Arecont Vision Update

June Customer Update

Arecont Vision

Arecont Vision Company Update – June 2017

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- Good finish to May 2017!
- New products are coming in June and July that were on display at ISC West in April!
- Continued Progress with VMS/NVR Partner sales opportunities. Our activity is much stronger and the opportunities are terrific!
- Project Registrations ranging 30-40% in additional discount! Best in Industry!
- Quality and Service continue strong improvement in RMA reductions and solid call rates. Averaging less than 2 voice messages per day!
- Customer Satisfaction continues to improve and highly rated! Exceptional results in June!
- Buy American Executive Order Program is in process!

MegaVertical Presentation: City Surveillance

Caution: File is 145MB ☺

Market Overview: City Surveillance

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- Megapixel camera technology enables city, county, state, and federal governments worldwide to deploy new, cost-effective applications for enhanced situational awareness and forensic viewing
- With security concerns on the rise, video surveillance is often the first and sometime the only witness to incidents and the actions that led to them
- Cities and municipal governments worldwide are leveraging Arecont Vision megapixel cameras to monitor a wide range of activities including…
    - Criminal behavior and vandalism
    - Law enforcement and first responders
    - Deterrence and documentation
    - Terrorist actions
    - Traffic monitoring
    - Parking
    - License plate recognition
    - Facial recognition
    - Crowd monitoring
    - Overall situational awareness

Representative End Users

City and Municipal Surveillance: North America

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City of Los Angeles — Founded 1781 — News Video

Alburtis — Case Study

The City of Miami — Dade Co., Florida — News Video

Big Four Bridge — News Video, News Video

Kenbaght Maeckt Maght — Seal of the City of Brooklyn — News Video

Cos Cob — News Article

Prospect Heights — Case Study

City of Mankato — Leading the way... — Video, Case Study

Hollister California — News Article

Vail — News Article

Town of Monroe — The Lake Region — Case Study

Horry County — South Carolina — Committed to Excellence — www.horrycounty.org — News Article

City of Sturgis — Michigan — News Article

City of McAllen, TX — Integrity · Accountability · Commitment

Bay Area Air Quality Management District

Castaic Lake Water Agency

Louisville Waterfront

Borough of Kutztown Pennsylvania

Bettendorf

City of Vallejo California

Bristol Township Pennsylvania

The Seal of the City of New York

America's Greatest Ocean City New Jersey Family Resort

Town of Stratford Settled 1639 Seal Connecticut

Township of Abington Montgomery County, Penna.

City of Springfield, Capital of Illinois — Home of Lincoln — 1840

City of Allentown Pennsylvania

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City and Municipal Surveillance: International

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Case Study
City of Buenos Aires

Case Study
Ulsan for you

News Article

Case Study
LEMBAGA LEBUHRAYA MALAYSIA

São Paulo viva tudo isso

CITY OF COPENHAGEN

Shijiazhuang Hebei China

ville de Lens

بلدية مدينة أبوظبي
ABU DHABI CITY MUNICIPALITY

United Arab Emirates Ministry of Interior

Commune de Roissy-en-France

ville de Cambrai

BAYONNE.fr

DUBAI UNITED ARAB EMIRATES

THIONville

Beijing 2008

Saint Pol sur Mer
la ville de toutes les ambitions

CATANZARO FC

CITY OF BEIJING

Fushan (福山区)

Humen 虎门镇

Suzhou 苏州市

Yangzhou 扬州市

Shanghai CHINA

PARTIDO DE GUAMINÍ
PROVINCIA DE BUENOS AIRES

RIOM

Ville de Goussainville

MARINA CITY 百丽广场 QING DAO

Ville de Chantilly
Ville d'Art et d'Histoire

La Madeleine
Proche de tout, proche de tous !

中國無錫 Wuxi China

SAINT-OUEN L'AUMONE

Saint Saulve

BULGARIA SOFIA Republic of Bulgaria

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City Surveillance - Sidewalks

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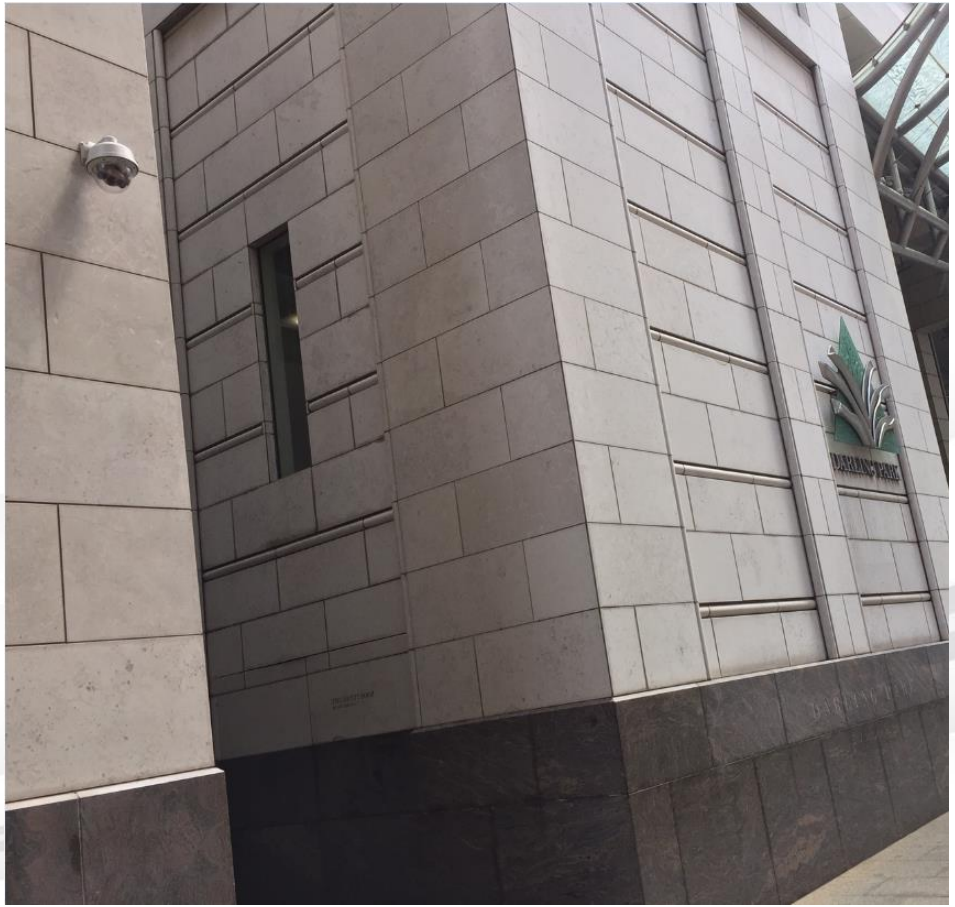

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City Surveillance - Streets & Highways

