



Enterprise Surveillance Manager (ESM) Release Notes

Version: 5.3

[Version 5.3.2 – 3/19/2012]

New Features

- **ESM Mobile UI Enhancements**
Optimized PTZ controls for a smoother experience on mobile devices as well as included a new feature to take a screenshot of the live video to save locally. Added Custom Layout options to the device tree for the Mobile UI.
- **Archive Playback Enhancements**
Optimized Archive playback engine to allow for an almost instantaneous playback experience instead of needing to wait for the video to build. This also includes the ability to seek dynamically through the video by clicking on a place in the timeline bar in the player window.
- **Simulated Joystick controls in Live view**
Implemented simulated joystick controls by using the keyboard arrow keys and the + and – key for zooming to allow for joystick style PTZ controls without the extra hardware.
- **Administrative Login Default page to Dashboard reports**
Now when logging into to ESM Administrator you will see the overview of the system from the Dashboard for greater awareness.

[Click for additional details on new features in ESM 5.3](#)

New Devices

Axis M7010
Axis M7014
Axis P3346
Axis P7214
Axis Q1602
Axis Q6035
Axis Q7414
HIKVision DS2CD862MFE
HIKVision DS2DF1518
IQinvision IQA20NE-B5
IQinvision IQ302
Panasonic WV-SF332
Panasonic WV-SF336
Pelco IP110

Sony SNC-EP520
Sony SNC-EP521
Sony SNC-EP580
Sony SNC-ER580
Toshiba IK-WB16A
Toshiba IK-WB30A
Toshiba IK-WD80A
Vivotek IP6112
Vivotek IP7361

[Click for the full list of support devices](#)

Fixes

- Library Playback for 16:9 ratio video clips were not playing properly
- Live view for mobile platform was not performing correctly for new iOS release and Android update
- Custom Layout loading issue
- Dashboard event reporting to properly show only the last 24 hours of data
- FTP recordings were not being properly flagged as motion
- FTP recorded video was not being stitched in the proper order in certain scenarios
- Arecont AV8365 was not set properly to utilize the 4 ports
- Silverlight was limited to 6 Live view streams
- Silverlight playback was not auto starting
- Silverlight seeking was not working unless video was buffered
- Silverlight install prompt for Safari was not loading
- Silverlight not clearing error message in live view when the stream recovers
- Safari admin pages were not loading all frames correctly
- Encoding issue with Axis camera when recording codec was switched
- Capture Frame was not grabbing the latest Frame from the video
- Resolution issues with the Axis P5522, P5532, 2100, 2110, 211, and Arecont AV1355
- Connection issues with the Panasonic KX-HCM280 and Sony SNC-RZ30N
- PTZ commands utilizing the Sony SNT-EX154 encoder with a Pelco PTZ camera
- PTZ commands for HIKVision cameras
- PTZ presets were not loading for the Vivotek PT7135
- PTZ controls in Silverlight were enhanced
- DNS/IP detection issues for live view
- Licensing page not displaying all camera count information correctly
- License page would error out when applying a license if there wasn't a linked archive server
- Automatic reconnection issue in live view for Vivotek cameras
- Motion Cycle indicator in live view was not changing from green to red
- When switching camera to a new archive server the stream would continue to record on the original until service was restarted
- Mass Update feature was causing a UI crash in the Administrative interface

[Version 5.3 – 10/17/2011]

New Features

- **ESM Mobile UI**
Live streaming and PTZ control support for iPhone and iPad devices.

- **Safari Support**
Full featured ESM application now available for Safari web browser on Mac or Windows.

- **Server-side Proxy**
Proxy server added to allow Motion-JPEG streams to be tunneled through an ESM server (firewall pass-through) to support Internet connections to live camera streams without additional port forwarding. This feature was a critical technology to allow iPhone and iPad devices to view live streams when connecting over a cellular network.

- **Axis AVHS**
Integration with Axis AVHS devices for easy cloud based hosting with zero configuration for router or firewall. Axis AVHS cameras are automatically detected by the cloud server and immediately available for streaming.

- **Camera-side motion detection**
Many network cameras on the market today support the ability to detect motion on the camera thus eliminating the need for content to be sent to the recording server for motion detection. Great solution for cameras with limited bandwidth or hosted in the cloud.

- **FTP recording**
Ability to record content from a camera when delivered to ESM server via FTP. Any camera that can upload via FTP protocol is supported.

