CAM3xxx Series

User Manual

Release 2.0



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Revision History

| Version | Description | Date |
|---------|---|----------------|
| 1.0 | Initial release: All the CAM3xxx series models are put into this manual; both hardware and software aspects are covered. | April 2012 |
| 1.1 | New model: CAM3371 added. | June 2012 |
| 1.2 | New model: CAM3351 added. | September 2012 |
| 1.3 | New models added. | August 2013 |
| 1.4 | New bracket added for CAM3351 and UI Modified. | October 2013 |
| 1.5 | Add new controller icons | December 2013 |
| 1.6 | New model: CAM3471MP added. | Feb. 2014 |
| 1.7 | FW upgraded | June 2014 |
| 1.8 | New models added | Sept. 2014 |
| 1.9 | New models added | Oct. 2014 |
| 2.0 | New models added | June 2015 |

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Safety Precautions

Electric Shock Warning

This equipment may cause electric shocks if not handled properly.

- Access to this equipment should only be granted to trained operators and maintenance personnel who have been instructed of, and fully understand the possible hazardous conditions and the consequences of accessing non-field-serviceable units such as the power supplies.
- The system must be unplugged before moving, or in the even that it becomes damaged.



Reliable Grounding

Particular attention should be given to prepare reliable grounding for the power supply connection. It is suggested to use a direct connection to the branch circuit. Check for proper grounding before powering on the device.



The device should be installed according to specifications. Provide a suitable power source with electrical overload protection. Do not overload the AC supply branch circuit that provides power to the device.



Please observe all conventional anti-ESD methods while handling the device. The use of a grounded wrist strap and an anti-static work pad are recommended. Avoid dust and debris in your work area.

Device Site Recommendations

The device should be installed according to specifications. This device should be operated at a site that is:

- Clean, dry, and free of excessive airborne particles.
- Well-ventilated and away from heat sources such as direct sunlight and radiators.
- Clear of vibration or physical shock.
- Away from strong electromagnetic fields produced by other devices.
- Available with properly grounded wall outlet for power. In regions where power sources are unstable, apply surge suppression.
- Available with sufficient space behind the device for cabling.

Chapter 1. Product Overview

1.1. Network Camera Introduction

CAM3xxx series are professional network cameras that use Internet Protocol (IP) to transmit video streams and control signals over networks. Capable of operating over both LANs and WANs, they provide a complete budget-conscious remote surveillance solution that are ultra clear and highly integrated. CAM3xxx series combine a user-friendly interface and simplified installation with a powerful feature set to provide users an easy upgrade path to new digital surveillance system in a virtual environment. These highlights make CAM3xxx series ideal choices for environments that require remote surveillance or video transmission.

1.2. Features and Benefits

3xxx series IP camera is a cutting-edge digital video transmission device. It can compress and transmit real-time images of outstanding quality using a reasonable amount of bandwidth through a standard TCP/IP network. The following features make this IP camera an outstanding choice when building an intelligent IP surveillance system:

High Video Quality

High image quality is essential in security surveillance applications. It is important to be able to clearly capture an incident in progress and identify persons or objects involved. A network camera gives exceptional video quality, even greater than that of traditional analog cameras, which means that more detail or larger areas can be covered.

H.264/MPEG-4/MJPEG Compression

Motion JPEG, MPEG-4, and H.264 (also known as MPEG-4 Part 10/AVC), each employ different techniques to reduce the amount of data transferred and stored in a network video system. Network cameras that support multiple compression standards are ideal for maximum flexibility and integration possibilities.

Dual Streaming

Dual-stream design enables simultaneous support of real-time video monitoring, video recording, or mobile viewing applications which require different resolutions, compression formats and frame rates.

MicroSD/SDHC card slot

IP surveillance relies on network connectivity, making it susceptible to attacks on the network between the camera and recording facilities. With onboard recording capability, our network cameras can truly be online 24/7. The microSD/SDHC card slot design ensures sufficient recording capacity for an over-weekend period even at full frame rate and high resolution.

Tampering Detection

This is an intelligent video analytics application available only in selected network cameras in the market. When a camera is manipulated in any way (e.g. accidental redirection, blocking, defocusing, spray-painted, covered or damaged), it can automatically trigger recording and alert notifications.

Power-over-Ethernet

The built-in Power-over-Ethernet support reduces cabling and installation costs, and enables users to consolidate power facilities for higher reliability. With PoE, a camera can still operate in the event of a power failure if it is connected to a centralized backup power with an Uninterruptible Power Supply.

IR LED Illuminators

With the built-in IR illuminators, the camera is capable of working in low light conditions, with a range up to 30m.

Outdoor Housing Design

CAM3xxx series has been designed for use of under harsh environmental conditions. Its IP66 weather-proof housing can withstand rain and dust. The built-in heater and fan ensures the camera will continue working even at temperatures as low as -20° C and as high as 50° C.

1.3. Technical Specifications

Model List for CAM3xxx Series

| CAM3351 | Full HD D/N Bullet IP Camera |
|------------|--|
| CAM3351R4 | 2 Megapixel D/N Bullet IP Camera |
| CAM3351R6 | 2 Megapixel D/N Bullet IP Camera |
| CAM3361 | 2MP D/N Bullet IP Camera with Individual ISP |
| CAM3361LV | 2 Megapixel D/N Outdoor Bullet IP Camera |
| CAM3461LV | 3 Megapixel D/N Outdoor Bullet IP Camera |
| CAM3371 | 2MP D/N Bullet IP Camera with Individual ISP |
| CAM3371EV | 2MP P-iris D/N Bullet IP Camera |
| CAM3371EM | 2MP P-iris D/N Bullet IP Camera |
| CAM3471V | 3MP HDR D/N Outdoor Bullet IP Camera |
| CAM3471M | 3MP Auto Focus D/N Outdoor Bullet IP Camera |
| CAM3471MP | 3MP Auto Focus D/N Outdoor Bullet IP Camera |
| CAM3471HEM | 3MP P-Iris Auto Focus Outdoor Bullet IP Camera |
| CAM3471HEV | 3MP P-Iris Outdoor Bullet IP Camera |
| CAM3571M | 5MP Auto Focus D/N Bullet Network Camera |
| CAM3571VP | 5MP P-Iris D/N Bullet Network Camera |

Specifications for CAM3351/-3351R4/-3351R6

| Model Name | CAM3351 | CAM3351R4 | CAM3351R6 |
|----------------------------------|--|--|---|
| Description | Full HD D/N Bullet IP Camera | 2 Megapixel D/N Bullet IP Camera | |
| Image Sensor | 1/2.7" 2 megapixel progressive scan CMOS | 1/2.8" megapixel SONY Exmor CMOS | |
| Lens | 4.2mm, F1.6 | 4.2mm, F1.6 f4.2 mm, F1.8 f6.0 mm, F2.0 | |
| SNR | | 48dB | |
| WDR | | Yes | |
| Day/Night ICR | | Yes | |
| IR LED | Yes (15M) | Yes (| 20M) |
| Min Illumination | 0.01 Lux @ F1.2 (B/W) 0.1 Lux @ F1.2 (Color) | 0.01 Lux @ F1.4 (B/W) 0.1 Lux @ F1.4 (Color) | |
| Iris Control | N/A | Fix | red |
| Viewing Angle | Diagonal: 64.0° Horizontal:56.0° Vertical: 32.0° | Diagonal: 89° Horizontal: 71° Vertical: 49.5° | Diagonal: 60.5° Horizontal: 52.4° Vertical: 29° |
| Camera Angle Adjustment | N/A | | |
| Pan/Tilt/Zoom Functionalities | N/A | | |
| Shutter Time | 1/30 ~ 1/50,000 s 1/1 ~ 1/1,000,000 s | | |
| Video Compression | H.264/MPEG-4/MJPEG | | |
| Resolution | Up to 1920 x 1080 | | |
| Video FPS | 25 fps at 1080P (1920 x 1080) 30 fps at SXGA (1280 x 1024) 30 fps at HD720 (1280 x 720) 30 fps at D1 (720 x 480) 30 fps at VGA (640 x 480) 30 fps at QVGA (320 x 240) | 30 fps at 1080P (1920 x 1080) 30 fps at SXGA (1280 x 1024) 30 fps at HD720 (1280 x 720) 30 fps at D1 (720 x 480) 30 fps at VGA (640 x 480) 30 fps at QVGA (320 x 240) | |

| Video Control | AGC (Auto Gain Control), AWB (Auto White Balance), AES (Auto Electronic Shutter), BLC (Back Light Compensation), Image Adjustment | AGC (Auto Gain Control) AWB (Auto White Balance) AES (Auto Electronic Shutter) Luminance Control WDR 2D/3D De-noise ROI Edge Enhancement Lens Correction Image Adjustment | |
|------------------------|---|--|--|
| Video Stream | Dual strea | am at H.264, MPEG-4, and MJPEG simultaneously | |
| Bit Rate | 64K ~ 10Mb | ps, VBR, CBR, controller frame rate and quality | |
| Intelligent Video | Motion Detection, Tampering Detection (blocked, redirected, defocused, or spray-painted) | | |
| Video Jack | | N/A | |
| Audio | | N/A | |
| Audio Compression | N/A | | |
| Audio Input/Output | N/A | | |
| Alarm In/Out | N/A | | |
| Video Buffer | 5 second pre-alarm, 30 second post-alarm | | |
| Event Action | Send snapshot or video clip by FTP or email, record to NAS, record to local storage, trigger DO | Send snapshot or video clip by FTP or email, record to NAS, record to local storage, trigger DO | |
| Supported Protocols | IPv4, ARP, TCP, UDP, ICMP, DHCP, NTP, DDNS, SMTP, FTP, HTTP, CIFS, PPPoE, UPnP, RTP, RTSP, RTCP, 3GPP | IPv4, IPv6, ARP, TCP, UDP, ICMP, IGMP, DHCP, NTP, DDNS, SMTP, SNMP, FTP, HTTP, HTTPS, CIFS, PPPoE, UPnP, RTP, RTSP, RTCP, 3GPP, ONVIF | |
| Ethernet | 10/100 Base-T / RJ45 | | |
| Local Storage | N/A microSD/SDHC x 1 | | |
| RS-485 | N/A | | |
| USB | N/A | | |
| SDK | SDK 2.0 | | |
| OS | Microsoft Windows XP/Vista/7 | | |
| Browser | Microsoft IE 6.0 or above | | |
| Software | Surveon VMS 2.4.7 | Surveon VMS 2.6 | |

| Temperature | Operation: -10-50°C (14-122°F) Storage: -30-60°C (-22-140°F) | |
|----------------------|---|-------------------------------------|
| Humidity | 5 to 90% | |
| Power | 12VDC 1.5A ; PoE (IEEE 802.3af) with Class 3 | PoE (IEEE 802.3af) with Class 3 |
| Power Consumption | Max. 7W (w/o Heater) | Max. 7.5W (w/o Heater) |
| Dimension | 75mm x 76mm x 172mm (2.46" x 2.49" x 5.64") | Length: 165mm, Diameter: 75mm |
| Weight | Net: 667g (1.47 lb.) Gross: 1014g (2.24 lb.) | Net: 600g With bracket: 800g |
| Certification | | Safety: LVD EMC: FCC, CE IP66 |

Specifications for CAM3361

| Model Name | CAM3361 | | |
|--|---|--|--|
| Description | 2M D/N Bullet IP Camera with Individual ISP | | |
| Image Sensor | 1/2.7" 2 megapixel progressive scan CMOS | | |
| Lens | 2.8 - 11 mm varifocal lens, F1.4 | | |
| SNR | 48dB | | |
| WDR | Yes | | |
| Day/Night ICR | Yes | | |
| IR LED | Yes (20M) | | |
| Min Illumination | 0.01 Lux @ F1.2 (B/W) 0.1 Lux @ F1.2 (Color) | | |
| Iris Control | DC drive | | |
| Viewing Angle | Diagonal: 99°~37.3° Horizontal: 79.3°~29.8° Vertical: 59.5°~22.4° | | |
| Camera Angle Adjustment | N/A | | |
| Pan/Tilt/Zoom Functionalities | N/A | | |
| Shutter Time | 1/30~1/50,000s | | |
| Video Compression | H.264/MPEG-4/MJPEG | | |
| Resolution | Up to 1920 x 1080 | | |
| Video FPS 25 fps at 1080P (1920 x 1080) 30 fps at SXGA (1280 x 1024) 30 fps at HD720 (1280 x 720) 30 fps at D1 (720 x 480) 30 fps at VGA (640 x 480) 30 fps at QVGA (320 x 240) | | | |
| Video Control | AGC (Auto Gain Control), AWB (Auto White Balance), AES (Auto Electronic Shutter), BLC (Back Light Compensation), Image Adjustment | | |
| Video Stream | Dual stream at H.264, MPEG-4, and MJPEG simultaneously | | |
| Bit Rate | 64K~6Mbps, VBR, CBR, controller frame rate and quality | | |
| Intelligent Video | Motion detection, Tampering Detection (blocked, redirected, defocused, or spray-painted) | | |
| Video JacK | Yes (BNC) | | |
| Audio | N/A | | |
| Audio Compression | 32KHz, ADPCM | | |
| Audio 3.5mm phone jack | | | |

| Alarm In/Out | N/A |
|------------------------|---|
| Video Buffer | 5 second pre-alarm, 30 second post-alarm |
| Event Action | Send snapshot or video clip by FTP or email, record to NAS, record to local storage, trigger DO |
| Supported Protocols | IPv4, ARP, TCP, UDP, ICMP, DHCP, NTP, DDNS, SMTP, FTP, HTTP, CIFS, PPPoE, UPnP, RTP, RTSP, RTCP, 3GPP |
| Ethernet | 10/100 Base-T / RJ45 |
| Local Storage | microSD/SDHC slot x 1 (Class 4/Class 6 only) |
| RS-485 | N/A |
| USB | N/A |
| SDK | SDK 2.0 |
| OS | Microsoft Windows XP/Vista/7 (32 bit) |
| Browser | Microsoft IE 6.0 or above |
| Software | VMS2.4.1 |
| Temperature | Operation: -25~50°C (-13~122°F) Storage: -30~60°C (-22~140°F) |
| Humidity | 5 to 90% |
| Power | 12VDC 1.5A; PoE (IEEE 802.3af) with Class 3 |
| Power | Max. 9W (w/o Heater) |
| Consumption | Max. 15.4W (w/ Heater & PoE 802.3af) |
| Dimension | 105mm x 218.8mm x 191.41mm (3.44" x 7.18" x 6.28") |
| Weight | Net: 1400g (3.09lb.) Gross: 2,170g (4.8lb.) |
| Certification | Safety: LVD EMC: FCC, CE IP66 |

Specifications for CAM3361LV/-3461LV

| Model Name | CAM3361LV | CAM3461LV | |
|----------------------------------|--|--|--|
| Description | 2 Megapixel D/N Outdoor Bullet IP Camera | 3 Megapixel D/N Outdoor Bullet IP Camera | |
| Image Sensor | 1/2.8" megapixel SONY Exmor CMOS | 1/2.5" megapixel progressive scan CMOS | |
| Lens | f3-10.5 mm vari | ifocal lens, F1.4 | |
| SNR | 48 | dB | |
| WDR | Ye | es | |
| Day/Night ICR | Ye | es | |
| IR LED | Yes (| 20M) | |
| Min Illumination | 0.01 Lux @ F1.4 (B/W) 0.1 Lux @ F1.4 (Color) | 0.01 Lux @ F1.4 (B/W) 0.1 Lux @ F1.4 (Color) | |
| Iris Control | Auto Electro | onic Control | |
| Viewing Angle | Diagonal: 130°~38° Horizontal: 108°~32° Vertical: 58°~18° | | |
| Camera Angle Adjustment | N/A | | |
| Pan/Tilt/Zoom Functionalities | N/A | | |
| Shutter Time | 1/1 ~ 1/1,000,000 s | | |
| Video Compression | H.264/MPEG-4/MJPEG | | |
| Resolution | Up to 1920 x 1080 | | |
| Video FPS | 30 fps at 1080P (1920 x 1080) 30 fps at SXGA (1280 x 1024) 30 fps at HD720 (1280 x 720) 30 fps at D1 (720 x 480) 30 fps at VGA (640 x 480) 30 fps at QVGA (320 x 240) | 20 fps at QXGA (2048 x 1536) 30 fps at 1080P (1920 x 1080) 30 fps at SXGA (1280 x 1024) 30 fps at HD720 (1280 x 720) 30 fps at D1 (720 x 480) 30 fps at VGA (640 x 480) 30 fps at QVGA (320 x 240) | |
| Video Control | AGC (Auto Gain Control) AWB (Auto White Balance) AES (Auto Electronic Shutter) Luminance Control WDR 2D/3D De-noise ROI Edge Enhancement Lens Correction Image Adjustment | | |
| Video Stream | Dual stream at H.264, MPEG-4, and MJPEG simultaneously | | |
| Bit Rate | 64K~10Mbps, VBR, CBR, cont | roller frame rate and quality | |
| Intelligent Video | Motion detection, Tampering Detection (blocked, redirected, defocused, or spray-painted) | | |

| Video JacK | N/A |
|------------------------|---|
| Audio | N/A |
| Audio Compression | N/A |
| Audio Input/Output | N/A |
| Alarm In/Out | N/A |
| Video Buffer | 5 second pre-alarm, 30 second post-alarm |
| Event Action | Send snapshot or video clip by FTP or email, record to NAS, record to local storage, trigger DO |
| Supported Protocols | IPv4, IPv6, ARP, TCP, UDP, ICMP, IGMP, DHCP, NTP, DDNS, SMTP, SNMP, FTP, HTTP, HTTPS, CIFS, PPPoE, UPnP, RTP, RTSP, RTCP, 3GPP, ONVIF |
| Ethernet | 10/100 Base-T / RJ45 |
| Local Storage | microSD/SDHC x 1 |
| RS-485 | N/A |
| USB | N/A |
| SDK | SDK 2.0 |
| OS | Microsoft Windows XP/Vista/7 (32 bit) |
| Browser | Microsoft IE 6.0 or above |
| Software | VMS2.6 |
| Temperature | Operation: -10~50°C (14~122°F) |
| Humidity | 5 to 90% |
| Power | PoE (IEEE 802.3af) with Class 3 |
| Power Consumption | Max. 7.9W (w/o Heater) |
| Dimension | Length: 165mm, Diameter: 75mm |
| Weight | NET: 600g With bracket: 800g |
| Certification | Safety: LVD EMC: FCC, CE IP66 |

Specifications for CAM3371

| Model Name | CAM3371 | |
|----------------------------------|--|--|
| Description | 2MP D/N Bullet IP Camera with Individual ISP | |
| Image Sensor | 1/2.8" 2 megapixel SONY Exmor CMOS | |
| Lens | 3 - 9 mm moto lens. F1.2 | |
| SNR | 48dB | |
| WDR | Yes | |
| Day/Night ICR | Yes | |
| IR LED | Yes (20M) | |
| Min | 0.01 Lux @ F1.2 (B/W) | |
| Illumination | 0.1 Lux @ F1.2 (Color) | |
| Iris Control | DC drive | |
| Viewing Angle | Diagonal: 148.4° - 43.8° Horizontal: 121.2° - 38.1° Vertical: 62.1° - 21.3° (CAM3371) | |
| Camera Angle Adjustment | N/A | |
| Pan/Tilt/Zoom Functionalities | N/A | |
| Shutter Time | 1/30~1/50,000s | |
| Video Compression | H.264/MPEG-4/MJPEG | |
| Resolution | Up to 1920 x 1080 | |
| Video FPS | 25 fps at 1080P (1920 x 1080) 30 fps at SXGA (1280 x 1024) 30 fps at HD720 (1280 x 720) 30 fps at D1 (720 x 480) 30 fps at VGA (640 x 480) 30 fps at QVGA (320 x 240) | |
| Video Control | AGC (Auto Gain Control), AWB (Auto White Balance), AES (Auto Electronic Shutter), BLC (Back Light Compensation), HLC (High Light Compensation), 3D Noise Reduction, DEFOG, Image Adjustment | |
| Video Stream | Dual stream at H.264, MPEG-4, and MJPEG simultaneously | |
| Bit Rate | 64K-6Mbps, VBR, CBR, controller frame rate and quality | |
| Intelligent Video | Motion detection, Tampering Detection (blocked, redirected, defocused, or spray-painted) | |
| Video JacK | Yes (BNC) | |
| Audio | 2 Way Audio | |

| Audio Compression | 32KHz, ADPCM | |
|------------------------|---|--|
| Audio Input/Output | 3.5mm phone jack | |
| Alarm In/Out | N/A | |
| Video Buffer | 5 second pre-alarm, 30 second post-alarm | |
| Event Action | Send snapshot or video clip by FTP or email, record to NAS, record to local storage, trigger DO | |
| Supported Protocols | IPv4, ARP, TCP, UDP, ICMP, DHCP, NTP, DDNS, SMTP, FTP, HTTP, CIFS, PPPoE, UPnP, RTP, RTSP, RTCP, 3GPP | |
| Ethernet | 10/100 Base-T / RJ45 | |
| Local Storage | microSD/SDHC slot x 1 (Class2/Class 4/Class 6) | |
| RS-485 | N/A | |
| USB | N/A | |
| SDK | SDK 2.0 | |
| OS | Microsoft Windows XP/Vista/7 (32 bit) | |
| Browser | Microsoft IE 6.0 or above | |
| Software | VMS2.4.7 | |
| Temperature | Operation: -25~50°C (-13~122°F) Storage: -30~60°C (-22~140°F) | |
| Humidity | 5 to 90% | |
| Power | 12VDC 1.5A; PoE (IEEE 802.3af) with Class 3 | |
| Power Consumption | Max. 10W (w/o Heater) Max. 15.4W (w/ Heater & PoE 802.3af) | |
| Dimension | 105mm x 218.8mm x 191.41mm (3.44" x 7.18" x 6.28") | |
| Weight | Net: 1400g (3.09lb.) Gross: 2,170g (4.8lb.) | |
| Certification | Safety: LVD EMC: FCC, CE IP66 | |

| Model Name | CAM3371EM | CAM3371EV | |
|----------------------------------|--|---------------------------------|--|
| Description | 2MP P-iris D/N E | Bullet IP Camera | |
| Image Sensor | 1/2.8" 2 megapixel SONY Exmor CMOS | | |
| Lens | f3-10.5 mm auto focus lens, F1.4 | f3-10.5 mm varifocal lens, F1.4 | |
| SNR | 50 | dB | |
| WDR | Ye | es | |
| Day/Night ICR | Ye | es | |
| IR LED | Yes (| 30M) | |
| Min Illumination | 0.005 Lux @ 0.05 Lux @ | 9 F1.4 (B/W) F1.4 (Color) | |
| Iris Control | P-i | ris | |
| Viewing Angle | Diagonal: 130°~38° Horizontal: 108°~32° Vertical: 58°~18° | | |
| Camera Angle Adjustment | N/A | | |
| Pan/Tilt/Zoom Functionalities | N/A | | |
| Shutter Time | 1/1~1/000,000s | | |
| Video Compression | H.264/MPEG-4/MJPEG | | |
| Resolution | Up to 1920 x 1080 | | |
| Video FPS | 30 fps at 1080P (1920 x 1080) 30 fps at SXGA (1280 x 1024) 30 fps at HD720 (1280 x 720) 30 fps at D1 (720 x 480) 30 fps at VGA (640 x 480) 30 fps at QVGA (320 x 240) | | |
| Video Control | AGC (Auto Gain Control) AWB (Auto White Balance) AES (Auto Electronic Shutter) Luminance Control WDR 2D/3D De-noise ROI Edge Enhancement Lens Correction Image Adjustment | | |
| Video Stream | Dual stream at H.264, MPEG-4, and MJPEG simultaneously | | |
| Bit Rate | 64K~10Mbps, VBR, CBR, cont | roller frame rate and quality | |
| Intelligent Video | Motion detection, Tampering Detection (blocked, redirected, defocused, or spray-painted) | | |
| Video JacK | N/A | Yes (BNC) | |

| Audio | 2 Way Audio |
|------------------------|---|
| Audio Compression | 16KHz, ADPCM/G.711 |
| Audio Input/Output | 3.5mm phone jack |
| Alarm In/Out | 1/1, terminal block |
| Video Buffer | 5 second pre-alarm, 30 second post-alarm |
| Event Action | Send snapshot or video clip by FTP or email, record to NAS, record to local storage, trigger DO |
| Supported Protocols | IPv4, IPv6, ARP, TCP, UDP, ICMP, IGMP, DHCP, NTP,DDNS, SMTP, SNMP, FTP, HTTP, HTTPS, CIFS, PPPoE,UPnP, RTP, RTSP, RTCP, 3GPP, ONVIF |
| Ethernet | 10/100 Base-T / RJ45 |
| Local Storage | microSD/SDHC slot x 1 (Class2/Class 4/Class 6) |
| RS-485 | N/A |
| USB | N/A |
| SDK | SDK 2.0 |
| OS | Microsoft Windows XP/Vista/7 |
| Browser | Microsoft IE 6.0 or above |
| Software | VMS2.6 |
| Temperature | Operation: -40~50°C (-40~122°F) |
| Humidity | 5 to 90% |
| Power | 12VDC 1.5A; PoE (IEEE 802.3af) with Class 3 |
| Power Consumption | Max. 9.5W (w/o Heater) Max. 15.6W (w/Heater & DC Power) |
| Dimension | 105mm x 218.8mm x 191.41mm (3.44" x 7.18" x 6.28") |
| Weight | Net: 1400g (3.09lb.) Gross: 2,170g (4.8lb.) |
| Certification | Safety: LVD EMC: FCC, CE IP66 |

