices.

Learn more about live face recognition



Request a meeting


Our top experts will be at IACP to discuss how our solutions can help law enforcement agencies protect and serve their communities. We'd love to share insights from our customer success stories and learn how we can help your agency too!

➔ Request a meeting

We look forward to seeing you.

The Gemalto team

Stay in touch with us through our

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This email is sent on behalf of Gemalto North America Inc., Arboretum Plaza II, 9442
Capital of Texas Highway, North, Suite 400, Austin, TX 78759, United States

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Stone, Andrea

From: Gemalto Cogent <noram@communication.gemalto.com>
Sent: Thursday, October 04, 2018 10:30 AM
To: jbarbieri@springfieldpolice.net
Subject: See Gemalto's Facial Recognition in Action at IACP!



Discover How Gemalto's Facial Recognition Solutions Can Benefit Your Agency



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Our top experts will be at IACP to discuss how our solutions can help law enforcement agencies protect and serve their communities. We'd love to share insights from our customer success stories and learn how we can help your agency too!

➔ Request a meeting

We look forward to seeing you.

The Gemalto team

Stay in touch with us through our

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[blog](#).

You are subscribed to this mailing list as jbarbieri@springfieldpolice.net

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This email is sent on behalf of Gemalto North America Inc., Arboretum Plaza II, 9442
Capital of Texas Highway, North, Suite 400, Austin, TX 78759, United States

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Stone, Andrea

From:
Sent:
To:
Subject:

GSHNSP Weekly Security Report <gshnsp@multibriefs.com>
Wednesday, January 30, 2019 10:24 AM
hsantiago@springfieldpolice.net
Cybersecurity: Business and government team up in the fight

This message was sent to hsantiago@springfieldpolice.net

January 30, 2019



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HOMELAND SECURITY

Airports encouraged to invest in anti-drone measures before the threats grow



By Matt Falcus

Following the drone attacks at London Gatwick airport in December and the crippling closure of the airport to air traffic at one of the busiest periods of the year for air travel, airports are being encouraged to invest in developing measures to counter the threat before it can develop. The actions taken at Gatwick from Dec. 19-21 (and briefly at Heathrow on Jan. 8) followed the standard response when a drone or unmanned aerial vehicle enters the control zone of an active airport. The potentially catastrophic result of a collision between an aircraft and drone poses an unimaginable threat. In the case of Gatwick, it uncovered just how open airports are to this kind of attack and how ill-equipped they are to countering such an attack. [READ MORE](#)

Congress must move quickly to fix the Anti-Terrorism Clarification Act



The Hill

In a perversely ironic turn, a law intended to aid American victims of international terrorist attacks will strike a serious blow to counterterrorism cooperation that keeps Israelis (and Americans visiting Israel) safe. The Anti-Terrorism Clarification Act (ATCA)

will take effect on Feb. 1. Unless it is adequately amended or repealed before then, the law will damage Israeli national security and U.S. foreign policy toward the Israeli-Palestinian conflict. Time is short, and Congress must take action. [READ MORE](#)

CYBERSECURITY

DHS orders federal agencies to protect themselves from ongoing cyber 'hijacking'



CNN

The Department of Homeland Security has ordered federal agencies to take immediate steps to protect themselves from "hijacking and tampering" cybersecurity incidents in the wake of an ongoing tampering campaign. DHS said in a statement this week it is aware of a "number of agencies affected" by the campaign. DHS did not indicate who is responsible for the attacks, but the private security firm FireEye said its analysis suggests the attacks are originating from Iran. [READ MORE](#)

Cybersecurity: Business and government team up in the fight



Fox Business

Global cybercrime will remain a pervasive problem for businesses, organizations, and governments in the coming year. What will continue to change in 2019, however, is the federal government's role in deterring and defending cyberattacks on U.S. and allied assets. [READ MORE](#)

Adversarial AI: Cybersecurity battles are coming



ZDNet

Stuart McClure, one of the top cybersecurity experts in the world, says that a battle between AI systems in cybersecurity is not here yet but will come in the next three to five years. He describes three points necessary to build an AI system, including those that can be used to bypass other AI systems: [READ MORE](#)

5 blockchain trends everyone should know about



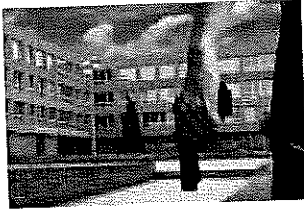
Forbes

Blockchain traveled a rocky road in 2018 but is still hotly tipped as a technology with huge potential for transforming business and day-to-day life. [READ MORE](#)

LAW ENFORCEMENT HEADLINES

Active shooter training for officers will be a key focus in 2019





By Bambi Majumdar

Law enforcement officers across the country are undergoing intensive active shooter training sessions. Recent active shooter incidents and their tragic consequences have been sobering learning experiences, but experts are using those experiences to create preventive programs. They have extracted and analyzed data from after-action reports and officers involved in the cases. The analytical reports are used to

develop improved, faster and better ways for first responders to respond to an active shooter scene. [READ MORE](#)

The FBI is trying Amazon's facial-recognition software



NextGov

The FBI is piloting Amazon's facial matching software—Amazon Rekognition—as a means to sift through mountains of video surveillance footage the agency routinely collects during investigations. The pilot kicked off in early 2018 following a string of high-profile counterterrorism investigations that tested the limits of the FBI's technological capabilities, according to FBI officials. [READ MORE](#)