- **Updated LPR Calibration Tool**
Updated LPR Calibration tool to make it easier to setup and management LPR cameras. LPR engine support added for US Government, Tennessee, Massachusetts, West Virginia, New Jersey, and North Carolina plates. For a full list of supported plates refer to the [LPR Setup and Field Installation Guide](#).

- **Motion Detection**
Motion Detection setup changed to Object Size, Sensitivity, and History to provide a more intuitive setup of motion detection. Object Size refers to the object size relative to the entire image. To detect smaller objects decrease the size. Sensitivity refers to the amount of change in the image. Decrease this value if system is categorizing too much content as motion. History is how long a motion event continues to trigger motion. Increase the history to increase how

long the system flags recorded content as motion.

- **Administrator Privileges**

ESM Admin now restricting camera access based on user group permissions. User group with access to specific cameras in live view will only be able to make changes to the same set of cameras in admin view.

- **Camera Live IP Address Supports DNS & Local IP Address**

Feature added to help when unable to view live camera using Internet DNS name (e.g., mycamera.domain.com) if web browser and camera are on the same local network. This issue is typically because the local router does not support the ability to recognize the camera is on the same network. One option to solve this is to setup a split DNS that resolves to the local IP address on the network when trying to access the camera from the local network. The other alternative is in ESM you can now add a DNS and IPAddress in the IPAddress field for live streaming.

Example:

ip address: mycamera.domain.com,172.16.10.97

(port 80 or whatever is specified in the port field will be used for both)

or

ip address: mycamera.domain.com:86,172.16.10.97:80

(external access using port 86 and internal access using port 80)

[Click for additional details on new features in ESM 5.3](#)

New Devices

AXIS M3114-VE

AXIS M5013

AXIS M5014

AXIS P5512

AXIS P5512-E

AXIS P5522

AXIS P5522-E

CANON VB-C60

DIGISENSORY ASC-100

DIGISENSORY ASC-200

INFINOVA V1072

PANASONIC WV-NP502

PANASONIC WV-SF336

SONY SNC-DH110T

SONY SNC-DH120

SONY SNC-DH140

SONY SNC-DH210T

SONY SNC-DH220
SONY SNC-DH240
SONY SNT-EX101E
TOSHIBA IK-WB30A
TOSHIBA IK-WB80A
TRENDNET TV-IP100
TRENDNET TV-IP100W
TRENDNET TV-IP200
TRENDNET TV-IP200W
TRENDNET TV-IP201
TRENDNET TV-IP201W
TRENDNET TV-IP300
TRENDNET TV-IP300W
TRENDNET TV-IP301
TRENDNET TV-IP301W
TRENDNET TV-IP410
TRENDNET TV-IP410W
VIVOTEK FD8133
VIVOTEK FD8133V
VIVOTEK FD8134
VIVOTEK FD8134V
VIVOTEK FD8162
VIVOTEK FD8361
VIVOTEK FD8361L
VIVOTEK FD8362
VIVOTEK FD8362E
VIVOTEK FE8171V
VIVOTEK IP2112
VIVOTEK IP7361
VIVOTEK IP8132
VIVOTEK IP8151
VIVOTEK IP8151P
VIVOTEK IP8162
VIVOTEK IP8162P
VIVOTEK IP8330
VIVOTEK IP8332
VIVOTEK IP8352
VIVOTEK IP8362
VIVOTEK MD7530
VIVOTEK MD7560
VIVOTEK SD8111
VIVOTEK SD8121
VIVOTEK VS3102

[Click for the full list of support devices](#)

Fixes

- Axis P1347 5MP recording not working
- Vivotek cameras are slow to opening when connecting over the Internet. Vivotek cameras will now connect twice as fast.
- IQ 852 missing some of the supported resolutions.
- Axis Q7404 invalid resolution
- Vivotek VS2403 not recording
- PTZ commands not accounting for image rotation settings
- Matrix camera stream stops and not reconnecting. Reconnect logic should reconnect or user can trigger a reconnect with the keyboard; disconnect (ESCAPE key) and reconnect (ENTER key) when camera selected without having to reload the matrix.
- Prebuffer and postbuffer setting changes don't have any impact on the recorded video. Settings removed since ESM records in 1 minute intervals and motion grooming for video without motion at a later date.
- Mass update not working for schedule changes across all cameras
- PTZ scroll wheel not moving camera fast enough.
- Time zone setting changes have no impact. Setting was removed since ESM now using UTC from the server when recording content.
- Library export not working. Timing issue fixed when trying to export a library not yet created.
- Deleted server volumes removed from ESM reports.
- Playback of recorded media just shows black screen. Overlaying window issue fixed.
- Recording no longer working after resolution change. Camera resolution now determined from incoming images instead of the database to resolve any differences between configured and actual resolution.