Specifications for CAM3471HEM/3471HEV

| Model Name | CAM3471HEM | CAM3471HEV | |
|----------------------------------|---|---------------------------------|--|
| Description | 3MP HDR D/N Bullet IP Camera | 3MP HDR D/N Bullet IP Camera | |
| Image Sensor | 1/3" megapixel progressive scan CMOS | | |
| Lens | f3- 10.5mm auto focus lens, F1.4 | f3- 10.5mm varifocal lens, F1.4 | |
| SNR | 50dB | | |
| WDR | Yes (HDR | , 120 dB) | |
| Day/Night ICR | Ye | es | |
| IR LED | Yes (Max. 30M on | limited shutter) | |
| Min Illumination | 0.01 Lux @ 0.1 Lux @ F | F1.2 (B/W) 1.2 (Color) | |
| Iris Control | P-1 | ris | |
| Viewing Angle | Diagonal: 130°~38° Horizontal: 108°~32° Vertical: 58°~18° | | |
| Camera Angle Adjustment | N/A | | |
| Pan/Tilt/Zoom Functionalities | N/A | | |
| Shutter Time | 1/1 ~ 1/10,000 s | | |
| Video Compression | H.264/MPEG-4/MJPEG | | |
| Resolution | Up to 2048 x 1536 | | |
| Video FPS | 30 fps at QXGA (2048 x 1536) 60 fps at 1080P (1920 x 1080) 60 fps at SXGA (1280 x 1024) 60 fps at 720P (1280 x 720) 60 fps at D1 (720 x 480) 60 fps at VGA (640 x 480) 60 fps at QVGA (320 x 240) | | |
| Video Control | AGC (Auto Gain Control) AWB (Auto White Balance) AES (Auto Electronic Shutter) BLC (Back Light Compensation) HDR 2D/3D De-noise ROI Edge Enhancement Image Adjustment | | |
| Video Stream | Dual stream at H.264, MPEG-4, and MJPEG simultaneously | | |
| Bit Rate | 32K ~ 20Mbps, VBR, CBR, controller frame rate and quality | | |
| Intelligent Video | Motion detection, Tampering Detection (blocked, redirected, defocused, or spray-painted) | | |
| Video Jack | N/A Yes (BNC) | | |
| Audio | 2 way audio | | |

| Audio Compression | 16KHz, ADPCM/G.711 | |
|---------------------|---|--|
| Audio Input/Output | 3.5mm phone jack | |
| Alarm In/Out | 1/1, terminal block | |
| Video Buffer | 5 second pre-alarm, 30 second post-alarm | |
| Event Action | Send snapshot or video clip by FTP or email, record to NAS, record to local storage, trigger DO | |
| Supported Protocols | IPv4, IPv6, ARP, TCP, UDP, ICMP, IGMP, DHCP, NTP, DDNS, SMTP, SNMP, FTP, HTTP, HTTPS, CIFS, PPPoE, UPnP, RTP, RTSP, RTCP, 3GPP, ONVIF | |
| Ethernet | 10/100 Base-T / RJ45 | |
| Local Storage | microSD/SDHC x 1 (Class 4/Class 6) | |
| RS-485 | N/A | |
| USB | N/A | |
| SDK | SDK 2.0 | |
| OS | Microsoft Windows 7/8 | |
| Browser | Microsoft IE 6.0 or above | |
| Software | VMS 2.5 | |
| Temperature | Operation: -40°C~ 50°C (-40°F~122°F) Storage: -30°C ~ 60°C (-22°F~140°F) | |
| Humidity | 5 to 90% | |
| Power | 12VDC 1.5A ; PoE (IEEE 802.3af) with Class 3 | |
| Power Consumption | Max. 9W (w/o Heater) Max. 27W (w/ Heater & PoE 802.3af) | |
| Dimension | 105mm x 218.8mm x 191.41mm (3.44" x 7.18" x 6.28") | |
| Weight | Net:1,400g (3.09lb.) Gross:2,170g (4.8lb.) | |
| Certification | Safety: LVD EMC: FCC, CE, IP66 | |

Specifications for CAM3471V/3471M/3471MP

| Model Name | CAM3471V | CAM3471M | CAM3471MP | |
|----------------------------------|---|---|-----------|--|
| Description | 3M HDR D/N Outdoor Bullet IP Camera | 3M Auto Focus D/N Outdoor Bullet IP Camera | | |
| Image Sensor | 1/3" 3 megapixel progressive scan CMOS | | | |
| Lens | 2.8 - 12 mm varifocal lens, F1.4 3 - 9 mm motorized lens, F1.2 | | | |
| SNR | 48 | dB | | |
| WDR | Yes (HDR | , 100 dB) | | |
| Day/Night ICR | Y | Yes | | |
| IR LED | Yes (Max. 30M or | limited shutter) | | |
| Min Illumination | 0.01 Lux @ F1.2 (B/W) 0.1 Lux @ F1.2 (Color) | | | |
| Iris Control | DC drive | DC drive | P-Iris | |
| Viewing Angle | Diagonal: 135°~35° Horizontal: 93°~28.7° Vertical: 53°~16.2° | | | |
| Camera Angle Adjustment | N/A | | | |
| Pan/Tilt/Zoom Functionalities | N/A | | | |
| Shutter Time | 1/2 ~ 1/1,000,000 | | | |
| Video Compression | H.264/MPEG-4/MJPEG | | | |
| Resolution | Up to 2048 x 1536 | | | |
| Video FPS | 30 fps at QXGA (2048 x 1536) 60 fps at 1080P (1920 x 1080) 60 fps at SXGA (1280 x 1024) 60 fps at 720P (1280 x 720) 60 fps at D1 (720 x 480) 60 fps at VGA (640 x 480) 60 fps at QVGA (320 x 240) | | | |
| Video Control | AGC (Auto Gain Control) AWB (Auto White Balance) AES (Auto Electronic Shutter) HDR Luminance Control 2D/3D De-noise Edge Enhancement Lens Correction Image Adjustment | | | |
| Video Stream | Dual stream at H.264, MPEG-4, and MJPEG simultaneously | | | |
| Bit Rate | 64K ~ 10Mbps, VBR, CBR, con | 64K ~ 10Mbps, VBR, CBR, controller frame rate and quality | | |
| Intelligent Video | Motion detection, Tampering Detection (blocked, redirected, defocused, or spray-painted) | | | |
| Video Jack | Yes (BNC) | N | /A | |
| Audio | 2 way audio | | | |

| Audio Compression | 32KHz, ADPCM | |
|---------------------|---|--|
| Audio Input/Output | 3.5mm phone jack | |
| Alarm In/Out | 1/1, terminal block | |
| Video Buffer | 5 second pre-alarm, 30 second post-alarm | |
| Event Action | Send snapshot or video clip by FTP or email, record to NAS, record to local storage, trigger DO | |
| Supported Protocols | IPv4, ARP, TCP, UDP, ICMP, DHCP, NTP, DDNS, SMTP, FTP, HTTP, CIFS, PPPoE, UPnP, RTP, RTSP, RTCP, 3GPP | |
| Ethernet | 10/100 Base-T / RJ45 | |
| Local Storage | microSD/SDHC x 1 (Class 4/Class 6) | |
| RS-485 | N/A | |
| USB | N/A | |
| SDK | SDK 2.0 | |
| OS | Microsoft Windows XP/Vista/7 | |
| Browser | Microsoft IE 6.0 or above | |
| Software | VMS 2.4.8 | |
| Temperature | Operation: -40°C~ 50°C (-40°F~122°F) Storage: -30°C ~ 60°C (-22°F~140°F) | |
| Humidity | 5 to 90% | |
| Power | 12VDC 1.5A ; PoE (IEEE 802.3af) with Class 3 | |
| Power Consumption | Max. 9W (w/o Heater) Max. 15.4W (w/ Heater & PoE 802.3af) | |
| Dimension | 105mm x 218.8mm x 191.41mm (3.44" x 7.18" x 6.28") | |
| Weight | Net:1,400g (3.09lb.) Gross:2,170g (4.8lb.) | |
| Certification | Safety: LVD EMC: FCC, CE, GOST IP66 | |

| Model Name | CAM3571M | CAM3571VP | |
|----------------------------------|--|--|--|
| Description | 5M Auto Focus D/N Bullet IP Camera | 5M P-Iris D/N Bullet IP Camera | |
| Image Sensor | 1/2.5" 5 megapixel progressive scan CMOS | | |
| Lens | 4.5 - 9 mm auto focus lens, F1.2 | 3.3 - 10.5 mm varifocal lens, F1.4 | |
| SNR | 48dB | | |
| WDR | Yes | | |
| Day/Night ICR | Yes | | |
| IR LED | Yes (Max 30M, on 1/1 Exposure) | | |
| Min Illumination | 0 Lux (IR LEDs on) 0.1 Lux @ F1.2 (Color) | | |
| Iris Control | DC drive | P-Iris | |
| Viewing Angle | Diagonal: 98.5° - 43.8° Horizontal: 80.5° - 38.1° Vertical: 41.3° - 21.3° | Diagonal: 126° - 40° Horizontal: 98° - 32° Vertical: 72° - 24° | |
| Camera Angle Adjustment | N/A | | |
| Pan/Tilt/Zoom Functionalities | N/A | | |
| Shutter Time | 1/1 ~ 1/1,000,000 s | | |
| Video Compression | H.264/MPEG-4/MJPEG | | |
| Resolution | Up to 2560 x 1920 | | |
| Video FPS | 14 fps at QSXGA (2560 x 1920) 21 fps at QXGA (2048 x 1536) 30 fps at 1080P (1920 x 1080) 30 fps at SXGA (1280 x 1024) 30 fps at 720P (1280 x 720) 30 fps at D1 (720 x 480) 30 fps at VGA (640 x 480) 30 fps at QVGA (320 x 240) | | |
| Video Control | AGC (Auto Gain Control), AWB (Auto White Balance), AES (Auto Electronic Shutter), Image Adjustment | | |
| Video Stream | Dual stream at H.264, MPEG-4, and MJPEG simultaneously | | |
| Bit Rate | 64K-20Mbps, VBR, CBR, controller frame rate and quality | | |
| Intelligent Video | Motion detection, Tampering Detection (blocked, redirected, defocused, or spray-painted) | | |
| Video JacK | N/A | BNC | |
| Audio | 2 Way | iy Audio | |

| Audio Compression | 32KHz, ADPCM | |
|------------------------|--|--|
| Audio Input/Output | 3.5mm phone jack | |
| Alarm In/Out | 1/1, terminal block | |
| Video Buffer | 5 second pre-alarm, 30 second post-alarm | |
| Event Action | Send snapshot or video clip by FTP or email, record to NAS, record to local storage, trigger DO | |
| Supported Protocols | IPv4, ARP, TCP, UDP, ICMP, DHCP, NTP, DDNS, SMTP, FTP, HTTP, CIFS, PPPoE, UPnP, RTP, RTSP, RTCP, 3GPP, ONVIF | |
| Ethernet | 10/100 Base-T / RJ45 | |
| Local Storage | microSD/SDHC slot x 1 (Class 4/Class 6) | |
| RS-485 | N/A | |
| USB | N/A | |
| SDK | SDK 2.0 | |
| OS | Microsoft Windows XP/Vista/7 (32 bit) | |
| Browser | Microsoft IE 6.0 or above | |
| Software | VMS2.4.8 | |
| Temperature | Operation: -40~50°C (-40~122°F) Storage: -30~60°C (-22~140°F) | |
| Humidity | 5 to 90% | |
| Power | 12VDC 1.5A; PoE (IEEE 802.3af) with Class 3 | |
| Power Consumption | Max. 9W (w/o Heater) Max. 15.4W (w/ Heater & PoE 802.3af) | |
| Dimension | 105mm x 218.8mm x 191.41mm (3.44" x 7.18" x 6.28") | |
| Weight | Net: 1400g (3.09lb.) Gross: 2,170g (4.8lb.) | |
| Certification | Safety: LVD EMC: FCC, CE, GOST IP66 | |

Chapter 2. Hardware Overview

2.1. Overview

CAM3xxx Series (except compact cameras)



CAM3351



| 1. Sunshield | 2. Lens | 3. IR LED |
|-----------------|-------------------|-----------|
| 4. Light Sensor | 5. Camera Bracket | |

CAM3351R4/3351R6/3361LV/3461LV



Rear View for CAM3xxx Series

(except compact cameras)

Please remove the cover.



2.2. Dimensions

Dimensions for CAM3xxx Series

(except compact cameras)

Unit: mm (inches)



Dimensions for CAM3351

Unit: mm (inches)





Dimensions for CAM3351R4/3351R6/3361LV/3461LV

Unit: mm (inches)





2.3. Functions

Cable Functions for CAM3xxx Series

(except compact cameras)


| | CAM3351 | CAM3361 CAM3471V CAM3571VP CAM3471HEV | CAM3371 CAM3371EV CAM3371EM CAM3471HEM CAM3471M CAM3471MP CAM3571M | CAM3351R4 CAM3351R6 CAM3361LV CAM3461LV |
|------------------------|---------|--|--|--|
| Audio In/Out Connector | | Optional | Optional | |
| Network Connector | > | > | ~ | ~ |
| Power Connector | > | > | ~ | |
| I/O Terminal Connector | | Optional | Optional | |
| Video Out Connector | | ~ | | |

Please look into the following table for cable options:

1. Audio In/Out Connector

Audio In/Out are both for 3.5mm jacks. Audio-in provides for an external mono microphone. Audio out can be connected to a public address system or an active speaker with a built-in amplifier. A pair of headphones can also be attached.

2. Status LED Indicator

The LED will light up after the camera has successfully completed the boot process. The Status LED indicator in the rear of the camera can be set to light whenever the unit is accessed, or be shut off.

| Status LED (rear) A | Green | Shows steady green for normal operation, flashing when the camera is accessed. | |
|---------------------------|-------|---|--|
| | | Note: The Status LED can be configured to be unlit. | |
| | | Steady during startup, reset to factory default or when restoring settings. | |
| | Amber | Flashes every 0.2 sec during firmware upgrade. | |
| | | (On:0.2 sec, Off: 0.2 sec) | |
| | | Note: Startup or reboot may have failed if the status LED shows steady amber for over 1 minute. | |
| | Unlit | No network connection. | |

3. Reset Button

Pressing the reset button will restore the camera to its factory default settings, as described in *Resetting to the Factory Default Settings*.

4. MicroSD/SDHC Card Slot

The microSD/SDHC card slot can be used for local recording and firmware upgrade.

Note: Apacer 4GB Class 6/Transcend 8GB Class 6/Kingston 16GB Class 2, SanDisk 16GB Class 2/SanDisk 32GB Class 4 MicroSDHC card are recommended, since they have passed the SD Card QVL (Qualified Vender List) test.

5. Video Out Connector (CAM3361 only)

Video Out Connector is used for connecting monitors with BNC ports.

6. Network Connector

The camera connects to the network via a standard RJ-45 network connector. The camera detects the speed of the local network (10/100BaseT). The camera also supports PoE (Power-over-Ethernet), and can be powered directly through the network cable.

7. Power Connector

The power connector is provided for solutions without PoE.

8. I/O Terminal Connector

The I/O terminal connector provides an RS-485 interface, one transistor output, two digital inputs, and connection points for auxiliary DC power and GND.

The I/O terminal connector provides the interface to:

- I transistor output For connecting external devices such as relays and LEDs. Devices can be activated by Output buttons on the Live View page or by an Event. The output will show as active (in Event Configuration > Port Status) if the alarm device is activated.
- 2 digital inputs An alarm input for connecting devices that can toggle between an open and closed circuit, for use with devices such as PIRs, door/window contacts, glass break detectors, etc. When a signal is received the state changes and the input becomes active (shown under Event Configuration > Port Status).
- Auxiliary Power and GND

| CUD | | | |
|----------------------------|-------|---|--|
| GND | Pin 1 | Ground | Description |
| (not to power this camera) | Pin 2 | Electrically connected in parallel with the connector for the power supply, this pin provides an auxiliary connector for main power to the unit. This pin can also be used to power auxiliary equipment with a maximum current of 100mA. | Voltage: 12V DC, Max: 1.2W |
| DI1(Digital Input) | Pin 3 | Connect to GND to activate, or leave floating (or unconnected) to deactivate. | Must not be exposed to voltages greater than 30V DC |
| DI2 (Digital Input) | Pin 4 | Connect to GND to activate, or leave floating (or unconnected) to deactivate. | Must not be exposed to voltages greater than 30V DC |
| DO(Digital Output) | Pin 5 | Uses an open- collector NPN transistor with the emitter connected to the GND pin. If used with an external relay, a diode must be connected in parallel with the load, for protection against voltage transients. | Max load = <100mA Max voltage = 24V DC (to the transistor) |
| RS-485A | Pin 6 | Data transmission connector for control of external devices. (ex. Pan/Tilt scanners) | Тх |
| RS-485B | Pin 7 | Data transmission connector for control of external devices. (ex. Pan/Tilt scanners) | Tx |



Cable Functions for CAM3351



1. Power Connector

The power connector is provided for solutions without PoE.

2. Network Connector

The camera connects to the network via a standard RJ-45 network connector. The camera detects the speed of the local network (10/100BaseT). The camera also supports PoE (Power-over-Ethernet), and can be powered directly through the network cable.

3. Reset Cable

To reset the device to the factory default settings:

- 1.) Make sure the device is in operation mode.
- 2.) Poke the little hole on the reset cable cover or press and hold the red button with a needle after removing the cable cover until the camera restarts (about 2 seconds). The status LED will change to amber during startup.



3.) When the status indicator changes back to green (which may take up to 1 minute), the process is complete. The default IP address is 192.168.88.10 if not assigned by a DHCP server.

4.) Note:

(1) Resetting to the factory default settings using the reset cable will cause all parameters (including IP address) to be reset. To reset the unit without changing parameters, disconnect and reconnect the power connector.

(2) Camera resets can also be performed under System > Reset ToFactory Default on the web interface.

Cable Functions for

CAM3351R4/3351R6/3364LV/3341LV



1. Network Connector

The camera connects to the network via a standard RJ-45 network connector. The camera detects the speed of the local network (10/100BaseT). The camera also supports PoE (Power-over-Ethernet), and can be powered directly through the network cable.

2.4. Installation

Installation for CAM3xxx Series (except compact cameras)

1. Use the screw hole indicator sticker to mark the desired camera position on the ceiling. Use the sticker as a guide, and make one cable entry hole and four screw holes on a flat surface with the electric drill.



2. Fix the camera bracket on the surface with screws and screw anchors.



- 3. Run the cable through the bracket.
- 4. Join the camera with the bracket.
- 5. The bracket is suggested to be tightened after positioning the camera to ensure the weatherproof characteristics of the camera are maintained. Use the L type hexagon spanner to screw the bracket joint tight.



6. Remove the front cover with a Phillips head screwdriver, unscrew the zoom puller on the lens and adjust the desired view angel as needed. Re-tighten the zoom puller. Unscrew the focus puller on the lens and adjust the focus as required. Re-tighten the focus puller and install the front cover back on the camera.



camera is logged in.

Installation for compact cameras - CAM3351/3361LV/3461LV

1. Use the camera bracket to mark the desired camera position on a flat interface. Make one cable entry hole and three screw holes on the surface with the electric drill.



2. Fix the camera bracket on the surface with screws and screw anchors.



CAM3351R3/3361LV/3461LV



3. Join the camera with the bracket. Loose the connecting screw to adjust the camera's viewing point to upward, downward, left and right.



CAM3351

CAM3351R3/3361LV/3461LV



The bracket is suggested to be tightened after positioning the camera to ensure the waterproof characteristics of the camera are maintained.



CAM3351R3/3361LV/3461LV



- 4. Connect the camera to the network with the network connector.
- 5. PoE (802.3af) is supported. You can also connect the power connector to the power adapter, and then connect the adapter to a power outlet.
- 6. Check if the live view display normally after the camera is logged in. Please refer to *Logging to the System* section for more details.

2.5. Camera Deployment

Camera Deployment for CAM3xxx Series

(except compact cameras)



Camera Deployment for compact cameras -CAM3351/3361LV/3461LV



2.6. Before You Start

Please prepare a PC with Windows (XP or above) and web browsers (Internet Explorer 6.0 or above) installed.

Chapter 3. Connecting to the Network Camera

This section demonstrates how to connect to the network camera through two methods:

- Web Browser A simple web-based interface. Internet Explorer is the recommended web browser for use with network cameras, and our examples will be from this browser. Usage on other browsers will be similar.
- RTSP Player These include common streaming media players, such as *RealPlayer* or *Quicktime Player*. These players can provide live view of the camera using the Real-Time Streaming Protocol (RTSP).

3.1. Connecting with a Web Browser

Obtaining IP address through the IP Utility

The IP address can be obtained using the IP Utility in your product CD:

- 1. Double click Start SearchToolInstall.exe to begin the utility installation.
- After the installation is complete, click the Auto Search button or click
 Camera > Search in the menus.

| 🔍 Auto Search 🔅 Update Firmware 🥞 S | File Group Camera 🕝 Reboot | Camera Help Login User Manager |
|-------------------------------------|---|--|
| All Devices(18) | Name CAM220(CAM2321 CAM2321 CAM1300 CAM2321 | Search Configuration Maintenance Device Group Link to Camera Properties |

The camera search will begin, and a status bar will display the search progress.

3. The details of the camera will display after the search is finished.

| D | etails | | | | | | |
|---|--------|-----------|--------------|---------|--------------|--------|---------------|
| | Number | Name | IP | Model | MAC | Status | NetMask |
| | 1 | 👰 CAM2320 | 172.18.6.147 | CAM2320 | 00D02360022F | New | 255.255.254.0 |
| | 2 | 👰 CAM2311 | 172.18.7.61 | CAM2311 | 000C0CA006AA | New | 255.255.254.0 |
| | 3 | 🔮 CAM3365 | 172.18.6.80 | CAM3365 | 00D02360022C | New | 255.255.254.0 |
| | 4 | 🔮 CAM1300 | 172.18.6.215 | CAM1300 | 000C0CA006F1 | New | 255.255.254.0 |

Note: (1) The search may take up to 2 minutes, depending on your network configuration. (2) If your network does not have DHCP service, the default IP address is 192.168.88.10.

Connecting to the Network Camera

Launch the web browser (Microsoft ® Internet Explorer 6.0 or higher is recommended). Enter the IP address of the network camera in the address bar of your browser and press enter.

You can also Click the Link to Camera button or click Camera > Link to Camera in the IP Utility menu bar. The camera's live view webpage will open in a browser window.



Logging into the System

The following information will prompt for logging in:

| User Name: | | |
|------------|----|--------|
| Password: | | |
| r assword. | | |
| | | |
| | ОК | Cancel |
| _ | | |

- **Username** The username for the domain. **Default is always** *admin*.
- **Password** The password for the domain. **Default is always** admin.

Click OK.

Installing Active X Components in Internet Explorer

You may be prompted to install ActiveX® components when accessing the network camera's Live View page; click **Yes** when prompted. You will be able to access the camera after installation is completed. Under Windows, this action may require administrator privileges.

If the dialog box suggests that you are not allowed to install ActiveX components, try resolving the problem using the following steps:

- 1. In Internet Explorer, open Tools> Internet Options> Security. Click the Custom level button.
- Search for *Download signed ActiveX controls*. Under this heading select
 Prompt and then click OK.

| Security S | ettings | | ? 🛛 |
|--|---|---|-----------------|
| Settings: | | | |
| Active Do Do Do Do Do Do Do Do Do Do Do Do Do | X controls and plu ownload signed Ac Disable Enable Prompt Disable Enable Enable Prompt itialize and script 4 Disable Enable Enable Prompt | ig-ins itiveX controls ActiveX controls ActiveX controls not | marked as safe |
| < | | | > |
| Reset cus Reset to: | tom settings Medium | OK | Reset Cancel |

- **3.** Continue installing the Active X components.
- 4. After installing ActiveX, go to Tools> Internet Options> Trusted Websites> Sites and add the IP Address of the camera.

Logging Out of the System

Logging off of the camera can be performed by closing the browser window.

Users can also choose to click the **Logout** link located at the top of the screen.

| Live View | T | Settings | Log | out | Help |
|-----------|---|----------|-----|-----|------|
| Streams | С | 1 | 2 | | |

Using the Help Interface

While using the web interface, you may click on the **Help** link located under the title bar. This will bring up a pop-up containing the IP Camera Help manual.

3.2. Connecting with an RTSP Player

Connections through RTSP Media Players such as *Real Player* and *QuickTime Player* are supported. We will use Real Player as an example in this section.

- 1. Launch Real Player.
- 2. Select File > Open URL, to open a URL dialog box.
- 3. Enter the camera URL in the address bar.

| Open | |
|-------|--|
| Ŷ | Type the location of a clip or web page, and RealPlayer will open it for you. |
| Open: | rtsp://172.16.80.169/stream1 |
| | OK Cancel Browse |

Note: The format for RTSP is: rtsp://<IP Address>/<Access>, where <Access> can be found at Settings> Network> Port Settings> RTSP Setting. By default the <Access> value should be stream1 and stream2.

4. Click OK, the stream should begin playing.

Connecting with a Mobile Device RTSP Player

In order to access streaming video on 3GPP mobile devices, please make sure the network camera is already online and connected to the Internet. In the IP field under the *IP Address* section of the window, enter the IP address of the IP camera.

- Change the settings under Settings > Video & Audio > Stream2: Set the image format as MJPEG4, resolution as QVGA (320x240 or below, and constant bit rate as 128 Mbps or below.
- 2. Launch the RTSP Player on the 3GPP mobile device and enter the URL address for the camera. The video should start playing.

Note: The format for RTSP is: rtsp://<IP Address>/<Access>, where <Access> can be found at Settings> Network> Port Settings> RTSP Setting. By default the <Access> value should be stream1 and stream2.

Chapter 4. Configuration through the Web Interface

Camera configurations can be done through web interface and IP Utility. **For web interface, please look into <u>this chapter</u>; for IP Utility, please refer to <u>Chapter 5</u>.

| | | Web Interface | IP Utility |
|------------------------|---------------------------------------|---------------|-------------|
| General | Basic Settings | V | Х |
| | User Account | V | Х |
| | Date & Time | V | Х |
| Network | Network Configuration | V | Set IP Only |
| | Port Settings | V | Х |
| | UpnP | V | Х |
| | Wifi Setting | V | Х |
| Video & Audio Settings | Basic Settings | V | Х |
| | Image Appearance Settings | V | Х |
| | Video Streams | V | Х |
| | Audio Settings | V | Х |
| PTZ | RS-485 Settings/PTZ Settings | V | Х |
| Recording | Recording Basic Settings | V | Х |
| | Recorded File Management | V | Х |
| Event Notification | Event Server | V | Х |
| | Motion Detection | V | Х |
| | Tampering Detection | V | Х |
| | DI & DO | V | Х |
| | Event Settings | V | Х |
| System | MicroSD Card Management | V | Х |
| | System Status | V | V |
| | System Log | V | Х |
| | Firmware Upgrade | V | V |
| | Resetting to Factory Default Settings | V | Х |

| | Export/Import | V | Х |
|-----------------------------|---------------|---|---|
| | Reboot | V | V |
| Camera Search | | Х | V |
| Login | | V | V |
| Properties | | Х | V |
| Delete from Tool | | Х | V |
| Clearing and Setting Status | | Х | V |
| Camera Group Actions | | Х | V |
| Configuration Settings | | Х | V |
| Focus Tool | | Х | V |

4.1. Interface Layout

This section demonstrates the layout of the network camera's main interface. The 4 main areas on the interface are:



- 1. Menu Bar The links on this bar allow users to toggle between liveview and settings screens, as well as logout and pull up the help menu.
- 2. Live View Controls These controls allow users to configure the live view streams and camera live view functionality.
- **3.** Button Bar These controls allow the user to quickly access common features such as live view window resizing, video and still frame capture, interface language, and audio controls.
- **4.** Live View Window This portion of the screen displays the stream selected in the Live View Control section of the web interface.

