Increase Your Business with Arecont Vision Megapixel IP Technology:

Arecont Vision Update

The Future of Low Light Video Surveillance

Customer Webinar
18 March 2015

Arecont Vision

Leading the Way in Megapixel Video

Agenda

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Leading the Way in Megapixel Video™

• **Arecont Vision Update**	Scott Schafer [Executive Vice President]
• **STELLAR Low-Light Technology**	Brad Donaldson [Director of Product Management]
• **Partner Presentation**	Bob Ehlers [Vice President, RGB Spectrum]
• **Tech Tips and Tricks**	Richard Kennedy [Field Applications Engineer]
• **Online 30 Day Loaner Program**	Jason Schimpf [Director of Sales Operations]
• **Q&A**	

Arecont Vision Update

Scott Schafer
Executive Vice President

Arecont Vision

Company Update – February 2014

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- Key new products and technologies shipping
- Key products shipping very soon
- Excellent Progress with VMS/NVR Partner integration
  - Improved camera discovery
  - Improved feature integration and performance
  - Better overall support
- Quality and Service
  - RMAs continue to be at very, very low levels!
  - Strong Support of the Arecont Vision Advance Replacement Process (NEW HOW-TO VIDEO ON WEBSITE)
  - Excellent Technical Support call and JIRA on-line answering results!
  - Project Registration Process is a winner! (NEW HOW-TO VIDEO ON WEBSITE)
- We are Celebrating 12 Years of Leading the Way in Megapixel Video!

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Customer Satisfaction Survey Results

February 2015

Customer Satisfaction Measurement February YTD 2015

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Delighted and Satisfied Scores (does not include somewhat satisfied, somewhat dissatisfied, disappointed)

• Arecont Vision stands behind their products	98%
• Arecont Vision is a valued partner to your business	92%
• Quality	91%
• Product Performance	89%
• Satisfaction with Arecont Vision product line	88%
• Overall Satisfaction with Arecont Vision	86%
• Presale Support	86%

Very strong improvement in key areas: technical support, RMA process, pricing, training, confident in selling Arecont Vision, ease of doing business

Recent Customer Meetings

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- End User activity is high
  - Retail
  - Banking
  - Stadiums
  - Corporate and Higher Education campuses and parking lots
  - City Surveillance
  - Excited about Omni, STELLAR
  - Megapixel cameras provide the best ROI
- Systems Integrators are working more closely with Arecont Vision
  - Positioning Arecont Vision as a leading product line
  - Training
  - Demonstrations
  - Project Registrations
- Distributors are leading with Arecont Vision
  - Distributors driving more intensity
  - Distributors and their SI/dealers make more money with Arecont Vision
  - SI/Dealers requesting Arecont Vision products more than ever before!

MIPS 2015

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MIPS 2015: Camera Manufacturer of the Year

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GIT Security Magazine comes to Arecont Vision WHQ

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SurroundVideo® Omni at Butler University

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“State of the Market” 2014-15

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“State of the Market” for video surveillance systems and services in 2014-15

- The state of the Video Surveillance Systems and Services market is very solid
- Higher growth in IP, primarily coming from Megapixel cameras
- IP standard definition cameras flat or low growth
- Analog cameras will decline another 10%
- Stronger offers by VMS firms for NVR products for standalone systems and multi-branch deployments

What will make 2015 different from 2014?

- Even more acceptability of IP and megapixel camera systems
- SI/dealers with more experience and better training in 2014 by will yield stronger systems

Is anything changing with end users requests or expectations when it comes to video?

- They still want a system that delivers value. Proof of ROI!
- Better image quality than SD or Analog
- Fewer cameras to install, monitor and manage

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Arecont Vision needs to continue to excel in all areas:

- Product Leadership
- Pricing Leadership
- Promotion and Marketing Leadership
- Sales and Channel Leadership
- Exceptional Execution!

2015 Keys to Success: Core Advantages

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- Our Sales Team
- Best overall product line: box, indoor and outdoor domes, dual sensor, panoramics
- Innovative, game changing products
- Excellent Image Quality + Camera Reduction = Terrific ROI! Plus, a new way of monitoring security systems.
- VMS/NVR “real” partnerships, globally
- High Quality and Reliability
- Made in USA
- Priced for success, especially via Project Registrations
- Our Service Team
- Advanced RMA process
- “We Take Customer Service Personally”
- Most impressive customer list in the industry!
- (One of the most profitable firms in the Security Industry)

Product Update

Brad Donaldson
Director of Product Management

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STELLAR™ Technology

(Spatio (space) TEmporal (time) Low Light ARchitecture)

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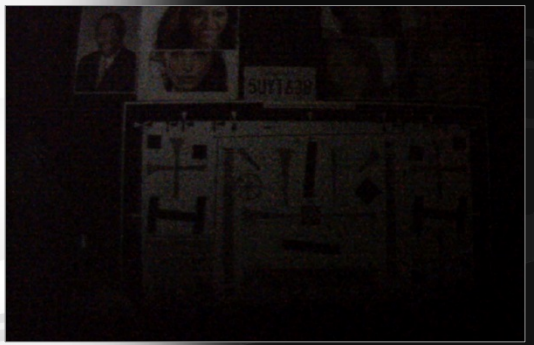
STELLAR™ Technology

(Spatio (space) TEmporal (time) Low Light ARchitecture)

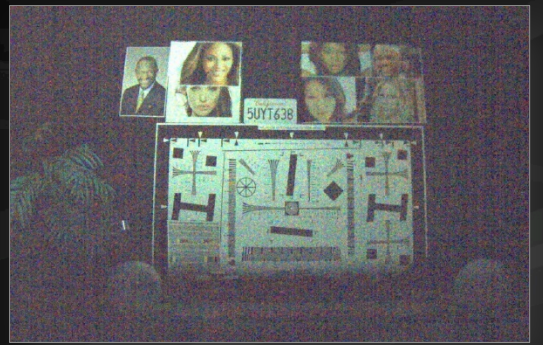
Highlights:

- Color Images in Near-Complete Darkness at 17 FPS
- Superior Low Light Sensitivity
- Adaptive Contrast Enhancement
- Motion Blur Reduction
- Patented Noise Reduction Algorithm
- Low Bit Rate and Storage Requirements

Color Mode Comparison at 0.01 Lux



Standard



STELLAR™

STELLAR™ Technology

4 Main Components to the STELLAR Design:

- Lens
- IR Cut Filter
- Sensor
- STELLAR Algorithm

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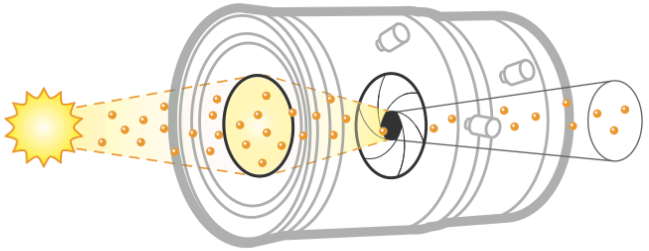
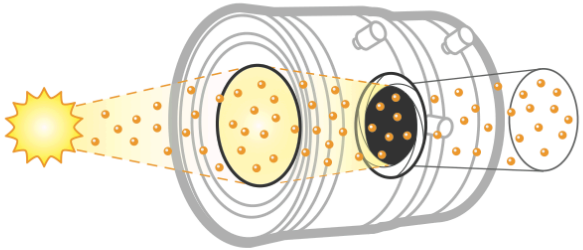


High F-Number
For bright sun-lit environments, an iris set to be not fully open is preferable.

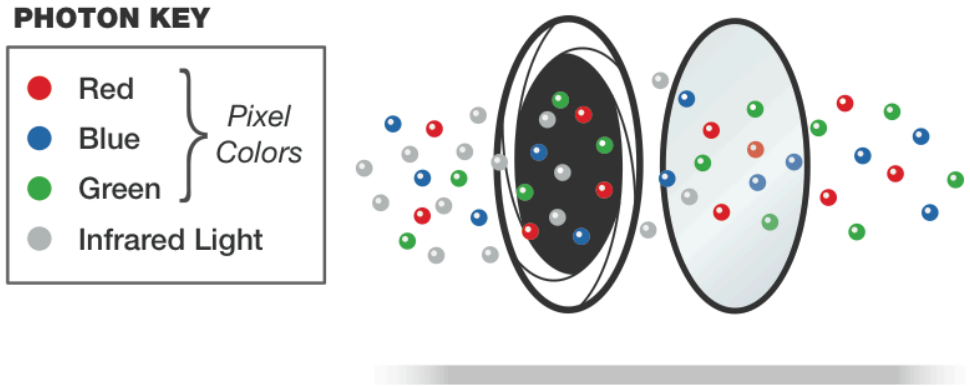


Low F-Number
For a dark environments, a wide open iris and a shorter focal length collects more light.

STELLAR™ Technology

4 Main Components to the STELLAR Design:

- Lens
- IR Cut Filter
- Sensor
- STELLAR Algorithm



Infrared Removal

Infrared light is removed from the stream of photons passing through the iris for better color accuracy.

STELLAR™ Technology

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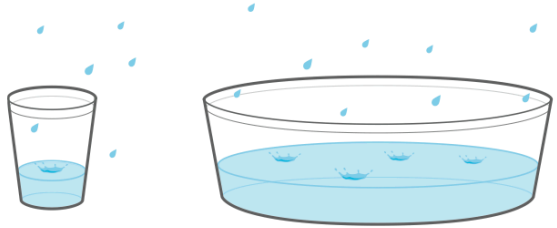

Pixel Size

Pixel size matters when trying to collect more light, especially in low-light conditions where photons are scarce. A larger pixel will collect more photons than a smaller pixel.

Exposure Time

A longer exposure time will also mean more photon collection, but this can result in motion blur.

STELLAR™ Technology

4 Main Components to the STELLAR Design:

- Lens
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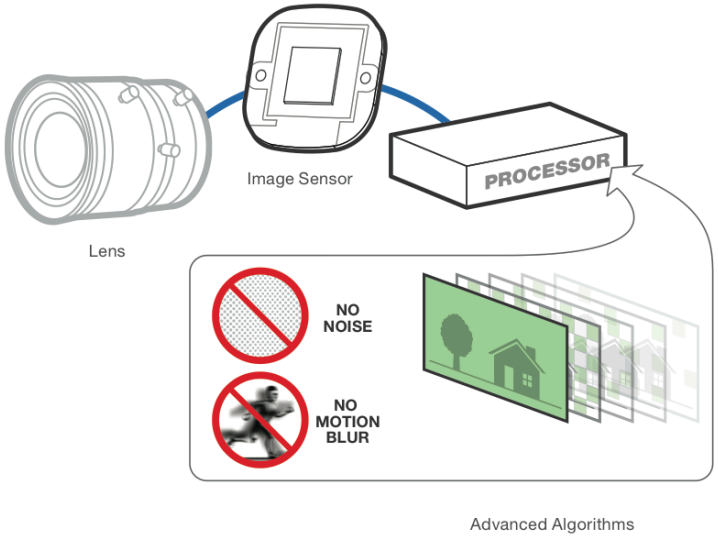
- STELLAR Algorithm