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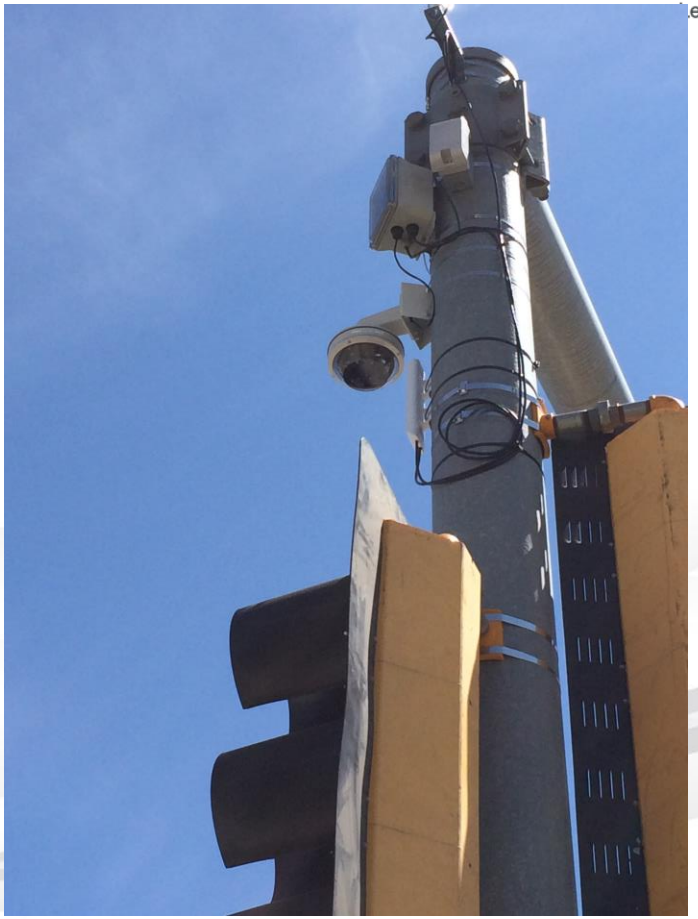

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City Surveillance - Traffic

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City Surveillance - Traffic Circle

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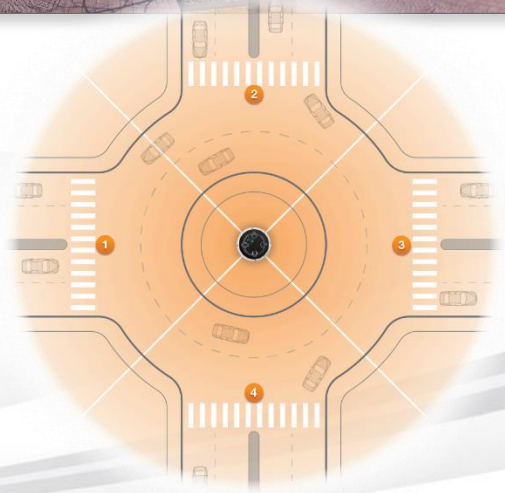
- **Surround**Video® Omni set up in the center of a traffic circle for a true 360 degree panoramic view



True 360° Traffic Circle
(Four 90° Lenses)

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Roadway Situational Awareness

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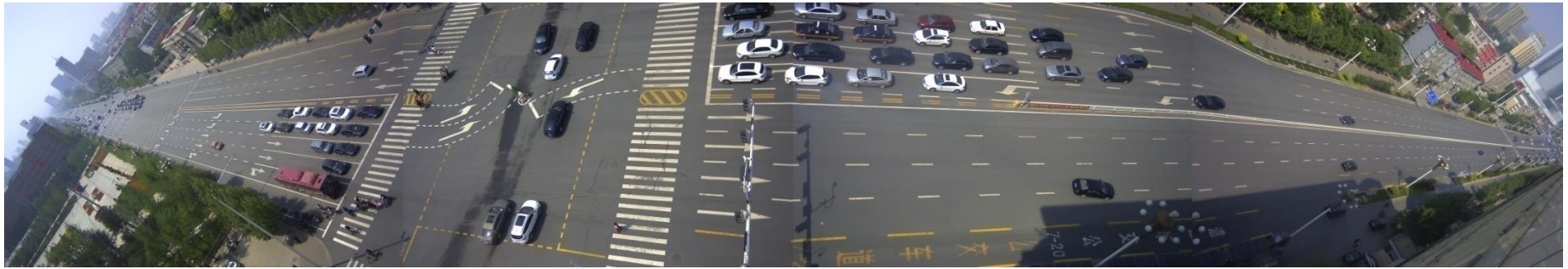

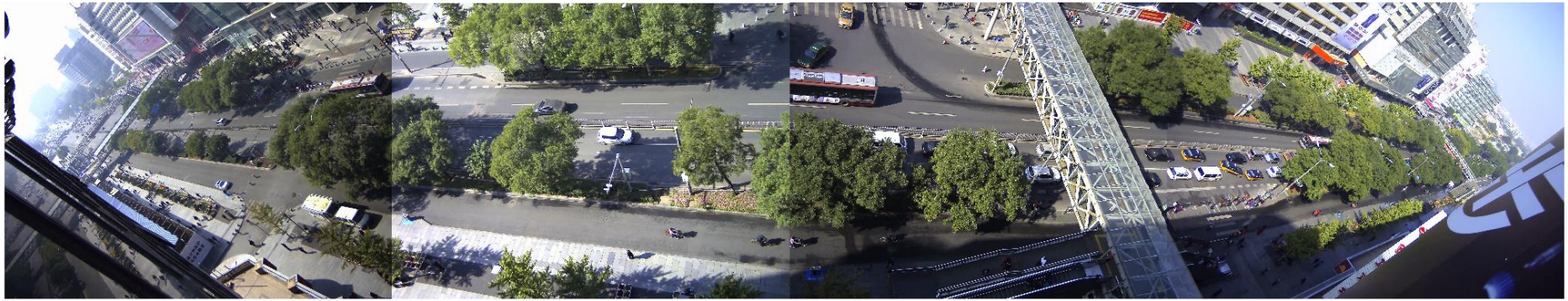

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Traffic Violations - Red Light Enforcement

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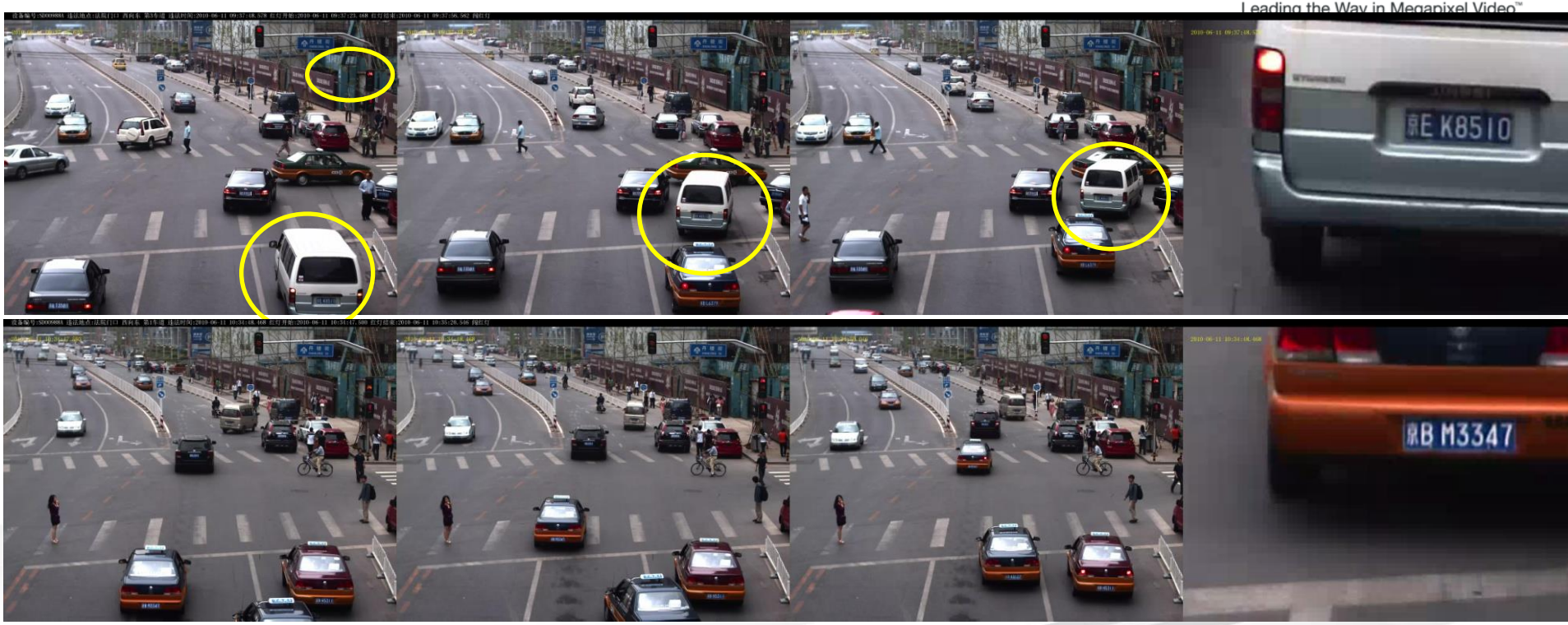