Control Descriptions

| Control | Description |
|----------------|--|
| | Adjust Window Size: When clicked, the display window size can be adjusted manually to fit the screen. The screen size changes back to the actual image size (resolution). |
| | Full-Screen: Goes to full-screen when clicked; press "ESC" to return to windowed view. |
| | Image Capture: When clicked, captures the current screen as an image in a new pop-up window. The location for saving the image can be changed under <u>Settings > Recording > Recording Basic Settings.</u> The file name is set to "Camera Name"+yyyymmdd_hhmmss (the Camera Name can be changed under <u>Settings ></u> <u>General > Basic Settings</u>). |
| (Official data | Manual Record: When clicked, records the current live video. Stops recording when clicked again. The location for storing the video can be changed under <u>Settings ></u> <u>Recording > Recording Basic Settings.</u> |
| | Audio-In: Turned off by default; clicking once allows audio to be transmitted from a local microphone to the camera. Clicking again stops audio transmission. Multiple users may access the live view page and receive audio from the camera, but only one user at once is allowed to send audio to the camera. |
| | Mute: Mutes the audio captured by the camera when clicked, un-mutes the audio when clicked again. |
| | Volume: Sets to the current computer volume; Dragging the slider adjusts the volume. |

| Control | Description | | | | | |
|--|--|--|--|--|--|--|
| Language English | Language: Sets the UI language. Available languages include English, Simplified Chinese, and Traditional Chinese. | | | | | |
| Streams 1 | Streams: Allows users to choose which camera stream to view. The indicator above the stream will turn light green when the stream is selected. | | | | | |
| Streams 1 2 Type MJPEG V Size H: 264 H: 264 UIPEG Digital Zoom V | Video Format: Sets the compression format for the current stream. Available formats are H.264, MPEG4, and MJPEG. | | | | | |
| Size VGA(640x480) ▼ SXGA(1280x1024) Digital HD720(1280x720) VGA(640x480) Digital QVGA(320x240) | Image size (resolution): Sets the resolution of the stream currently selected. Options are available for each stream: 1536P (2048 x 1536), 1080P (1920 x 1080), SXGA (1280 x 1024), 720P (1280 x 720), VGA (640 x 480), QVGA (320 x 240) for stream 1 and VGA (640 x 480), QVGA (320 x 240), QQVGA (160 x 120) for stream 2. | | | | | |
| Digital Zoom | Digital Zoom: When clicked, activates digital zoom in the current live-view stream. 2 options are available when clicked: | | | | | |
| Digital Output | To set the digital output as high voltage or ground or off can be done here. | | | | | |
| Optical Zoom: | To magnify the image, change its focal length to vary its view from 0 to 16. | | | | | |
| Focus: Near Far | Change the depth of field by adjusting the Near and Far steps. | | | | | |

| Control | Description |
|---------------|--|
| One Push AF | AutoFocus can be achieved by pressing this button. |
| P-IRIS level: | P-IRIS level can be adjusted Manually or Automatically. Manual |
| | Auto |
| | 10 F1.8 |

4.2. Settings

Camera settings may be changed by clicking on the **Settings** link located in the title bar. This will bring up a menu list of configuration menus for all major camera settings.

General

General setting menus are found under **Settings > General**.

Basic Settings

| Live View Settings Logou | ut Help | | admin 2014-05-16 15:28:39 |
|------------------------------|--------------------------|--|---------------------------|
| S General | General > Basic Settings | | |
| >Basic Settings | Host Name | | |
| User Account | Host Name: | CAM4311-00d0236093cf | |
| Date & Time | | | |
| | Camera Name | | |
| >> Network | | | |
| >> Video & Audio | Camera Name: | CAM4311 (Valid characters: A-Z, a-z, 0-9, Chinese, space) | |
| » PTZ | LED Indicator | | |
| » Recording | System Status LED: | LED default on, flashing during camera access | |
| >> Event Notification | | LED default off, flashing during camera access | |
| » System | | LED default on, off during camera access | |
| | | ○ LED always off | |
| | IR LED: | ○ Off ○ On ④ Auto | |
| | Fan Control: | Always On Normal Mode | |
| | | OK | |

Basic settings may be accessed under **General > Basic Settings**. The following settings can be made:

- Host Name: by default set to "model name + MAC address"; displays on the center of the main page. Users may replace the default name with a new name consisting of alphanumeric characters, spaces and the ":" character.
- Camera Name: by default set to "model name"; after selecting Camera Name" from Settings > Video & Audio > Basic Settings, the Camera Name will show on the display. Users may replace the default name with a new name consisting of alphanumeric characters, spaces and the ":" character.
- System Status LED: changes the behavior of the status LED on the front of the camera. There are four possible behaviors:

- LED on when camera is on LED default on, flashing during camera access.
- **LED on during camera access** LED default off, flashing during camera access
- LED off during camera access LED default on, off during camera access
- LED always off LED always off

Click **OK** to save or **Cancel** to abort the changes before you leave the page.

User Account

The User Account section, found under **General** > **User Account**, controls the user account information and privileges.

| Live View Settings Logou | t Help | admin 2015-06-08 16:20:44 |
|------------------------------|---|---------------------------|
| Seneral | General > User Account | |
| Basic Settings | User Account | |
| >User Account | | |
| | User Name | User Group |
| Date & Time | admin | Administrator |
| | guest | Operator |
| >> Network | Max account number is 10. | |
| >> Video & Audio | | Add Edit Remove |
| » PTZ | User Login Settings | |
| >> Recording | Enable access without login | |
| >> Event Notification | Maximum number of simultaneous viewers li | mited to: 5 [110] |
| >> System | | |
| | | OK |

There are two pre-configured accounts:

- **admin** This is the default administration account, and cannot be deleted.
- guest This is an account with only live view capability.

There are also two basic settings under user account settings:

- Enable access without login Checking the checkbox will allow users to view the camera stream without having to login.
- Maximum number of simultaneous viewers limited to Enter a number from 1 to 10 in this field to limit the number of users that can view the live view stream for this camera. This option will only be displayed once you add an account.

Click **OK** to save or **Cancel** to abort the changes before you leave the page.

Adding Accounts

In **General > User Account** under the **User Account** heading, click on "Add". Up to 10 accounts can be added to the system.

| Add User Account | |
|-------------------|---------------|
| User Account | |
| User Name: | test1 |
| User Group: | Administrator |
| Password: | ••••• |
| Confirm password: | ••••• |
| | |
| ОК | Cancel |

All User Names and Passwords must be combinations of alphanumeric characters, ":", "-", "_" between 4 and 20 characters in length, and must begin with an alphabet letter. Fill out the following fields:

- User Name The identifier name used to login to the system.
- User Group The system allows for 2 types of users.
 - Administrator Administrators have full access privileges.
 - **Operator** Operators can only access the live view page.
- Password A passkey used to control user access. The password must be a combination of alphanumeric characters, ":", "-", "_" between 4 and 20 characters in length, and must begin with an alphabet letter. This password should be retyped in the Confirm password field, to ensure that the correct key is saved.

Click **OK** when finished to add the user to the system.

Editing Accounts

| Edit User Account | |
|-------------------|-----------|
| User Account | |
| User Name: | guest |
| User Group: | Operator |
| Password: | •••• |
| Confirm password: | • • • • • |
| | |
| ОК | Cancel |

In General > User Account under the User Account heading, select an existing account by clicking on the account entry. The entry will be highlighted in yellow. Clicking Edit will allow you to change the following fields:

- User Group The system allows for 2 types of users.
 - Administrator Administrators have full access privileges.
 - **Operator** Operators can only access the live view page.
- Password A passkey used to control user access. The password must be a combination of alphanumeric characters, ":", "-", "_" between 4 and 20 characters in length, and must begin with an alphabet letter. This password should be retyped in the Confirm password field, to ensure that the correct key is saved.

Click **OK** when finished to save any changes.

Note: Only accounts that are not currently logged-in can be edited.

Deleting Accounts

In General > User Account under the User Account heading, select an existing account by clicking on the account entry. The entry will be highlighted in yellow. Click Remove and, when prompted to confirm deletion, click OK to remove the account.

Date & Time

| Live View Settings Logou | it Help | | | | adn | nin 2015-06-08 | 16:25:39 |
|------------------------------|-------------------------------------|--------------------------------|---------------------------------|---------|----------|----------------|----------|
| 🕇 General | General > Date & Time | | | | | | |
| Basic Settings | Current Date & Time | | | | | | |
| User Account | Date: 2015-06-08 | Time | : 16:25:37 | | | | |
| >Date & Time | | | | | | | |
| | Time Zone Settings | | | | | | |
| >> Network | Time Zone: | (GMT +8:00) Beijing Perth | Singapore Hong Kong Ta | ainei 🗸 | | | |
| » Video & Audio | | North Cortes and Contraction | , onigupore, riong rong, re | aipor - | | | |
| » PTZ | Time Settings | | | | | | |
| >> Recording | Synchronize wit | h NTP server(Periodically synd | shronize clock with Internet se | ervers) | | | |
| >> Event Notification | NTP server: | 64.236.96.53 | | | | | |
| >> System | O Manual Update | | | | | | |
| ojotom | Date: | | Tin | ne: | | | |
| | | | | | | 1 | |
| | Synchronize wit | h Computer Time | | | | | |
| | Date: | 2015-06-08 | Tin | ne: | 16:25:39 | | |
| | David Sabt Caudaa | | | | | | |
| | Day Light Saving | | | | | | |
| | Enable Day Light Saving | | | | | | |
| | Start Time: | Month Day | Hour Minute | | | | |
| | otan mile. | | | | | | |
| | End Time : | January 🗸 1 🗸 | 00 🗸 : 00 🗸 | | | | |
| | | | | | | | |

Date and time settings can be accessed at General > Date & Time.

Current Date & Time displays the current system date and time.

Time Zone Settings

The time zone can be set using the dropdown menu. This menu is only applicable when selectable when **Synchronize with NTP Server** is chosen under **Time Settings**.

Time Settings

There are 3 ways to set the system time:

- Synchronize with NTP server NTP is a protocol for synchronizing the system clock to an external server. If this option is chosen, enter the IP address of a known NTP server in the NTP Server field. You must also choose the appropriate time zone under Time Zone Settings.
- Manual update Updates the time manually. Choose the appropriate date and enter a time for the system.
- Synchronize with computer time Synchronizes the time with the computer's internal clock.

Day Light Saving

Users can set the Day Light Saving Time by ticking on Enable Day Light Saving.

Click **OK** to save or **Cancel** to abort the changes before you leave the page.

Network

The network settings, including network configuration, port configuration, and universal plug and play (UPnP) settings are used to configure camera connectivity. These settings are found under the **Settings > Network** context.

| Live View Settings Logou | it Help | | | admin 2015-06-08 16:28:13 |
|------------------------------|--|---------------|--------|---------------------------|
| » General | Network > Network Configuration | | | |
| ℅ Network | IP & DNS Settings | | | |
| Network Configuration | Get IP address Automatically | | | |
| Port Settings | O Use fixed IP address | | | |
| UPnP | IP address: | 172.30.10.46 | | |
| Wifi | Subnet mask: | 255.255.255.0 | | |
| SNMP | Default Gateway: | 172.30.10.254 | | |
| HTTPS | Primary DNS: | 192.168.99.13 | | |
| | Secondary DNS: | 192.168.99.14 | | |
| >> Video & Audio | | | | |
| » PTZ | IPV6 &DNS Setting | | | |
| » Recording | Get IPv6 Address Automaticall | ly | | |
| >> Event Notification | Use fixed IPv6 | | | |
| >> System | IP address: | | | |
| | Prefix length: | | | |
| | Default Router: | | | |
| | Primary DNS: | | | |
| | Secondary DNS: | | | |
| | | | | |
| | PPPoE Settings | | | |
| | Enable PPPoE | | | |
| | User Name: | | | |
| | Password: | | | |
| | Confirm Password: | | | |
| | | | | |
| | DDNS Settings | | | |
| | Enable DDNS | | | |
| | DDNS Server : | × | | |
| | Host Name: | | | |
| | User Name: | | | |
| | Password: | | | |
| | | | | |
| | | | | |
| | | | | |
| | | ОК | Cancel | |

Network Configuration

These settings are used to configure basic network access for the camera. They are found under **Network > Network Configuration**.

Most of these settings vary with your specific hardware setup; therefore the defaults are set for common SOHO level usage. If you are using the camera in

an enterprise environment, please check with your IT department to determine the correct settings for this section.

IP & DNS Settings

These settings are used determine the IP address of the network camera.

- Get IP address automatically Automatically acquires IP address from a DHCP service. This is the default setting.
- Use fixed IP address Sets a fixed IP address. You must also manually fill in IP address, Subnet mask, Default gateway, Primary DNS, and Secondary DNS fields. The network camera can be connected to the network upon completion.

IPV6 & DNS Settings

This only works if your network environment and hardware equipment support IPv6.

- Get IPv6 address automatically the network camera will listen to router advertisements and be assigned with a link-local IPv6 address accordingly.
- Use fixed IPv6 address Sets a fixed IPv6 address. You must also manually fill in IP address, Prefix length, Default gateway, Primary DNS, and Secondary DNS fields. The network camera can be connected to the network upon completion.

PPPoE Settings

This feature is disabled by default. Connecting to the network using PPPoE (Point-to-Point Protocol over Ethernet) requires a user name and password from your ISP (Internet Service Provider). Select **Enable PPPoE** and fill in valid user name and password to connect the camera to the Internet.
DDNS Settings

DDNS (Dynamic Domain Name Server) is a protocol that enables the camera to maintain a static connection address, even when its IP changes. Access using this feature is disabled by default.

Connecting using DDNS requires registration on third-party websites for DDNS services. Select desired DDNS service website, check the **Enable DDNS** option, and fill in valid user name and password. You can then access the camera through the registered domain name.

Click **OK** to save or **Cancel** to abort the changes before you leave the page.

Port Settings

Ports are a software construct used to multiplex the transmission information to and from the camera. They act as separate endpoints within an IP address where software "listens" for incoming information. This section, which can be accessed under **Network > Port Settings**, includes *HTTP Port Settings*, *RTSP Settings* and *RTP Multicast Settings*.

| veView Port: 6002 (1-32767) SP Settings stream1 eq. rtsp://IP address/stream1 sccess Name for Stream 1: stream2 eq. rtsp://IP address/stream1 sccess Name for Stream 2: stream2 eq. rtsp://IP address/stream2 TSP port: 554 Note: RTSP port must be a valid port number. TP port for video: 5500 Note: RTP port for video must be a valid port num TCP port for video: 5501 Note: RTCP port for video must be a valid port num TCP port for audio: 5502 Note: RTCP port for audio must be a valid port num TCP port for audio: 5503 Note: RTCP port for audio must be a valid port num tP packet Size: 16384 (1448-16384) PMulticast Settings still 5102 RTP Multicast Video Port1: 5102 RTP Multicast Video Port2: 5104 RTP Multicast Video Port2: 5104 | eView Port 6002 (1-32767) P Settings cess Name for Stream 1: stream1 eq. rtsp://P address/stream1 cess Name for Stream 2: stream2 eq. rtsp://P address/stream2 SP port: 554 Note: RTSP port must be a valid port number. P port for video: 5500 Note: RTCP port for video must be a valid port number. CP port for video: 5501 Note: RTCP port for video must be a valid port number. CP port for audio: 5502 Note: RTCP port for audio must be a valid port number. CP port for audio: 5503 Note: RTCP port for audio must be a valid port number. p packet Size: 16384 (1448-16384) Muticast Settings RTP Multicast Video Port1: 5100 RTP Multicast Video Port2: 5104 RTP Multicast TL: 15 | TTP Port: 8 | 0 | |
|--|---|---|---|--|
| TSP Settings Access Name for Stream 1: stream1 eq. rtsp://IP address/stream1 Access Name for Stream 2: stream2 eq. rtsp://IP address/stream2 RTSP port 554 Note: RTSP port must be a valid port number. RTP port for video: 5500 Note: RTP port for video must be a valid port num RTCP port for video: 5501 Note: RTCP port for video must be a valid port num RTP port for audio: 5502 Note: RTP port for audio must be a valid port num RTCP port for audio: 5503 Note: RTCP port for audio must be a valid port num RTCP port for audio: 6503 Note: RTCP port for audio must be a valid port num RTP Packet Size: 16384 (1448-16384) TP Multicast Settings PTP Multicast Video Port1: 6100 RTP Multicast Video Port2: 6104 RTP Multicast Video Port2: 6104 | P Settings ccess Name for Stream 1: stream1 = eq. rtsp://IP address/stream1 ccess Name for Stream 2: stream2 = eq. rtsp://IP address/stream2 SP port: 554 P port for video: 5500 CP port for video: 5501 CP port for video: 5501 Vettings 5502 P port for audio: 5503 Vettings 5503 Note: RTCP port for audio must be a valid port number. CP port for audio: 5503 Note: RTCP port for audio must be a valid port number. p Packet Size: 16364 Multicast Settings Plenable RTP Multicast 5100 RTP Multicast Video Port1: 5100 RTP Multicast Video Port1: 5102 RTP Multicast Video Port1: 5102 RTP Multicast Video Port1: 5102 RTP Multicast Group Address: 239.225.76.55 RTP Multicast TTL: 15 | LiveView Port: 6 | 002 | (1-32767) |
| TSP Settings Access Name for Stream 1: stream1 eq. rtsp://IP address/stream1 Access Name for Stream 2: stream2 eq. rtsp://IP address/stream2 RTSP port 554 Note: RTSP port must be a valid port number. RTP port for video: 5500 Note: RTP port for video must be a valid port num RTCP port for video: 5501 Note: RTCP port for video must be a valid port num RTP port for audio: 5502 Note: RTCP port for audio must be a valid port num RTP port for audio: 5503 Note: RTCP port for audio must be a valid port num RTP Packet Size: 16384 (1448-16384) TP Multicast Settings TP Multicast Video Port1: 5100 RTP Multicast Video Port2: 5104 RTP Multicast Croup Addrese: P00 005 75 /5 | P Settings cess Name for Stream 1: stream1 eq. rtsp://IP address/stream1 cess Name for Stream 2: stream2 eq. rtsp://IP address/stream2 SP port 554 Note: RTSP port must be a valid port number. P port for video: 5500 Note: RTCP port for video must be a valid port number. CP port for video: 5501 Note: RTCP port for video must be a valid port number. CP port for audio: 5502 Note: RTCP port for audio must be a valid port number. CP port for audio: 5503 Note: RTCP port for audio must be a valid port number. cP port for audio: 5503 Note: RTCP port for audio must be a valid port number. cP port for audio: 5503 Note: RTCP port for audio must be a valid port number. cP port for audio: 5503 Note: RTCP port for audio must be a valid port number. cP port for audio: 5503 Note: RTCP port for audio must be a valid port number. cP port for audio: 5501 Note: RTCP port for audio must be a valid port number. cP port for audio: 5503 Note: RTCP port for audio must be a valid port number. cP port for audio: 5100 RTP Multicast Video Port1: 5100 RTP Multicast Video Port2: | | | |
| Access Name for Stream 1: stream1 eq. rtsp://IP address/stream1 Access Name for Stream 2: stream2 eq. rtsp://IP address/stream2 RTSP port: 554 Note: RTSP port must be a valid port number. RTP port for video: 5500 Note: RTP port for video must be a valid port number. RTCP port for video: 5501 Note: RTCP port for video must be a valid port num RTP port for audio: 5502 Note: RTCP port for audio must be a valid port num RTCP port for audio: 5503 Note: RTCP port for audio must be a valid port num RTP port for audio: 5503 Note: RTCP port for audio must be a valid port num RTP port for audio: 5503 Note: RTCP port for audio must be a valid port num RTP port for audio: 5503 Note: RTCP port for audio must be a valid port num RTP Port for audio: 5503 Note: RTCP port for audio must be a valid port num RTP Packet Size: 16384 (1448-16384) PMulticast Settings 5102 RTP Multicast Audio Port1: F100 F102 F104 RTP Multicast Video Port2: 5104 RTP Multicast Crown Address: 500.057.056 | cess Name for Stream 1: stream1 eq. rtsp://IP address/stream1 cess Name for Stream 2: stream2 eq. rtsp://IP address/stream2 SP port 554 Note: RTSP port must be a valid port number. P port for video: 5500 Note: RTP port for video must be a valid port number. CP port for video: 5501 Note: RTP port for video must be a valid port number. CP port for audio: 5502 Note: RTCP port for audio must be a valid port number. CP port for audio: 5503 Note: RTCP port for audio must be a valid port number. CP port for audio: 5503 Note: RTCP port for audio must be a valid port number. P port for audio: 5503 Note: RTCP port for audio must be a valid port number. P port for audio: 16384 (1448-16384) Multicast Settings Interact Settings Interact Settings P nulticast Video Port1: 5100 Interact Settings RTP Multicast Video Port2: 5104 Interact Settings RTP Multicast Group Address: 239.225.76.55 Interact Settings RTP Multicast TTL: 15 Interact Settings | TSP Settings | | |
| Access Name for Stream 2: stream2 eq. rtsp://IP address/stream2 RTSP port: 554 Note: RTSP port must be a valid port number. RTP port for video: 5500 Note: RTP port for video must be a valid port num RTCP port for video: 5501 Note: RTCP port for video must be a valid port num RTP port for audio: 5502 Note: RTP port for audio must be a valid port num RTCP port for audio: 5503 Note: RTCP port for audio must be a valid port num RTP Packet Size: 16384 (1448-16384) TP Multicast Settings | cess Name for Stream 2: stream2 eq. rtsp://IP address/stream2 SP port 554 Note: RTSP port must be a valid port number. P port for video: 5500 Note: RTCP port for video must be a valid port number. CP port for video: 5501 Note: RTCP port for video must be a valid port number. P port for audio: 5502 Note: RTCP port for audio must be a valid port number. CP port for audio: 5503 Note: RTCP port for audio must be a valid port number. p Packet Size: 16384 (1448-16384) Multicast Settings | Access Name for Stream 1: | stream1 | eq. rtsp://IP address/stream1 |
| RTSP port: 554 Note: RTSP port must be a valid port number. RTP port for video: 5500 Note: RTP port for video must be a valid port num RTCP port for video: 5501 Note: RTCP port for video must be a valid port num RTP port for audio: 5502 Note: RTCP port for audio must be a valid port num RTCP port for audio: 5503 Note: RTCP port for audio must be a valid port num RTP Packet Size: 16384 (1448-16384) TP Multicast Settings | SP port: 554 Note: RTSP port must be a valid port number. P port for video: 5500 Note: RTP port for video must be a valid port number. CP port for video: 5501 Note: RTCP port for video must be a valid port number. SP port for audio: 5502 Note: RTCP port for audio must be a valid port number. CP port for audio: 5503 Note: RTCP port for audio must be a valid port number. SP packet Size: 16384 (1448-16384) Multicast Settings | Access Name for Stream 2: | stream2 | eq. rtsp://IP address/stream2 |
| RTP port for video: 5500 Note: RTP port for video must be a valid port num RTCP port for video: 5501 Note: RTCP port for video must be a valid port num RTP port for audio: 5502 Note: RTP port for audio must be a valid port num RTCP port for audio: 5503 Note: RTCP port for audio must be a valid port num RTCP port for audio: 5503 Note: RTCP port for audio must be a valid port num Rtp Packet Size: 16384 (1448-16384) TP Multicast Settings | P port for video: 5500 ICP port for video: 5501 Note: RTCP port for video must be a valid port number. P port for audio: 5502 ICP port for audio: 5503 ICP port for audio: 16384 IP Packet Size: 16384 Intrast Settings Intrest Settings Intrast Settings </th <th>RTSP port</th> <th>554</th> <th>Note: RTSP port must be a valid port number.</th> | RTSP port | 554 | Note: RTSP port must be a valid port number. |
| RTCP port for video: 5501 Note: RTCP port for video must be a valid port nu RTP port for audio: 5502 Note: RTCP port for audio must be a valid port num RTCP port for audio: 5503 Note: RTCP port for audio must be a valid port num RTP Packet Size: 16384 (1448-16384) TP Multicast Settings | CP port for video: 5501 Note: RTCP port for video must be a valid port number. P port for audio: 5502 Note: RTCP port for audio must be a valid port number. CP port for audio: 5503 Note: RTCP port for audio must be a valid port number. p Packet Size: 16384 (1448-16384) Multicast Settings Image: Setting Seting Seting Setting Setting Setting Setting Setting Se | RTP port for video: | 5500 | Note: RTP port for video must be a valid port number. |
| RTP port for audio: 5502 Note: RTP port for audio must be a valid port num RTCP port for audio: 5503 Note: RTCP port for audio must be a valid port num Rtp Packet Size: 16384 (1448-16384) CTP Multicast Settings 16384 (1448-16384) CTP Multicast Settings 5100 100 RTP Multicast Audio Port1: 5102 RTP Multicast Video Port2: 5104 PTR Multicast Croup Address: 000 005 70 55 | P port for audio: 5502 Note: RTP port for audio must be a valid port number. CP port for audio: 5503 Note: RTCP port for audio must be a valid port number. p Packet Size: 16384 (1448-16384) Multicast Settings I Enable RTP Multicast RTP Multicast Video Port1: 5100 RTP Multicast Audio Port1: 5102 RTP Multicast Video Port2: 5104 RTP Multicast Group Address: 239.225.76.55 RTP Multicast TTL: | RTCP port for video: | 5501 | Note: RTCP port for video must be a valid port number. |
| RTCP port for audio: 5503 Note: RTCP port for audio must be a valid port nu Rtp Packet Size: 16384 (1448-16384) TP Multicast Settings (1448-16384) Charlen RTP Multicast 100 RTP Multicast Video Port1: 5100 RTP Multicast Audio Port1: 5102 RTP Multicast Video Port2: 5104 | CP port for audio: 5503 p Packet Size: 16384 Multicast Settings Benable RTP Multicast RTP Multicast Video Port1: 5100 RTP Multicast Video Port1: 5102 RTP Multicast Video Port2: 5104 RTP Multicast Group Address: 239.225.76.55 RTP Multicast TTL: | RTP port for audio: | 5502 | Note: RTP port for audio must be a valid port number. |
| Rtp Packet Size: 16384 (1448-16384) TP Multicast Settings | Implement Multicast Settings Implement Implement <th></th> <th></th> <th></th> | | | |
| TP Multicast Settings | Multicast Settings Image: Im | RTCP port for audio: | 5503 | Note: RTCP port for audio must be a valid port number. |
| RTP Multicast Video Port1: 5100 RTP Multicast Audio Port1: 5102 RTP Multicast Video Port2: 5104 | RTP Multicast Video Port1:5100RTP Multicast Audio Port1:5102RTP Multicast Video Port2:5104RTP Multicast Group Address:239.225.76.55RTP Multicast TTL:15 | RTCP port for audio: Rtp Packet Size: | 5503 16384 | Note: RTCP port for audio must be a valid port number. |
| RTP Multicast Audio Port1: 5102 RTP Multicast Video Port2: 5104 RTP Multicast Croup Address: 620,005,70,55 | RTP Multicast Audio Port1: 5102 RTP Multicast Video Port2: 5104 RTP Multicast Group Address: 239.225.76.55 RTP Multicast TTL: 15 | RTCP port for audio: Rtp Packet Size: TP Multicast Settings | 5503 16384 | Note: RTCP port for audio must be a valid port number. |
| RTP Multicast Video Port2: 5104 | RTP Multicast Video Portz: 5104 RTP Multicast Group Address: 239.225.76.55 RTP Multicast TTL: 15 | RTCP port for audio: Rtp Packet Size: TP Multicast Settings Enable RTP Multicast RTP Multicast Video Pol | 5503 16384 t1: 5100 | Note: RTCP port for audio must be a valid port number. |
| R I R MUNICARI L'IOUD ADDIARS' 1000 005 70 55 | RTP Multicast Group Address: 239,225,76,55 RTP Multicast TTL: 15 | RTCP port for audio: Rtp Packet Size: TP Multicast Settings Enable RTP Multicast RTP Multicast Video Por RTP Multicast Audio Por | 5503 16384 11: 5100 11: 5102 | Note: RTCP port for audio must be a valid port number. |
| | RTP Multicast TL: 15 | RTCP port for audio: Rtp Packet Size: TP Multicast Settings Enable RTP Multicast RTP Multicast Video Poi RTP Multicast Audio Poi RTP Multicast Video Poi | t1: 5100 t1: 5102 t2: 5104 | Note: RTCP port for audio must be a valid port number. |
| RTP Multicast TTL: 15 | | RTCP port for audio: Rtp Packet Size: TP Multicast Settings Enable RTP Multicast RTP Multicast Video Por RTP Multicast Audio Por RTP Multicast Video Por RTP Multicast Video Por | t1: 5100 t1: 5102 t2: 5104 dress: 239.225 | Note: RTCP port for audio must be a valid port number. (1448-16384) |
| | | RTCP port for audio: Rtp Packet Size: TP Multicast Settings Enable RTP Multicast RTP Multicast Video Pol RTP Multicast Audio Pol RTP Multicast Video Pol RTP Multicast Group Ad RTP Multicast TTL: | t1: 5100 t1: 5102 t2: 5104 dress: 239.225. 15 | Note: RTCP port for audio must be a valid port number. (1448-16384) |
| | | RTCP port for audio: Rtp Packet Size: TP Multicast Settings Enable RTP Multicast RTP Multicast Video Por RTP Multicast Audio Por RTP Multicast Video Por RTP Multicast Group Ad RTP Multicast TTL: | 5503 16384 16384 11: 5100 11: 5102 12: 5104 dress: 239,225. 15 | Note: RTCP port for audio must be a valid port number. (1448-16384) |
| | | RTCP port for audio: Rtp Packet Size: TP Multicast Settings Enable RTP Multicast RTP Multicast Video Por RTP Multicast Audio Por RTP Multicast Video Por RTP Multicast Video Por RTP Multicast TrL: | 5503 16384 11: 5100 11: 5102 12: 5104 dress: 239.225. 15 | Note: RTCP port for audio must be a valid port number. (1448-16384) |
| OK | OK | RTCP port for audio: Rtp Packet Size: TP Multicast Settings Enable RTP Multicast RTP Multicast Video Pol RTP Multicast Audio Pol RTP Multicast Video Pol RTP Multicast Group Ad RTP Multicast TTL: | 5503 16384 11: 5100 11: 5102 12: 5104 dress: 239,225, 15 0K | Cancel Note: RTCP port for audio must be a valid port number. (1448-16384) |