Video Processing Algorithms

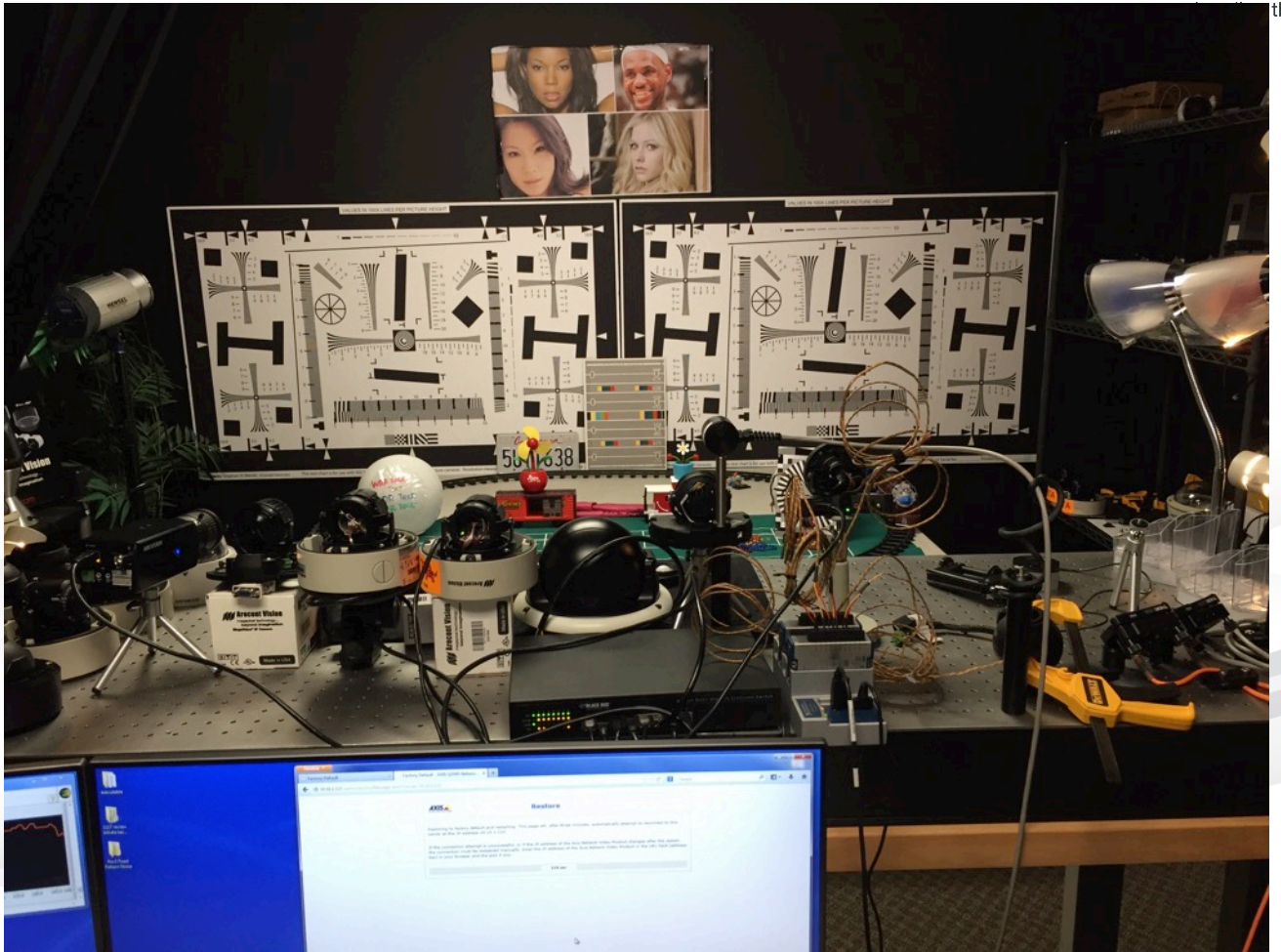


Spatio Temporal Noise Reduction and Adaptive Contrast Enhancement

Arecont Vision's patent-pending smart processing algorithms collect relevant information from multiple video frames to reduce both noise and motion blur as new video is recorded.