Capture LP for 3 lanes

- Use AV5115 5M to cover 3 lanes
- Single capture mode to snapshot images when violations happen
- LPR software
- External LED light

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LPR Capture Using 3MP to Cover 3 to 4 Traffic Lanes

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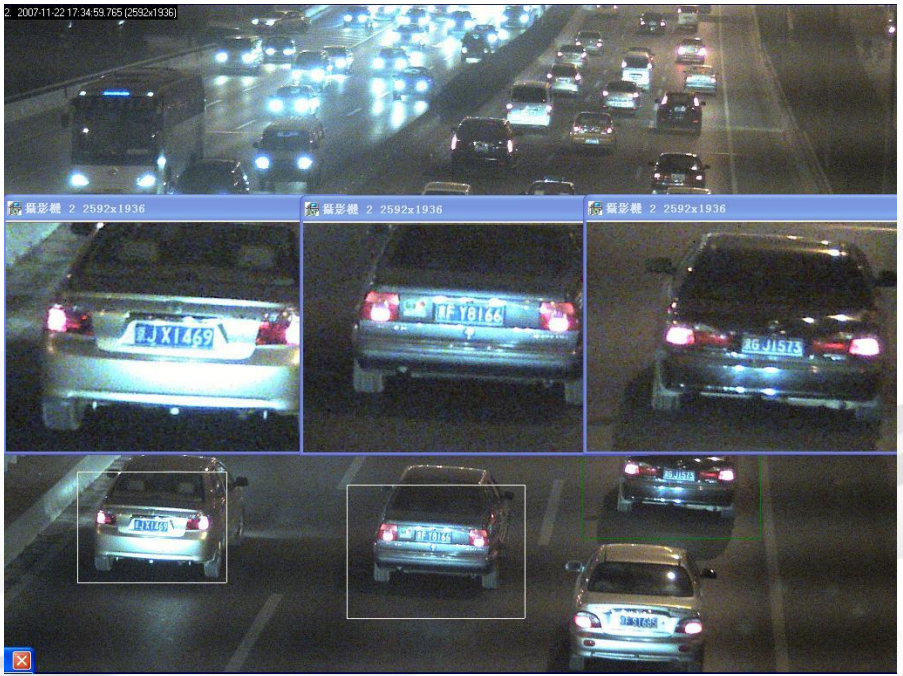

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LPR Capture Using 5MP to Cover 5 Traffic Lanes

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Solution:

- Use 5MegaPixel (AV5115DN) mounted on top of the cross bridge
- Covered up to 5 lanes on each side of the street

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Traffic Monitoring

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Challenge Addressed: Need to cover up to 5 lanes of high speed traffic

- Use 5M (AV5115) mount on top of overpass
- Covers up to 5 lanes on each side of the roadway

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Street Parking Violation

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AVA PTZ Housing

AV5115

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Intelligent Vehicle Monitoring System

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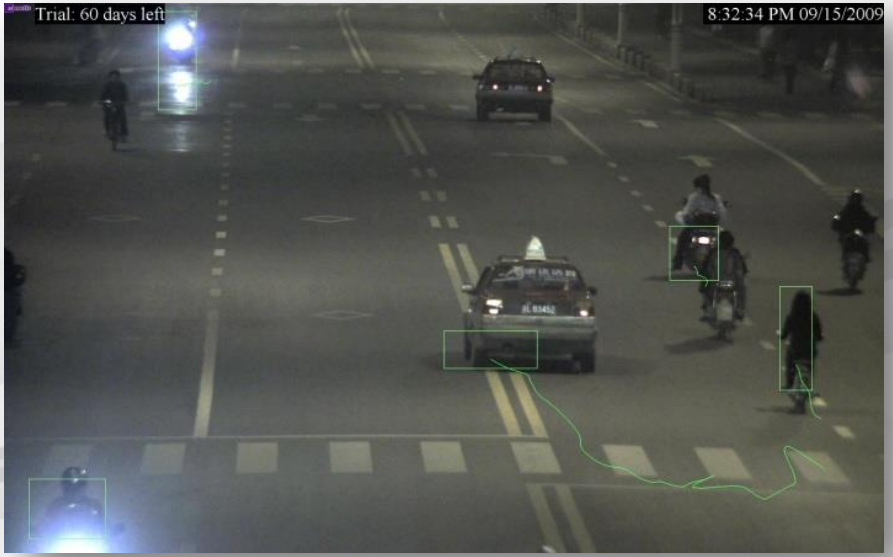
Requirement:
Capture license plate of every vehicle entering and exiting the city

Solution:

- Uses AV2115 @ 30fps
- LPR software
- LED lighting if needed



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City Surveillance - India

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SurroundVideo® WDR Installed at Kumbh Mela

- One of the largest congregations of people in the world at a single site – approximately 10 Million people at Kumbh Mela
- There are 125 Arecont Vision panoramic cameras installed at the site, watching this huge festival

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City Surveillance

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Case Studies and News Coverage

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- Buenos Aires, Argentina
  - http://goo.gl/6S0fTv
- St. Andrew's Village, New Zealand
  - http://goo.gl/RFeMxj
- Alburtis County, Pennsylvania
  - http://goo.gl/IhaFRW
- Seattle, WA
  - http://goo.gl/r2tCky
- Ulsan, South Korea
  - http://goo.gl/PUIICP
- Hollister, California (news story)
  - http://goo.gl/1x9Wdx
- Wisconsin State Fair, Milwaukee (news video)
  - http://goo.gl/HgwcI5
- Horry County, Georgia (news video)
  - http://goo.gl/8a4SJd
- Sturgis, South Dakota (news story)
  - http://goo.gl/Q5SoeC
- Indianapolis, Indiana (news video)
  - http://goo.gl/d3GxWD
- Hollywood, Los Angeles, California (news video)
  - http://goo.gl/8hjtCP
- Brooklyn, New York
  - http://goo.gl/xn9UGC (news video)
- Bal Harbor, Florida (news video)
  - http://goo.gl/fd7nme
- Vail, Colorado
  - http://goo.gl/7ejiAY
- Manus, Connecticut (news story)
  - http://goo.gl/BcLJCe
- Miami, FL (news story)
  - http://goo.gl/77ck4H
- Big 4 Bridge, Indiana
  - http://goo.gl/MS2TtD

Customer Operations Roundtable
May 2017

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Pricing and Project Protection

- Arecont Vision protects systems integrators/distributors better than any other company.
- Project registrations discounts are ranging between 25-30% and lately have been over 40% using the products from the Spring Promotion
- Only one SI/dealer is registered for an end user project, except in rare cases. In those cases, the competing SI/dealers are both notified that project pricing has been provided to more than one reseller.
- Project registrations are turned around in less than 24 hours. Usually, in 2-4 hours.
- Registrations have no minimum, even one lens or camera mount can be registered, and conversely our sales team can work with the SI/dealer on large end user customers with multi-site locations globally to assure the SI/Dealer is price protected through the life of the project.
- We have a very easy to use online portal to register projects.