changed unless there is a specific reason to do so.

HTTP Port Settings

The HTTP port number is used access the camera via the HTTP protocol.

The LiveView Port number is used to transmit live-view information.

RTSP Settings

Real-Time Streaming Protocol (RTSP) is a protocol used to establish and control media sessions between end points.

You may change the access name for stream 1, stream 2, the RTSP port number, the RTP port for video, the RTCP port for video, RTP port for audio, and RTCP port for audio.

Note: The RTP port number must be an even number. After entering the RTP port number, the RTCP port number will automatically be set to the RTP port number + 1.

RTP Multicast Settings

Tick Enable RTP Multicast to set up multicast via the RTP protocol. The RTP Multicast video/audio port and group address can also be set.

Click **OK** to save or **Cancel** to abort the changes before you leave the page.

UpnP

| Live View Settings Logou | ut Help | | | | admin | 2014-05-13 | 15:19:02 |
|------------------------------|----------------|---------|----|--------------------|-------|------------|----------|
| Seneral | Network > UPnP | | | | | | |
| S Network | UPnP Settings | | | | | | |
| Network Configuration | Enable UPnP | | | | | | |
| Port Settings | Friendly Name: | CAM4311 | | | | | |
| >UPnP | Interval: | 100 | | [10 Sec - 300 Sec] | | | |
| Wifi | | | | | | | |
| SNMP | | | | | | | |
| HTTPS | | | | | | | |
| | | | ОК | Cancel | | | |
| Video & Audio | | | | | | | |
| » PTZ | | | | | | | |
| >> Recording | | | | | | | |
| >> Event Notification | | | | | | | |
| >> System | | | | | | | |
| | | | | | | | |

Universal plug and play (UPnP) is a protocol that simplifies the implementation of networks by allowing new hardware to connect seamlessly

to a network. The settings for this feature can be found under Network > UPnP.

To enable UPnP, first check the **Enable UPnP** box. If you wish to change the default values, there are two fields that can be edited.

- Friendly Name An identifier for the camera on the network.
- Interval The time between camera-sent UPnP updates.

Click **OK** to activate UPnP or **Cancel** to abort the changes before you leave the page. Once activated, the camera will be visible to other devices on the network.

Note: If the computer does not have UPnP installed, you can add it by going to Start > Control Panel > Add or Remove Programs. In the Add or Remove Programs page, select Add/Remove Windows Components > Networking Services and click Details. Select UPnP from the popup window, and OK out to install UPnP services.

Wifi

Wifi functionality is not supported for CAM3xxx series.

| Live View Settings Logou | ut Help | admin 2014-05-13 15:23:10 |
|------------------------------|----------------------------|---------------------------|
| » General | Network > WiFi Setting | |
| ➤ Network | | |
| Network Configuration | | |
| Port Settings | | |
| UPnP | | |
| >Wifi | | |
| SNMP | WiEi function is not suppo | ortedi |
| HTTPS | with Hundron is not suppo | nicu: |
| >> Video & Audio | | |
| » PTZ | | |
| » Recording | | |
| >> Event Notification | | |
| » System | | |
| | | |

SNMP

| Live View Settings Logou | ut Help | | | admin 2014-05-13 15:24:32 |
|------------------------------|---------------------------------|-------|--------|---------------------------|
| >> General | Network > Network Configuration | | | |
| Vetwork | SNMP Config | | | |
| Network Configuration | Enable SNMPv1, SNMPv2c | | | |
| Port Settings | Read/Write community: | | | |
| UPnP | Read only community: | | | |
| Wifi | | | | |
| >SNMP | Enable SNMPv3 | | | |
| HTTPS | Read/Write Security Name: | | | |
| | Authentication Type: | MD5 | | |
| >> Video & Audio | Authentication Password: | | | |
| » PTZ | Encryption Type | AES | | |
| >> Recording | Encryption Password: | | | |
| >> Event Notification | Read Only Security Name: | | | |
| >> System | Authentication Type: | SHA 🗸 | | |
| Jystem | Authentication Password: | | | |
| | Encryption Type | DES 🗸 | | |
| | Encryption Password: | | | |
| | | | | |
| | | | | |
| | | | | |
| | | ОК | Cancel | |

The Simple Network Management Protocol is an application layer protocol that facilitates the exchange of management information between network devices. It helps network administrators to remotely manage network devices and find, solve network problems with ease. The settings for this feature can be found under **Network > SNMP**.

• The SNMP consists of the following three key components:

1. Manager: Network-management station (NMS), a server which executes applications that monitor and control managed devices.

2. Agent: A network-management software module on a managed device which transfers the status of managed devices to the NMS.

3. Managed device: A network node on a managed network. For example: routers, switches, bridges, hubs, computer hosts, printers, IP telephones, network cameras, web server, and database.

Before configuring SNMP settings on the this page, please enable your NMS first.

To enable SNMP, check the Enable SNMPv1, SNMPv2c box.

Select this option and enter the names of Read/Write community and Read Only community according to your NMS settings. For example: 111/222.

| SNMP Config | | |
|------------------------|-----|--|
| Enable SNMPv1, SNMPv2c | | |
| Read/Write community: | 111 | |
| Read only community: | 222 | |

check the Enable SnMPv3

This option contains cryptographic security, a higher security level, which allows you to set the Authentication password and the Encryption password.

- Security name: According to your NMS settings, choose Read/Write or Read Only and enter the community name.
- Authentication type: Select MD5 or SHA as the authentication method.
- Authentication password: Enter the password for authentication (at least 8 characters).
- Encryption password: Enter a password for encryption (at least 8 characters).

Click **OK** to activate SNMP or **Cancel** to abort the changes before you leave the page. Once activated, the camera will be visible to other devices on the network.

HTTPS (for certain models only)

| Live View Settings Logou | t Help admin 2014-05-13 15:52:33 |
|------------------------------|--|
| » General | Network > Network Configuration |
| S Network | Installed Certificate |
| Network Configuration | Create Self-Signed Certificate Automatically |
| Port Settings | Create Self-Signed Certificate Manually |
| UPnP | Create |
| Wifi | |
| SNMP | Certificate Info |
| >HTTPS | Subject Name: |
| | State: |
| >> Video & Audio | |
| » PTZ | |
| » Recording | Remove |
| >> Event Notification | |
| » System | |
| | |

Hypertext Transfer Protocol Secure (HTTPS) is a communications protocol for secure communication over a computer network, with especially wide deployment on the internet.

Select **Create Self-Signed Certificate Automatically** and click **"Create"** to have the certification authority automatically. Once succeed, you will see the **Certificate Info** in the next section of this web page.

| Live View Settings Logou | t Help | admin 2014-05-13 15:56 | 6:08 |
|------------------------------|---------------------------------|--|------|
| >> General | Network > Network Configuration | | |
| S Network | Installed Certificate | | |
| Network Configuration | Create Self-Signed Certif | icate Automatically | |
| Port Settings | Create Self-Signed Certif | icate Manually | |
| UPnP | | Create | |
| Wifi | | | |
| SNMP | Certificate Info | | |
| >HTTPS | Subject Name: | C=TW,ST=Asia,L=Asia,O=PROPHET Technology Inc.,OU=PROPHET Technology Inc. | |
| | | CN=ipcam@surveon.com,V=3650 | |
| >> Video & Audio | State: | active | |
| » PTZ | | | |
| » Recording | | Remove | |
| >> Event Notification | | | |
| >> System | | | |

Click "Remove" to delete the set certificate if you wish to change the setting.

Or **Select Self-Signed Certificate Manually** and click **"Create"** to have the certification authority manually. A window will be prompted for creating certificate information.

| Certificate Setting | |
|-----------------------|-------------------------|
| Country: | TW |
| State Or Province: | Asia |
| Locality: | 3650 |
| Organization Unit: | PROPHET Technology Inc. |
| Common Name: | 172.30.10.109 |
| Validity(1~9999Days): | TW |
| | |
| ОК | Cancel |

Edit the information in the files if necessary and click "OK" to confirm the setting. Once succeed, you will see the **Certificate Info** in the next section of this web page.

| Live View Settings Logou | it Help | admin 2014-05-13 16:07:37 |
|------------------------------|---------------------------------|--|
| >> General | Network > Network Configuration | n |
| S Network | Installed Certificate | |
| Network Configuration | Create Self-Signed Cert | ficate Automatically |
| Port Settings | Create Self-Signed Cert | ificate Manually |
| UPnP | | Create |
| Wifi | | |
| - MAMP | Certificate Info | |
| >HTTPS | Subject Name: | C=TW,ST=Asia,L=3650,O=PROPHET Technology Inc.,OU=PROPHET Technology Inc. |
| | | CN=ipcam@surveon.com,V=TW |
| >> Video & Audio | State: | active |
| » PTZ | | |
| >> Recording | | Remove |
| >> Event Notification | | |
| » System | | |

Click "Remove" to delete the set certificate if you wish to change the setting.

Video & Audio Settings

Video and audio are the heat of a network camera's functionality. The settings for video and audio can be found under **Settings > Video & Audio**. Under this section, you can access basic video and audio settings, video appearance parameters, video stream settings, as well as audio parameters.

| Live View Settings Logo | ut Help | | | | admin | 2014-05-16 15:33:48 |
|-----------------------------|--------------------------------|-------------------------|--------|-------------|-----------|---------------------|
| » General | Video & Audio > Basic Settings | | | | | |
| >> Network | Basic Settings | | | | | |
| Video & Audio | Video Orientation: | Elip | | Mirror | | |
| Basic Settings | BNC Out: | ○ NTSC | | PAL | O Disable | |
| Image Appearance | Stream Buffer | Off | | ⊖ On | | |
| Video Streams | FPS\BitRate Display | Off | | ⊖ On | | |
| ROI | Text Overlay Settings | | | | | |
| Privacy Mask | Include Date | Include Time | | Camera Name | | |
| Audio | Video Codec Setting | | | | | |
| » PTZ | H.264 Profile: | O BaseLine | ○ Main | High | | |
| » Recording | | | | | | |
| >> Event Notification | | | | | | |
| >> System | | ОК | | Cancel | | |

Basic Settings

Basic settings pertain to simple live-view tweaks. These parameters can be found under Video & Audio > Basic Settings.

• Video Orientation

In certain mounting situations, the default video output may not be oriented correctly. This setting allows you to change the orientation of the output video.

- Flip flips the image vertically.
- Mirror flips the image horizontally.

BNC Out

- NTSC
- o PAL
- o Disable

• Stream Buffer

- o Off
- o On

• FPS\BitRate Display

- o Off
- o On

Text Overlay Setting

The text overlay involves is the text displayed in the black bar at the top of the output screen. You can display multiple text messages at the same time. (Only the camera name will display if the resolution is 160 x 120).

- Include Date Displays the current date.
- Include Time Displays the current time.
- Camera Name Displays the name of the camera.

Video Codec Setting

H.264 profile can be further set to:

- **BaseLine** restricts the encoder to certain basic features only for mobile applications.
- Main is used for standard-definition digital TV broadcasts that use the MPEG-4 format as defined in the DVB standard.
- High is used for high-definition broadcasts and disc storage applications.

Image Appearance Settings

These settings, found under Video & Audio > Image Appearance, deal with the video output of the camera. There are two tabs, *Image Attributes* and *Sensor Configuration*, as well as *Advanced Settings*.

| >> Network | Image Appearence Setting | js | | | | | |
|-----------------------|--------------------------|-----------|----------|----------------|-----|----------------------|-----|
| Video & Audio | 2 | 012-08-01 | 15:16:01 | Image Adjustme | ent | | |
| Basic Settings | | | | Image Attribut | tes | Sensor Configuration | L., |
| >Image Appearance | | | | Brightness: | _ | | 50 |
| Video Streams | | | | | | | |
| Audio | | | | Saturation: | | | 60 |
| » PTZ | | | | Contrast: | | | 65 |
| >> Recording | | | | Sharpness : | | | 5 |
| >> Event Notification | | | | | | | |
| >> System | | | | | | | |
| | Advanced Settings | | | | | | |
| | Lens Type: | Manual | • | | | | |
| | Frequency: | 60Hz | • | | | | |
| | Denoise Level | | 15 | | | | |
| | White Balance: | AWB | • | | | | |
| | Max Shutter Speed: | 1/30 | • | | | | |
| | Min Shutter Speed: | 1/100000 | • | | | | |
| | AGC | | 50 | | | | |
| | Day/Night Mode: | Auto | • | | | | |
| | Night Threshold: | 10 | Day to N | light (0~254) | | | |
| | Day Threshold: | 20 | Night to | Day (1~255) | | | |

Image Appearance (for CAM3351)

These parameters deal with the image lighting and color. All parameters are values ranging from (0) to (100). Dragging the slider to the right increases the value, while dragging to the left lowers the value. The adjustments will be displayed in real-time in the window to the left of the sliders.

• Brightness - Adjusts the perceived light intensity of the image.

Note: In certain situations, the sensor may experience banding issues. In these cases, please raise the brightness.

- Saturation Adjusts the colorfulness of a color relative to its own brightness.
- **Contrast** Adjusts the overall difference in the light vs dark areas.
- Sharpness Adjusts the edge contrast of the image.

Sensor Configuration

| Image Adjustment | | | |
|------------------|--------------|----------|---|
| Image Attributes | Sensor Confi | guration | L |
| D-WDR: | © Off | On | |
| D-WDR Level: | | _ | 1 |

The Sensor Configuration can be accessed by clicking on the tab to the right of the Image Attributes tab. The following parameters can be changed:

- D-WDR Specifies if the wide dynamic range (WDR) function is activated. If activated, the WDR function will attempt to preserve detail at contrast extremes.
 - D-WDR Level- Specifies the WDR correction level ranging from 1 (least) to 10 (most).

Advanced Settings

| Advanced Settings | | |
|--------------------|----------|----------------------|
| Lens Type: | Manual | • |
| Frequency: | 60Hz | • |
| Denoise Level | | 15 |
| White Balance: | AWB | • |
| Max Shutter Speed: | 1/30 | • |
| Min Shutter Speed: | 1/100000 | • |
| AGC | | 50 |
| Day/Night Mode: | Auto | • |
| Night Threshold: | 10 | Day to Night (0~254) |
| Day Threshold: | 20 | Night to Day (1~255) |
| | | |
| | | |
| | | |
| | ОК | Default |

- Lens Type Chooses the lens type installed on the camera.
 - **Fix Lens** -A fixed lens is installed, and DC-iris adjustments are not possible.
 - **DC-IRIS** A lens with an adjustable DC-iris is installed, and connected to the port at the back of the camera.
- Frequency The user can choose to compensate for 50Hz or 60Hz lighting.
- **Denoise** Removes video noises.
- White Balance This setting allows users to choose the color balancing method used.
 - AWB Automatically chooses white level.
 - **MWB** The user must specify the red and blue gain levels to achieve the correct white level.
 - **R** Gain The gain applied to the red video channel.
 - **B** Gain The gain applied to the blue video channel.
- Max Shutter Speed -users can choose the Max Shutter Speed from 1/30, 1/60, 1/120, 1/1000 and 1/10000.
- Min Shutter Speed -- users can choose the Min Shutter Speed from 1/30, 1/60, 1/120, 1/250, 1/500, 1/750, 1/1000, 1/1500, 1/2000, 1/10000 and 1/100000.
- AGC Gain Automatic gain control (AGC) adjusts the video gain level to a variety of inputs. This setting provides a baseline value for the AGC. Values higher than this will be darkened, and values that are lower will be brightened. AGC should be adjusted so that the area of interest is best lit.
- **Day/Night Mode** Sets the day (color) and night (black and white, IR cut filter off where applicable.) Night mode sacrifices color information to produce a clear picture with less light.
 - Auto The camera will determine when the light levels require a switch.
 - Night Threshold The threshold which the camera will switch to night mode.
 - Day Threshold The threshold which the camera will switch back to day mode.

- Day mode Forces day mode.
 - Chroma Suppress Reduces the false color phenomena.
- Night mode Forces night mode.
- Schedule for day mode Allows the user to set a time for day/night transitions.
 - From: The time, in hours and minutes, when the camera will be in day mode.
 - To: The time, in hours and minutes, when the camera will switch to night mode.

Click **OK** to save or **Cancel** to abort the changes before you leave the page.

Image Appearance (for CAM3361)

| Live View Settings Logou | ut Help | | | | | admin | 2013-10-29 13:21 |
|------------------------------|-------------------------|----------------|------------------|----------|----------------------|-----------|------------------|
| » General | Video & Audio > Image A | ppearance | | | | | |
| >> Network | Image Appearence Se | ttings | | | | | |
| Video & Audio | | 2013-10- | 29 13:21 | :34 | Day/Night Mode Adjus | st | |
| Basic Settings | | | | | Mode Panel | | |
| ►Image Appearance | | | | | Day/Night Mode: | Auto mode | ~ |
| Video Streams | | | | | Night Threshold: | 10 | (0~254) OK |
| Audio | | | | | Day Threshold : | 20 | (1~255) OK |
| » PTZ | | | | | D IDIO: | Manual | |
| » Recording | | | | | P-IRIS: | Jivianuai | ~ |
| >> Event Notification | | | | | P-IRIS level: | | 50 |
| 2 Pystem | | | | | | | |
| | 0.0 |) NU-LA | | | | | |
| | Image Attributes | Basic Settings | Advance Settings | Sensor A | Attributes | | |
| | | | | 50 | | | |
| | Brightness: | | | - 50 | | | |
| | Contrast: | | | | | | |
| | Saturation: | | | 65 | | | |
| | Sharpness: | _ | | - 70 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | Default | | | |

Day/Night Mode Adjust

Mode Panel

Day/Night Mode - Sets the day (color) and night (black and white, IR cut filter off where applicable.) Night mode sacrifices color information to produce a clear picture with less light.

• Auto - The camera will determine when the light levels require a switch.

| Day/Night Mode Adjus | st |
|----------------------|---------------|
| Mode Panel | |
| Day/Night Mode: | Auto mode |
| Night Threshold: | 10 (0~254) OK |
| Day Threshold : | 20 (1~255) OK |
| P-IRIS: | Manual 🔽 |
| P-IRIS level: | 50 |
| | |
| | |

- Night Threshold The threshold which the camera will switch to night mode.
- Day Threshold The threshold which the camera will switch back to day mode.
- P-IRIS
 - Auto Adjust the P-Iris automatically.
 - P-Iris Sensitivity
 - P Iris Level
 - **Manual** -Adjust the P-Iris manually.
 - P Iris Level

• Day mode - Forces day mode.

| Day/Night Mode Adju | st |
|---------------------|----------|
| Mode Panel | |
| Day/Night Mode: | Day mode |
| Chroma Suppress: | 75 |
| P-IRIS: | Manual 🔽 |
| P-IRIS level: | 50 |
| | |
| | |
| | |

- Chroma Suppress Reduces the false color phenomena.
- P-IRIS
 - Auto Adjust the P-Iris automatically.
 - P-Iris Sensitivity
 - P Iris Level
 - **Manual** -Adjust the P-Iris manually.
 - P Iris Level

• **Night mode** - Forces night mode.

| st | |
|------------|----------------------------|
| | |
| Night mode | ~ |
| Manual | ~ |
| | 50 |
| | |
| | |
| | |
| | st Night mode Manual |

- P-IRIS
 - Auto Adjust the P-Iris automatically.
 - P-Iris Sensitivity
 - P Iris Level
 - **Manual** -Adjust the P-Iris manually.
 - P Iris Level

• Schedule for day mode - Allows the user to set a time for day/night transitions.

| st |
|-------------------------|
| |
| Schedule for day mode 🗸 |
| 6:0 (HH:MM) OK |
| 18:0 (HH:MM) OK |
| Manual 🔽 |
| 50 |
| |
| |

- From: The time, in hours and minutes, when the camera will be in day mode.
- $\circ\,$ To: The time, in hours and minutes, when the camera will switch to night mode.
- P-IRIS
 - Auto Adjust the P-Iris automatically.
 - P-Iris Sensitivity
 - P Iris Level
 - **Manual** -Adjust the P-Iris manually.
 - P Iris Level

Image Appearance (for CAM3371)

| Live View Settings Logout | Help | | | | | admin | 2013-12-23 10:44:09 |
|-------------------------------|--------------------------|----------------|------------------|---------------|--------------------|-------------------|---------------------|
| >> General | Video & Audio > Image Ap | opearance | | | | | |
| >> Network | Image Appearence Set | ttings | | | | | |
| >> Video & Audio | | | | Da | ay/Night Mode Adju | ist | |
| >> PTZ | | | | | Mode Panel | | |
| Secording | | | | | Day/Night Mode: | Auto mode | ~ |
| Recording Basic Settings | | | | | Night Threshold: | 10 | (0~254) OK |
| Recorded File Management | | | | | Day Threshold : | 20 | (1~255) OK |
| | | | | | One Push AF Nea | r << < | > >> Far |
| | | | | | | Wide | 3 Tele |
| | | | | | Open-Iris | Focus Calibration | Calibration |
| >> Event Notification | O Day 🔘 | Night | | | | | |
| >> System | Image Attributes | Basic Settings | Advance Settings | Sensor Attrib | utes | | |
| | Back Light: | Disable (| O BLC O HSBLC | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | Default | | | |

Day/Night Mode Adjust

Mode Panel

Day/Night Mode - Sets the day (color) and night (black and white, IR cut filter off where applicable.) Night mode sacrifices color information to produce a clear picture with less light.