[Version 5.2.3 – 3/9/2011]

Additions

- New Usage reports provide details on system utilization by users
- Verint Encoder S1900e 1-port encoder, S1712e 12-port encoder support added
- Pelco IP110 camclosure support added

Fixes

- Updated state training files included in LPR package
- Mass Exporting of Video bug resolved

- Improved playback quality of recorded video using VSA encoder card
- Enhanced live and recorded playback of Pelco Sarix camera line
- Motion Detection fixed for Arecont and Sony cameras

[Version 5.2.2 – 2/9/2011]

New Additions

- LPR added North Carolina license plate support
- Motion Detection configuration frame pulling from recorded video stream
- Web user session state off-loaded to SQL to maintain longer user login sessions
- SONY SNC-CH110 Added

Fixes

- LPR Calibrate UI improvements
- UDP Encoder card stabilization changes
- Archive Mass Export calendar now consistent with other calendars
- Matrix Time Cycle performance and bandwidth optimizations
- 800x600 resolution support for Axis P Series
- PTZ added for Axis Q Series
- Documentation updated for 64-bit installations
- IQeye cameras in some instances was using cropped image instead of true image
- Reset camera to default session errors

[Version 5.2.1 – 1/8/2011]

New Additions

- LPR added West Virginia, Massachusetts, and New Jersey license plate support

Fixes

- Video retention issue related to motion grooming
- Export as Evidence and Quick Export fixed on Multi-Camera archiving

- Arecont Motion-JPEG streaming optimized
- Vivotek Motion-JPEG recording enabled
- HIKVision camera recording improvements
- Backward compatibility of the new user ActiveX control and ESM 5.1
- Barix I/O page missing icons
- Archive Search page performance improvements
- 64-bit Install issue with SQL Server Configuration Manager after initial install
- Updated documentation on SMTP & SSL Support
- Memory leak fixes in Archive Service
- Reset Camera to default values in ESM Admin causing error
- LPR Calibrate.exe configuration tool throwing .NET errors
- Drag & Drop camera in Layout View creating duplicate camera entries
- Multi-Camera playback send to library not working until single camera send to library

[Version 5.2 – 12/2010]

Release Summary

This document describes new features, enhancements and bug fixes of ipConfigure's Enterprise Surveillance Manager, version 5.2. *Many performance improvements and minor tweaks have been made since the previous version that we have not documented herein.*

New Features and Enhancements

1. Support for 32-bit and 64-bit Windows Server Operating Systems. ESM 5.2 now supports the following Operating Systems:

- Windows Server 2003 Standard Edition 32-bit
- Windows Server 2003 Standard Edition R2 32-bit
- Windows Server 2003 Standard Edition 64-bit
- Windows Server 2003 Enterprise Edition 64-bit
- Windows Server 2003 Datacenter Edition 64-bit

- Windows Web Server 2008 32-bit
- Windows Server 2008 Standard 32-bit
- Windows Server 2008 Enterprise 32-bit
- Windows Server 2008 Datacenter 32-bit

Windows Web Server 2008 64-bit
Windows Web Server 2008 R2 64-bit
Windows Server 2008 R2 Standard 64-bit
Windows Server 2008 R2 Enterprise 64-bit
Windows Server 2008 R2 Datacenter 64-bit

2. Live and Recorded Audio Support. ESM supports live and recorded synchronized audio from Axis and Sony cameras with H.264 compression. An audio enable/disable check box has been added to the ESM Administrator's UI. The audio channel is embedded in the H.264 stream using uLaw G.711 codec (8Khz sample rate, 1 channel, 64Kpbs overhead).

NOTE: In order to playback H.264 video in Windows Media Player a H.264 codec is required. Users can download and install a third party plug-in or use another media player that supports H.264 natively such as VideoLan's VLC media player. (www.vlan.org).