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Support and RMA

- New on-line RMA process reduces time and improves accuracy.
- Arecont Vision usually handles RMA for defect with the SI/dealer directly. Distributor administrative people do not need to be involved.
- Arecont Vision wants to pre-approve the RMA by trying to troubleshoot the problem remotely or on-site before a RMA is approved. That way we make sure to only replace cameras that need to be replaced as opposed to just adjusting, changing settings, or firmware updating. This saves the SI/dealer time and gets the fix in place faster. It also reduces the chances of a misdiagnosed camera failure.
- Arecont Vision does advance RMA for all cameras in its warranty period. Three year is standard. Products may be upgraded for a fee to five year at the time of registration or original billing.
- Pricing grid for out-of-warranty repair prices so decisions can be made in advance of the RMA.

Technical Support Center (TAC)

- Based in USA at the Arecont Vision headquarters, adjacent to our engineering and quality departments.
- Investing significantly in new people, new tools, training, and new processes.
- 97% of calls are answered by live Technical Support Engineers
- Average less than 2 voice messages per day and those 2 calls are returned personally by the director of the TAC usually within 2 hours.
- Closed-loop support system improves customer service and reduces resolution time.
- With our MegaLab, we offer pre- and post-sales support with 3rd party VMSs and other technology partners.

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Logistics

- Made in USA
- Easy order process
- 24 hour confirmation of order shipment date
- Immediate Project Registration discount is applied to the order.
- Products ship from Arecont Vision finished goods in our Glendale (Los Angeles) CA facility.
- If a large or small order comes in that requires products to ship that are not on the shelf, our operations people can schedule the product assembly. No need to wait for a shipment from Asia or other international facility. I think we are the only company that can do this in the USA.
- New on-line demonstration/evaluation unit process reduces time and improves accuracy.

Customer Operations Roundtable

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Installation

- New remote setup configurations for a hands-free camera configuration experience.
  - Potentially removes extra costs of a lift or lift truck.
  - Provides greater safety for the installer, minimizing trips on a lift.
  - Product family currently includes: SurroundVideo Omni G3 and MegaDome G3
- Newly designed housings with easy installation for the installer, saving your installer time and ultimately costs.
  - Mounting plates with electrical box adapters built in and mapped on the plate so there's no guess work involved. Reduces installation time and improves efficiency.
  - Improved water tight integrity. Only one access port in our new designs with rugged grommets for full environmental protection.
  - Magnetic holding features for a single-handed installation. Providing safety, convenience, and time savings for the installer.
- Arecont Vision wall mounts now ship as a part of a complete unit with the junction box included at no extra cost.
- New mounting accessories designed for an easy installation experience with a standardized approach across most camera models making it easier for product selection and lowering the number of required SKUs.
- IP Utility Software Tool for small to large mass camera installations, camera settings and changes, and camera firmware updates that can be done in mass per each camera type.
- Improved Installation manuals and other collateral such as REVIT to assist and plan for camera installations
- QR codes right on the box for easy access to all installation manuals from any mobile device in the field.

Other points

- Arecont Vision conducts monthly satisfaction surveys of our customers. Over the last 5 years we have delivered tremendous improvement in logistics, presale support, quality, and post-sales support. Our customer satisfaction scores have improved significantly over the past 5 years while our customer shipments have more than doubled.
- Cybersecurity is important to Arecont Vision and we offer cyber protection others don't. We develop our own features and capabilities, instead of buying licensed code or chipsets from 3rd parties, for the best performance and cybersecurity protection. See our whitepaper on this topic. https://www.arecontvision.com/whitepapers/
- Arecont Vision FPGA (Field Programmable Gate Array) and 5th generation MPIP (Massively Parallel Image Processing) architecture allows for upgrades (color accuracy improvements, better processing, bandwidth advances, network security protocols, etc.) to currently installed cameras. This is unique to Arecont Vision.
- Designed and built in the USA.

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Actions for you

- Please set up a Service/Parts agreement with Arecont Vision, if you don't already have one in place. It allows us to provide advance RMA units and demonstration/evaluation units without needing a special purchase order or credit card. Arecont Vision will set you up with a nominal credit line to accommodate your needs. As long as you return the defective camera (in the case of an RMA) or demonstration/evaluation unit on time, there is no charge.

Spring 2017 Promotion Program

Spring 2017 Promotion Program: Distributor/PR Pricing

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MicroDome1 1-3MP: Change -10%

MicroDome1 5MP: Change -28%

MegaBall1: Change -12-37%

MicroBullet: Change -50%

SurroundVideo 2&3: Change -40%

OMNI 1: Change -33-40%

* Does not include shipping, duties, tariffs, taxes.

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2Q17 Action

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- Programs released:
  - Spring 2017 Promotion!
  - Trade UP Program
  - Try&Buy Program
    - Extended for Multi-Sensor Products, MicroDome Duo, 4K and Flex
    - Expanded for OMNI3, MegaDome3, 4K Box camera
- SI/dealers should sign up for service parts/demo agreements.
  - Immediate shipment without a credit card.
  - It is fast and simple to do.
- Our new products are shipping now and more to come next month!

Product Development Update

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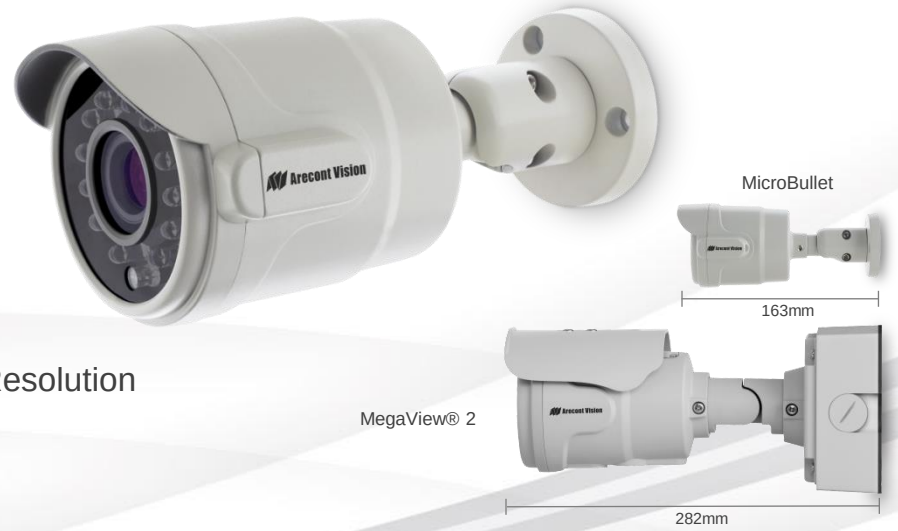
Leading the Way in Megapixel Video™