'Tuning in' to people's feelings, body language and voice tones



By Frank R. Myers

I do not claim to be an expert, psychologist or therapy worker; however, I do believe I have a knack for "tuning in" to what people are projecting to me through their various mannerisms. With time and experience, anyone can fine tune their people "reading" capabilities through dealing with them on a day-to-day basis. This is especially true when your line of work is in the medical field. Over several years of being a crew member and

then officer on an ALS (advanced life support) rescue unit with my former department, I could quickly determine what is real and what is not real. [READ MORE](#)

Police: No drones allowed around Super Bowl event sites



The Associated Press via Times Union

Atlanta police are reminding the public that no drones are allowed around sites hosting events related to the Super Bowl. Police spokesman Carlos Campos said in an email Sunday that there would be a zero-tolerance policy for drones flying in areas that include Mercedes-Benz Stadium, the Georgia World Congress Center, State Farm Arena, Centennial Olympic Park and the Fox Theatre. [READ MORE](#)

GSHNSP NEWS

Upcoming webinars



GSHNSP

The following are webinars being offered by GSHSNP through its partner Justice Clearinghouse.

- **Jan. 30:** [Justice Agencies & Future Planning for Dark Net, Cryptocurrency and Blockchain](#)

- **Jan. 31:** Investigating Animal Crimes: What Law Enforcement and Other Justice Professionals Need to Know
- **Jan. 31:** Abusive Head Trauma for Prosecutors & Investigators
- **Feb. 6:** Patrol Work Scheduling
- **Feb. 6:** Moral Courage and Ethical Lessons Learned from Iraq's Most Notorious War Crime
- **Feb. 7:** Demystifying Terrorism: A Critical Examination of Modern Terrorism
- **Feb. 7:** Police Liability: Recent Developments under Section 1983

Homeland Security Certifications



GSHNSP

The Certified Homeland Protection Professional (CHPP) and Certified Homeland Protection Associate (CHPA) levels I through IV certification programs were established by the National Sheriffs' Association in partnership with the Global Society of Homeland and National Security Professionals. The designations certify that individuals have demonstrated competency, knowledge, skills and abilities in the blended discipline of Homeland Protection through a rigorous qualification program.

For an overview of the Certified Homeland Protection Professional program, [click here](#).

For an overview of the Certified Homeland Protection Associate program, [click here](#).

TRAINING

Certified Homeland Protection Professional (CHPP) Review Course & Test



GSHNSP

Feb. 12, 2019

If you are an individual who possesses the experience, knowledge, skills and abilities to be considered a Homeland Protection Professional and you want to be recognized as a certified professional in the homeland security field, then you have the opportunity to become a Certified Homeland Protection Professional (CHPP) during the 2019 National Sheriffs Association Winter Conference. **READ MORE**

Operations Based Threat, Risk, and Vulnerability Assessment training



GSHNSP

The Operations Based Threat, Risk, and Vulnerability Assessment is a comprehensive assessment that defines a community, evaluates a community's strengths and weaknesses, identifies critical infrastructure and key resources, identifies the threats to the community from an all hazard perspective, identifies and prioritizes Critical Infrastructure/Key Resources and provides a comprehensive vulnerability assessment. **READ MORE**

School Based Threat, Risk and Vulnerability Assessment training



GSHNSP

The School Based Threat, Risk and Vulnerability Assessment is a comprehensive assessment that evaluates a school system's strengths and weaknesses in regard to

safety and security, identifies critical infrastructure and key resources, identifies the threats to the schools from an all-hazard perspective, and provides a comprehensive vulnerability assessment. [READ MORE](#)

GSHNSP Weekly Security Report

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7701 Las Colinas Ridge, Ste. 800, Irving, TX 75063

From: GovTech Today <newsletters@govtech.com>
Sent: Tuesday, February 12, 2019 10:33 AM
To: John Barbieri
Subject: A North Dakota Cybersecurity Bill Seeks Unified Approach, Centralized IT



GOVTECH TODAY

FEBRUARY 12, 2019

N.D. Cybersecurity Bill Seeks Unified Approach, Centralized IT

A bill newly passed in the North Dakota state Senate would overhaul the state's cybersecurity strategy, emphasizing unity and greater centralization. [READ MORE](#)

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Oakland Transforms City Services for Residents and Saves \$1 Million Using OutSystems

Learn how the City of Oakland used the OutSystems low-code development platform to transform city services and find out how much they saved.

[READ MORE](#)

MORE TOP STORIES

Cincy Data-Analytics Leader Leigh Tami Heads to NYC Parks

Tami, who spent four years helping Cincinnati build its

data and analytics work into some of the most robust of any mid-sized U.S. city, has accepted a similar position with the New York City parks department. [READ MORE](#)

Columbus, Ohio, Prepares to Launch Second AV Shuttle Service

The driverless shuttles, operating with autonomous vehicle technology, will serve as a free, first-mile/last-mile solution connecting residents to a community center, recreation facility and a transit center. [READ MORE](#)

Camino Secures \$5.9M to Bolster Permitting Platform

As the San Francisco-based company tries to simplify and democratize the process of obtaining permits, it plans to open its platform and make its data and APIs accessible to potential clients and innovators. [READ MORE](#)

Cloud Emergency Dispatch Startup RapidDeploy Raises \$12M

RapidDeploy, which recently moved its headquarters from South Africa to the U.S., also added a former Oracle executive to its board of directors. The company makes software in the competitive emergency dispatch space. [READ MORE](#)

To Understand IoT Security: Look to the Clouds

The Internet of Things (IoT) is growing exponentially. But security and privacy concerns are piling up at the same time. How can we understand where this trend is heading? Here's what we can learn from the history of

the cloud. [READ MORE](#)

QUESTION OF THE DAY

This art exhibit allows strangers to do what?