TIP: You can find out what codecs are installed in Windows Media Player by right clicking on the Windows Media Bar menu bar and selecting Help | About Windows Media Player. Click on the Technical Support Information hyperlink on the bottom of the About dialogue box. Scroll down to the Video Codecs section and see if a H.264 codec is installed.

3. New Camera Types.

(1) Interactive Monitoring. A new camera type has been added in the Administrator's UI for cameras that are used for Interactive Monitoring applications (example: Central Station Monitoring, Telemedicine, Distance Learning, and Web Conferencing) and is used in conjunction with a decoder for displaying video on a CRT. Recording is not available when this camera type is selected.

When an Interactive Monitoring camera is selected for live viewing from the ESM Client Maps and Matrix pages, the pop-up window displays the live video stream along with audio (if enabled in the Administrator's UI) and audio controls (speaker mute/volume, microphone mute/volume). Additional functions include: Auto Focus and Zoom for PTZ cameras, enable/disable remote display monitor (decoder), and PTZ Presets.

2) Workstation. This new camera type is used for *live viewing only* on PC. It differs from the Interactive Monitoring camera type because it is not associated with a decoder. The PC/Workstation does the decoding for display on its monitor. Like Interactive Monitoring no recording function is available for this camera type. The functions available on the live view pop-up window only include PTZ presets (if applicable) microphone and speaker mute/volume controls.

4. Decoder Support. The Axis 292 decoder is supported. Decoders are typically used to convert an IP video stream to analog signal for display on public view monitor or CCTV display. In ESM 5.2 decoders

are associated with the Interactive Monitor camera type and appear in the Global Camera Directory. User can select add decoder to the system and specify its URL. Once added, that decoder will be available to select when an Interactive Monitoring Camera Application is chosen.

5. Enhanced Motion Detection. Users can resize the motion detection lines and draw rectangles for more precise triggering of motion detection. Other improvements include the addition of preset grid patterns, a pixel counter to measure CPU load, cropping detectors and horizon detectors.

(1) **Resize Lines and Windows:** Administrators can now lengthen and shorten the trip wires allowing more precise triggering of motion based recordings. Lines can also be converted into rectangles or squares in ESM's Motion Detection page using the Resize right-click option or by grabbing the neon green handle.

NOTE: Using rectangles/squares to do motion detection increases CPU utilization. To see the impact right click on the VMD windows and Toggle Pixel Counter to display the number of pixels being analyzed. ipConfigure suggests using a smaller grid (20x20) inside a larger grid (10x10) to accomplish the same effect as a rectangle or square.

(2) **Preset Gridlines:** several presets grid patterns have been added as defaults including: Grid A (10x10), Grid B (10x10), and Grid C (20x20). A User can combine grid patterns and use the Crop Detectors or Delete function to effectively create exclude zones from the image.

(3) **Send to Back/Send to Front:** Functions the same as with a graphics application to move objects to the background or foreground in the case when VMD windows and lines overlap with each other.

(4) **Pixel Counter:** Displays the number of pixels that are being analyzed by the motion detection algorithm. This indicator is useful in determining the CPU load. ipConfigure recommends using several trip lines rather than rectangles/squares to trigger motion as it puts less demand on the server's CPU. The pixel counter can be moved around the Motion Detection page.

(5) **Add Horizon Detectors:** A predefined VMD grid pattern that operates on the premise that the smaller/ further the object is away from the camera the more lines that are used to detect it. Conversely fewer lines spaced further apart are used to detect a larger/closer object in the field of view.

(6) **Toggle Over Scaling:** If the source image resolution is smaller than the target VMD display window resolution then it can be stretched ("over scaling") to fill the entire motion detection window. If the source image is larger than the VMD display window, it is sampled down to fit within the window. The source image resolution is taken from the Camera Recording Settings.

(7) **Crop Detectors** – deletes all grid lines that are touching the window that you have drawn over an area of the image. This feature is accessed by left mouse clicking on the image (where no detectors are present) and holding the mouse button down to draw a cropping window (gray

box) over the area where the detectors will be deleted. Right click to select Crop Detectors once the cropping area (gray box) has been defined. You are effectively creating an “exclude window” for the motion detection algorithm. You could also use this cropped area to insert or embed a grid pattern as well.