MicroBullet®

1080p or 3 Megapixel (MP) H.264 All-in-One 2.8–8mm Motorized Lens True Day/Night IR Indoor/Outdoor Bullet-Style IP Cameras with SNAPstream™ (Smart Noise Adaptation and Processing) and WDR (Wide Dynamic Range) Models

Highlighted Features Include:

- 1080p and 3MP Resolutions
- 2.8–8mm Motorized Lens for Remote Focus/Zoom
- Integrated IR LED Illuminator
- SNAPstream™ (Smart Noise Adaption and Processing) for reduced bandwidth without impacting image quality
- Optional True Wide Dynamic Range up to 100dB at Full Resolution
- True Day/Night with Mechanical IR Cut Filter
- Indoor/Outdoor IP66 and IK-10 Protection Grade



Integrated Motorized Lens with Remote Focus and Zoom

True Day/Night with Mechanical IR Cut Filter

CorridorView™ with 90° Image Flip

WDR

Wide Dynamic Range Available on Select Models

SNAPstream™ Technology

Pixel Binning Mode on 3MP Models

IR LEDs

All-in-One Bullet-Style Solution

Casino Mode™ Maintains at Least 30fps on Select 1080p Models

Impact / Weather Resistant IK-10 and IP66 Rated

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MicroBullet®

New Accessories

MCB-JBAS

adapts to AV-JBA

MCB-JBA

SurroundVideo® Omni G3

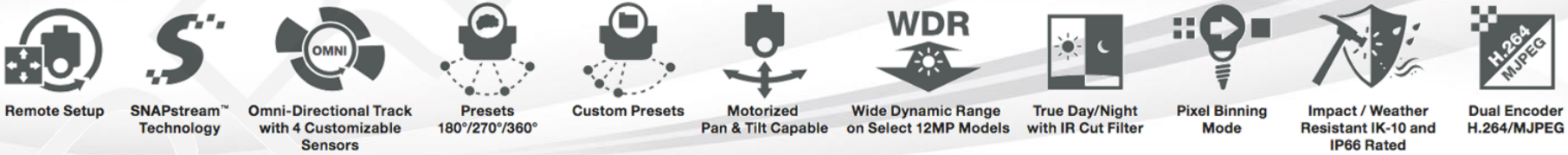
Arecont Vision®

Leading the Way in Megapixel Video™

12 or 20 Megapixel H.264 All-in-One 3nd Generation Omni-Directional Multi-Sensor Day/Night Indoor/Outdoor Dome IP Cameras with Remote Setup

Highlighted Features Include:

- Multi-Sensor, Multi-Megapixel (12 and 20 MP) Omni-Direction Low Profile Dome Camera with Advanced H.264 Compression, Optional WDR, Increased Frame Rates, and Remote Focus
- No-Touch **Remote Setup** for all 4 Individual Camera Gimbals for Setup or Field of View Changes
  - *180º, 270º, 360º view presets plus up to 2 custom user-defined presets*
  - *User-Specific View / Angles / Focus*
  - *Varifocal motorized lens*
- True Day/Night and Wide Dynamic Range (WDR) Models
- SNAPstream™ Advanced Compression Algorithm Reduces Bandwidth Without Impacting Image Quality



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Learn more about SurroundVideo Omni at: http://www.arecontvision.com/landing-pages/omni/overview.php

SurroundVideo® Omni G3

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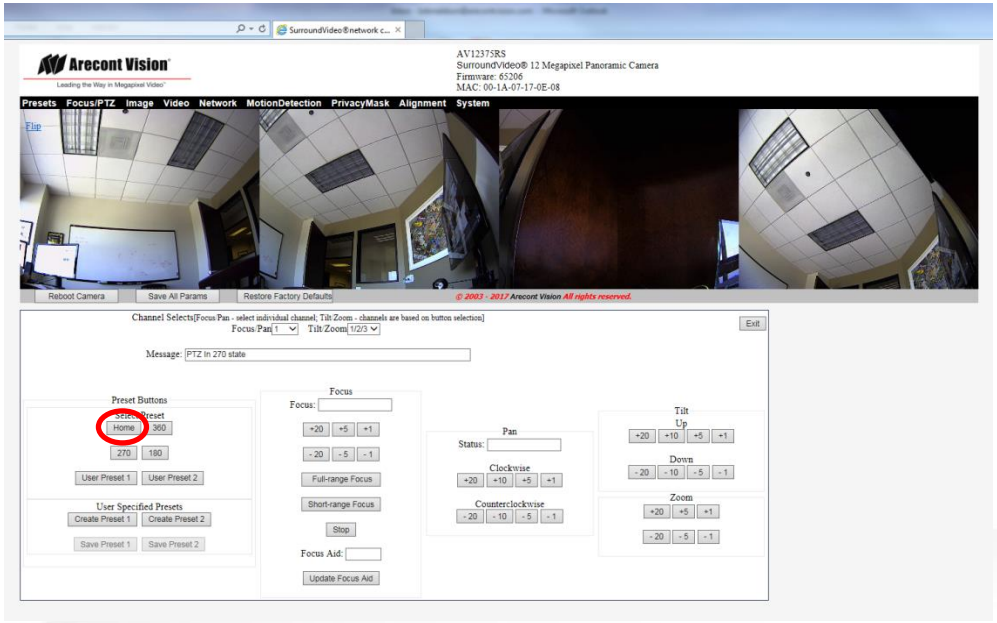
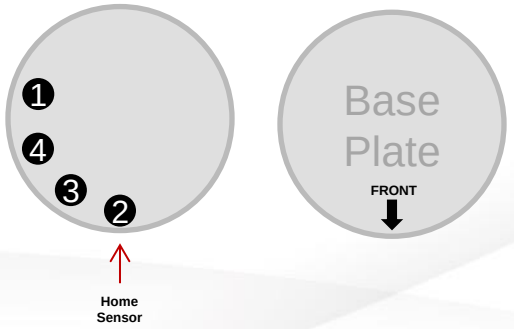


Home Preset



Video is disabled while moving to presets, not for manual movements

Message: Moving to Home Preset PTZ In process - live video is disabled

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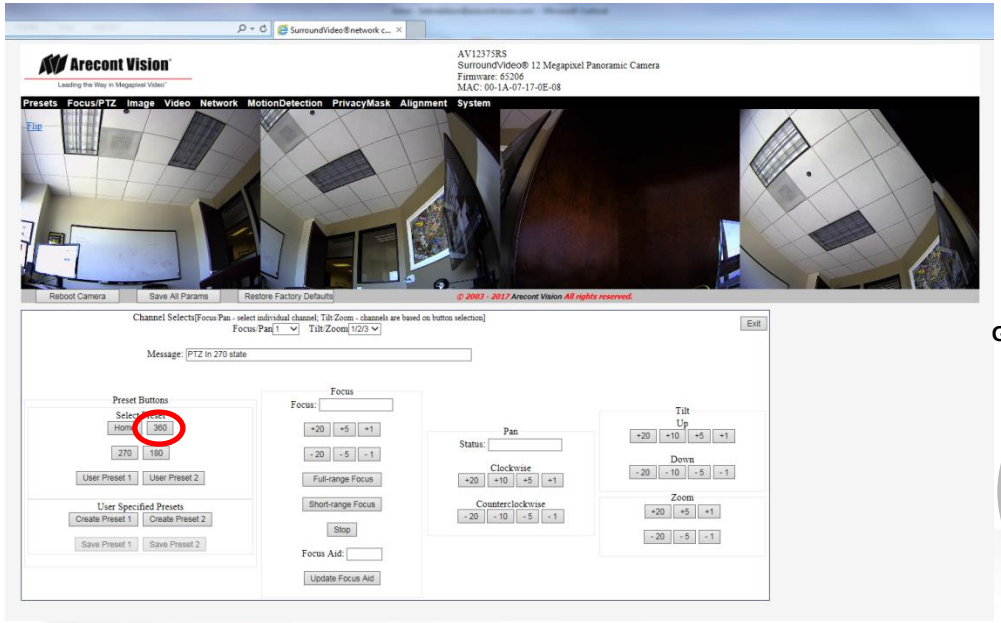
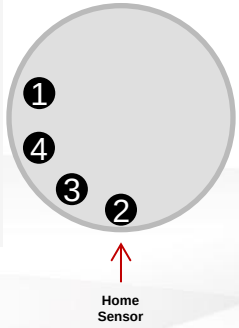
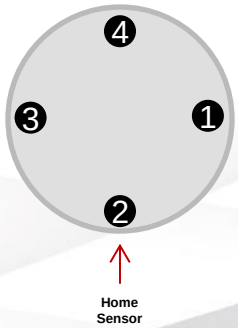