STELLAR™ Technology Examples

Test Environment



0.045 LUX iPhone

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0.045 LUX

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0.005 LUX iPhone

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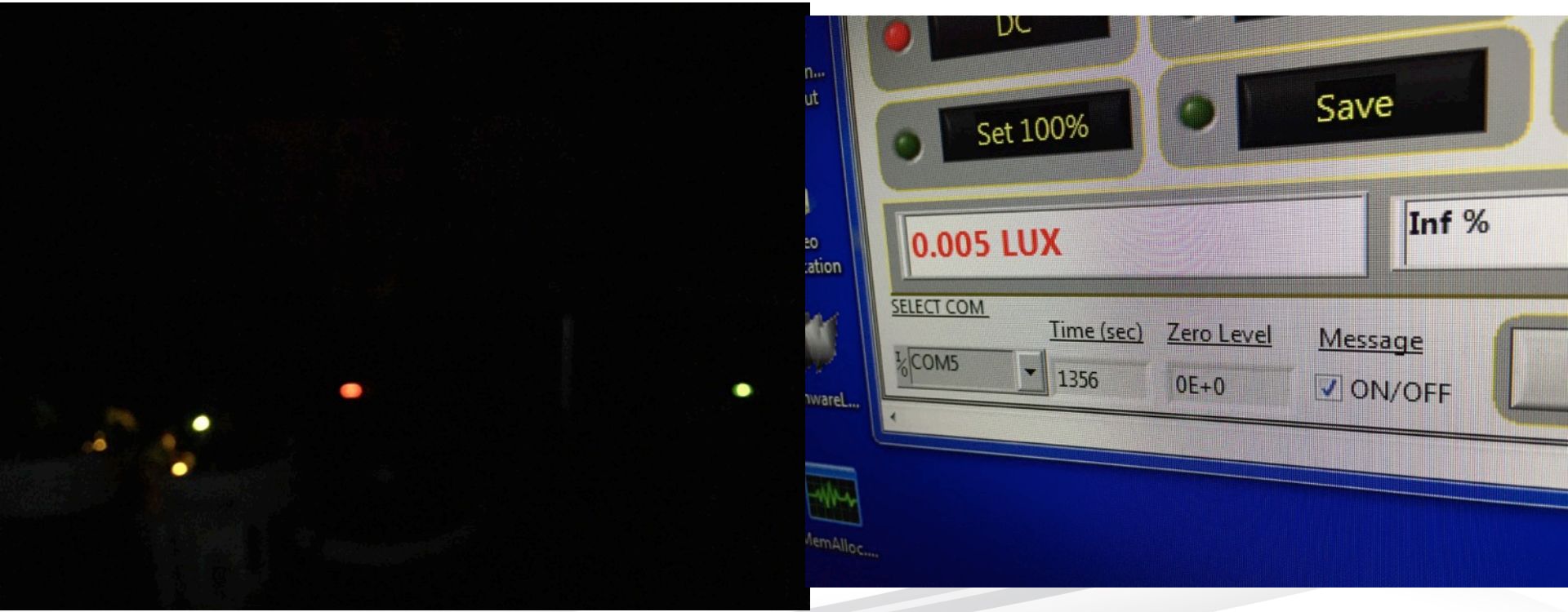

0.005 LUX

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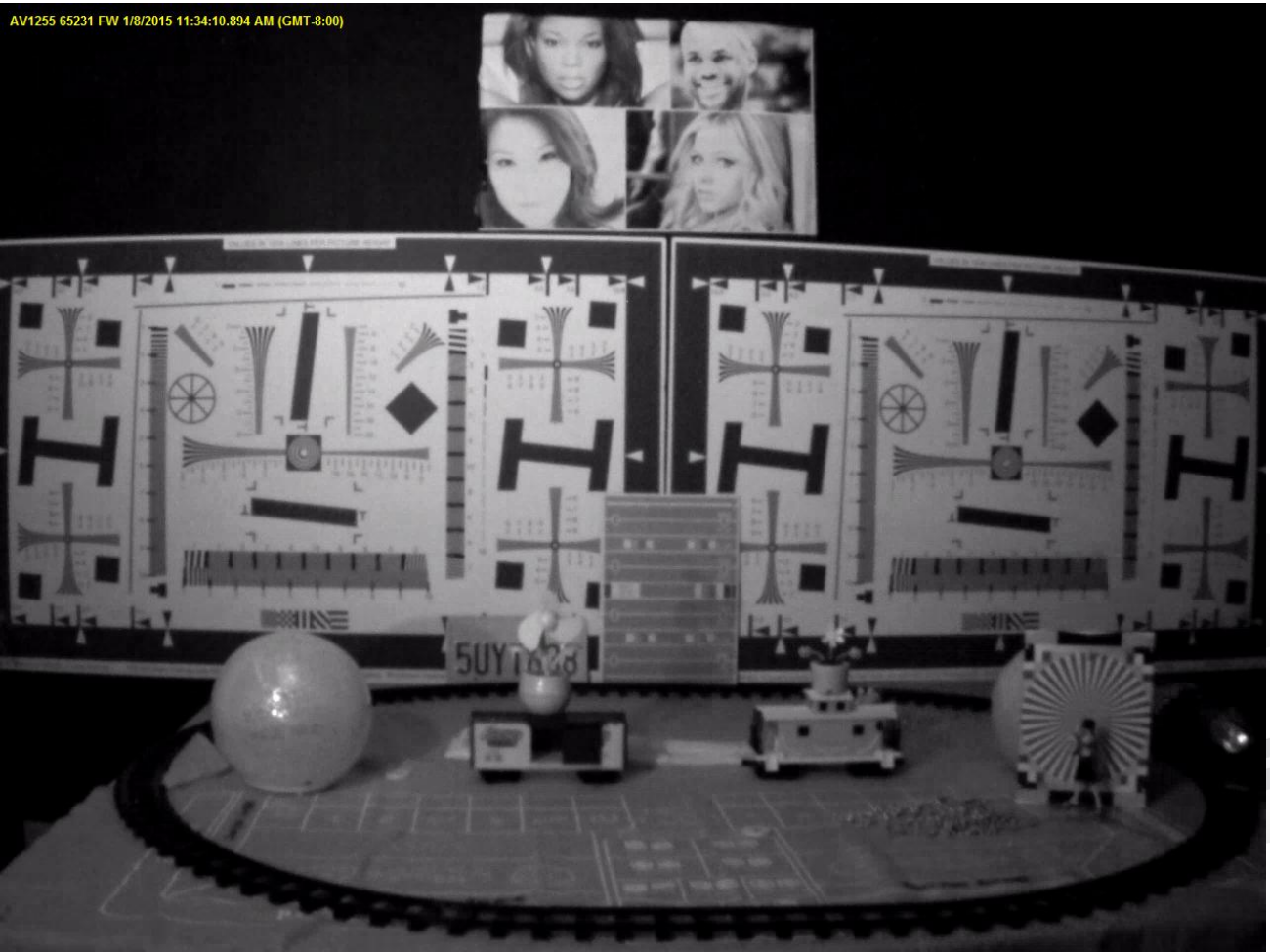

Integrating with Video

Company Overview

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- Video Solutions for mission critical command and control
- Headquartered in the San Francisco Bay Area (Alameda, CA)
- International offices in the Netherlands, France, UK, Russia, South America, and China
- 2014 Quality Magazine #25 in USA