• Auto - The camera will determine when the light levels require a switch.

| Day/Night Mode Adjust | |
|------------------------------|-----------------|
| Mode Panel | |
| Day/Night Mode: Auto mode | ~ |
| Night Threshold: 10 | (0~254) OK |
| Day Threshold : 20 | (1~255) OK |
| One Push AF Near << < | > >> Far |
| Wide | 3 Tele |
| ✓ Open-Iris Focus Calibratio | on: Calibration |

- Night Threshold The threshold which the camera will switch to night mode.
- Day Threshold The threshold which the camera will switch back to day mode.
- One Push AF
 - Focus can be arranged to near or far.
 - Wide and Tele can also be arranged to have a better range.
 - Focus Calibration can be achieved by pressing the "Calibration" to have a best focus result.

• Day mode - Forces day mode.

Day/Night Mode Adjust

| Mode Panel | |
|-----------------|--------------------------------|
| Day/Night Mode: | Day mode |
| Chroma Suppres | s: 75 |
| One Push AF Nea | ar << < >>> Far |
| | Wide Tele |
| Open-Iris | Focus Calibration: Calibration |
| | |

- Chroma Suppress Reduces the false color phenomena.
- One Push AF
 - Focus can be arranged to near or far.
 - \circ Wide and Tele can also be arranged to have a better range.
 - Focus Calibration can be achieved by pressing the "Calibration" to have a best focus result.

• **Night mode** - Forces night mode.

Day/Night Mode Adjust

| Mode Panel | | |
|-----------------|--------------------|------------|
| Day/Night Mode: | Night mode | > |
| One Push AF Nea | r << < > | >> Far |
| | Wide | Tele |
| Open-Iris | Focus Calibration: | alibration |
| | | |
| | | |

- One Push AF
 - Focus can be arranged to near or far.
 - Wide and Tele can also be arranged to have a better range.
 - Focus Calibration can be achieved by pressing the "Calibration" to have a best focus result.

• Schedule for day mode - Allows the user to set a time for day/night transitions.

| Day/Night Mode Adj | ust | |
|--------------------|----------------------|------------|
| Mode Panel | | |
| Day/Night Mode: | Schedule for day mod | e |
| From: | 6:0 (HH:MM) | ок |
| To: | 18:0 (HH:MM) | ок |
| One Push AF Nea | ar << < > | >> Far |
| | Wide | 16 Tele |
| ✓ Open-Iris | Focus Calibration: | alibration |

- From: The time, in hours and minutes, when the camera will be in day mode.
- $\circ\,$ To: The time, in hours and minutes, when the camera will switch to night mode.
- One Push AF
 - Focus can be arranged to near or far.
 - Wide and Tele can also be arranged to have a better range.
 - Focus Calibration can be achieved by pressing the "Calibration" to have a best focus result.

Image Attributes

| 🖲 Day 🛛 🔿 | Night | | |
|------------------|----------------|------------------|-------------------|
| Image Attributes | Basic Settings | Advance Settings | Sensor Attributes |
| Brightness: | | | 50 |
| Contrast: | _ | | 30 |
| Saturation: | _ | | 65 |
| Sharpness: | _ | | 70 |
| | | | |

These parameters deal with the image lighting and color. All parameters are values ranging from (0) to (100). Dragging the slider to the right increases the value, while dragging to the left lowers the value. The adjustments will be displayed in real-time in the window to the left of the sliders.

• Brightness - Adjusts the perceived light intensity of the image.

Note: In certain situations, the sensor may experience banding issues. In these cases, please raise the brightness.

- **Contrast** Adjusts the overall difference in the light vs dark areas.
- Saturation Adjusts the colorfulness of a color relative to its own brightness.
- Sharpness Adjusts the edge contrast of the image.

Basic Settings

| • Day | Night | | | |
|------------------|-------------------------|------------------|-------------------|--|
| Image Attributes | Basic Settings | Advance Settings | Sensor Attributes | |
| AGC | _ | | 45 | |
| Exposure | AUTO | | \checkmark | |
| Max Shutter Spe | ed: 1/25 | | ~ | |
| Min Shutter Spee | ed: 1/50000 | | ~ | |
| Slow Shutter: | OFF | ○ x2 (| ⊃ x4 | |
| | | | | |

- AGC Gain Automatic gain control (AGC) adjusts the video gain level to a variety of inputs. This setting provides a baseline value for the AGC. Values higher than this will be darkened, and values that are lower will be brightened. AGC should be adjusted so that the area of interest is best lit.
- Exposure Sets how the camera captures images. Longer shutter times allow more light into the sensor, resulting in a cleaner picture, however longer shutter times can result in motion blur.
- Max Shutter Speed users can choose the Max Shutter Speed from 1/30, 1/60, 1/120, 1/1000 and 1/10000.
- Min Shutter Speed users can choose the Min Shutter Speed from 1/30, 1/60, 1/120, 1/250, 1/500, 1/750, 1/1000, 1/1500, 1/2000, 1/10000 and 1/100000.
 - \circ Slow Shutter Slows the shutter speed to 1/2 or 1/4.

Advanced Settings

| 🖲 Day 🛛 🔿 | Night | | | | |
|------------------|----------------|------------------|-------------------|--|--|
| Image Attributes | Basic Settings | Advance Settings | Sensor Attributes | | |
| Frequency: | 50Hz | | × | | |
| Denoise | Off | | \checkmark | | |
| White Balance: | AWB | | \checkmark | | |
| DWDR: | Off | | \checkmark | | |
| LSC: | On | | \checkmark | | |
| DEFOG: | Off | | \checkmark | | |
| | | | | | |

- Frequency The user can choose to compensate for 50Hz or 60Hz lighting.
- **Denoise** Removes video noises.
- White Balance This setting allows users to choose the color balancing method used.
 - **AWB** Automatically chooses white level.
 - **MWB** The user must specify the red and blue gain levels to achieve the correct white level.
 - **R** Gain The gain applied to the red video channel.
 - **B** Gain The gain applied to the blue video channel.
- DWDR Specifies if the wide dynamic range (WDR) function is activated. If activated, the WDR function will attempt to preserve detail at contrast extremes.
- LSC(Lens Shading Compensation) Lens shading is the reduction in light falling on the image sensor away from the center of the image caused by physical obstructions. To suppress the lens shading effect on the corners is called the lens shading compensation. DEFOG-Adjusts picture quality during bad weather conditions.
- **Defog** Adjusts picture quality during bad weather conditions.

Sensor Attributes

| • Day | Night | | | |
|------------------|----------------|------------------|-------------------|--|
| Image Attributes | Basic Settings | Advance Settings | Sensor Attributes | |
| Back Light: | O Disable | O BLC | | |
| HSBLC Grid: | Off | | \checkmark | |
| HSBLC Level: | | | 50 | |
| | | | | |

- Black light
 - BLC (Backlight compensation) Adjusts video gain to automatically correct the exposure of objects that are strongly backlit. This brightens the image, at the cost of overexposing areas of high illumination.
 - BLC Area View Users can choose to view the area for BLC effect. When it is opened, you will see the grids showing on the live view screen.
 - BLC Level
 - HSBLC (High Suppression Backlight Compensation) Backlight compensation helps resolve detail in darker areas even when brightly lit objects are in view. Highlight suppression goes further, darkening full white areas to achieve optimum video quality.
 - HSBLC Grid Users can choose to view the areas for HSBLC effect. When it is opened, you will see four squares showing on the live view screen.
 - HSBLC Level

Image Appearance (for CAM3471V/-M/-MP, CAM3571M/-VP, CAM3371EV/-EM, CAM3351R4/-R6, CAM3361LV, CAM3461LV)

| Video & Audio > Image Ap | pearance | | | | | | |
|--------------------------|-----------------|----------------|---------------|---------------------|--------------|-----------|--------|
| Image Appearence Set | tings | | | | | | |
| | 2013-10 |)-30 10: | 27:32 | Mode Panel | | | |
| | | | | Day/Night Mode: | Day mode | ~ | |
| | | | | Chroma Suppress: | On | ~ | |
| | | | | Suppress Level: | | | 60 |
| | | | | Suppress Start: | | | 40 |
| | | | | Suppress End: | | | 20 |
| | | | | | | | |
| Day Drafile | O Night Drofile | | | | | | |
| Image Adjust | Exposure | Luminance Ctrl | White Balance | Noise Reduction | Edge Enhance | Lens Corr | ection |
| Brightness: | _ | | 45 | | | | |
| Contrast: | _ | | 45 | | | | |
| Gamma Mode: | ● De | efault 🔿 User- | defined | | | | |
| Saturation: | _ | | 35 | | | | |
| Sharpness: | _ | | | | | | |
| | | | | | | | |

Model Panel

- Day/Night Mode Sets the day (color) and night (black and white, IR cut filter off when applicable.) Night mode sacrifices color information to produce a clear image quality.
 - Auto mode- The camera will determine when to switch.
 - Day mode Forces day mode.
 - Chroma Suppress Reduces the false color phenomena.
 - Suppress Level The strength of spatial frequency can be adjusted from 0 to 100.
 - Suppress Start Suppression can be started from 0 to 100.
 - Suppress End -Suppression can be ended from 0 to 100.
 - Night mode Forces night mode.

• Schedule for day mode - Allows users to set a day/night transition time.

Day Profile/Night Profile

| Day Profile | O Night Profile | | | | |
|--------------|-------------------------|---------------|-----------------|--------------|-----------------|
| Image Adjust | Exposure Luminance Ctrl | White Balance | Noise Reduction | Edge Enhance | Lens Correction |
| Brightness: | | 45 | | | |
| Contrast: | | 45 | | | |
| Gamma Mode: | ● Default ○ User-de | efined | | | |
| Saturation: | | 35 | | | |
| Sharpness: | | 80 | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | Default | | | |

The parameters deal with the image lighting and color. Dragging the slider to increase and lower the value. The adjustments will be shown in the preview window.

Image Adjust

• Brightness - Adjusts the perceived light intensity of the image.

Note: In certain situations, the sensor may experience banding issues. In these cases, please raise the brightness.

- **Contrast** Adjusts the overall difference in the light vs dark areas.
- Gamma Adjusts the color error of the image.
- Saturation Adjusts the colorfulness of a color relative to its own brightness.
- Sharpness Adjusts the edge contrast of the image.

Exposure

| Da | ay Profile O Night age Adjust Expose | t Profile ure Luminance Ctrl | White Balance | Noise Reduction | Edge Enhance | Lens Correction |
|----|--|----------------------------------|---|-----------------|--------------|-----------------|
| | Frequency | 60Hz | | | _ | |
| | requency. | 0012 | | | | |
| E | Exposure Mode: | ○ Fixed ● | Auto | | | |
| N | Max Shutter Speed: | 1/30 | ~ | | | |
| I | Min Shutter Speed: | 1/100000 | \checkmark | | | |
| | | | _ | | | |
| | WDR: | OFF O DWDR | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | Default | | | |
| | Max Shutter Speed: Min Shutter Speed: WDR: | 1/30 1/100000 • OFF O DWDR | ✓ ✓ HDR | | | |

The parameters deal with the image lighting and color. Dragging the slider to increase and lower the value. The adjustments will be shown in the preview window.

- Frequency -Reduces flickering caused by the difference in frequency of the system and the environment lighting. The user can choose to compensate for a 50Hz or 60Hz lighting.
- Exposure Mode -Sets how the camera captures images. Longer shutter times allow more light into the sensor, resulting in a cleaner picture, however longer shutter times can result in motion blur.
 - Fixed
 - Auto -The camera will automatically change the shutter speed and gain balance between image quality and frame rate when there is insufficient light to preserve both.
- Max Shutter Speed -Can be selected from 1/1 to 1/1000000.
- Min Shutter Speed -Can be selected from 1/1 to 1/1000000.
- WDR Can be set as off to disable this functionality, set as DWDR or HDR (for CAM3471V/-M/-P only) to enable the functionalities.

Luminance Ctrl

| Day Profile | O Night Profile | | | | | |
|---------------|-----------------|----------------|---------------|-----------------|--------------|-----------------|
| Image Adjust | Exposure | Luminance Ctrl | White Balance | Noise Reduction | Edge Enhance | Lens Correction |
| Auto Iris: | ON | | ~ | | | |
| Target Lumina | ance: | - W- | 109 | | | |
| AGC | _ | | 53 | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | ĺ | Default | | | |

- Auto Iris Adjusts the iris automatically.
- Target Luminance Adjusts the lightness of the image.
- AGC Automatic gain control (AGC) adjusts the video gain level to a variety of inputs. This setting provides a baseline value for the AGC. Values higher than this will be darkened, and values that are lower will be brightened. AGC should be adjusted so that the area of interest is best lit.

White Balance

| Image Adjust | Exposure | Luminance Ctrl | White Balance | Noise Reduction | Edge Enhance | Lens Correct |
|----------------|----------|----------------|---------------|-----------------|--------------|--------------|
| White Balance: | MWB | | ~ | | | |
| R Gain: | _ | -11- | 50 | | | |
| B Gain: | _ | | 60 | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | ĺ | Default | | | |

This setting allows users to choose the color balancing method used.

- AWB Automatically chooses white level.
- MWB The user must specify the red and blue gain levels to achieve the correct white level.
 - **R Gain** The gain applied to the red video channel.
 - **B Gain** The gain applied to the blue video channel.

Noise Reduction

| Day Profile Night | Profile | White Delegat | | Edu Estara | |
|-----------------------|--------------------|---------------|-----------------|--------------|-----------------|
| Image Adjust Exposi | ure Luminance Ctri | White Balance | Noise Reduction | Edge Enhance | Lens Correction |
| De-noise Mode | BLEND | ~ | | | |
| Normal Strength: | | 164 | | | |
| Motion Adaptive: | OFF | ~ | | | |
| Current Weight: | | 9 | | | |
| Reference Strength: | | 7 | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | Default | | | |
| | | | | | |

- **De-noise Mode** Removes video noises.
 - **OFF** Can be set to disable this functionality
 - 2DNR Reduces noises.
 - **3DNR** Reduces noises in low light conditions and even with moving objects.
 - **BLEND** Blends 2DNR and 3DNR to create clear images.
- Normal Strength Ranges from 0 to 164.
- Motion Adaptive Sets as ON to Deinterlace
- Current Weight Ranges from 0 to 9.
- **Reference Strength** -Ranges from 0 to 7.
• Edge Enhance

| Day Profile Image Adjust | Night Profile Aposure Luminance Ctrl White Balance Noise Reduction Edge Enhance Lens Correction |
|------------------------------|--|
| Noise Sensitivity: | 10 |
| Edge Strength Clip: | 10 |
| | |
| | |
| | |
| | Default |

- Noise Sensitivity Senses the noise.
- Edge Strength Clip Enhances the edges of the image.

Lens Correction

| Day Profile | light Profile | | | | |
|------------------|---------------------|-------------------|-----------------|--------------|----------------|
| Image Adjust E | posure Luminance Ct | trl White Balance | Noise Reduction | Edge Enhance | Lens Correctio |
| | | | | | |
| Lens Correction: | Disable | \checkmark | | | |
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| | | | | | |
| | | Default | | | |

Correct the barrel distortions and pincushion distortions of images while using wide-angle lenses.

| | out F Help | | | | admin | 2015-04-21 14.13.4 |
|--|---|--|--|-----------------------------------|------------|--------------------|
| >> General | Video & Audio > Image A | ppearance | | | | |
| | Image Appearance Se | ttings | | | | |
| >> Network | The second se | The state of the s | Day/Night | Setting F | ocus Panel | Lens Adjustmen |
| | - | | Smart S | hutter | Smart AE | Smart AF |
| 🖇 Video & Audio | | | | | | |
| Basic Settings | | | Day/Nig | nt Mode: 10 | ay mode | • |
| >Image Appearance | | | E Suppr | ia ess: | | 60 |
| Video Streams | - | | and the second | | | |
| Privacy Mask Settings | 1 | the second secon | Table Land | | | |
| Audio | | | _ | | | |
| | Second and an over 1 and 1 and 1 | | | | | |
| ₩ PTZ | | | | | | |
| >> PTZ | | | | | | |
| PTZ Recording | Oay Profile | Night Profile | | | | |
| PTZ Recording Event Notification | Day Profile Basic | Night Profile Advance | | | | |
| PTZ Recording Event Notification | Day Profile Basic Brightness: | Night Profile Advance 45 | Exposure Mode: | Auto | | |
| PTZ Recording Event Notification System | Day Profile Basic Brightness: Contrast | Night Profile Advance 45 | Exposure Mode: Max Shutter Spec | Auto d: 1/25 | > | |
| PTZ Recording Event Notification System | Day Profile Basic Brightness: Contrast: Saturation: | Night Profile Advance 45 | Exposure Mode: Max Shutter Spee Min Shutter Spee | Auto id: 1/25 d: 1/10000 | | |
| PTZ Recording Event Notification System | Day Profile Basic Brightness: Contrast: Saturation: Sharpness: | Night Profile Advance 45 | Exposure Mode: Max Shutter Spee Min Shutter Spee | Auto 1/25 d: 1/10000 | | |
| PTZ Recording Event Notification System | Day Profile Basic Brightness: Contrast: Saturation: Sharpness: AGC | Night Profile Advance 45 | Exposure Mode: Max Shutter Spee WDR: | Auto 1/25 d: 1/10000 Off | × × × | |

Image Appearance (for CAM3471HEM/3471HEV)

Day/Night Setting

- Day/Night Mode Sets the day (color) and night (black and white, IR cut filter off when applicable.) Night mode sacrifices color information to produce a clear image quality.
 - Auto mode- The camera will determine when to switch.
 - Day mode Forces day mode.
 - Chroma Suppress Reduces the false color phenomena.
 - Night mode Forces night mode.
 - Schedule for day mode Allows users to set a day/night transition time.
 - From Set the starting time for the scheduled day mode.
 - To Set the ending time for the scheduled day mode.
 - o Digital Input -
 - High Profile Switch to Day or Night mode when the DI status is high.
 - Low Profile -Switch to Day or Night mode when the DI status is low.

Day Profile/Night Profile

Selecting the Day Profile or the Night Profile according to the Day/Night Setting you have set: Day Profile for Day Setting and Night Profile for Night Setting. The parameters deal with the image lighting and color. The adjustments will be shown in the preview window. Use the **Default** button to have the settings back to the defaults.

| Day Profile | O Night Profile | | | | |
|---|-----------------|--|--|-------------------------|-------------|
| Basic | Advance | | | | |
| Brightness: Contrast: Saturation: Sharpness: | 45 55 65 | (0~100) (0~100) (0~100) (0~100) | Exposure Mode: Max Shutter Speed: Min Shutter Speed: WDD: | Auto 1/25 1/10000 |]]] |
| AGC | 60 | (0~100) | WDIX. | [0π 🗸 |] |
| | | | Default | | |

Basic

• Brightness - Adjusts the perceived light intensity of the image.

Note: In certain situations, the sensor may experience banding issues. In these cases, please raise the brightness.

- **Contrast** Adjusts the overall difference in the light vs dark areas.
- Saturation Adjusts the colorfulness of a color relative to its own brightness.
- Sharpness Adjusts the edge contrast of the image.
- AGC Automatic gain control (AGC) adjusts the video gain level to a variety of inputs. This setting provides a baseline value for the AGC. Values higher than this will be darkened, and values that are lower will be brightened. AGC should be adjusted so that the area of interest is best lit.
- Exposure Mode -Sets how the camera captures images. Longer shutter times allow more light into the sensor, resulting in a cleaner picture, however longer shutter times can result in motion blur.
 - Fixed

- Auto -The camera will automatically change the shutter speed and gain balance between image quality and frame rate when there is insufficient light to preserve both.
- Shutter Speed -Can be selected from 1/1 to 1/10000.
- WDR Attempts to preserve detail at contrast extremes and handles multiple exposure zones to give both the highlight and low light areas a proper exposure.
 - **Off** Disable this functionality.
 - **DWDR** Specifies the DWDR correction level manually, ranging from 1 (least) to 9 (most) or automatically.
 - True WDR the shutter speed by average
 - HDR level Auto / Low / Middle / High
 - BLC Backlight Compensation allows the camera to adjust the exposure of the entire image to properly expose the subject in the foreground.

Advanced

- Gamma Mode- Adjusts the color error of the image.
 - **Default -** Automatically chooses gamma level.
 - User-defined The user must specify the gamma level
 - 0.30-1.00.
- Target Luminance Adjusts the lightness of the image, 0-255.
- Dead Pixel Correction Investigates and corrects dead pixel, 0-255.
- De-noise Mode Removes video noises.
 - **OFF** Can be set to disable this functionality
 - **2D** Reduces noises.
 - Manual
 - Auto
 - **3D** Reduces noises in low light conditions and even with moving objects.
 - Low
 - Middle

- High
- Whit Balance: This setting allows users to choose the color balancing method used.
 - **AWB** Automatically chooses white level.
 - **MWB** The user must specify the red and blue gain levels to achieve the correct white level.
 - **R Gain** The gain applied to the red video channel.
 - **G** Gain The gain applied to the green video channel.
 - **B** Gain The gain applied to the blue video channel.
- Smart IR Adjusts the shutter time automatically to make the image clear without overexposures.
 - \circ Off
 - **On**

Focus Panel

The parameters deal with the focus. The adjustments will be shown in the preview window.

| THE OWNER | 2815-84-21 15:57:85 | Day/Night Setting | Focus Panel | Lens Adjustment |
|-----------|---------------------|-------------------|------------------|-----------------|
| | | Smart Shutter | Smart AE | Smart AF |
| = | | One Push AF Nea | r | > >> Far |
| | | | < | 1 |
| | A A | | Wide | Tele |
| | | | Focus Calibratio | n: Calibration |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

One Push AF: Auto Focus can be achieved by pressing this button.

Near / Far: Change the depth of field by adjusting the Near and Far steps.

Wide: Offers expanded visual perspective.

Tele: Normalizes the size and distance difference between near and far objects, and can make the depth of field appear shallower.

Calibration: Calibrates the focus.

Lens Adjustment

| Live View Settings Log | out Help | | admin | 2015-04-21 16:26:05 |
|----------------------------|----------------------------------|----------------------------|-------------------------|-----------------------------|
| » General | Video & Audio > Image Appearance | | | |
| >> Network | Image Appearance Settings | 15:25:85 Day/Night Setting | Focus Panel Smart AE | Lens Adjustment Smart AF |
| 💙 Video & Audio | | | Manual | |
| Basic Settings | | F-IRIS. | Jivianuai | |
| >Image Appearance | | P-IRIS level: | - | 80 |
| Video Streams | | | | |
| Privacy Mask Settings | | | | |
| Audio | | | | |
| » PTZ | - | | | |
| >> Recording | | | | |

- P-IRIS: Can be adjusted Manually or Automatically.
 - Manually
 - P-IRIS Level: 0-100.
 - o **Auto**
 - P-IRIS Sensitivity: 0-100.
 - P-IRIS Level: F11-F1.4

Smart Shutter

This functionality is used for capturing precise images of fast-moving objects by adjusting the shutter speed automatically to avoid captured images going blurry or dragging using the conventional shutter settings.



- Enable: On / Off this functionality.
 - **Hide/Show:** show/hide the enabled smart shutter window.
 - Window: up to 3 windows can be set.

Smart AE

Smart AE (Smart Auto Exposure): The conventional cameras adjust the general exposure and allow either underexposed shadows or overexposed highlights. The Smart AE automatically adjusts the exposure based on a targeted area to bring out the proper exposure for the overall image.



• Enable: On / Off this functionality.

- **Hide/Show:** show/hide the enabled smart shutter window.
- **AE Region Window:** Move the window to the area where you'd like to set as a target area.

Smart AF

The Smart AF allows users to apply auto focus on a targeted area, showing the clear image of the region that really matters.

| Live View Settings Log | out Help | _ | | | admin | 2015-04-21 16:57:25 |
|----------------------------|----------------------|--------------|------------|-------------------|-------------|---------------------|
| » General | Video & Audio > Imag | e Appearance | | | | |
| | Image Appearance | Settings | | | | |
| >> Network | | BE | | Day/Night Setting | Focus Panel | Lens Adjustment |
| | | | The second | Smart Shutter | Smart AE | Smart AF |
| Video & Audio | | - | | Enchles | On | kal bida |
| Basic Settings | | T | | Enable. | Iou | |
| >Image Appearance | | | AF Region | An | | |
| Video Streams | | | Commence | <u> </u> | | |
| Privacy Mask Settings | | 1 | | - | | |
| Audio | | | | | | |
| | | | | | | |
| » PTZ | - | | | | Save | |
| » Recording | | | | | | |

- Enable: On / Off this functionality.
 - Hide/Show: show/hide the enabled smart shutter window.
 - **AF Region Window:** Move the window to the area where you'd like to set as a target area.