6. Rules Engines. Version 5.2 includes an advanced rules engine wizard that enables users to select Events (Camera Online, Camera Offline, Error, Motion Detected, Motion Ceased) and trigger Actions (Cancel Force Record All, Force Record, Email, Log Alert, Log Update). Furthermore, Administrators can also define Conditions (Delay, Duration and Value) that must be met or can be checked periodically before an Action is triggered. *Conditions specifically apply to use of the Barix Barionet Ethernet Device Server (I/O) in this version of ESM.*

NOTE: Events are specific to one location and do not affect other ESM Remote Location Servers

The most common use of Events would be to send e-mail notifications or make changes in recording settings (example: If Motion Detected on Front Door Camera 1 then Force Record on Lobby Camera 1. When Motion Ceased on Lobby Camera 1 then Cancel Force Record).

NOTE: Force Record over rides the Recording Schedule for a particular camera. Cancel Force Record returns the camera to its Recording Schedule.

8. Additional IP Camera Support. ESM 5.2 supports new camera models (see Appendix A).

9. H.264 Video Encoder Card Support. Analog camera support is available via ESM 5.2 via a H.264 encoder capture card driver (VSA ENCODER) and ipConfigure’s VSA Hybrid. The encoder is driver supports UDP Technology’s HP2000/HP3000 capture card. The driver supports 4/8 ports or channels that are available with a maximum resolution of 720 x 480 (D1) and frame rate of 30 frames per second on each channel. MJPEG is used for live viewing and H.264 is used for recording. Audio is not enabled in this version.

10. Delete Volume Function. Now administrators can easily remove an Archive server volume from the Global Devices tree by right clicking on the volume. This function does not delete video that has been stored on that server volume; it simply removes it from the tree.

11. Decoding performance. The H.264, MPEG4 and MJPEG codecs have been optimized in the ipConfigure Recording Service and ipConfigure Embedded Media player resulting in a performance gain of 30-50% with corresponding improvements in memory footprint for both recording and live view.

12. Cryptographic hashing performance. The hashing mechanism used to verify the integrity of media files is substantially improved on H.264/MPEG4.

NOTE: Hashing MJPEG clips is not enabled on this version of ESM.

13. HTTPS/SSL. ESM 5.2 supports secure streams for both Live Viewing and Recording for Axis Cameras.

14. Still Image Quality. Administrators can select the quality of a still image capture as Low, Medium or High. Low, Medium and High conversely correspond to the amount of JPEG compression used. Low Quality setting will apply the 80% JPEG compression, Medium 50% and High no compression.

15. Matrix Enhancement. The Matrix page behavior has been optimized so selected and deselected cameras do not cause the entire page to refresh. Also a 2x1 layout has been added to the list of Grid Layouts as well as interval settings for Timed Cycle.

Known Issues: Clicking Capture Frame on any Windows 2008 R2 or Windows 2008 x64 with Windows Media Services x64. ESM fails to extract a frame from recorded video in H.264 or MPEG-4. There is a work around for Windows Server 2008 x64 where you can install the x86 version of Windows Media Services, but on Windows 2008 R2 – Windows Media Services x64 is the only option. ipConfigure will release a patch in the future which will correct this issue.