Video Wall Processors
Many sources to many monitors

Multiviewers
Many sources to one monitor

Digital Switchers
Routing video

Display and Control

Codecs and Recorders
Record and transmit video over IP

Scalers and Keyers
Manipulate video and add text or graphic content

Control Software and IP KVM

RGB SPECTRUM

Example Installations in Many Markets

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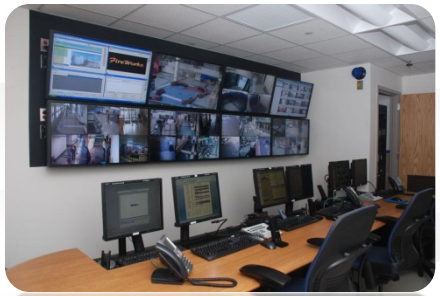

RGB SPECTRUM

Video as Integration Enabler

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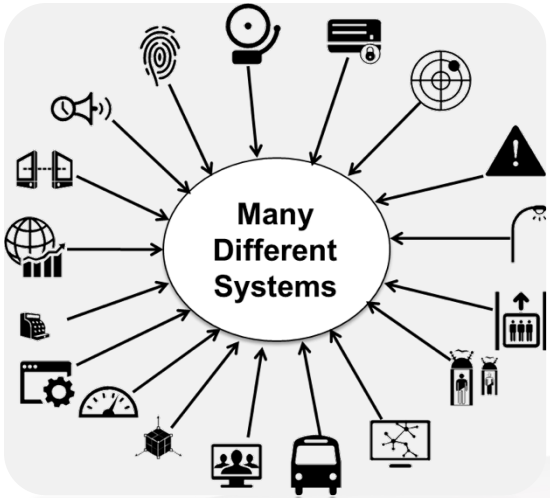

Customizable work surface

Source drag and drop

Live thumbnails

Collaboration for Arbitration

Integrated wall control

Control status indicators

Unified local and remote control

Control over local displays

Wall Presets

RGB SPECTRUM

MediaWall V

The World's *First* True 4K UHD Video Wall Display Processor

Single-wire input / output resolutions up to 4K UHD

Real-time processing with no dropped frames

Dedicated application and IP stream decode processor

Unmatched security and reliability with an embedded architecture

Fully-scalable windows, any size, anywhere

Thank You

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The Challenges of Low Light Surveillance

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The Challenges of Low Light Video Surveillance

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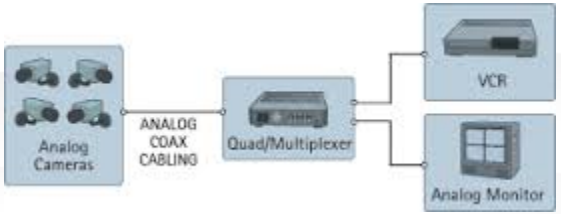

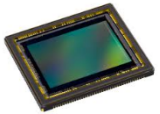

The Challenges of Low Light Video Surveillance

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- The early years, CCTV cameras were large and bulky, relied on (Vacuum Tubes) to capture images.

- And the resolution during the day in color at best was inadequate. Vision at night was a struggle if not totally impossible.

The Challenges of Low Light Video Surveillance

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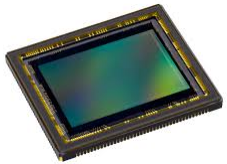
- As technology got better, CCDD &CMOS imaging sensors replaced the vacuum tube. This allowed for smaller and higher quality surveillance video cameras and images.



The Challenges of Low Light Video Surveillance

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- When discussing recording video at night, the term Day/Night or D/N should also be addressed.
- Once the security industry realized that black & white video at night was cleaner and sharper than color images, the D/N camera was born.

The Challenges of Low Light Video Surveillance

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- Even though we had enhanced night vision by literally turning off the color, in extreme low lighting conditions made it nearly impossible to clearly see without light.
- The utilization of Infrared Illumination made it possible for a security camera to see virtually without ambient light.
- Also known as 0 Lux.

The Challenges of Low Light Video Surveillance

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- Infrared Illumination or IR are a series of LED illuminators that project IR light.
- IR having a wavelength just beyond our spectrum of seeing emits a light source that only specialized Day/ Night cameras can see, and they use this light source to compensate for the lack of ambient light.
- IR to a D/N camera is like turning on a flood light only the camera can see.