Video Streams

The configuration for video streams, including resolution, frame rate and image quality parameters can be found under Video & Audio > Video Streams.

| Live View Settings Logou | it Help | | | admin 2014-05-14 11:32: |
|------------------------------|--------------------------------|------------------|----------------|-------------------------|
| » General | Video & Audio > Video Streams | | | |
| >> Network | Video Stream 1 Settings | | | |
| Video & Audio | Video Format: | H.264 | ~ | |
| Basic Settings | Video Resolution: | 1080P(1920x1080) | \checkmark | |
| Image Appearance | Video Frames per Second: | 20 | \checkmark | 15 (1~30) |
| >Video Streams | Key Frame Interval: | 1 sec | \checkmark | |
| ROI | Video Quality Settings | | | |
| Privacy Mask | Constant Bit Rate: | 6 Mbps | \checkmark | 4096 (32-10240)kbps |
| Audio | Fixed Quality: | Medium | ~ | |
| N 017 | | | | |
| | Video Stream 2 Settings | | | |
| » Recording | Video Format: | H.264 | ~ | |
| >> Event Notification | Video Resolution: | | \checkmark | |
| » System | Video Frames per Second: | 30 | \checkmark | 15 (1~30) |
| | Key Frame Interval: | 1 sec | \checkmark | |
| | Video Quality Settings | | | |
| | Constant Bit Rate: | | \checkmark | 512 (32-10240)kbps |
| | Fixed Quality: | Medium | \sim | |
| | | | | |
| | When No Motion Settings | | | |
| | Enable | | | |
| | Video Stream 1 | | | |
| | Video Frames per Second: | 15 | (1-30) | |
| | Constant Bit Rate: | 6144 | (32-10240)kbps | |
| | Video Stream 2 | | | |
| | Video Frames per Second: | 30 | (1-30) | |
| | Constant Bit Rate: | 512 | (32-10240)kbps | change to no motion) |
| | No wouldn't ost Setting. | | 10 3 (Norman | change to no motion) |
| | When Network Disconnection Set | tina | | |
| | | ung | | |
| | Enable | | | |
| | Video Stream 1 | 20 | (1.20) | |
| | Constant Bit Bate: | E10 | (1-30) | |
| | Video Stream 2 | 512 | (32-20460)K0ps | |
| | Video Frames per Second: | 30 | (1-30) | |
| | Constant Bit Rate: | 512 | (32-20480)kbps | |
| | | | | |
| | | | | |
| | | | | |
| | | ОК | | Cancel |
| | | | | |

The page is split into settings for 2 streams. Common settings are:

| Video & Audio > Video Streams | |
|-------------------------------|--------------------------------|
| Video Stream 1 Settings | |
| Video Format: | H.264 |
| Video Resolution: | 960P(1280x960) |
| Video Frames per Second: | ○ 30 ■ 15 (1~30) |
| Key Frame Interval: | 1 sec 💌 |
| Video Quality Settings | |
| Constant Bit Rate: | ○ 4 Mbps ● 4096 (32-10240)kbps |
| Fixed Quality: | Medium 🗸 |
| | |
| Video Stream 2 Settings | |
| Video Format: | H.264 |
| Video Resolution: | |
| Video Frames per Second: | ○ 30 ■ 15 (1~30) |
| Key Frame Interval: | 1 sec |
| Video Quality Settings | |
| Constant Bit Rate: | ○ 512 (32-10240)kbps |
| Fixed Quality: | Medium |

- Video format The compression format for the video stream.
 - **H.264** Provides the best compression, and clear picture, but is processor intensive.
 - **MPEG4** Provides more compression that MJPEG, but loses picture quality.
 - MJPEG Provides minimal compression, with the best picture quality. Each frame is stored as a discrete JPEG. This option is only available in Stream 1.
- Video Resolution Sets the resolution of the video output. The following options are available: QSXGA (2560x1920, Stream 1 only), QXGA (2048x1536, Stream 1 only), 1080P (1920 x 1080, Stream 1 only), SXGA (1280 x 1024, Stream 1 only), 960P (1280x960, Stream 1 only), 720P (1280 x 720), D1 (720x480), VGA (640x480), QVGA (320x240, Stream 2 only).
- Video Frames per Second- Sets the number of frames per second. 1, 3, 5, 10, 15, 20, 25, 30 FPS are possible values. You can also choose to type in the values you want (the range is from 1~30).

- Key Frame Interval Sets the period between minimally compressed recovery frames that don't require other video frames to decode. 1/4s, 1/2s, 1s, 2s, 3s, and 4s are possible values.
- Video Quality Settings Sets the quality of the video image.
 - Constant Bit Rate In this mode, the camera will maintain a constant bit rate output, regardless of video quality. Bit rates available are dependent on the video resolution chosen, and range from 256 kbps to 6 Mbps. You can also choose to type in the values you want (the range is from 32~10240).
 - Fixed quality In this mode, the camera will attempt to maintain a constant quality output, up to a maximum bandwidth of 10 Mbps.

Settings can be further defined when no motions occur.

Enable this option to adjust the Video Frames, Constant Bit Rate for Video Stream 1 and 2.

| When No Motion Settings | | |
|--------------------------|------|-----------------------------------|
| | | |
| Enable | | |
| Video Stream 1 | | |
| Video Frames per Second: | 15 | (1-30) |
| Constant Bit Rate: | 6144 | (32-10240)kbps |
| Video Stream 2 | | |
| Video Frames per Second: | 30 | (1-30) |
| Constant Bit Rate: | 512 | (32-10240)kbps |
| No Motion Post Setting: | | 31 s (Normal change to no motion) |

Settings can be further defined when the network disconnection occur.

Enable this option to adjust the Video Frames, Constant Bit Rate for Video Stream 1 and 2.

| When Network Disconnection Set | ing |
|--------------------------------|--------------------|
| | |
| ✓ Enable | |
| Video Stream 1 | |
| Video Frames per Second: | 20 (1-30) |
| Constant Bit Rate: | 512 (32-20480)kbps |
| Video Stream 2 | |
| Video Frames per Second: | 30 (1-30) |
| Constant Bit Rate: | 512 (32-20480)kbps |
| | |

Video Streams (for CAM3471V/-M/-MP, CAM3571M/-VP, CAM3371EV/-EM, CAM3351R4/-R6, CAM3361LV, CAM3461LV)

The configuration for video streams, including field of view, resolution, frame rate and image quality parameters can be found under Video & Audio > Video Streams.

FoV can be defined as the width and height of a scene to be monitored. Different Fields of View are available for selection, 3MP 1536P (Max. 30fps), 5MP 1920P (Max. 14fps, for CAM3571 only) and Full HD 1080P (Max. 60fps).

| Video & Audio > Video Streams | | |
|-------------------------------|------------------------------------|----------------|
| Field of View | | |
| Field of View: | 3MP 1536P(Max. 30fps) | |
| Video Stream 1 Settings | | |
| Video Format: | H.264 | |
| Video Resolution: | 1536P(2048x1536) | |
| Video Frames per Second: | 20 20 20 | (1~60) |
| Key Frame Interval: | 1 sec 💌 | |
| Video Quality Settings | | |
| Constant Bit Rate: | ● 6 Mbps 		 6144 | (32-20480)kbps |
| O Fixed Quality: | Medium 🗸 | |
| Video Stream 2 Settings | | |
| Video Format: | H.264 | |
| Video Resolution: | QVGA(320x240) | |
| Video Frames per Second: | 30 30 | (1~60) |
| Key Frame Interval: | 1 sec | |
| Video Quality Settings | | |
| Constant Bit Rate: | ● 512 kbps 		 512 | (32-20480)kbps |
| O Fixed Quality: | Medium 🗸 | |
| | | |
| | | |
| | | |
| | OK Cancel | |

The page is split into settings for 2 streams. Common settings are:

- Video format The compression format for the video stream.
 - **H.264** Provides the best compression, and clear picture, but is processor intensive.
 - **MPEG4** Provides more compression that MJPEG, but loses picture quality.
 - **MJPEG** Provides minimal compression, with the best picture quality. Each frame is stored as a discrete JPEG. This option is only available in Stream 1.
- Video Resolution Sets the resolution of the video output. The following options are available: 1536P (2048 x 1536, Stream 1 only), 1080P (1920 x 1080, Stream 1 only), SXGA (1280 x 1024, Stream 1 only), 720P (1280 x 720, Stream 1 only), VGA (640x480), QVGA (320x240), QQVGA (160x120, Stream 2 and MPEG4 only).
- Video Frames per Second Sets the number of frames per second. 1, 3, 5, 10, 15, 20, 25, 30 FPS are possible values. You can also choose to type in the values you want (the range is from 1~30).
- Key Frame Interval Sets the period between minimally compressed recovery frames that don't require other video frames to decode. 1/4s, 1/2s, 1s, 2s, 3s, and 4s are possible values.
- Video Quality Settings Sets the quality of the video image.
 - Constant Bit Rate In this mode, the camera will maintain a constant bit rate output, regardless of video quality. Bit rates available are dependent on the video resolution chosen, and range from 32 kbps to 10 Mbps. You can also choose to type in the values you want (the range is from 32~10240).
 - Fixed quality In this mode, the camera will attempt to maintain a constant quality output, up to a maximum bandwidth of 10 Mbps.

ROI Settings

| t Help | | admin 2013-06-11 17:46:22 |
|--|--------------------------|---|
| Video & Audio > ROI | | |
| Enable Different Quality With ROI | | |
| ROI Setting | | |
| CAM2441 2013-06-11 17:46:23 window2 | Window Settings | L |
| window1 | Window Name: | window1 Max. Number of windows is 3. |
| | Delta Quality: | 5 (-10~+10) |
| | Encoding Frame Interval: | 500 (0~10 Window Settings |
| | New | Save Remove |
| | | |
| Background Window Encoding Frame Interval: | | (1~1000) |
| ОК | Cancel | |

Use the Region of Interest (ROI) to execute different functions in one image.

- Window Settings
 - Window Name Specify a name for a different window.
 - **Delta Quality** Can be selected from -10 to +10.
 - Encoding Frame interval Can be selected from 1 to 1000.
- **Background Window Encoding Frame Interval** Can be selected from 1 to 1000.

Privacy Mask Setting

| Video & Audio > Privacy Mask Setting | |
|---|-----------------|
| Enable Privacy Mask | |
| Privacy Mask Setting | |
| 2014-05-14 13:32:19 | Window Sottings |
| | Window Settings |
| | Window Name: |
| | Color Red 🔽 |
| and the second | |
| The second s | New Save Remove |
| and the second se | |
| the second s | |
| | |

Use **New** button to create privacy mask on the video, up to 3 masks can be created. The window name and the mask color can be further defined.

Audio Settings

The audio settings, under Video & Audio > Audio Settings, contain parameters dealing with audio coming from the cameras built in mic, or an external microphone.

| Live View Settings Logo | ut Help | | | | admin 2014 | -05-14 13:36:50 |
|------------------------------------|-----------------------|------------|------|--------|------------|-----------------|
| » General | Video & Audio > Audio | | | | | |
| >> Network | Audio Settings | | | | | |
| Video & Audio | Audio In: | Off | O On | | | |
| Basic Settings Image Appearance | Line Selection | | | | | |
| Video Streams | Audio In: | Line In | | | | |
| ROI | Codec Settings | | | | | |
| Privacy Mask | | | | | | |
| >Audio | Audio Codec: | G711 U-Law | ~ | | | |
| » PTZ | | | | | | |
| » Recording | | | OK | Cancel | | |
| >> Event Notification | | _ | | | | |
| >> System | | | | | | |

The audio settings, under Video & Audio > Audio Settings, contain parameters dealing with audio coming from the cameras built in mic, or an external microphone.

- Mute Selects whether or not to mute the incoming audio from the camera.
- Audio In Selects the source for the camera audio feed. Line In specifies an external source connected to the camera's line-in port, while Microphone is the camera's internal microphone.

Note: For models with built-in microphone, Microphone option can be selected in *Line Selection*.

• Audio Codec - G.711 U-law, G.711 A-law, and ADPCM are methods for digitally encoding audio signals. Only one bit rate, 32 Kbps, is currently supported. Audio will be encoded at this bit rate.

PTZ

Note: CAM 3361 does not support PTZ functionalities.

RS-485 is a control standard that is used as a basis for controlling point-tiltzoom (PTZ) cameras or mounts. The PTZ menu **Settings > PTZ> RS-485**

| Live View Settings Logou | ut Help | | | admin 2010-07-26 17:16:02 |
|---|---|--------------|--------|---------------------------|
| » General | PTZ > RS-485 Settings | | | |
| >> Network | RS-485 Settings | | | |
| >> Video & Audio | Baud Rate: | 9600 🔽 | | |
| S PTZ | | | | |
| >RS-485 Settings | PTZ Settings | | | |
| Recording Event Notification System | I Fnable PTZ PTZ Decoder Address PTZ Protocol | 1 Pelco-P | | |
| | | ОК | Cancel | |

Settings allows configuration of the RS-485 controls.

The following parameters are configurable:

- Baud rate The baud rate to be used with the RS-485 device. Options are 2400, 4800, 9600, 19200, 11520 bd.
- Enable PTZ This check box activates PTZ service, allowing PTZ controls to be displayed.
 - PTZ decoder address The address of the PTZ decoder, which decodes commands and turns them into electrical signals to drive the PTZ mechanism. This address is a discreet number based on PTZ decoder's connection.
 - **PTZ protocol** The protocol used by the PTZ. Two of the most common protocols are supported: Pelco-D and Pelco-P.

Recording

The Recording menu, **Settings> Recording**, deals with recording settings and managing recorded video files.

Recording Basic Settings

Recording basic settings, **Recording > Recording Basic Settings** are parameters which deal with the recording location and scheduling.

| Live View Settings Logou | t Help | | admin 2013-07-30 13:24:16 |
|------------------------------|-------------------------------------|--|---------------------------|
| » General | Recording > Recording Basic Setting | S | |
| >> Network | Record to Memory Card when con | nection is lost | |
| >> Video & Audio | Enable Recording | | |
| >> PTZ | Network Bandwidth Using: | 1536 (0~10240)kbps | |
| >Recording Basic Settings | Passive download by NVR Se | erver(private format) | |
| Recorded File Management | Manual Record Setting | | |
| >> Event Notification | Manual Record To: | C:\Users\Joyce.Chou\AppData\Loc Browse | |
| » System | | eq. C.wr.Camerai/Vecoru/ | |
| | Event/Schedule Record Setting | | |
| | Event/Schedule Record To: | O microSD Card | |
| | | Remote Storage | |
| | | O ISCSI Storage | |
| | | | |
| | | | |
| | | | |
| | | OK Cancel | |
| | | | |

The following parameters can be configured within this menu:

• Record to Memory Card when connection is lost

When enabled, video will automatically be recorded onto the microSD card if the network connection is lost. When a network connection is re-established, recording will switch back to the remote destination. If this feature is turned off, there will be no recording at all when if network connection is lost.

- Enable Recording Tick it if you want the video to be recorded on to the micro SD card.
- Connection Resume Send to FTP Tick Enable Recording if you want the video to be uploaded to FTP automatically after the network connection is recovered.

Network Bandwidth Using - The speed limitation of the FTP.

• Passive download by NVR Server (private format)

- Manual Record Setting
 - Manual Record To Defines the path for manual recording.
 - \circ Screenshots and image recordings will be saved in this location.
- Event/Schedule Record Setting Allows users to set the destination for event or scheduled recording.
 - o microSD Card
 - \circ Remote Storage

ISCSI Storage - Before selecting the ISCSI Storage as your recording destination, settings of Event Server under the Event Notification should be done to enable the ISCSI Storage. Go to Event Notification > Event Server to set the ISCSI Storage Settings.

Settings > Event Notification > Event Server

| ISCSI Storage Settings | |
|------------------------|-------------------------------------|
| Initiator Mada Nama: | an 2011 12 com comerci 004022602642 |
| Initiator Node Name. | Iqn.2011-12.com.camera.000023603003 |
| Server Address: | |
| Port: | 0 Target |
| CHAP logon information | |
| User Name: | |
| Target Secret: | |
| Perform mutual auther | tication |
| User Name: | |
| Target Secret: | |
| | |

| Live View Settings Logou | ut Help | | | admin 2015-06-08 16:55:38 |
|------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| » General | Event Notification > Event Server | | | |
| >> Network | Email Settings | | | |
| >> Video & Audio | SSL | | | |
| » PTZ | Sender Email Address: | | eg:template@gmail.com | |
| >> Recording | Recipient Email Address: | | eg:template@gmail.com | |
| S Event Notification | Server Address: | | | |
| >Event Server | User Name: | | | |
| Event Alert Action | Password: | | | |
| Motion Detection | SMTP Server Port: | 25 | Test | |
| Tampering Detection | FTP Settings | | | |
| DI & DO | Sonior Address: | | | |
| Event Settings | ETP Server Port | 21 | | |
| - | Liser Name: | | | |
| >> System | Password: | | | |
| | FTP Folder Name: | | | |
| | | | | |
| | HTTP Servers | | | |
| | HTTP | | | |
| | URL: | | eg:http://www.google.com | |
| | Port: | 0 | | |
| | User Name: | | | |
| | Password: | | | |
| | 705.0 | | | |
| | TCP Servers | | | |
| | TCP | | | |
| | IP Address: | • | | |
| | Port | U | | |
| | NAS Settings | | | |
| | Soprar Addross: | | | |
| | User Name: | | | |
| | Password: | | | |
| | Folder Name: | | | |
| | | | | |
| | ISC SI Storage Settings | | | |
| | Initiator Node Name: | iqn.2011-12.com.camera:0 | 0d02360b713 | |
| | Server Address: | | | |
| | Port: | 0 | Target | |
| | CHAP logon information | | | |
| | User Name: | | | |
| | Target Secret: | | | |
| | Perform mutual auther | ntication | | |
| | User Name: | | | |
| | i arget Secret: | |] | |
| | | | | |
| | | | | |
| | | OK | Cancel | |
| | | 0 | 11.00 | |

Click **OK** to save or **Cancel** to abort the changes before you leave the page.

Recorded File Management

This section, located at **Recording > Recorded File Management** allows users to manage videos recorded on the microSD cards.

| Live View Settings Logou | ut Help | | | | | | admin 2015-06-08 | 16:56:51 |
|------------------------------|-------------|----------------------------|------------|---------------------------------|----------------|---------|------------------|----------|
| » General | Recording > | Recorded File Management | | | | | | |
| >> Network | Recorded | File Management | | | | | | |
| >> Video & Audio | From: | | To: | 0 | YYY-MM-DD hh:r | nm:ss) | Search | |
| » PTZ | | File Name | Media Type | Trigger Typ | e Locked | Play | Download |] |
| Secording | Current F | age:0 ,Total Page:0 Forwar | d To: | | | << | < > >> | |
| Recording Basic Settings | | | | | | | | |
| Recorded File Management | | | | | Loc | VUnlock | Remove | |
| >> Event Notification | | | | | | | | |
| » System | | | | | | | | |

Locating Video Files

To locate video files from a specific time frame, enter a begin and end time in the **From:** and **To:** fields below, and click **Search**.

Each video file will have an entry containing:

- Time The time the video was recorded, also the filename of the entry: YYYY_MM_DD_HH_MM_SS.avi
- Media Type The encoding/compression method
- **Trigger Type** What type of action triggered this recording eg. if it was alarm recording or scheduled recording.
- Locked The lock state of the alarm.

The video records located will be split into pages. The information on these

- << Click to go to the first page of the recorded files list.
- < Click to go to the previous page of the recorded files list.
- > Click to go to the next page of the recorded files list.
- >> Click to go to the last page of the recorded files list.
- Forward To: This dropdown can be used to skip to a page number.

You may also narrow the entries displayed by clicking on the **Media Type** column. This will give you the option of choosing *All*, *H264*, *MPEG4*, or *MJPEG* types. The system will only show video files of the format selected.

Managing Video Files

Once you have located the video files of interest you may select them by checking the box in the leftmost column of the entry. You can also select all displayed entries by checking the box in the header row.

There will be two buttons in each entry:

- Play Plays the video file in local helper application.
- Download Downloads video files. Select one or more video files and click Download; Choose location to save the video file(s) onto your local PC.

Other actions that you can perform:

- Lock/Unlock Locks/Unlocks video files. Locked files cannot be removed. Select one or multiple video files and click Lock/Unlock. When a file is locked, the Locked status will display yes.
- **Remove** Manually deletes stored video files. Select one or more video files and click **Remove** to delete the file(s).

Click **OK** to save or **Cancel** to abort the changes before you leave the page.

Note: The video files shown in Recorded File Management are files stored in the microSD card. You can also record live video by clicking the record button in the Live View screen, which will be stored directly into your local computer, and are not managed by this function. Please refer to the section on <u>Manual Record</u> for more information on this functionality.

Event Notification

Event Notification settings, found under **Settings > Event Notification**, deal with the event detection, scheduled recording, and notification abilities of the camera.

Event Server

The event server, which can be configured under **Event Notification > Event Server**, is the communications center of the camera. This section deals with the configuration of E-mail and FTP notifications, HTTP and TCP triggers, NAS settings and ISCSI Storage settings.

| Live View Settings Logou | ut Help | | | admin 2015-06-08 16:55:38 |
|------------------------------|-----------------------------------|--------------------------|--------------------------|---------------------------|
| » General | Event Notification > Event Server | | | |
| >> Network | Email Settings | | | |
| >> Video & Audio | SSL | | | |
| » PTZ | Sender Email Address: | | eg:template@gmail.com | |
| >> Recording | Recipient Email Address: | | eg:template@gmail.com | |
| S Event Notification | Server Address: | | | |
| >Event Server | User Name: | | | |
| Event Alert Action | Password: | | | |
| Motion Detection | SMTP Server Port: | 25 | Test | |
| Tampering Detection | FTP Settings | | | |
| DI & DO | Server Address: | | | |
| Event Settings | ETP Server Port | 21 | | |
| | User Name: | | | |
| >> System | Password: | | | |
| | FTP Folder Name: | | | |
| | | | | |
| | HTTP Servers | | | |
| | HTTP | | | |
| | URL: | | eg:http://www.googie.com | |
| | Port: | 0 | | |
| | User Name: | | | |
| | Password: | | | |
| | TCP Servers | | | |
| | | | | |
| | IP Address: | | | |
| | Port | 0 | | |
| | | | | |
| | NAS Settings | | | |
| | Server Address: | | | |
| | User Name: | | | |
| | Password: | | | |
| | Folder Name: | | | |
| | ISCSI Storage Settings | | | |
| | Initiator Node Name: | iqn.2011-12.com.camera:0 | 0d02360b713 | |
| | Server Address: | | | |
| | Port | 0 | Target | |
| | CHAP logon information | | | |
| | User Name: | | | |
| | Target Secret | | | |
| | Perform mutual auther | ntication | | |
| | User Name: | | | |
| | Target Secret: | | | |
| | | | | |
| | | | | |
| | | OK | Cancel | |
| | | UN | Gancer | |

Email Settings

Email settings are used to configure e-mail notifications.

- Sender Email Address The return e-mail address for notifications. This should be your notification address.
- **Recipient email address** The e-mail address notification emails will be sent to. Only one email address can be entered.
- Server address The IP or address of the e-mail server.
- User Name The user name of the notifications e-mail account.
- **Password** The password of the e-mail account.
- SMTP Server Port the SMTP port of the email server; Default 25.
- **Test** Click this button to send a test email. E-mails will only be sent if all parameters are entered correctly.

FTP Settings

FTP settings are used to configure recording to a remote location via the file transfer protocol.

- Server Address The address of the FTP server.
- FTP Server Port The port number of the FTP server; Default 21.
- User Name The user name of the FTP account.
- **Password** The password of the FTP account.
- **FTP Folder Name** The name of the folder on the FTP site which video files will be stored in.

Http Servers

- URL The address.
- **Port** The port number for the web service. It is usually 80.
- User Name The username of the camera. The default user name is admin.
- Password The password of the camera. The default password is admin.

TCP Servers

- IP Address The address of the TCP server.
- **Port** The port number of the TCP server.

NAS Settings

NAS settings are used to configure recording to network attached storage.

- Server Address The address of the NAS server.
- User Name The user name of the NAS account.
- **Password** The password of the NAS account.
- Folder Name The name of the CIFS account folder on the server.

ISCSI Storage Settings

- Initiator Node Name Your Internet Small Computer System Interface's name.
- Server Address Your server address.
- Port
 - CHAP logon information

User Name - Your user name.

Target Secret - Created to manage the connections between an iSCSI device and the servers that need to access it.

 Perform mutual authentication - Two parties authenticating each other suitably.

User Name - Your user name.

Target Secret - Defines the portals (IP addresses) that can be used to connect to the iSCSI device, as well as the security settings that the iSCSI device requires to authenticate the servers that are requesting access to its resources.

Event Alert Action

| Live View Settings Logou | ıt Help | | | admin 2012-08-06 17:06:24 |
|------------------------------|------------------------------------|-------------------------------|----------|---------------------------|
| » General | Event Notification > Event Alert A | Action | | |
| >> Network | General Settings | | | |
| >> Video & Audio | Set Time Interval Between T | riggers (sec): 5 | (>=5sec) | |
| » PTZ | | | | |
| >> Recording | HTTP Trigger Settings | | | |
| Sevent Notification | DI1: | cgi/param.cgi?action=update&U | Test | |
| Event Server | Motion: | cgi/param.cgi?action=update&U | Test | |
| >Event Alert Action | Network Resume: | cgi/param.cgi?action=update&U | Test | |
| Motion Detection | | | | |
| Tampering Detection | Network Resume Settings | | | |
| DI & DO | NVR Server IP Address: | | | |
| Event Settings | | | | |
| » System | | | | |
| | | ОК | Cancel | |
| | | | | |

General Settings

• Set Time Interval between Triggers (sec)

HTTP Trigger Settings

Set the CGI rule for HTTP triggers.

- **DI1** /surveon-cgi/param.cgi?action=update&USER=admin&PWD=admin&System.LiveViewPor=6002.
- **DI2** -/surveon-cgi/param.cgi?action=update&USER=admin&PWD=admin&System.LiveViewPor=6002.
- Network Resume -

/surveon-cgi/param.cgi?action=update&USER=admin&PWD=admin&System.LiveViewPor=6002.

Network Resume Settings

• NVR Server IP Address - The IP address of the NVR server.

The system will start to ping this IP for three times, and if the results are different, the network connection will be defined as lost. The video will be recorded automatically to the micro SD card, and when the connection is recovered, it will be uploaded to the FTP.

Note: Please refer to Recording Basic Settings section for more details.

Motion Detection

The motion detection functionality of the camera can be found under **Event** Notification > Motion Detection.



Motion Detection Window Management

Motion detection is activated by checking the Enable Motion Detection box.

Click the *Window Settings* tab to enter the window configuration, and click **New** to add a new detection window. A maximum of 3 motion detection windows can be added. Each new window will be created with a default name *Window N*, where *N* is the number of the window. After creating the window, clicking it will select the window. You can drag and resize the window using your mouse. You can also change the following parameters:

You can also change the following parameters:

- Window Name Tthe name of the motion detection window.
- **Trigger Interval** The time interval between motion triggers. Options available are: 200 ms , 400 ms, 800 ms, and 1000 ms.
- **Trigger Threshold** The percentage change in the window before a motion alarm is triggered.
- **Sensitivity** The sensitivity of the motion box.

Click **Save** to save all settings. Settings of existing windows can also be changed by selecting the window and changing the settings. To delete a window, select a window in and click **Remove**.