**Appendix A – Supported
Cameras & Devices ESM 5.2**

		AXIS	210	AXIS	M1011
		AXIS	2100	AXIS	M1031
		AXIS	210A	AXIS	M3011
ARECONT	AV3105	AXIS	211	AXIS	Q1755
ARECONT	AV5105	AXIS	2110	AXIS	Q6032
ARECONT	AV8180	AXIS	211A	AXIS	P1311
ARECONT	AV1300	AXIS	211M	AXIS	M3014
ARECONT	AV1305	AXIS	211W	AXIS	P3343
ARECONT	AV2100	AXIS	212 PTZ	AXIS	P3343-V
ARECONT	AV2105	AXIS	212 PTZ-V	AXIS	P3343-VE
ARECONT	AV3100	AXIS	2120	AXIS	P3344
ARECONT	AV3130	AXIS	213 PTZ	AXIS	P3344-V
ARECONT	AV5100	AXIS	2130	AXIS	P3344-VE
ARECONT	AV8360	AXIS	214 PTZ	AXIS	Q7401
ARECONT	AV1355	AXIS	215 PTZ	AXIS	M7001
ARECONT	AV2155	AXIS	216FD	AXIS	Q7406
ARECONT	AV3155	AXIS	216FD-V	AXIS	Q7404
ARECONT	AV5155	AXIS	216MFD	AXIS	P1346
ARECONT	AV8185	AXIS	216MFD-V	AXIS	P5534
ARECONT	AV8365	AXIS	221	AXIS	M1054
ARECONT	AV1310	AXIS	223M	AXIS	M1103
ARECONT	AV2110	AXIS	225FD	AXIS	M1104
ARECONT	AV2805	AXIS	230	AXIS	M1113
ARECONT	AV3110	AXIS	231D	AXIS	M1114
ARECONT	AV3135	AXIS	231D+	AXIS	M3203
ARECONT	AV5110	AXIS	232D	AXIS	M3203-V
ARECONT	AV10005	AXIS	232D+	AXIS	M3204
ARECONT	AV2815	AXIS	233D	AXIS	M3204-V
ARECONT	AV1325	AXIS	240	AXIS	P3304
ARECONT	AV2825	AXIS	2400	AXIS	P3304-V
ARECONT	AV1315	AXIS	2401	AXIS	P1343
AXIS	200P	AXIS	240Q	AXIS	P1344
AXIS	205	AXIS	2411	AXIS	P1347
AXIS	206	AXIS	241Q	AXIS	M3113-R
AXIS	206M	AXIS	241S	AXIS	M3114-R
AXIS	206W	AXIS	2420	AXIS	P5532
AXIS	207	AXIS	243Q	AXIS	Q1910
AXIS	207MW	AXIS	243SA	AXIS	Q6032-E
AXIS	207W	AXIS	247S	AXIS	Q6034
AXIS	209FD	AXIS	250S	Barix	Barionet 100
AXIS	209FD-R	AXIS	292	HIKVISION	2CD7153
AXIS	209MFD	AXIS	P3301	HIKVISION	2CD886BF
AXIS	209MFD-R	AXIS	P3301-V	HIKVISION	2CD876BF

HIKVISION	2CD852MF	IQINVISION	IQ511	PELCO	SARIX IX30
HIKVISION	2CD892NF	IQINVISION	IQ732	PELCO	SARIX IXE20
HIKVISION	2CD732M	IQINVISION	IQ832	PELCO	SARIX IX10
HIKVISION	2CD752MF	IQINVISION	IQD30	PELCO	SARIX IXE10
HIKVISION	2CD862MF	IQINVISION	IQD31	PELCO	SARIX IDE10
HIKVISION	2CD762MF	IQINVISION	IQM30	PELCO	SARIX IXS0
HIKVISION	2CD7133	IQINVISION	IQM31	PELCO	SARIX ID30
IQINVISION	IQ501	IQINVISION	IQM32	PELCO	SARIX IDE20
IQINVISION	IQ040	MOBOTIX	M12	PELCO	SARIX ID10
IQINVISION	IQD40	MOBOTIX	D12	PELCO	SARIX IDS0
IQINVISION	IQ041	MOBOTIX	D24	PELCO	SARIX IM10
IQINVISION	IQD41	MOBOTIX	M24	PELCO	SARIX IMS0
IQINVISION	IQ042	MOBOTIX	Q24	SANYO	VCC-HD2500
IQINVISION	IQD42	PANASONIC	KX-HCM110A	SANYO	VDC-HD3500
IQINVISION	IQ540	PANASONIC	WV-NF284	SONY	CM120
IQINVISION	IQ541	PANASONIC	WV-NP244	SONY	CS10
IQINVISION	IQ542	PANASONIC	WV-NS202A	SONY	CS11
IQINVISION	IQ811	PANASONIC	KX-HCM10	SONY	CS20
IQINVISION	IQ851	PANASONIC	KX-HCM230	SONY	CS50N
IQINVISION	IQ802	PANASONIC	KX-HCM250	SONY	DF40N
IQINVISION	IQ852	PANASONIC	KX-HCM270	SONY	DF50N
IQINVISION	IQ803	PANASONIC	KX-HCM280	SONY	DF70N
IQINVISION	IQ853	PANASONIC	KX-HCM8	SONY	DM160
IQINVISION	IQ805	PANASONIC	WV-NF302	SONY	DS10
IQINVISION	IQ855	PANASONIC	WV-NM100	SONY	DS60
IQINVISION	IQA10	PANASONIC	WV-NP1004	SONY	M1
IQINVISION	IQA20	PANASONIC	WV-NP304	SONY	M3
IQINVISION	IQA11	PANASONIC	WV-NP472	SONY	P1
IQINVISION	IQA21	PANASONIC	WV-NP324	SONY	P5
IQINVISION	IQA12	PANASONIC	WV-NS954	SONY	RX550N
IQINVISION	IQA22	PANASONIC	WV-NS964	SONY	RZ25N
IQINVISION	IQA13	PANASONIC	WV-NW484S	SONY	RZ30N
IQINVISION	IQA23	PANASONIC	WV-NW964	SONY	RZ50N
IQINVISION	IQA15	PANASONIC	WV-NS202	SONY	RZ20N
IQINVISION	IQA25	PELCO	SPECTRA IV IP	SONY	DF80N
IQINVISION	IQ711	PELCO	SPECTRA-HD	SONY	RX530N
IQINVISION	IQ751	PELCO	SPECTRA IV IPH264	SONY	RX570N
IQINVISION	IQ702	PELCO	SPECTRA MINI	SONY	Z20N
IQINVISION	IQ752	PELCO	SARIX IES0	SONY	DM110
IQINVISION	IQ703	PELCO	SARIX IE10	SONY	DF85N
IQINVISION	IQ753	PELCO	SARIX IE30	SONY	CH120
IQINVISION	IQ705	PELCO	SARIX IEE10	SONY	CH140
IQINVISION	IQ755	PELCO	SARIX IEE20	SONY	CH180