[ANSWER](#)

MORE HEADLINES

Could California's Data Privacy Law Be a Model for the Nation?

N.D. Amendment Could Take the Wind Out of Local Fiber-Optic Sails

Massachusetts Considers Bill to Limit Facial Recognition

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Missouri Utility to Build Out EV Stations with State OK

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© 2019 e.Republic. All rights reserved. 100 Blue Ravine Rd, Folsom, CA 95630, USA.
Phone: 916-932-1300

Stone, Andrea

From: dana.crawford@gmail.com
Sent: Friday, March 01, 2019 9:53 AM
To: Jiansong@SpringfieldPolice.net
Subject: Suspect Technologies - Video Analytics Platform
Attachments: RedactionOverview.pdf; SuspectFacialDataSheet.pdf

Hello Jiansong,

It was a pleasure speaking with you this morning.

As I stated during our telephone discussion this morning, I work for a company called **Suspect Technologies** as their VP, Business Development.

We are the leading provider of video analytics software; specifically, automated video & audio redaction software with frame-by-frame review, facial recognition and video conversion applications powered by artificial intelligence for the public safety & critical infrastructure markets.

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Vice President, Business Development

Suspect Technologies

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Mobile #: 508-389-3240

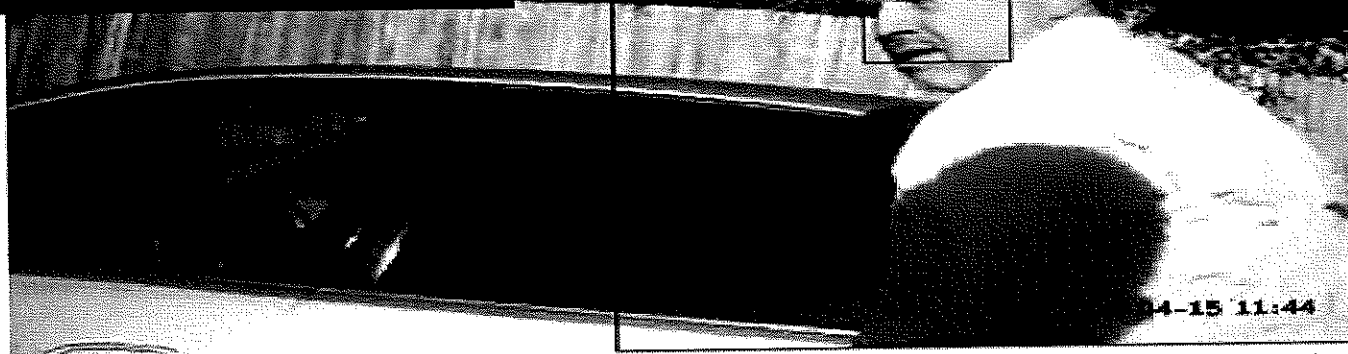
Email: Dana.Crawford@suspecttech.com



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Automated Video Redaction (AVR) platform is a highly advanced video redaction tool built to automatically blur faces and objects without user involvement. AVR product is 10x faster than other redaction competitors and is optimized to improve the ability to work with high-movement, low-light conditions, and low-resolution videos. It comes with both a Desktop and Cloud version that can easily interface with any evidence-type system.

Redaction Overview

Redaction is an area that is one of the most opportunistic areas within digital software products in the past decade due to police body camera ongoing innovation. It can take several hours to redact even a 10 minute video. AVR takes this process from hours into minutes.

The AVR software saves over an hour of time over other existing and other automated solutions. The numbers are staggering. 1 hr per video per day, 1000 agencies, on average 2 redacted videos per day, at 50 dollars/ hr, will equate to over 30 million dollars of agency time and money saved just this coming year.