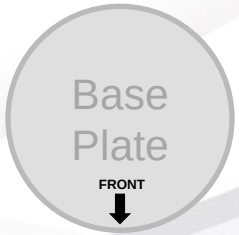
360 Preset Sequence

Goes to Home Position First to Calibrate



Then Goes to 360





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SurroundVideo® Omni G3

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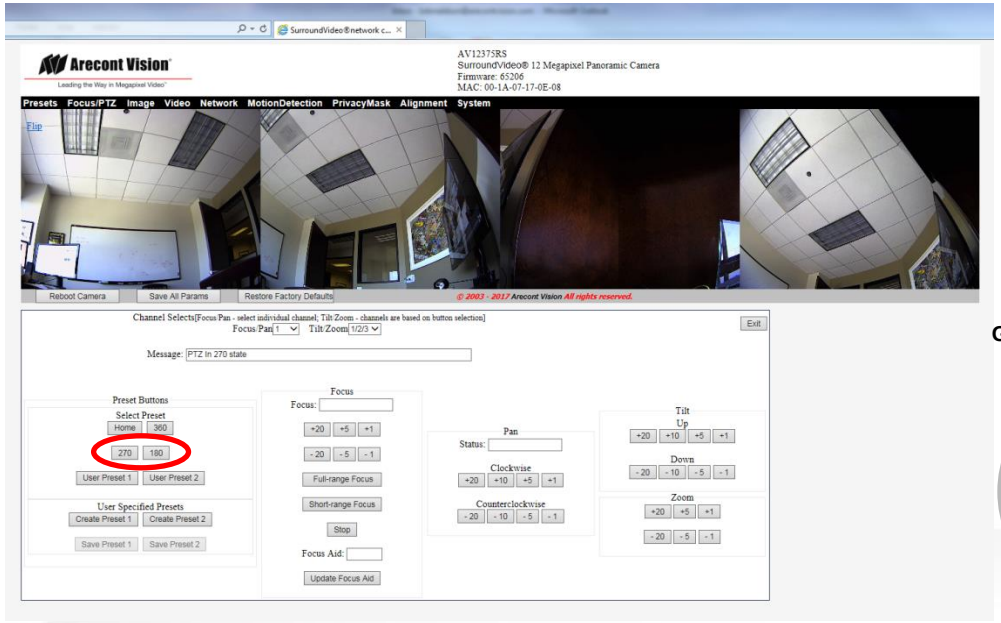
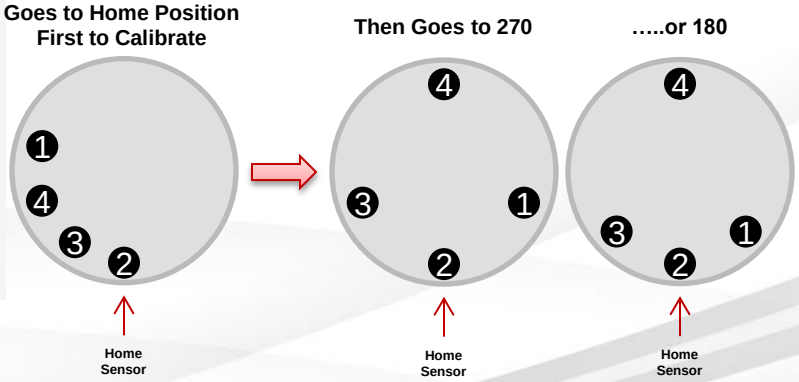


270 or 180 Preset Sequence



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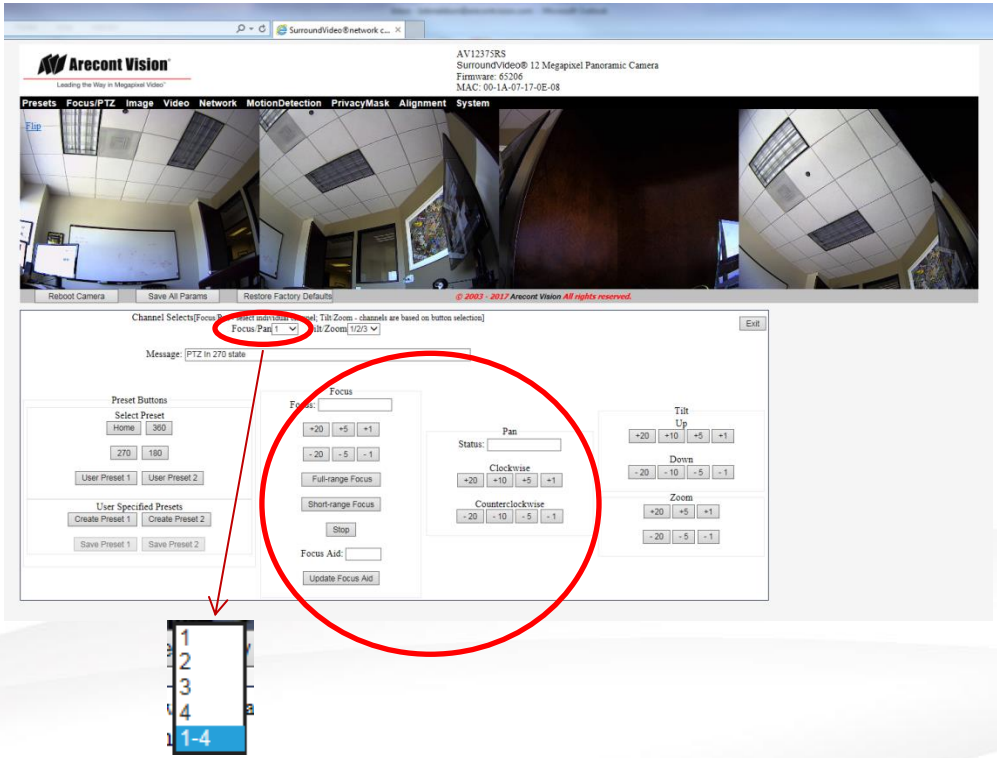