SONY	CH210	STARDOT	SD500B	VIVOTEK	VS8102
SONY	CH240	TOSHIBA	IK-WB11A	VIVOTEK	VS7100
SONY	DH120T	TOSHIBA	IK-WB15A	VIVOTEK	VS2403
SONY	DH140T	TOSHIBA	IK-WD01	VIVOTEK	FD8161
SONY	DH180	TOSHIBA	IK-WB02	VIVOTEK	FD8361
SONY	DH240T	TOSHIBA	IK-WB21A	VIVOTEK	MD7530
SONY	RH124	TOSHIBA	IK-WR01A	VIVOTEK	MD7560
SONY	DRH164	VSA (UDP)	ENCODER		
SONY	RS44N	VIVOTEK	PZ7151		
SONY	RS46N	VIVOTEK	IP7142		
SONY	RS84N	VIVOTEK	IP7330		
SONY	RS86N	VIVOTEK	IZ7151		
SONY	SNT-EP104	VIVOTEK	IP8161		
SONY	SNT-EP154	VIVOTEK	IP7161		
SONY	SNT-EX101	VIVOTEK	IP7160		
SONY	SNT-EX104	VIVOTEK	IP7251		
SONY	SNT-EX154	VIVOTEK	IP7152		
SONY	RS44P	VIVOTEK	IP7153		
SONY	RS46P	VIVOTEK	IP7154		
SONY	RS84P	VIVOTEK	IP7138		
SONY	RS86P	VIVOTEK	IP7139		
SONY	CH220	VIVOTEK	IP7130		
SONY	CH160	VIVOTEK	IP7131		
SONY	CH260	VIVOTEK	IP7133		
SONY	CH280	VIVOTEK	IP7135		
SONY	CH110	VIVOTEK	PZ7111		
SONY	CS3N	VIVOTEK	PZ7112		
SONY	DH220T	VIVOTEK	PZ7121		
SONY	DH110	VIVOTEK	PZ7122		
SONY	DH210	VIVOTEK	PZ7152		
SONY	DH160	VIVOTEK	PZ7131		
SONY	DH260	VIVOTEK	PZ7132		
SONY	DH280	VIVOTEK	PZ7135		
SONY	RS44P	VIVOTEK	PZ7137		
SONY	RS46P	VIVOTEK	SD7313		
SONY	RS84P	VIVOTEK	SD7323		
SONY	RS86P	VIVOTEK	SD7151		
STARDOT	EXPRESS	VIVOTEK	FD7141		
STARDOT	SD300B	VIVOTEK	FD7141V		
STARDOT	SD130B	VIVOTEK	FD7132		
STARDOT	SD500V	VIVOTEK	FD7131		
STARDOT	SD300V	VIVOTEK	FD7160		
STARDOT	SD130V	VIVOTEK	FD7130		