Activity Status Display

The Activity Status Display tab displays the amount of motion detected in a selected window. By raising the **Sensitivity** of the window the motion values for a given motion, which are in shown in yellow, will be higher. When the motion value reaches or crosses the **Trigger Threshold**, denoted by the red line, a motion event will be triggered. Use Activity Status Display to check if the setting of threshold is reasonable. For smaller motions below the set number, the motions won't trigger alarm. Motion alarm handling and notifications can be configured under <u>Event Settings</u>.

| Basic | Settings | | | | | | |
|-------|--------------|---|---------|---------|--------|--------|-----|
| Wir | ndow Setting | 6 | Activit | y Statu | s Disp | olay | |
| 100 | | | | | | | |
| 90 | | | | | | | |
| 80 | | | | | | | |
| 70 | | | | | | | |
| 60 | | | | | | _ | |
| 50 | | | | | _ | | |
| 40 | | | 1 | | | | |
| 30 | | | | | | | |
| 20 | | | - | | | | |
| 10 | | | - | | | | |
| 0 | | | | Trigg | er Thr | eshold | :74 |

Activate Motion Detection By: Auto/Schedule

Motion detection is activated by checking the Enable Motion Detection box.

Activate Motion Detection By: denotes when motion detection will be triggered as an event.

- Auto As long as Enable Motion Detection is checked, an event is triggered.
- Schedule Selecting this option allows to manually schedule the

| Activate Motion Det | ection By: | | | | | |
|---------------------|-------------|-------|-------|-------|---------|--|
| O Auto | | | | | | |
| Schedule | | | | | | |
| 🗹 Sun | 🗆 Mon 🗖 Tue | 🗆 Wed | 🗖 Thu | 🗹 Fri | 🔽 Sat | |
| | From: 22:0 |) | To: | 06:00 | (hh:mm) | |

times motion detection will be active. Select the days of the week that Motion Detection is active by checking the corresponding boxes, and fill in a start time and end time for motion detection in the **From:** and **To:** boxes.

Tampering Detection

Note: CAM 3361 does not support tampering detection.

Tampering detection is similar to motion detection in that it detects where there is a sudden unexpected change in the whole camera view. Parameters for this feature are found under **Event Notification > Tampering Detection**.

Tampering alarm handling and notifications can be configured under <u>Event</u> <u>Settings.</u>

| Live View Settings Logou | ut Help | | | | admin 2014-05-15 14:01:18 | |
|------------------------------|--|--------|--------------|--------|---------------------------|--|
| » General | Event Notification > Tampering Detection | | | | | |
| >> Network | Tampering Detection Settings | | | | | |
| >> Video & Audio | Tampering Detection: | O On | Off | | | |
| » PTZ | Tampering Sensitivity: | Normal | \checkmark | | | |
| » Recording | | | | | | |
| Sevent Notification | | | | | | |
| Event Server | | | | | | |
| Event Alert Action | | | ОК | Cancel | | |
| Motion Detection | | | | | | |
| >Tampering Detection | | | | | | |
| DI & DO | | | | | | |
| Event Settings | | | | | | |
| » System | | | | | | |

The tempering detection parameters include:

- Tampering Detection Turns tampering detection on or off.
- Tampering Sensitivity Sets the sensitivity of Tampering Detection. Options are Very Low, Low, Normal, High, and Very High. Higher sensitivities can detect more tampering attempts, but also increase the chances that the camera will produce a false alarm.

DI & DO

Digital Input (DI) and Digital Output (DO) stand are used for event triggering. The camera has 1 DO and 2 DI ports. Settings for these ports can be found under **Event Notification > DI & DO**. Conditions for DI and DO triggering, as well as notifications for can be set under <u>Event Settings</u>.

Digital Input

The two inputs are listed as Input1 and Input2 and connect to external circuits such as window break detectors. These inputs can be tested by clicking the **Test** button in the input entry.

Each input has a Normal Status:

• Normal Open - the DI requires a low voltage input, with the following configuration.



It is triggered when it does not receive this input.

• Normal Close - the DI requires a high voltage input (+12V), with the following configuration.



It is triggered when it does not receive this input.

• Off - DI inputs are closed at all times. The camera will not respond to any signals on this DI.

Digital Output

The camera can also be configured to send signals through the digital output. Each output has a **Normal Status**:

• **High** - DO outputs a high voltage when triggered, and is connected to the output circuit in the following manner:



• Low - DO acts as a ground when triggered, and is connected to the output circuit in the following manner:



• Off - Closes DO output; no signals will be sent.

Event Settings

Event settings deal with alarm handling and notification, as well as feature scheduling. These settings can be found under the **Event Notification** > **Event Settings** menu.

| Live View Settings Logou | it Help | | | admin 2014-05-15 15:20:18 | | | |
|------------------------------|-------------------------------------|--------|--|---------------------------|--|--|--|
| >> General | Event Notification > Event Settings | | | | | | |
| >> Network | Event List | | | | | | |
| >> Video & Audio | Name | Enable | Туре | Actions | | | |
| » PTZ | 123 | Enable | DI,Motion Detection,Video Loss & Tamperi | FTP,Record,Trigger DO | | | |
| >> Recording | | | Add | Edit Remove | | | |
| Sevent Notification | | | | | | | |
| Event Server Schedule List | | | | | | | |
| Event Alert Action | Name | Enable | Condition | Actions | | | |
| Motion Detection | 1234 | Enable | Recurrence Pattern | Trigger DO | | | |
| Tampering Detection | | | | | | | |
| DI & DO | | | Add | Edit Remove | | | |
| >Event Settings | | | | | | | |
| » System | | | | | | | |

The event handler is rule based. There are lists for both two types of rules:

- Event List Contains rules based on triggered events such as motion detection or DI triggers.
- Schedule List Contains time-based rules.

Each rule has an action list. When the conditions for rule are met, the actions specified by the rule are carried out. Users may perform the following actions in both Event and Schedule lists:

- Add Clicking on the Add button adds a new rule to a list.
- Edit A selected rule may be edited by clicking on the Edit button.
- **Remove** A selected rule may be deleted by clicking on the **Remove** button.

Adding/Editing an Event Rule

| ent Notification > Event Settings > Add Trigg | ered Events | |
|--|-------------|----------------|
| General | | |
| Name : Set Time Interval Between Triggers (sec) : | | (max hh:mm:ss) |
| nable Triggering By | | |
| Always | | |
| O Recurrence Pattern | | |
| ○ Never | | |
| Friggered By | | |
| Motion Detection | | |
| On Boot | | |
| Video Loss & Tampering Detection | | |
| Disk Full | | |
| DI | | |
| Day>Night | | |
| □ Night>Day | | |
| Trigger Actions Streams : 1 | | |
| Email | | |
| FTP | | |
| Record | | |
| Trigger DO | | |
| ĺ | ОК | Cancel |

The Add and Edit screens contain the following triggering actions:

Note: If editing a rule that has not been triggered, the rule will not be triggered after until after editing is complete. If the rule is triggered, any changes will not be applied until the current trigger is resolved.

General

The following general fields should be filled in:

- Name Specifies the name of the Event.
- Minimum time interval between triggers The time frame in which a subsequent trigger of the same event will be ignored (maximum 23:59:59).

Enable Triggering By

The next step is to specify the frequency of trigger response. 3 options are available:

- Always The default setting; Triggers event when conditions are met.
- **Recurrence Pattern** Enables triggering only if conditions are met during a specified time period. To specify the period, select the days of the week that the trigger is active by checking the corresponding boxes, and fill in a start time and end time for motion detection in the **From:** and **To:** boxes.

| C Recurrence Pattern | | | | | | | | | |
|----------------------|-------|-------|-------|-------|-------|-------|---------|--|--|
| | 🗆 Sun | 🗆 Mon | 🗖 Tue | ☑ Wed | 🗖 Thu | 🗆 Fri | 🗖 Sat | | |
| From : 01:00 | | | | | To : | 03:00 | (hh:mm) | | |

• Never - The event is never triggered.

Triggered By

After the frequency is selected, triggering conditions can be set. Multiple conditions can be set at once. Available options include:

- Motion Detection Trigger when motion is detected.
 - In Window Specifies the detection window that will trigger the event.

Please refer to the section on Motion Detection for details.

- On Boot Trigger when camera reboots.
- Video Loss & Tampering Detection Trigger when video signal is lost or tampering is detected. Please refer to the section on <u>Tampering</u> <u>Detection</u> for more detail.
- Disk Full Trigger when the SD disk installed in the camera is full.
• **DI** - Trigger when a DI trigger occurs. For more information please refer to the section on DI & DO.

When Triggered

The actions to take when trigger conditions are met are configured here.

| Trigger Actions | |
|------------------------------|---------|
| Streams : 1 | • |
| 🗹 Email | |
| Subject : | |
| Additional Information : | |
| Snapshot | C Video |
| FTP | |
| Snapshot | C Video |
| Record | |
| Trigger DO | |
| Trigger duration: | 5 sec |

The following options are available:

- **Streams** Selects the stream from which the snapshot or recording will be obtained.
- Email E-mails notifications to the email address specified in the Event Server settings. If this option is chosen, fill in the following:
 - Subject The subject line of the notification e-mail.
 - Additional Information Contents of the notification e-mail.
 - Snapshot/Video Clip Choose to send a snapshot or video attachment from 5s before to 30s after the trigger.
- FTP uploads a snapshot or video clip to a FTP location specified in the <u>Event Server</u> settings.
 - Snapshot/Video Clip Choose to upload a snapshot or video file from 5 seconds before to 30 seconds after the trigger. Files are sent as attachments.
- **Record** Records video to the server specified in the <u>Event Server</u> settings and the microSD card when triggered. The video clip stored on both remote storage server and local storage is a video file 35 seconds in length (5 seconds before and 30 seconds after the trigger)
- Trigger DO A Digital output signal is sent when triggered.

Trigger Duration - The length of time that the DO signal is sent. Options are 1, 2, 5, 10, 20 or 30 seconds. For more information please refer to the section on DI & DO.

Click **OK** to save or **Cancel** to abort the changes before you leave the page.

Adding/Editing a Scheduled Rule

The Add and Edit screens contain the following actions:

| Name: | schedule1 | | |
|-------------------------------------|-----------|---------|--|
| Set Time Interval (When Activated): | 01:12 | (hh:mm) | |
| | | | |
| | | | |
| ctivate Event Time By | | | |
| ctivate Event Time By | | | |
| C Always | | | |
| C Always | | | |

Note: If editing a rule that has not been triggered, the rule will not be triggered after until after editing is complete. If the rule is triggered, any changes will not be applied until the current trigger is resolved.

General

The following general fields should be filled in:

- Name Specifies the name of the Event.
- Set Time Interval (When Activated) The trigger time of the event (00:00 to 23:59).

Enable Triggering By

The next step is to specify the frequency of trigger response. 3 options are available:

- Always The default setting; Triggers event when conditions are met.
- **Recurrence Pattern** Enables triggering only if conditions are met during a specified time period. To specify the period, select the days of the week that the trigger is active by checking the corresponding boxes, and fill in a start time and end time for motion detection in the **From:** and **To:** boxes.

| Recurrence | e Pattern | | | | | |
|------------|-----------|-----------|-------|-------|-------|---------|
| 🗖 Sun | 🗆 Mon | 🗆 Tue | ✓ Wed | 🗖 Thu | 🗖 Fri | 🗖 Sat |
| | F | rom : 01: | 00 | To : | 03:00 | (hh:mm) |

• Never - The event is never triggered.

When Triggered

The actions to take when trigger conditions are met are configured here.

| Trigger Actions | |
|------------------------------|---------------------------------------|
| Streams : 1 | I I I I I I I I I I I I I I I I I I I |
| 🗹 Email | |
| Subject : | |
| Additional Information : | |
| Snapshot | C Video |
| FTP | |
| Snapshot | C Video |
| Record | |
| Trigger DO | |
| Trigger duration: | 5 sec |

The following options are available:

- **Streams** Selects the stream from which the snapshot or recording will be obtained.
- **Email** E-mails notifications to the email address specified in the <u>Event Server</u> settings. If this option is chosen, fill in the following:
 - **Subject** The subject line of the notification e-mail.
 - Additional Information Contents of the notification e-mail.
 - Snapshot/Video Clip Choose to send a snapshot or video attachment from 5s before to 30s after the trigger.
- FTP uploads a snapshot or video clip to a FTP location specified in the Event Server settings.
 - Snapshot/Video Clip Choose to upload a snapshot or video file from 5 seconds before to 30 seconds after the trigger. Files are sent as attachments.
- **Record** Records video to the server specified in the <u>Event Server</u> settings and the microSD card when triggered. The video clip stored on both remote storage server and local storage is a video file 35 seconds in length (5 seconds before and 30 seconds after the trigger)
- Trigger DO A Digital output signal is sent when triggered.
 - Trigger Duration The length of time that the DO signal is sent. Options are 1, 2, 5, 10, 20 or 30 seconds. For more information please refer to the section on <u>DI & DO</u>.

Click **OK** to save or **Cancel** to abort the changes before you leave the page.

System

The system settings, which deal with hardware and firmware parameters, logs, and configuration lists, can be found under **Settings > System.**

| | t Help | | | | | admin | 2015-06-08 17 |
|--------------------|--|--------|------------|------|------|--------|---------------|
| » General | System > Storage Management | | | | | | |
| Network | Storage Status | | | | | | |
| Video & Audio | Storage Devices | Status | Total Size | Free | Used | Use(%) | |
| PTZ | micro SD Card | no | | | | | |
| | ISCSI | no | | | | | |
| Recording | NAS | no | | | | | |
| Event Notification | Basaward: | | Format | | | | |
| Storage Management | Storage Management Available Recording Time: | 0 min | | | | | |

Storage Management

MicroSD class 2/4/6 cards can be accessed for offline video storage and upgrade purposes. MicroSD installed in the camera can be managed under System > Storage Management.

Storage Status

The status of the current storage device can be obtained under *Storage Status*:

- Storage Devices -micro SD Card, ISCSI, NAS
- **Status** If a readable card is present, this will show *ready*, otherwise *no* will be shown.
- Total Size The size of the card.
- Free The total space left on the card.
- Used The occupied space on the card.
- Use(%) The percentage of the card that has been used.
- Format User may need to type in the administrator password to format the storage device.

Storage Management

- Available Recording Time Calculates how much recording time is available based on current settings.
- Storage Recycle Settings Turning the function On will clear the storage device once it is full.
- Max Duration for Automatic Disc Save ____ Hours If storage recycling is activated, the card will save recordings continuously. (99999 hours max.)
- Max Duration for Automatic Disc Cleanup ____ Hours, When The Disk Is Full. - If storage recycling is activated, the card will be cleared when this number of days has elapsed. (100 days max. Locked files will not be cleared)

Click **OK** to save or **Cancel** to abort the changes before you leave the page.

System Status

| Live View Settings Logou | it I Help | | | admin 2015-06-08 17:06:37 |
|------------------------------|----------------------------|-------------------|-------|---------------------------|
| » General | System > System Status | | | |
| >> Network | System Status | | | |
| >> Video & Audio | IP Address: | 172.30.10.46 | | |
| | MAC Address: | 00:D0:23:60:B7:13 | | |
| » PTZ | Subnet Mask: | 255.255.255.0 | | |
| » Recording | Default Router: | 255.255.255.127 | | |
| >> Event Notification | | | | |
| System | Boot Loader: | V1.0.A01 | | |
| Storage Management | Firmware Version: | V2.4.D16 | | |
| System Status | | | | |
| System Log | Send system status to tech | nnical support. | Email | |
| Firmware Upgrade | | | | |
| Reset To Factory Default | | | | |
| Export/Import & Reboot | | | | |

The camera status can be found under System > System Status.

This section displays useful system information including:

- IP Address
- MAC Address
- Subnet Mask
- **Default Router** address
- microSD Card Capacity Status
- Boot Loader Version
- Firmware Version

Clicking on the **Email** button will send the system status information out to the notification e-mail address specified in <u>Event Server</u> for troubleshooting or reference purposes.

System Log

The system log, **System > System Log**, provides a log for system messages and events. The log lists important information such as login information, changes to camera settings (both successful and unsuccessful), triggered events, and error messages.

This information can be very useful in the event of a camera failure or unauthorized entry.

| Live View Settings Logou | t Help admin 2014-05-15 14:46:57 |
|------------------------------|--|
| >> General | System > System Log |
| | |
| >> Network | Log List |
| | |
| >> Video & Audio | Feb 19 00:20:36: UI:user admin get event list failed, return -1 |
| | Feb 19 00:20:36: geteventlist/g_ruleCount=0 |
| <u>"PIZ</u> | Feb 19 00:20:30. Of additing get Schedule faite faited, fedure 1 |
| N December | Feb 19 00:01:28: STREAM:Del client ip:172.30.10.37 Success, Current user count:0,max |
| W Recording | user enable:5 |
| N Event Natification | Feb 19 00:00:40: STREAM:unsupported msg cmd [124] |
| Event Notification | |
| System | Feb 19 00:00:40: Revice event: type:124 1d:1 Value0:1 Value1:255 Value2:255 |
| • oystem | Feb 19 00:00:30: STREAM: Start success.Play streams using |
| microSD Card Management | rtsp://172.30.10.109/ <streamname></streamname> |
| System Status | Feb 19 00:00:30: STREAM:add user success!client ip:172.30.10.37 Current user |
| eystern etalae | count:1,maxenable:5 |
| System Log | Fab 10 00.00.20. STREAM.exects new tests of ftp mid(1011) |
| Eirmwore Ungrade | reb 19 00:00:30: SIREAM:Create new task off_itp pid[1011] |
| Filliware Opgrade | Feb 19 00:00:30: STREAM:create new task ENT Handle pid[1012] |
| Reset To Factory Default | |
| Export/mport & Reboot | Feb 19 00:00:30: STREAM:create new task CheckLinkStatus pid[1010] |
| Experimpertartebeer | |
| | reb 19 00:00:30: SIREAM:create new task ittcping_server_checker pia[1009] |
| | Feb 19 00:00:30: STREAM:create new task top worker pid[1008] |
| | |
| | Feb 19 00:00:30: STREAM:create new task http_worker pid[1007] |
| | Feb 19 00:00:26:Cam_server.m_model:4311 |
| | May 15 14:08:46: Ulruser admin get event list failed, return -1 |
| | May 15 17.00.10. geteventilb/g_iutecount-0 |
| | Note: Send system Log to Technical Support. |
| | Email Developed |
| | Enali Download |

Clicking **Email** will send the log out as an email the notification e-mail address specified in <u>Event Server</u>; Clicking **Download** will begin the browser download process to download the log to the local PC.

Firmware Upgrade

Upgrading with a firmware file on a PC:

- 1. Power ON the device.
- 2. Connect to the camera through a web browser and go to System >

Firmware Upgrade.

| Live View Settings Logou | ut Help | | | admin 2015-06-08 17:07:27 |
|---|--|---------|--------|---------------------------|
| >> General | System > Firmware Upgrade | | | |
| » Network » Video & Audio » PTZ » Recording | Firmware Upgrade Specify the Firmware to Upgrade: Configuration Upgrade | | Browse | |
| >> Event Notification | | | | |
| System Storage Management System Status System Log Firmware Upgrade Reset To Factory Default | Keep Customized Configurations Keep Network Setting Upgrade All Configurations | Upgrade | Cancel | |
| Export/import & Reboot | | | | |

 Choose "Specify the firmware to upgrade". Click Browse...and locate the file [cam number]fw.

Configuration Upgrade

- Keep customized configuration to keep current configuration settings.
- Keep Network Setting to keep current network configuration.
- Upgrade all configurations to clear all settings back to factory defaults.

Click **Upgrade** to start the upgrade. Upon completion of firmware upgrade, the camera will reboot (you will be logged off).

The LED will flash amber during the firmware upgrading. The camera will start reboot after firmware upgrade completed. When the LED indicator turns green, the firmware is upgraded successfully.

If the status LED shows steady amber for over 1 minute, the camera will become unresponsive and the upgrade process may have failed. Please contact with your dealer for technical support. If the status LED shows steady amber for over 1 minute, the camera will become unresponsive and the upgrade process may have failed. Please contact with your dealer for technical support.

Resetting to Factory Default Settings

To reset the device to the factory default settings:

- 1. Make sure the device is in operation mode.
- 2. Using a needle or similar object to press and hold the Reset button until the camera restarts (about 2 seconds). The status LED will change to amber during startup.
- 3. When the Status Indicator changes to back to Green (which may take up to 1 minute), the process is complete. The default IP address is 192.168.88.10 if not assigned by a DHCP server.

Note: Resetting to the factory default settings using the Reset button will cause all parameters (including the IP address) to be reset. To reset the unit without changing parameters, disconnect and reconnect the power connector.

Camera resets can also be performed under System> Reset To Factory Default.

| Live View Settings Logou | t Help | admin 2014-05-15 14:59:48 |
|------------------------------|---|---------------------------|
| >> General | System > Reset To Factory Default | |
| >> Network | Reset To Factory Defaults | |
| » Video & Audio | Reset All Configurations to Factory Defaults | |
| » PTZ | Reset All Configurations to Factory Defaults Except Network Configuration | |
| >> Recording | | |
| >> Event Notification | | |
| 😆 System | OK | |
| microSD Card Management | | |
| System Status | | |
| System Log | | |
| Firmware Upgrade | | |
| ➤Reset To Factory Default | | |
| Export/Import & Reboot | | |
| | | |
| | | |
| | | |

There are 2 types of reset.

• Reset All Configurations to Factory Defaults

• Reset All Configurations to Factory Defaults Except Network Configuration.

Click **OK** after choosing a reset option to perform a reset.

Alternately, you may press the "Reset" button on the bottom of the camera to perform a complete reset of the camera (no configurations retained). To reset the camera by pressing the "Reset" button on the bottom of the camera, press and hold the "Reset" button for 3 seconds. During this time, the LED indicator in front of the camera will blink in red.

Export/Import & Reboot

| Live View Settings Logou | ıt Help | | | admin 2015-06-08 17:08:18 |
|------------------------------|---------------------------------|--------|---------|---------------------------|
| » General | System > Export/Import & Reboot | | | |
| >> Network | Export/Import & Reboot | | | |
| >> Video & Audio | | | | |
| » PTZ | Restart Camera: | Apply | | |
| >> Recording | Export Configuration: | Export | | |
| >> Event Notification | | | | |
| System | Export Log: | Export | | |
| Storage Management | luce of Ocoffeeee lines | | | (Arrely |
| System Status | Import Configuration: | | Browse | Арріу |
| System Log | | | | |
| Firmware Upgrade | | | | |
| Reset To Factory Default | | | | |
| >Export/Import & Reboot | | | | |

In certain situations it may be necessary to restart your network camera (network settings changed, DHCP added, etc). The settings under **System > Export/Import & Reboot** allow you to restart the camera.

This menu also contains options to export configuration details (for backup or replication purposes), as well as import configuration details. The following options are available:

- Restart Camera Resets the camera when Apply is clicked.
- Export Configuration Export the camera's settings and configurations by clicking Export, this will start a browser dialogue to download the configuration.
- Export Log
- Import Configuration Imports previously exported camera settings. The field should contain the path for the camera configuration file. Click Browse: to browse your PC for the configuration file. Click Apply to import the settings.

Chapter 5. Configuration through the IP Utility

Camera configurations can be done through web interface and IP Utility. **For IP Utility, please look into <u>this chapter</u>; for web interface, please refer to <u>Chapter 4</u>.

| | | Web Interface | IP Utility |
|------------------------|---------------------------------------|---------------|-------------|
| General | Basic Settings | V | Х |
| | User Account | V | Х |
| | Date & Time | V | Х |
| Network | Network Configuration | V | Set IP Only |
| | Port Settings | V | Х |
| | UpnP | V | Х |
| | Wifi Setting | V | Х |
| Video & Audio Settings | Basic Settings | V | Х |
| | Image Appearance Settings | V | Х |
| | Video Streams | V | Х |
| | Audio Settings | V | Х |
| PTZ | RS-485 Settings/PTZ Settings | V | Х |
| Recording | Recording Basic Settings | V | Х |
| | Recorded File Management | V | Х |
| Event Notification | Event Server | V | Х |
| | Motion Detection | V | Х |
| | Tampering Detection | V | Х |
| | DI & DO | V | Х |
| | Event Settings | V | Х |
| System | MicroSD Card Management | V | Х |
| | System Status | V | V |
| | System Log | V | Х |
| | Firmware Upgrade | V | V |
| | Resetting to Factory Default Settings | V | Х |

| | Export/Import | V | V |
|-----------------------------|---------------|---|---|
| | Reboot | V | V |
| Camera Search | | Х | V |
| Login | | V | V |
| Properties | | Х | V |
| Delete from Tool | | Х | V |
| Clearing and Setting Status | | Х | V |
| Camera Group Actions | | Х | V |
| Focus Tool | | Х | V |

5.1. Overview

The IP Utility is a set of tools for network cameras. It includes tools to create, modify, delete and manage groups within the camera; The IP Camera Utility also provides tools to perform simple connectivity configuration, firmware upgrades and reboot operations. The utility is intended to simplify the configuration and management of multiple cameras.

5.2. Installing the IP Utility

Install the IP Utility with the following steps:

1. Start SearchToolInstall.exe to begin the utility installation dialog:

| 🛃 IP Utility | |
|--|------------|
| Welcome to the IP Utility Setup Wizard | |
| The installer will guide you through the steps required to install IP Utility on your computer. | |
| WARNING: This computer program is protected by copyright law and international treaties Unauthorized duplication or distribution of this program, or any portion of it, may result in se or criminal penalties, and will be prosecuted to the maximum extent possible under the law. | vere civil |
| Cancel < Back N | ext > |

2. Click Next to continue with installation.

| 🛃 IP Utility 🔽 🗖 🔀 |
|--|
| Select Installation Folder |
| The installer will install IP Utility to the following folder. |
| To install in this folder, click "Next". To install to a different folder, enter it below or click "Browse". |
| Eolder: C:\Program Files \IP Utility\ Disk Cost |
| Install IP Utility for yourself, or for anyone who uses this computer: |
| |
| ⊙ Just me |
| Cancel < Back Next > |

- 3. Fill in the Folder field to specify the installation path. Clicking Browse... pulls up a file system browser. Clicking Disk Cost will display free space and the space the utility will take up on disks.
- Choose if you wish to install the application for the current user only (Just me) or all users on this computer (Everyone).
- Click Next to continue. The system will respond with a ready screen. Click Next again. The system will respond by displaying installation progress.
- You may click Cancel at any time before finishing introduction, or
 Back if it is available to cancel or jump back a step. Click Close when after installation is complete. The software is ready to use at this

5.3. IP Utility Basics

Starting the IP Utility

To start the IP Utility, double-click the IP Utility shortcut on your desktop or go to Start > Program Files > IP Utility> IP Utility.