Product Features

99% precision, 90% recall, 100FPS on single CPU

Infinitely Parallelizable Code--Run Infinitely Fast

Automatic Face Detection

Automatic Object Tracking

Easy to Review Interface

Easily crop different pieces of any video

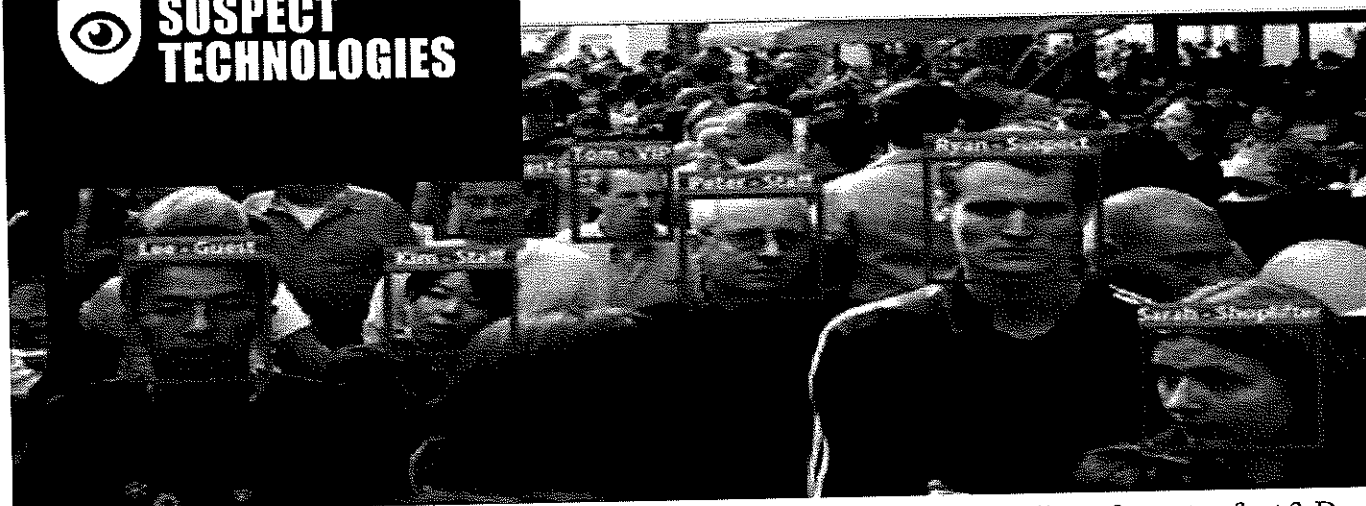
Drag and Drop interface to mute different audio time slices.

Contact
jacob@suspecttech.com



WEBSITE
www.suspecttech.com

PHONE
843 318 8278



The novel approach of Suspect's facial recognition allows for state of art 3-D accuracy results, with only 2D datasets. This directly allows for state of art accuracy in 3D biometric performance "in-the-wild". 2D competitors in recent past deal with several challenges, including poor accuracy with distance, sunglasses, and pose; and because of that, they cannot be deployed in many real world deployment scenarios. 3-D companies suffer from having to use novel hardware or 3-D lists. Suspect's technology is able to overcome these faults.



State of Art Accuracy Overview

Suspect is able to obtain state of art results, w/out massive 3-d datasets, by leveraging CNN's, augmentation, and a couple other techniques, without novel hardware. In order to overcome the challenge of acquiring large scale 3D facial datasets, Suspect leverages fine-tuning and augmentation methods. The method only requires standard pre-processing methods, including a nose tip detection and ICP, and does not involve complex feature extraction and matching, so it is very time efficient.

Accuracy Overview

The method is evaluated on the public 3D databases and shows comparable performances to the state-of-the-art results in terms of accuracy while being more scalable as past 3-D only companies. See Table 1 below.

In general, Suspects expects good statistics for 10-4 false acceptance rate, which is state of art at or near a 99 percent true positive. This is state of art and is just accurate enough for many real-world applications.

Table 1: Comparison of rank-1 accuracy (%) on public 3D face databases

Approaches	Training data	Bosphorus	BU-3DFE	3D-TEC			
				Case I	Case II	Case III	Case IV
Lei <i>et al.</i> [19] (2016)	Gallery ^a	98.9	93.2	-	-	-	-
Ocegueda <i>et al.</i> [23] (2011)	FRGC v2	98.6	99.3	-	-	-	-
Li <i>et al.</i> [20] (2014)	BU-3DFE, Gallery ^a	95.4	-	93.9	96.3	90.7	91.6
	Bosphorus, Gallery ^a	-	92.2	94.4	96.7	90.7	92.5
Li <i>et al.</i> [21] (2015)	Gallery ^a	98.8	-	-	-	-	-
Berretti <i>et al.</i> [5] (2013)	BU-3DFE ^b	95.7	87.5	-	-	-	-
Huang <i>et al.</i> [13] (2011)	None	-	-	91.1	93.5	77.1	78.5
Huang <i>et al.</i> [14] (2011)	FRGC v1	-	-	91.6	93.9	68.7	71.0
Faltemier <i>et al.</i> [11] (2008)	FRGC v1	-	-	94.4	93.5	72.4	72.9
Ours	FRGC ^c , Casia 3D ^c , Gallery ^{a,d}	99.2	95.0	94.8	94.8	81.3	79.9

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Technology Optimizations in next 6 months



1. First, Suspect plans to push accuracy for specific ethnicities: fine-tune a pre-trained CNN such to optimize it for a particular demographic group, i.e. initialize the CNN parameters with the pre-trained values, then resume training with a different (small) dataset and update the weights using stochastic gradient descent and back-propagation. The small dataset used for fine tuning can be selected to match the demographics of the population during operation. In an uncontrolled environment, several CNNs would need to be trained (fine-tuned) for each demographic group.

2. Second, Suspect plans to push the accuracy on order of ~1 million distractors. As the graphs below show, accuracy on dataset sizes of over ~100k start breaking down accuracy noticeably. Suspect will push this accuracy far forward.