The Challenges of Low Light Video Surveillance

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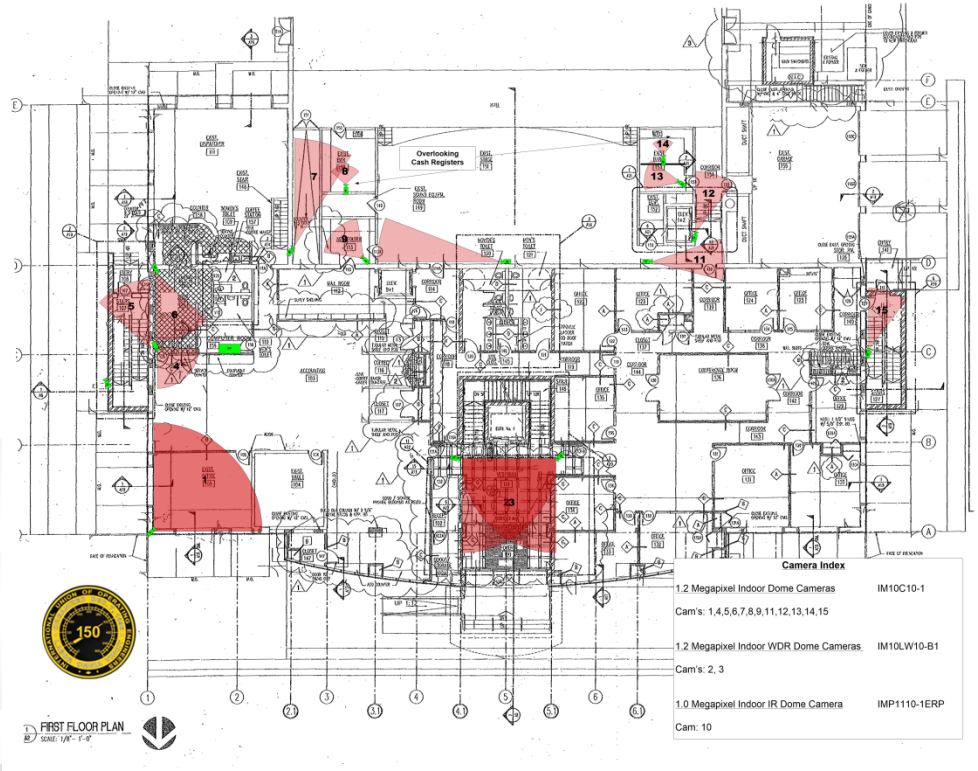
- For this particular customer, at 5pm the employees turn off the lights as they lock up for the night.
- Their existing analog system only showed the video as black imagery, as the ambient light was insufficient enough to capture video.
- Literally they only had useable video ½ of the day!



The Challenges of Low Light Video Surveillance

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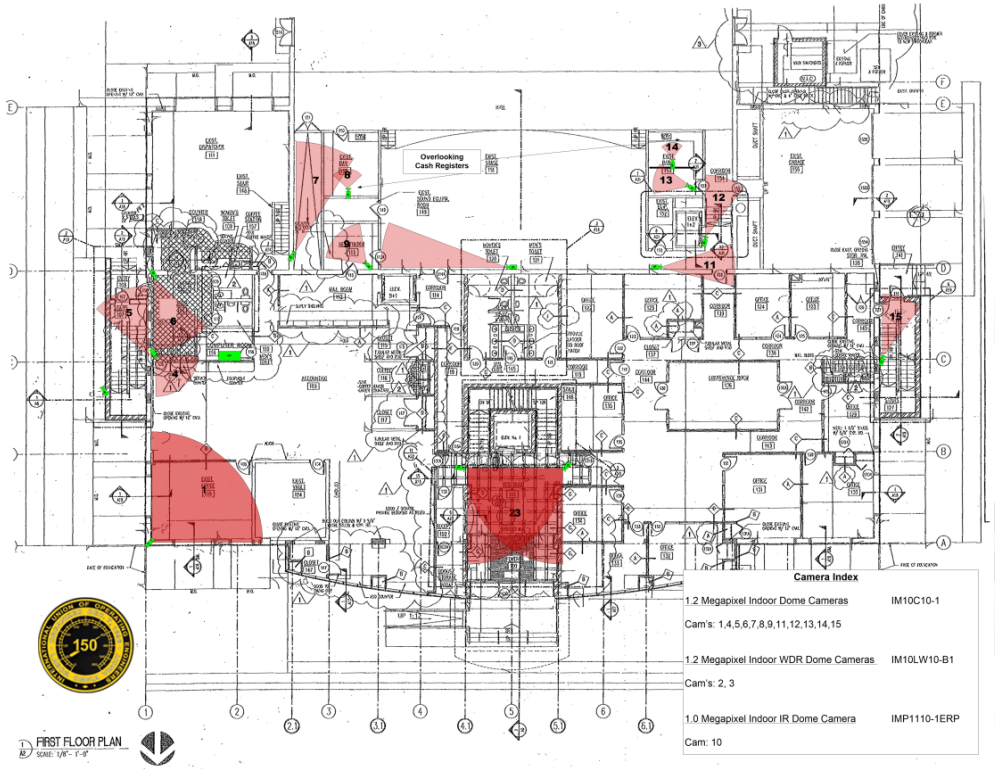

The Challenges of Low Light Video Surveillance

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- There are limitations to IR; the foremost is distance the light can travel.
- ArecontVision makes two most commonly utilized models of IR cameras.
- One version has an IR max range of 50ft with a field of view angle of 40°
- The “TIR” series has an IR max range of 120ft with a field of view angle also at 40°

The Challenges of Low Light Video Surveillance

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- The use of IR cameras for both indoor and outdoor applications greatly increases the odds of capturing useable forensic video information.
- When discussing the overall cost of ownership, take in account how valuable having infrared cameras at night recording an incident, vs. not having them in place.

The Challenges of Low Light Video Surveillance

- As technology progressed, the ability to record color video with extreme low light levels became more available.
- Early engineering of color cameras with the ability record nighttime video in color had flaws.
- Compensating with a slower shutter speed of a camera to allow color video resulted in what we call in the industry as “Motion Blur”

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STELLAR™ Technology

(Spatio (space) TEmporal (time) Low Light ARchitecture)

Highlights:

- Color Images in Near-Complete Darkness at 17 FPS
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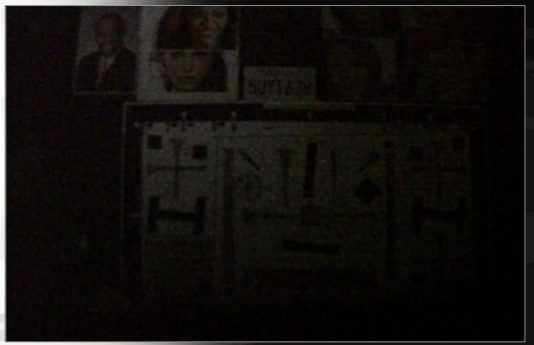
Color Mode Comparison at 0.01 Lux



Standard

STELLAR™

MegaDome® 2 / MegaView® 2 STELLAR™

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Highlighted New Features:

- STELLAR™ Low Light Technology Reduces Motion Blur, Noise and Storage Requirements, While Enhancing Contrast and Allowing Color Imaging in Near Complete Darkness
- CorridorView™ Allows 90° Image Rotation for Better Coverage in Hallways and Corridors
- SDHC Card Slot for Onboard Storage

STELLAR™ Low Light Technology

CorridorView™ with 90° Image Flip

SDHC Card Slot

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STELLAR™ Technology

(Spatio (space) TEmporal (time) Low Light ARchitecture)

STELLAR Technology will be incorporated in our other popular lines on cameras!