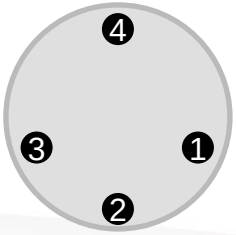

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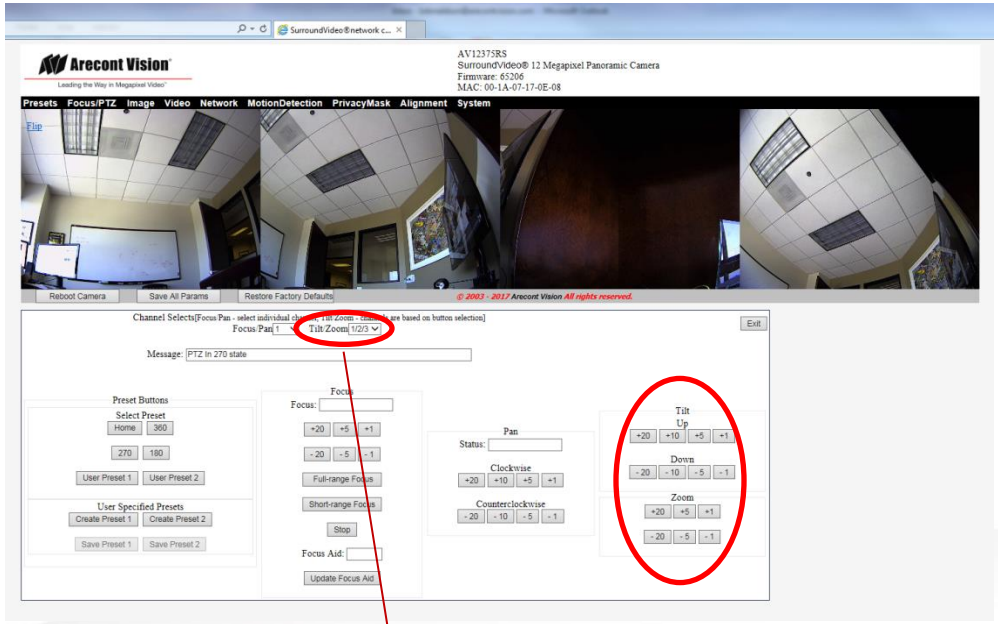

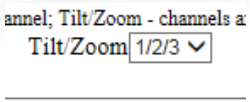

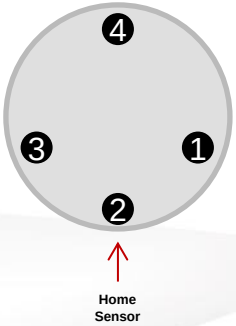

Learn more about SurroundVideo Omni at: http://www.arecontvision.com/landing-pages/omni/overview.php

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SurroundVideo® Omni G3

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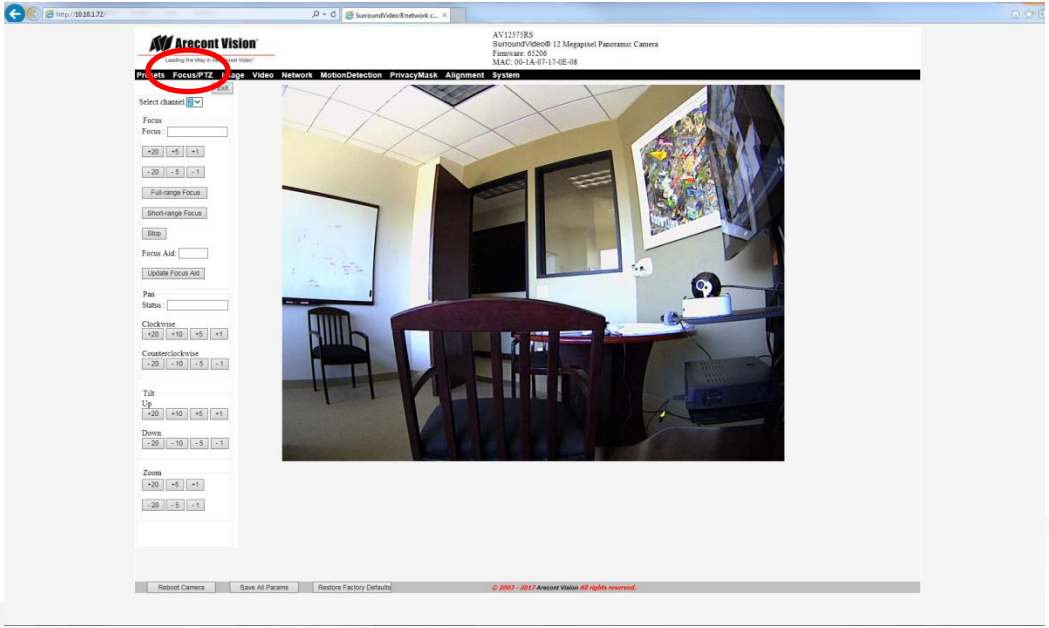

Watch the video at:
http://www.arecontvision.com/trainingvideo.php

Learn more about SurroundVideo Omni at: http://www.arecontvision.com/landing-pages/omni/overview.php

Protecting the City of Brooklyn

The Leiby Kletzky Security Initiative

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Protecting the City of Brooklyn

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The Solution

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- Cameras needed to be able to work on a Verizon 4G network and store video locally
- 150+ Arecont Vision multi-sensor cameras AV8185DN-HB
- The city needed total overall coverage of the streets with no miss in coverage using fewer cameras
- Ease of install, Less Licenses, and Higher resolution than a PTZ

Protecting the City of Brooklyn

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2 Wire Runs
2 Times the Labor

2 Camera License
on NVR

5MP Day/Night	MSRP	QTY	Total
AV5155DN-1HK	$1,500	2	$3,000
MD-WMT2	$150	2	$300
			$3,300

vs

How Cost Effective

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1 NVR License

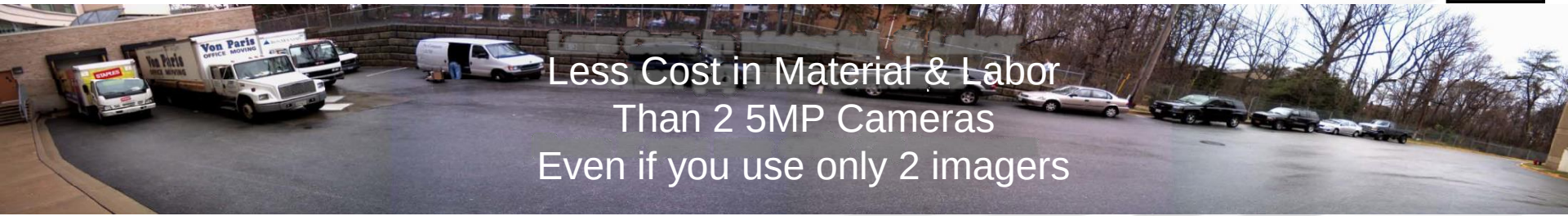
Most NVRS

1 Wire Run

1 Camera

5MP Day/Night	MSRP	QTY	Total
AV5155DN-1HK	$1,500	2	$3,000
MD-WMT2	$150	2	$300
			$3,300

20MP Day/Night	MSRP	QTY	Total
AV20185DN-HB	$3,098	1	$3,098
SV-WMT	$160	1	$160
			$3,258