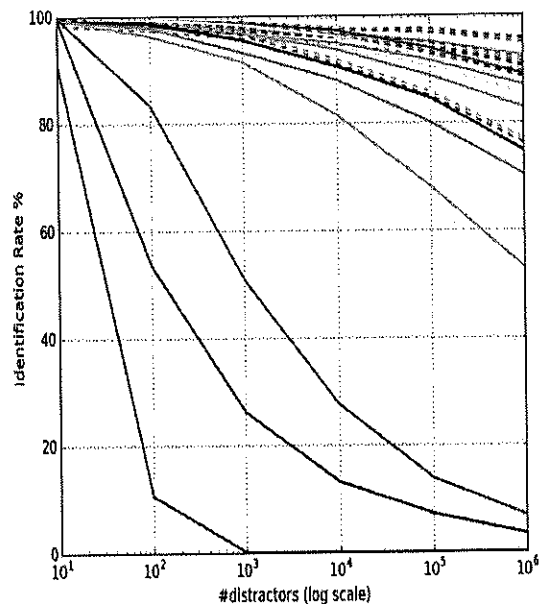
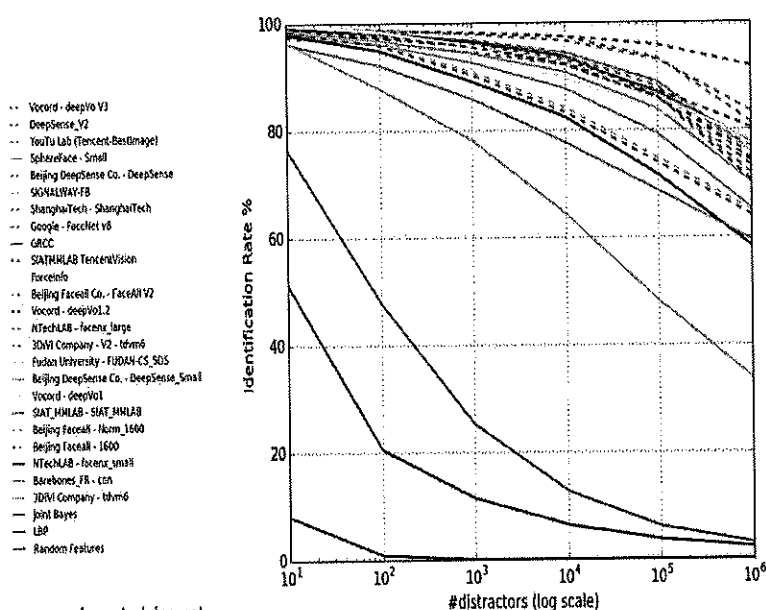
3. Third, Suspect plans to optimize for night-time and side-view face recognition and to push accuracy very high in these scenarios.

Rank-1 Identification Performance

Rank-10 Identification Performance

Set 1

Set 1



Stone, Andrea

From: dana.crawford@gmail.com
Sent: Thursday, March 07, 2019 4:55 PM
To: Jiansong@SpringfieldPolice.net
Subject: RE: Suspect Technologies - Video Analytics Platform

Hello Jiansong,

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Many thanks for your feedback!

Kind Regards,

Dana Crawford
Vice President, Business Development

Suspect Technologies
618 Cambridge Street
Cambridge, Massachusetts 02141

Mobile #: 508-389-3240
Email: Dana.Crawford@suspecttech.com



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Importance: High

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From: dana.crawford@gmail.com <dana.crawford@gmail.com>
Sent: Thursday, March 7, 2019 4:55 PM
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Stone, Andrea

From: Xu, Jiansong <jiansong@springfieldpolice.net>
Sent: Tuesday, March 12, 2019 11:06 AM
To: dana.crawford@gmail.com
Subject: Re: Suspect Technologies - Video Analytics Platform
Attachments: image002.jpg; image004.jpg; image006.jpg; image008.jpg

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<image008.jpg>

Stone, Andrea

From: dana.crawford@gmail.com
Sent: Tuesday, March 12, 2019 1:03 PM
To: 'Xu, Jiansong'
Subject: RE: Suspect Technologies - Video Analytics Platform

Hello Jiansong,

Many thanks for your reply.

I will patiently await a further update from you regarding a scheduled date.

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Kind Regards,

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Vice President, Business Development

Suspect Technologies
618 Cambridge Street

Cambridge, Massachusetts 02141

Mobile #: 508-389-3240

Email: Dana.Crawford@suspecttech.com

<image008.jpg>

Stone, Andrea

From: dana.crawford@gmail.com
Sent: Friday, March 15, 2019 12:10 PM
To: 'Xu, Jiansong'
Subject: RE: Suspect Technologies - Video Analytics Platform

Importance: High

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Importance: High

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From: dana.crawford@gmail.com
Sent: Wednesday, March 20, 2019 10:24 AM
To: 'Xu, Jiansong'
Subject: RE: Suspect Technologies - Video Analytics Platform

Hello Jiansong,

Just another update to help you with scheduling a joint meeting.....

I met with the Sudbury, Ma PD yesterday and they have agreed to test drive our software prior to purchase and the Framingham, Ma PD (population 68K) have agreed to a face-to-face meeting to learn more about Suspect Technologies and see a demonstration of our technology.

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From: dana.crawford@gmail.com
Sent: Monday, March 25, 2019 9:57 AM
To: 'Xu, Jiansong'
Subject: RE: Suspect Technologies - Video Analytics Platform

Hello Jiansong,

Just an FYI.....Suspect Technologies will be attending the upcoming Massachusetts Chiefs of Police Association Conference in Marlboro, MA on April 3rd. Assuming the Springfield Police Department will be attending as well, we would welcome the opportunity to speak with your colleagues to arrange a face-to-face meeting at your facility.

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I will get back to you as soon as I can.

Jiansong

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We have time this month to meet with you and your colleagues before we are scheduled to participate at ISC West in Las Vegas, April 9th thru 11th.

I welcome your feedback.