Color Mode Comparison at 0.01 Lux

Standard

STELLAR™

Channel Support
Online 30 Day Loaner Program

Jason Schimpf

Made in the USA

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New Channel Support Dashboard

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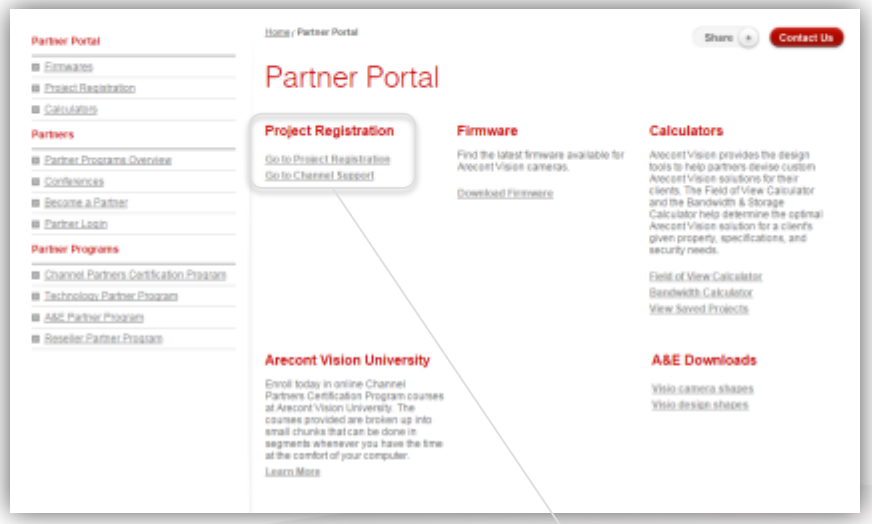
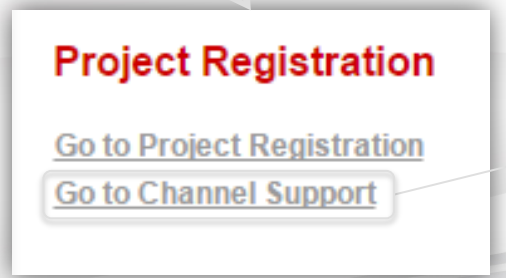
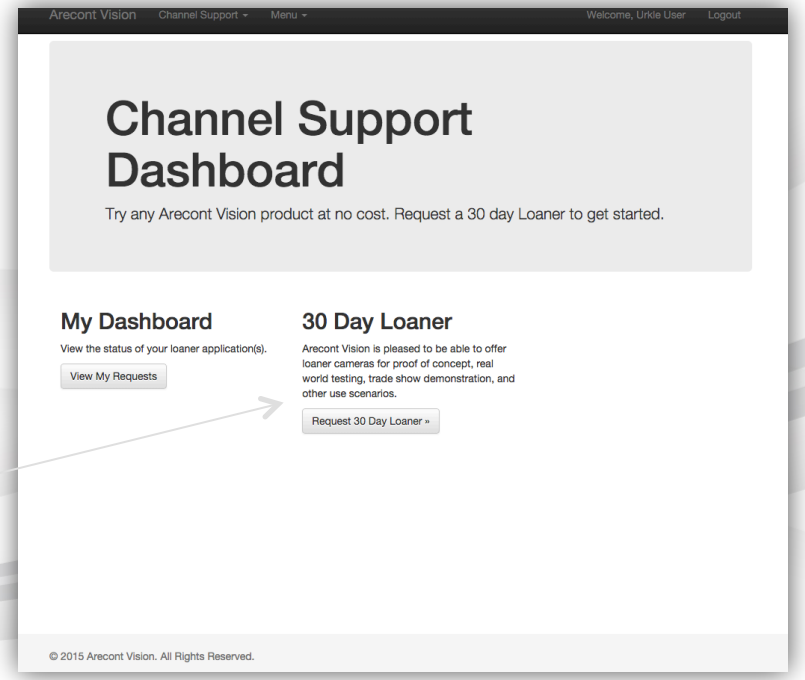