Less Cost in Material & Labor
Than 2 5MP Cameras
Even if you use only 2 imagers

1 Large Coverage Area

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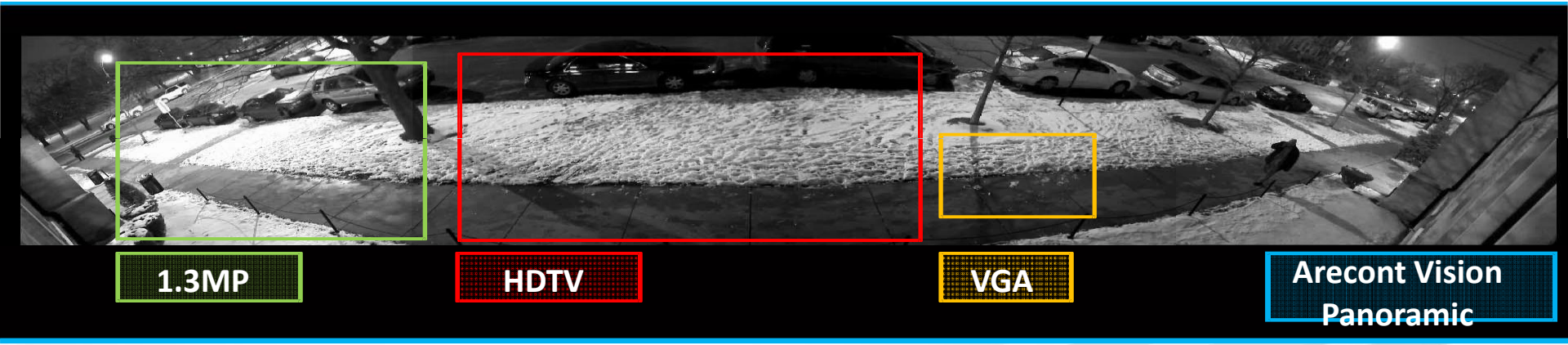
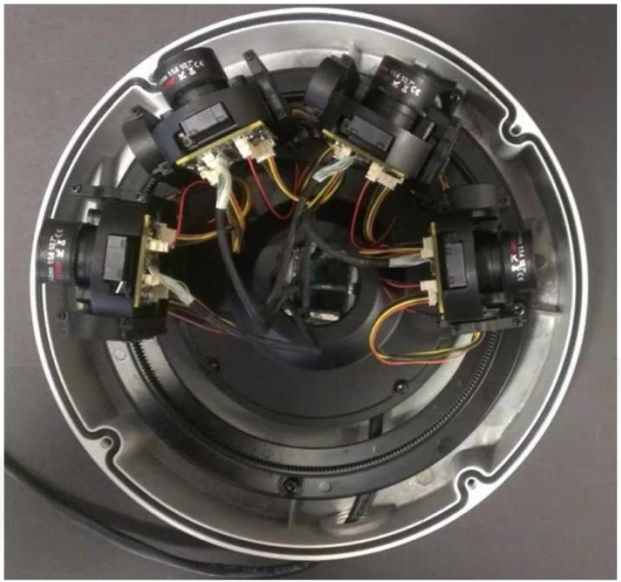
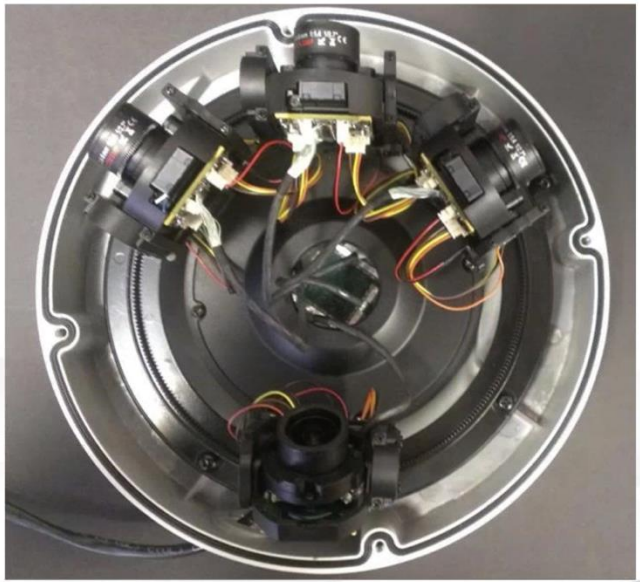
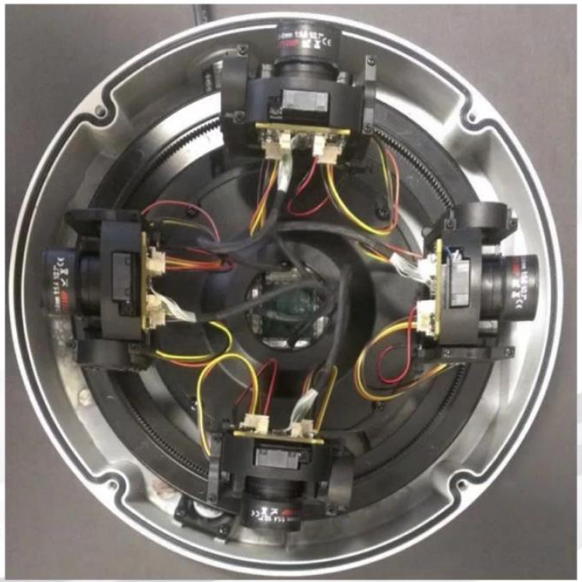

1.3MP
HDTV
VGA
Arecont Vision
Panoramic



180°



270°



360°

Megapixel Value Proposition

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- Camera Reduction
  - Covering a wider FOV results in less lenses, housings, NVR license fees, cable runs, labor time.
  - Less cameras to monitor increases productivity

- Resolution Increase
  - Megapixel allows you to maximize scene resolution, and yield the best image quality possible producing live and archived video with forensic evidentiary value.

Tech Tips & Tricks: P-Iris Technology

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What is P-Iris technology

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- P-Iris stands for “Precision”
- It is an improved auto iris technology that seeks to optimize the depth of field in a given image
- Instead of a DC motor P-Iris uses a precise stepper motor to control the iris position

What is P-Iris technology

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- P-Iris technology allows more precise control of the aperture allowing the lens to achieve best possible position for maximum image depth of field in any given lighting condition

- Instead of gain the technology works with the shutter speed on the camera to control the iris position (Auto Iris is driven by signal gain)

P-Iris vs. Auto Iris

- The aperture (iris) affects both the light getting to the sensor and the image depth of field

- Traditional auto iris lenses have drawbacks for Megapixel imaging, and there are limits to how effective electronic exposure control can be in some environments

So what's an iris?

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- An iris is an adjustable lens aperture used to control the amount of light coming through the camera lens

- As the iris is opened, the more light it lets in and the brighter the scene gets

Traditional Auto Iris technology

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- Outdoor scenes with changing light levels were difficult for CCD sensors to maintain good exposure

- This motivated invention and evolution of auto iris lenses to control the aperture (iris)

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Traditional Auto Iris technology

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- As signal gain increases to brighten the image the lens iris opens to brighten the image
- Auto-iris can have problems finding the right position with frequently changing light source
- These lenses don’t allow good depth of field because the aperture is not fixed like a manual lens

Depth of field

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Shallow depth of field

Deep depth of field

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Enter the P-Iris

- P-iris is ideal for Megapixel imaging eliminating drawbacks of AI, and working together with the Cameras electronic exposure control to achieve best possible image in a given scene

Product Series featuring P-Iris

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MegaBall G2

MegaDome 2

MegaDome 4K

P-Iris Control for
Best Depth of Field and
Image Clarity (PM Models)

MegaVideo G5

MegaView 2

SurroundVideo G5

Applications:

- Anywhere indoors or out where lighting conditions change through out the day

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Q&A

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