Kind Regards,

Dana Crawford
Vice President, Business Development

Suspect Technologies
618 Cambridge Street
Cambridge, Massachusetts 02141

Mobile #: 508-389-3240
Email: Dana.Crawford@suspecttech.com

<image002.jpg>

From: dana.crawford@gmail.com <dana.crawford@gmail.com>
Sent: Thursday, March 7, 2019 4:55 PM
To: Jiansong@SpringfieldPolice.net
Subject: RE: Suspect Technologies - Video Analytics Platform

Hello Jiansong,

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Email: Dana.Crawford@suspecttech.com

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From: dana.crawford@gmail.com <dana.crawford@gmail.com>
Sent: Monday, March 4, 2019 4:15 PM

To: Jiansong@SpringfieldPolice.net

Subject: RE: Suspect Technologies - Video Analytics Platform

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We are fully booked on Friday, 03/08/19. We are scheduled to meet with the Brunswick, ME PD in the Morning and the York County, ME Detectives Task Force (see attached) in the afternoon the same day.

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<image006.jpg>

From: dana.crawford@gmail.com <dana.crawford@gmail.com>

Sent: Friday, March 1, 2019 9:53 AM

To: Jiansong@SpringfieldPolice.net

Subject: Suspect Technologies - Video Analytics Platform

Hello Jiansong,

It was a pleasure speaking with you this morning.

As I stated during our telephone discussion this morning, I work for a company called **Suspect Technologies** as their VP, Business Development.

We are the leading provider of video analytics software; specifically, automated video & audio redaction software with frame-by-frame review, facial recognition and video conversion applications powered by artificial intelligence for the public safety & critical infrastructure markets.

We have deployments nationwide; sold via direct and indirect channels (primarily camera manufacturers). The NYPD, Miami PD, Phoenix PD and Oakland PD are a sample of our customers today. One of our financial investors (amongst others) is Mark Cuban who has deployed our software in the Dallas Maverick's locker room.

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I'm of the strong belief that our video analytical platform would be of great value for the Springfield Police Department in help to solve local crime.

As requested, I'm providing you with (2) documents:

1. Our automated video & audio redaction application
2. Our facial recognition application

The Suspect Technologies website is under construction and will provide more content by early March.

We would welcome the opportunity to brief your detective unit on our video analytics platform and provide a demo of the same. Please let me know what date(s) / time(s) will accommodate your schedule.

Many thanks for your feedback.

Kind Regards,

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618 Cambridge Street
Cambridge, Massachusetts 02141

Mobile #: 508-389-3240
Email: Dana.Crawford@suspecttech.com

<image008.jpg>

Stone, Andrea

From: dana.crawford@gmail.com
Sent: Friday, March 29, 2019 10:59 AM
To: 'Xu, Jiansong'
Subject: RE: Suspect Technologies - Video Analytics Platform

Hello Jiansong,

To assist you in your internal efforts to help schedule a face-to-face meeting in order to brief you on our company and technology, can you provide me with the name and contact information (tel # and email address) of the appropriate individual within your investigative unit so that I can send him / her an email as well.

Many thanks for your feedback!

Kind Regards,

Dana Crawford
Vice President, Business Development

Suspect Technologies
618 Cambridge Street
Cambridge, Massachusetts 02141

Mobile #: 508-389-3240
Email: Dana.Crawford@suspecttech.com



**SUSPECT
TECHNOLOGIES**

From: dana.crawford@gmail.com <dana.crawford@gmail.com>
Sent: Monday, March 25, 2019 9:57 AM
To: 'Xu, Jiansong' <jiansong@springfieldpolice.net>
Subject: RE: Suspect Technologies - Video Analytics Platform

Hello Jiansong,

Just an FYI.....Suspect Technologies will be attending the upcoming Massachusetts Chiefs of Police Association Conference in Marlboro, MA on April 3rd. Assuming the Springfield Police Department will be attending as well, we would welcome the opportunity to speak with your colleagues to arrange a face-to-face meeting at your facility.

I welcome your feedback.

Kind Regards,

Dana Crawford
Vice President, Business Development

Suspect Technologies
618 Cambridge Street
Cambridge, Massachusetts 02141

Mobile #: 508-389-3240
Email: Dana.Crawford@suspecttech.com



From: dana.crawford@gmail.com <dana.crawford@gmail.com>
Sent: Monday, March 18, 2019 4:18 PM
To: 'Xu, Jiansong' <jjiansong@springfieldpolice.net>
Subject: RE: Suspect Technologies - Video Analytics Platform
Importance: High

Hello Jiansong,

I once again apologize for my persistence, however, I'm thoroughly convinced our automated video and audio redaction software with frame-by-frame review capability will save your technicians & detectives time & money. Additionally, the application will help to isolate critical information needed in solving crime and providing undisputable evidence to the judicial system.

We look forward to briefing your colleagues on our company / software and providing a demo of the same.

Please let me know what date(s) / time(s) will accommodate your schedule.

Many thanks for the feedback.

Kind Regards,

Dana Crawford
Vice President, Business Development

Suspect Technologies

618 Cambridge Street
Cambridge, Massachusetts 02141

Mobile #: 508-389-3240

Email: Dana.Crawford@suspecttech.com



SUSPECT TECHNOLOGIES

From: dana.crawford@gmail.com <dana.crawford@gmail.com>

Sent: Friday, March 15, 2019 12:10 PM

To: 'Xu, Jiansong' <jiansong@springfieldpolice.net>

Subject: RE: Suspect Technologies - Video Analytics Platform

Importance: High

Hello Jiansong,

Just to give you a quick update.....the Westborough Police Department has agree to test drive our automated video & audio redaction software with frame-by-frame review capability, the Brookline Police Department will be receive a demonstration of our product next week, Brunswick, Maine Police Department hosted a face-to-face meeting with Suspect Technologies last week and has already begun to test drive our software and the Kennebunk, Maine Task Force hosted a visit from Suspect Technologies last week as well and from that briefing we had the US Department of State inquire about our software.