Fast, Easy, Secure

Soft Launch March 23





Easy to Use Online Form

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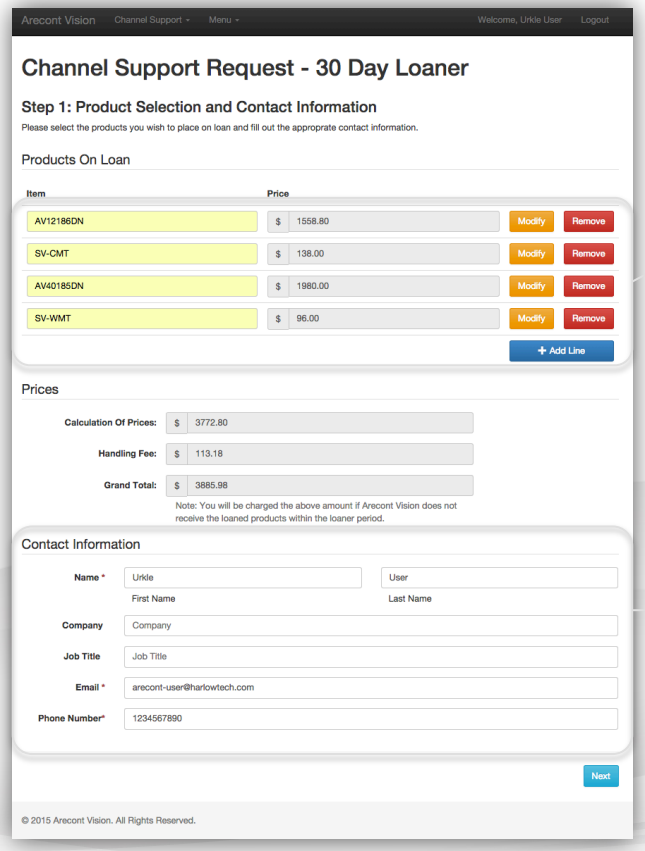
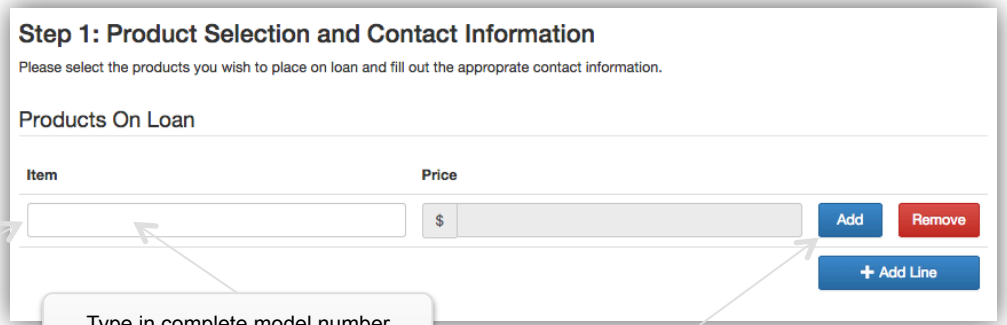
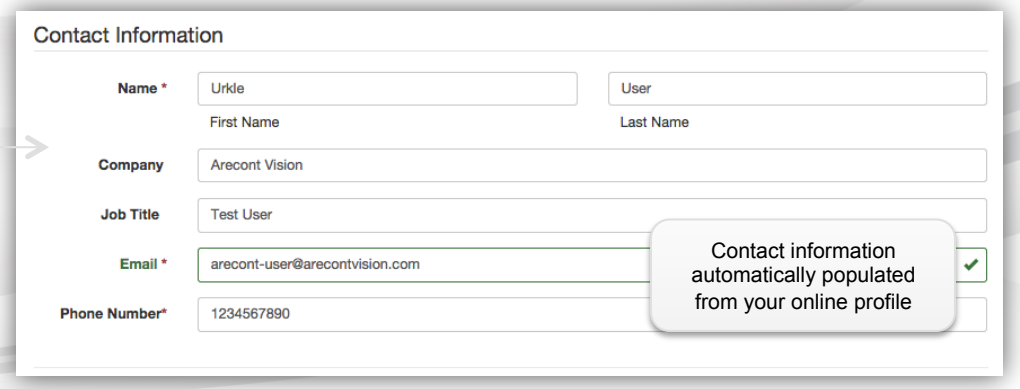




Type in complete model number

Or select from a list of products



Contact information automatically populated from your online profile

Secure Credit Card Authorization, PO Submission

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Credit Card Information

Please enter a new credit card number that matches the billing information above.

Credit Card* Credit Card Number

Expiration Date* 1 (Month) 2015 (Year)

Card Code * CVV

Payment Options

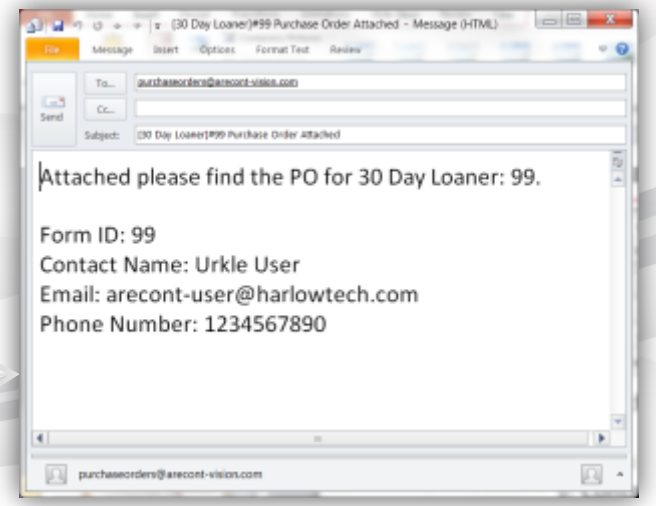
Please select from the payment options below.

Payment Option:* Pay by Credit Card / Pay by Purchase Order

Purchase Order Information

To submit a purchase order (PO), please insert the PO number into the field and then click the above button to open a pre-drafted email. Prior to sending, please attach your actual PO to the email as a PDF.

Purchase Order* Purchase Order Number — Email PO



Service Account – Sign Up Today!

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- Service Accounts
  - Loaners
  - Advance RMAs
  - Out of warranty service

- To sign up for a Service Account:
  - Contact your inside sales person
  - Email avsales@arecontvision.com and include your full contact info, city, state, country and an inside sales manager will follow up with you

- Coming soon!
  - Online Advance Replacement Requests, release in mid-April

Q&A

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Next Month…

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- **Topic: ISC WEST 2015 Preview**
- Wednesday, April 8th at 8:30 Pacific Time
- Register: www.arecontvision.com/webinars

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