We are eager to make sure Springfield Police Department has an opportunity to experience this application as well.

Further to this.....

We are due to officially launch our facial recognition software product to the law enforcement market on 06/01/19.

With this in mind we are in search of law enforcement agencies / departments that are willing to participate in our beta program between now and 06/01/19. Our goal would be to integrate our facial recognition software with your video management or record management system and help test our software over a (30) day period.

For the law enforcement agencies / departments willing to participate in our beta program, we will be offering a minimum number of licenses for our facial recognition software at a 50% discount for the balance of this calendar year.

Please let me know if leading the law enforcement market with cutting edge facial recognition technology in solving crimes is of interest to you.

Kind Regards,

Dana Crawford
Vice President, Business Development

Suspect Technologies
618 Cambridge Street
Cambridge, Massachusetts 02141

Mobile #: 508-389-3240
Email: Dana.Crawford@suspecttech.com



From: dana.crawford@gmail.com <dana.crawford@gmail.com>
Sent: Tuesday, March 12, 2019 1:03 PM
To: 'Xu, Jiansong' <jjiansong@springfieldpolice.net>
Subject: RE: Suspect Technologies - Video Analytics Platform

Hello Jiansong,

Many thanks for your reply.

I will patiently await a further update from you regarding a scheduled date.

Kind Regards,

Dana Crawford
Vice President, Business Development

Suspect Technologies
618 Cambridge Street
Cambridge, Massachusetts 02141

Mobile #: 508-389-3240
Email: Dana.Crawford@suspecttech.com



From: Xu, Jiansong <jiansong@springfieldpolice.net>
Sent: Tuesday, March 12, 2019 11:06 AM
To: dana.crawford@gmail.com
Subject: Re: Suspect Technologies - Video Analytics Platform

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Email: Dana.Crawford@suspecttech.com

<image008.jpg>

Stone, Andrea

From: lawenforcement@m.carahsoft.com on behalf of Law Enforcement Team
<lawenforcement@m.carahsoft.com>
Sent: Wednesday, April 17, 2019 2:30 PM
To: JBarbieri@springfieldpolice.net
Subject: Law Enforcement Technology News You Need to Know

[Click here](#) to view this message in a browser window

Law Enforcement Technology Newsletter

Q2 | 2019

carahsoft



Carahsoft Law Enforcement Technology Newsletter

The following newsletter summarizes notable news in the law enforcement industry, current events, and provides access to informative and educational events.

Featured Event

Accelerate 2019

Join us on April 29th – May 1st for Axon

Accelerate, the leading technology conference for public safety professionals.

This year, **former US Army General Stan**

McChrystal will deliver the keynote speech and provide attendees with invaluable insight

into leadership strategies and the relentless drive to protect our communities. **Register**

today to join Axon and Carahsoft in Phoenix, Arizona, and use discount

code **AACarahsoft50** to receive \$50 off your registration.

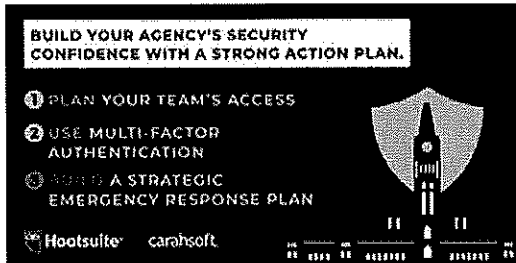


Axon just achieved a FedRAMP Joint Authorization Board (JAB)
Provisional Authority To Operate (P-ATO) at the Moderate

Impact Level. Discover which Axon products are in-scope

>>

Resources

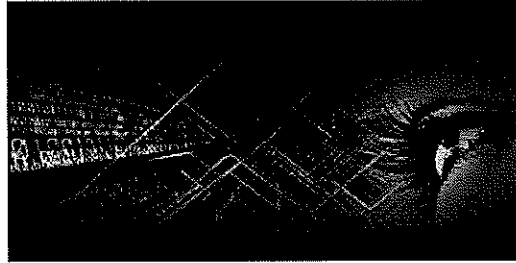


Minimizing Social Media Security Risk
Hootsuite's Global Strategist, Ben Cathers, advises some of the world's largest governments regarding their social media management infrastructure. Discover the practical steps government agencies can take to minimize social media security risk.

Check out the 3-Step Action Plan for Government >>

Listen to Ben Cather's podcast interview

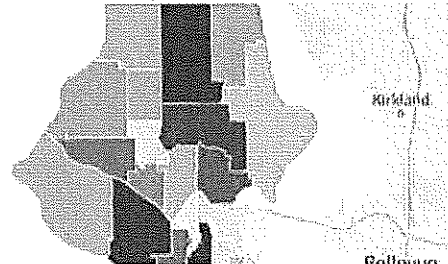
>>



Complete Deep-Dive Forensic Investigations Faster with Image and Facial Recognition
Investigations are complex. Learn how Access Data can help you accomplish your mission faster using the market's premier tools for investigation. With advanced image and facial recognition, APFS parsing and more, you can analyze all mobile, image, and computer data simultaneously, saving time and eliminating the need to pass evidence between applications. **Discover these features here >>**

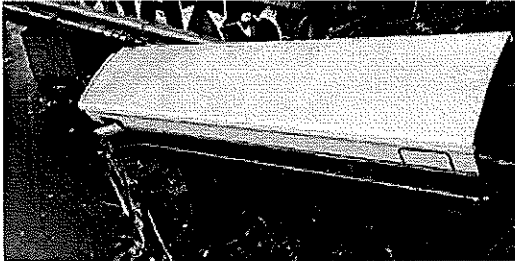


Exceptional Digital Experiences and Workflows in Law Enforcement
The demands of law enforcement are made more complex and challenging by today's rapidly increasing digital asset requirements. Discover how Adobe Experience Manager (AEM) provides a more secure hub that effectively handles a wide variety of crucial law enforcement functions allowing employees to focus on their main concern – enforcing the law.



Seattle Police Department (SPD) Crime Dashboard
SPD has switched their crime-reporting format based on their General Offense (GO) Reports. The SPD now receives their crime statistics faster because their GO data is updated on an on-going monthly basis and replaces previous data to reflect classification changes, investigative updates, and reporting delays. GO crime incident data also mirrors the major crime

[Read this whitepaper >>](#)



Responding from All Sides

When it comes to technology, Washington State Patrol (WSP) detectives are fearless. They regularly experiment with tools and software to find innovative ways to use technology. That technology versatility helps give them the comfort and confidence to respond to any incident and investigate it thoroughly. They needed a hefty dose for the massive 2017 DuPont train derailment outside Tacoma, Washington. The incident not only challenged WSP detectives, it provided the opportunity to push the limits of one of their newly developed forensic tools: an integrated scanning/UAV point cloud. **[Check out the case study >>](#)**



How BlackBerry 2FA and BlackBerry UEM Help Suffolk County Police Department (SCPD) to Protect and Serve New York

Since rolling out BlackBerry 2FA and BlackBerry UEM, the SCPD has lowered its security costs and gained greater control over its mobile fleet. Discover the new

categories that SPD uses to identify, respond, and assess effectiveness in addressing community crime problems.

[Check out SPD's crime dashboard >>](#)



Police of Chiefs Talk Priorities: Collaboration and Advanced Technologies

Many of the pressing issues facing law enforcement today were discussed at the Major Cities Chiefs Association conference. This event shed light on four key areas that chiefs of police see as top priorities including collaboration between federal and local authorities, applying advanced technology to solving crimes, preventing gun violence against officers, and bridging the generation gap. Discover how chiefs of police are overcoming many diverse challenges. **[Check out the blog >>](#)**



Secure Law Enforcement Networks

Law enforcement agencies are adopting new digital technologies to combat crime trends, increase public safety, and reduce operating costs. Discover how several police service organizations around the world have used the capabilities of the Palo Alto Networks Security Operating Platform

processes that allow officers to take the field much quicker, and operate with much greater efficiency. Rolling this out also put more emphasis on maintaining critical systems, securing sensitive data, and seeking new and innovative ways to empower and enable their organization.

[Learn more >>](#)

to simplify operations, reduce cost of ownership, increase security resilience and performance and ease skill shortages.

[Check out the case study >>](#)

Highlight Video



Veritone IDentify Application

Veritone's suspect identification solution, IDentify, automatically compares video and photographic evidence with your known-offender and person-of-interest records enabling you to identify potential suspects quickly for further investigation. To learn more about how IDentify can help you tap into your arrest records to accelerate your investigations, [watch this video](#) or [contact us](#) to request a demo.

Upcoming Events

- | | |
|---|---|
| April 29 th -May 1 st | <u>Accelerate 2019</u>
Phoenix, AZ |
| May 14 th -15 th | <u>AFCEA Law Enforcement and Public Safety Technology Forum</u>
Washington, D.C. |
| May 14 th -15 th | <u>AFCEA TechNet Cyber</u>
Baltimore, MD |
| May 29 th | <u>Voyager Webinar</u>
Online |
| June 2 nd -5 th | <u>GEOINT Symposium</u>
San Antonio, TX |
| October 26 th -29 th | <u>IACP Annual Conference and Exposition</u>
Chicago, IL |
| August 18 th -21 st | <u>Defense Intelligence Information System (DoDIIS) Worldwide Conference</u>
Tampa, FL |

About Carahsoft's Law Enforcement Solutions

Carahsoft's strong relationships with leading law enforcement partners and our deep understanding of the law enforcement landscape provides customers with the confidence

they need to accurately match project requirements with supporting technologies.

Our **Law Enforcement Solutions Portfolio** is composed of several complementary technologies that aid in the collection, dissemination, exploitation, and analysis of law enforcement information and create an end-to-end law enforcement workflow. Our technologies help agencies fuse relevant, location-based data with modern mapping platforms to more effectively process information, thus enabling better decision making.

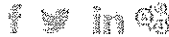
Questions? Contact me.

If you have questions or need additional information, please don't hesitate to **contact our team**:

carahsoft.

Law Enforcement Team
833-221-5LAW
www.carahsoft.com/law-enforcement

Follow us on social media using the buttons below!



By supplying my contact information, I authorize Carahsoft and its vendors and partner community to contact me with personalized communications about their products and services. Please review our **Privacy Policy** for more details or to **opt-out** at any time.

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1860 Michael Faraday Drive, Suite 100
Reston, Virginia 20190

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T: 703.871.8500 | F: 703.871.8505