Note: On startup, the utility will automatically scan for IP Cameras on the same subnet as the computer. In some cases this may result in longer wait times.

IP Utility Main Screen

The IP Utility main screen is divided into 3 sections:

| IP Camera Utility | | File Group Camer | a Help | | | - × |
|-------------------------------------|---------------------|-----------------------|---------------|---------|--------------|--------|
| 🔍 Auto Search 🐐 Update Firmware 🔗 F | Reboot 💿 Link to Ca | mera 💔 Set IP 💽 Focus | s Tool | | | |
| Camera Group | Details | | | | | |
| | Number | Name | IP | Model | MAC | Status |
| | 1 | CAM2321 | 172.30.10.71 | CAM2321 | 00D0236037A0 | online |
| MyGroup | 2 | CAM2321 | 172.30.10.102 | CAM2321 | 00D023603BB3 | online |
| <u> </u> | 3 | CAM2301 | 172.30.10.69 | CAM2301 | 00D0236012B9 | online |
| | 4 | CAM3371 | 172.30.10.39 | CAM3371 | 00D023602BAE | online |
| | 5 | CAM2311 | 172.30.10.62 | CAM2311 | 00D023603021 | online |
| | 6 | CAM1320 | 172.30.10.143 | CAM1320 | 00D02360117A | online |
| 1 | | | 2 | | | |

- 1. Camera Group Display displays group details
- 2. Camera Detail Display displays camera details
- 3. Function Buttons and Menus this section contains alternative access methods for functions that can be done within the Camera Group and Camera Detail Displays. This manual does not discuss this section separately.

Exiting the IP Utility

To exit the IP utility, click the X button on the top right corner of the screen or choose **File > Exit** from the menu bar.

5.4. Camera Actions

This section displays camera information, including the IP, Name, Model, MAC Address, Status and Network Mask.

Search

Search updates the details for the cameras listed, as well as locates any new cameras connected on the same subnet. The search is performed every time the IP utility starts. To perform search again:

 Click the Auto Search button or click Camera > Search in the menus. The search will begin, and a status bar will display the search progress.

| IP Camera Utility | | File Group | Camera Help | | _ | | - × |
|-----------------------------------|---------------|---------------------|----------------|-----|------|--------------|--------|
| 🔍 Auto Search 🙀 Update Firmware 🍙 | Reboot 💿 Link | to Camera 📲 Set IP | Login | | _ | | |
| | | | User Manager | | | | |
| Camera Group | Details | | Search | | | | |
| All Devices(6) | Number | r Name | Conliguration | • | el | MAC | Status |
| Online Devices(6) | 1 | @ CAM232 | Maintenance | • | 2321 | 00D0236037A0 | online |
| WGroup | 2 | CAM232 ⁻ | Device Group | • | 2321 | 00D023603BB3 | online |
| | 3 | CAM230 ⁻ | Link to Camera | | 2301 | 00D0236012B9 | online |
| | E 4 | CAM337 | Properties | | 3371 | 00D023602BAE | online |
| | 5 | CAM2311 | 172.30.10.62 | CAM | 2311 | 00D023603021 | online |
| | 6 | CAM1320 | 172.30.10.143 | CAM | 1320 | 00D02360117A | online |
| | | | | | | | |
| | • | | m | | | | • |

Note: The search may take up to 2 minutes, depending on your network configuration.

Login

Before performing camera actions, most cameras require that proper login credentials are supplied. To login to a camera:

1. Right click the camera you wish to set. Select Login from the popup, the system responds with the *Login* window. Alternatively, click the camera entry and choose Login from the Camera menu.

| IP Camera Utility | | | File Group (| Camera Help | | | | × |
|--|----------|-----------|------------------|------------------|----|---------|--------------|--------|
| 🔍 Auto Search 🐐 Update Firmware 🎯 | Reboot 🍕 | Link to C | amera 💔 Set IP 💽 | Focus Tool | | | _ | |
| Camera Group | Detail | s | | | _ | | | |
| | N | umber | Name | IP | | Model | MAC | Status |
| Online Devices(6) | | 1 | CAM2324 | Login . | | CAM2321 | 00D0236037A0 | online |
| Giffine Devices(0) | | 2 | CAM23 | Liser Manager | 02 | CAM2321 | 00D023603BB3 | online |
| ······································ | | 3 | CAM23 | Configuration | 9 | CAM2301 | 00D0236012B9 | online |
| | | 4 | CAM33 | Maintenance | 9 | CAM3371 | 00D023602BAE | online |
| | | 5 | CAM23 | Basic focus tool | 2 | CAM2311 | 00D023603021 | online |
| | | 6 | CAM13 | Device Group | 43 | CAM1320 | 00D02360117A | online |
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| | | | | Delete from tool | | | | |
| | | | | Properties | | | | |
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| IP Camera Utility | | | File Group | Camera Help | | | | - × |
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| 🔍 Auto Search 👫 Update Firmware 👩 | Reboot | 💿 Link to C | amera 🦞 Set IP | Login 🔓 | | | | |
| Comora Croup | | -ile | | Oser Manager Search | | | | |
| | Det | Numbor | Namo | Configuration | | | MAC | Status |
| All Devices(6) | | 1 | CAM232 | Maintananaa | | 2321 | 00D023603740 | online |
| Offline Devices(0) | | 2 | CAM222 | Davias Group | | 221 | 000022602882 | online |
| | | 2 | @ CAM232 | Link to Comoro | • | 201 | 00D023003DD3 | online |
| | | 3 | @ CAM230 | Broportion | | 2301 | 00D0236012B9 | online |
| | | 4 | @ CAM337 | Properties 470 00 40 00 | | 3/1 | 00D023602BAE | onine |
| | | 5 | CAM2311 | 172.30.10.62 | CAN | 2311 | 00D023603021 | online |
| | | 6 | @ CAM1320 | 172.30.10.143 | CAN | 1320 | 00D02360117A | online |
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2. Fill in the user name and password.

| Login | × |
|--------------|-----------|
| User Name: | |
| Password: | |
| HTTP Port: | 80 |
| Stream Port: | 6002 |
| | OK Cancel |

3. Click OK to set the username and password.

Note: To perform further configuration, please make sure that the User set here has administrator privileges. The default Username/Password for cameras is admin/admin.

Properties

The properties of a camera can be viewed by following these steps:

- 1. Select a camera by checking the box in the first column of its listing.
- Right click the camera and select Properties, or select Camera > Properties from the menu bar.

| IP Camera Utility | | File Group Can | nera Help | | | X |
|---|--------------------|---|---|---|---|--|
| 🔍 Auto Search Update Firmware 🎯 F | Reboot 💿 Link to C | amera 🎁 Set IP 💽 Fo | icus Tool | | | |
| Auto Search & Update Firmware Camera Group All Devices(6) Comine Devices(0) MyGroup | Reboot Link to C | Amera ¥ Set IP © Fo Name CAM2321 © CAM2321 © CAM2301 © CAM2301 © CAM2301 © CAM2311 © CAM2311 © CAM1320 | IP 172 30 10 71 Login User Manager Configuration + Maintenance + Basic focus tool Device Group + Select All Deselect All Delete from Tool Properties | Model CAM2321 CAM2321 CAM2301 CAM3371 CAM2311 CAM1320 | MAC 00D0236037A0 00D023603BB3 00D0236012B9 00D023602BAE 00D023603021 00D02360117A | Status online online online online online |
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| IP Camera Utility | | | File Group | Ca | imera Help | | | | - × |
|-----------------------------------|----|------------------|----------------|----|----------------|---|--------|---------------------|--------|
| 🔍 Auto Search 👫 Update Firmware 👩 | Re | boot 💿 Link to C | amera 🦞 Set IP | | Login | | | | |
| | | | | | Oser Manager | | | | |
| Camera Group | | Details | Norra | | Search | | | 1140 | Ctatua |
| All Devices(6) | | Number | CAM222 | | Configuration | | • BI | MAC 00D022602740 | Status |
| Offline Devices(0) | | . 2 | CAM232 | | Device Group | | 0221 | 00D023603PR0 | online |
| | | . 2 | @ CAM230 | | Link to Camera | | 301 | 00D023603883 | online |
| | | | CAM230 | - | Properties | | 371 | 00D023602BAE | online |
| | | □ - | @ CAM2311 | | 172 30 10 6245 | C | AM2311 | 00D023603021 | online |
| | | . 6 | @ CAM1320 | | 172 30 10 143 | c | AM1320 | 00D02360117A | online |
| | | | - 0/ MITO20 | | 112.00.10.110 | | | 000020001111 | - |
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The Camera Information popup will display with camera details.

| Camera Inform | ation 🔀 |
|---------------|---------------|
| IP: | 172.18.6.57 |
| Status: | ОК |
| DHCP: | Yes |
| MAC: | 00D0236009E8 |
| Name: | CAM2321 |
| Network | 255.255.254.0 |
| Model: | CAM2321 |
| Firmware: | 1.4.A10T |
| ок | Cancel |

Delete from Tool

- 1. Select one or more cameras by checking the box in the first column of their listing.
- 2. Right click the camera(s) which you want to delete from the tool and select **Delete from Tool.** The camera will be removed from the listings.

| IP Camera Utilit | у 📻 | | File Group Ca | mera Help | | | |
|-----------------------------------|------------|-------------|--------------------|------------------|---------|--------------|--------|
| 🔍 Auto Search 👫 Update Firmware 🌘 | 🕉 Reboot 🌾 |) Link to C | amera 🚏 Set IP 👩 F | ocus Tool | | | |
| Camera Group | Detai | s | | | | | |
| All Devices(6) | N | lumber | Name | IP | Model | MAC | Status |
| Online Devices(6) | | 1 | CAM2321 | 172.30.10.71 | CAM2321 | 00D0236037A0 | online |
| Offline Devices(0) | | 2 | CAM2321 | Login | CAM2321 | 00D023603BB3 | online |
| | | 3 | CAM2301 | User Manager | CAM2301 | 00D0236012B9 | online |
| | | 4 | CAM3371 | Configuration | CAM3371 | 00D023602BAE | online |
| | | 5 | CAM2311 | Maintenance > | CAM2311 | 00D023603021 | online |
| | | 6 | CAM1320 | Basic focus tool | CAM1320 | 00D02360117A | online |
| | | | | Device Group | | | |
| | | | | SelectAll | | | |
| | | | | Deselect All | | | |
| | | | L | Delete from Tool | | | |
| | | | ι. | Properties | | | |
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Select All

In a group context, right clicking a camera, and selecting **Select All** will select all the cameras in the group.

| IP Camera Utility | | File Group C | amera Help | | | | | | | | | |
|---|-----------------|---|--|--|---|--|--|--|--|--|--|--|
| 🔍 Auto Search 🤹 Update Firmware 💿 Reboot 💿 Link to Camera 🦞 Set IP 💽 Focus Tool | | | | | | | | | | | | |
| Camera Group | Details Numb | er Name 1 © CAM2321 2 © CAM2321 3 © CAM2301 4 © CAM3371 5 © CAM2311 8 © CAM1320 | IP 472 30 40 Login User Mana Configurat Maintenan Basic focu Device Gro SelectAI DeselectA Delete fron Properties | Model 21 CAM2321 ager AM2321 AM2321 AM3371 ce AM3371 AM3371 AM3371 AM3371 AM320 JI n Tool | MAC 00D0236037A0 00D023603BB3 00D0236012B9 00D023602BAE 00D023603021 00D02360117A | Status online online online online online | | | | | | |
| | • | | | III | | • | | | | | | |

Rebooting Camera

In certain cases it may be necessary to reboot the camera. To do this:

- 1. Select a camera by checking the box in the first column of its listing.
- 2. Click the **Reboot** button or select **Camera > Configuration > Reboot** from the menu bar.

| IP Camera Utility | | File Group Camer | a Help | | | |
|-----------------------------------|----------------------|------------------------|---------------|---------|--------------|--------|
| 🍳 Auto Search 👫 Update Firmware 🎯 | Reboot 🕤 🕤 Link to C | amera 🦹 Set IP 💽 Focus | s Tool | | | |
| Camera Group | Details | | | _ | | |
| ⊡ | Number | Name | IP | Model | MAC | Status |
| Online Devices(6) | 1 | CAM2321 | 172.30.10.71 | CAM2321 | 00D0236037A0 | online |
| Offline Devices(0) | 2 | CAM2321 | 172.30.10.102 | CAM2321 | 00D023603BB3 | online |
| | 3 | CAM2301 | 172.30.10.69 | CAM2301 | 00D0236012B9 | online |
| | 4 | CAM3371 | 172.30.10.39 | CAM3371 | 00D023602BAE | online |
| | 5 | CAM2311 | 172.30.10.62 | CAM2311 | 00D023603021 | online |
| | 6 | CAM1320 | 172.30.10.143 | CAM1320 | 00D02360117A | online |
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| IP Camera Utility | | | File Group | Camera He | lp | | _ | | - × |
|-------------------------------------|--------|-------------|---------------------|-------------------|---------------|-----|------|------------------------|--------|
| 🔍 Auto Search 🤺 Update Firmware 🔗 F | Reboot | 💮 Link to C | amera 🦞 Set IP | Login User Mar | ager | | | | |
| Camera Group | Det | ails | | Search | | | | | |
| Enter All Devices(6) | | Number | Name | Configura | ation | • | | Download Configuration | Status |
| | | 1 | CAM232 ⁻ | Maintena | nce | • | | Update Configuration | online |
| Offline Devices(0) | | 2 | CAM232 ⁻ | Device Gr | roup | + | | Reboot | nline |
| | | 3 | CAM230 ⁻ | Link to Ca | amera | | 2301 | 000023001289 | online |
| | | 4 | CAM337 ¹ | Propertie | s | | 3371 | 00D023602BAE | online |
| | | 5 | @ CAM2311 | | 172.30.10.62 | CAM | 2311 | 00D023603021 | online |
| | | 6 | CAM1320 | | 172.30.10.143 | CAM | 1320 | 00D02360117A | online |
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The camera will reboot. If further configuration is needed, perform the **Login** function again after the reboot is completed.

Set IP

The IP Address of a camera can be set by following these steps:

1. Click the **Set IP** button.

| IP Camera Utility | | File Group Ca | amera Help | | | × |
|-----------------------------------|--------------|--------------------------|---------------|---------|--------------|--------|
| 🔍 Auto Search 🐐 Update Firmware 📀 | Reboot 💮 Lin | k to Camera 💏 Set IP 🚺 F | Focus Tool | | | |
| Camera Group | Details | 6.13 | 10 | _ | | |
| ⊡ | Numbe | er Name | IP | Model | MAC | Status |
| | 1 | CAM2321 | 172.30.10.71 | CAM2321 | 00D0236037A0 | online |
| Offline Devices(0) | 2 | @ CAM2321 | 172.30.10.102 | CAM2321 | 00D023603BB3 | online |
| | . 3 | @ CAM2301 | 172.30.10.69 | CAM2301 | 00D0236012B9 | online |
| | E 4 | @ CAM3371 | 172.30.10.39 | CAM3371 | 00D023602BAE | online |
| | E 6 | @ CAM2311 | 172.30.10.62 | CAM2311 | 00D023603021 | online |
| | _ e | CAM1320 | 172.30.10.143 | CAM1320 | 00D02360117A | online |
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2. You can choose to obtain an IP address from DHCP or assign a fixed IP.

| Assig | m IP Address | | | | | | |
|-------|--------------|-------------|---------------|--------------|--------------|------|----------------------|
| Ca | mera | | | | | | |
| | Name | IP | Netmask | Gateway | DNS | DHCP | Logged In/Logged Out |
| | CAM1301 | 172.18.7.29 | 255.255.254.0 | 172.18.7.254 | 192.168.1.23 | Yes | Logged Out |
| | | | | | | | |
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| | | | | | Select All | De | eselect All Login |

- **3.** Select one or more cameras by checking the box in the first column of their listing. Click **Select All.**
- A Login window will pop up. Fill in the user name and password. Click OK.

| Login | | | | | | |
|--------------|------|--|--|--|--|--|
| User Name: | | | | | | |
| Password: | | | | | | |
| HTTP Port: | 80 | | | | | |
| Stream Port: | 6002 | | | | | |
| OK Cancel | | | | | | |

Click **OK** to save or **Cancel** to abort the changes before you leave the page.

Link to Camera Web Interface

Link to Camera

- 1. Select a camera by checking the box in the first column of its listing.
- Double click the selected camera or select Camera > Link to Camera in the menu bar. The camera's live view webpage will open in a browser window.

| IP Camera Utility | | | File Group | Camera Help | | _ | | - × |
|-----------------------------------|----------|-------------|----------------|------------------|-----|------|--------------|--------|
| 🔍 Auto Search 👫 Update Firmware 🙆 | Reboot (| 🗈 Link to C | amera 📲 Set IP | Login | | | | |
| | | | | User Manager | | | | |
| Camera Group | Deta | ls | | Search | | | | |
| e- I Devices(6) | 1 | lumber | Name | Configuration | + | el | MAC | Status |
| Online Devices(6) | | 1 | CAM232 | Maintenance | + | 2321 | 00D0236037A0 | online |
| Gffline Devices(0) | | 2 | CAM232 | Device Group | • | 2321 | 00D023603BB3 | online |
| | | 3 | CAM230 | Link to Camera 🔓 | | 2301 | 00D0236012B9 | online |
| | | 4 | CAM337 | Properties | | 3371 | 00D023602BAE | online |
| | | 5 | @ CAM2311 | 172.30.10.62 | CAM | 2311 | 00D023603021 | online |
| | | 6 | CAM1320 | 172.30.10.143 | CAM | 1320 | 00D02360117A | online |
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Link to Camera User Manager

This function links to the user management page of the selected camera.

- 1. Select a camera by checking the box in the first column of its listing.
- Right click the camera and select User Manager or click Camera > User Manager in the menu bar. The camera's user management webpage will open in a browser window.

| IP Camera Utility | | File Group Came | ra Help | | | |
|-------------------------------------|--|-----------------------|---|--|---|--|
| 🔍 Auto Search 🐐 Update Firmware 🎯 I | Reboot 🍥 Link to Ca | amera 🏋 Set IP 💽 Focu | is Tool | | _ | |
| Auto Search * Update Firmware | Number ✓ 1 ✓ 1 ✓ 2 ✓ 3 ✓ 4 ✓ 5 ✓ 6 | amera ¥≸ SetIP | IP 172 20 40 74 Login User Manage Comiguration Maintenance Basic focus to Device Group Select All Deselect All | Model M2321 M2321 M2301 M3371 M2311 M2311 M1320 | MAC 00D0236037A0 00D023603BB3 00D0236012B9 00D023602BAE 00D023603021 00D02360117A | Status online online online online online |
| | < | | Delete from T Properties | ool | | |

| IP Camera Utility | | | File Group | Camera Help | | | | - X |
|-----------------------------------|----------|---|--|--|------------|--|---|--|
| 🔍 Auto Search 🙀 Update Firmware 🧔 | Reboot (| 💿 Link to C | Camera 🚏 Set IP | Login | | | | |
| | | | | User Manager 🔓 | | | | |
| Camera Group | | IIS Number 1 2 3 4 5 6 | Name © CAM232 @ CAM232 @ CAM230 @ CAM230 @ CAM337 @ CAM2311 @ CAM1320 | Search Configuration Maintenance Device Group Link to Camera Properties 172.30.10.62 172.30.10.143 | CAN CAN | 2321 2321 2301 3371 2311 1320 | MAC 00D0236037A0 00D023603BB3 00D0236012B9 00D023602BAE 00D023603021 00D02360117A | Status online online online online online |
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5.5. Camera Group Actions

The *Camera Group* frame contains a simple tree containing group listings. There are two pre-defined subsections.

- All Devices contains all the cameras in the tool, as well as predefined groups New Devices and Warnings/Errors
- **MyGroup** contains only user defined groups.

Add Group

1. Right click the *MyGroup* root, and choose **Add Group** or choose **Add**

Group from the Group menu.



| IP Camera Utility | File | Group Camera | Help | | | - × |
|-----------------------------------|-------------------------|--------------|------|-------|-----|--------|
| 🔍 Auto Search 🐐 Update Firmware 🎯 | Reboot 💿 Link to Camera | Add Group | - C2 | | _ | |
| Camera Group | Details | Rename Grou | p | | | |
| All Devices(6) | Number | Name | IP | Model | MAC | Status |
| | | | | 11 | | |

The system responds with the *Add Group* popup.

2. In the *New Group Name* field, type in a group name.

| Add Group | |
|-----------------|--------|
| New Group Name: | |
| ок | Cancel |

3. Click OK to add the group. The group will appear under *MyGroup*

Note: Camera group names can contain upper and lower-case letters, numerals and the _ symbol. Cameras can belong to more than one group.

Delete Group

- 1. Expand *MyGroup* and right-click the group you wish to delete.
- 2. Choose **Delete Group** to delete the group. Alternatively, click the group and choose **Delete Group** from the **Group** menu.

| IP Camera Utility | | File Group Camer | ra Help | | | |
|--------------------------------------|------------------|------------------------|---------------|---------|--------------|--------|
| 🔍 Auto Search 🏘 Update Firmware 🏾 🞯 | Reboot 💿 Link to | Camera 🚏 Set IP 👩 Focu | s Tool | | | |
| Camera Group | Details | | | | | |
| All Devices(6) | Number | Name | IP | Model | MAC | Status |
| | 1 | CAM2311 | 172.30.10.62 | CAM2311 | 00D023603021 | online |
| Offline Devices(0) | 2 | CAM1320 | 172.30.10.143 | CAM1320 | 00D02360117A | online |
| B. WGroup | | | | | | |
| Rename Group | | | | | | |
| Delete Group | | | | | | |
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| IP Camera Utility | | File Group Came | ra Help | | | |
|--------------------------------------|------------------|--------------------|---------------|---------|--------------|--------|
| 🔍 Auto Search 📫 Update Firmware 👩 I | Reboot 💿 Link to | Camera 1 Add Group | | | | |
| | | Delete Gro | up 🔎 | | | |
| Camera Group | Details | Name | ioup | Madal | MAC | Statua |
| All Devices(6) Online Devices(6) | | CAM2311 | 172 30 10 62 | CAM2311 | 00D023603021 | online |
| Offline Devices(0) | 2 | @ CAM1320 | 172.30.10.143 | CAM1320 | 00D02360117A | online |
| | | | | | | |
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3. The system will ask to confirm the deletion. Click Yes to delete the group.

Note: Groups may be deleted, even if they contain cameras.

Rename Group

- 1. Expand *MyGroup* and right-click the group you wish to rename.
- Choose Rename Group. Alternatively, click the group and choose Rename Group from the Group menu.



| IP Camera Utility | | File Group Came | ra Help | | | - × |
|-----------------------------------|--------------------|---------------------|---------------|-----------|--------------|--------|
| 🔍 Auto Search 🙀 Update Firmware 🎯 | Reboot 💿 Link to C | amera 👔 🛛 Add Group | | | | |
| | _ | Delete Grou | up | | | |
| Camera Group | Details | Rename G | roup | | | |
| All Devices(6) | Number | Name © CNU0244 | 170 20 40 60 | Model | MAC | Status |
| Offline Devices(0) | | CAM2311 | 172.30.10.62 | CAM23TT | 00D023603021 | onine |
| MGCroup | | UNIT 1320 | 172.30.10.143 | CANI 1320 | 000023001174 | omne |
| | • | | | | | 4 |

The Rename Group popup appears.

3. Enter a new group name in the New Group Name field.

| Rename Group | × |
|-----------------|---|
| New Group Name: | |
| OK Cancel | |

4. Click OK to save your changes.

Note: Camera group names can contain upper and lower-case letters, numerals and the _ symbol.

Move to Group

This function moves the selected camera(s) from a group to another group.

- 1. From the *Camera Group* window select a group under *MyGroup*.
- **2.** Select one or more cameras from the existing group by checking the box in the first column of their listing.
- Right click the camera and select Device Group > Move to Group, or select Camera > Device Group > Move to Group from the menu bar.

| IP Camera Utility | | | File Group Ca | imera Help | | | - × |
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| 🔍 Auto Search 📫 Update Firmware 🎯 I | Reboot 🤇 | Link to C | amera 🦞 Set IP 👩 F | ocus Tool | | | |
| Auto Search & Update Firmware () | Reboot | Link to C s umber 1 2 | amera 💱 Set IP 💽 F Name 🔮 CAM2311 🎯 CAM1320 | Login User Manager Configuration Maintenance Basic focus tool Device Group Select All Deselect All Detete from Tool Properties | Model CAM2311 CAM1320 Copy to Group Move to Group | MAC 00D023603021 00D02360117A | Status online online |
| | | | | | | | |
| | • | | | III | | | |

| IP Camera Utility | | | File Group | Camera | Help | | | _ | | - × |
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| 🔍 Auto Search 🐐 Update Firmware 🎯 I | Reboot | 💿 Link to Ca | imera 🦞 Set IP | Lo | jin Managar | | | | | |
| Camera Group | Deta | ils | _ | Se | er Manager arch | | | | | |
| All Devices(6) | | Number | Name | Co | nfiguration | | ۲ | el | MAC | Status |
| Online Devices(6) | | 1 | CAM231 | Ма | intenance | | • | 2311 | 00D023603021 | online |
| Offline Devices(0) | | 2 | CAM132 | De | vice Group | | ► | | Copy to Group | online |
| New(2) | | | | Lin | k to Camera | | | | Move to Group | |
| | | | | Pro | perties | | _ | - | M | |
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| | • | | | | | III | | | | - F |
4. In the Select Group pop-up box select the destination group.

| Camera Group | |
|--------------------|--|
| All Devices(6) | |
| | |
| Offline Devices(0) | |
| MyGroup | |
| New(2) | |
| | |
| | |
| | |

5. Click **OK** to move the selected camera(s) to the group.



Copy to Group

This function copies the selected camera(s) from a group to another group.

- 1. From the *Device Group* window select a group.
- **2.** Select one or more cameras from the existing group by checking the box in the first column of their listing.
- Right-click the camera(s) and select Device Group > Copy to Group, or select Camera > Device Group > Copy to Group from the menu bar.

| IP Camera Utility | | | File Group Camera | He | elp | | | - × |
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| 🔍 Auto Search Update Firmware 🧔 | Reboot | 💿 Link to Ca | amera 🎁 Set IP 👩 Focus | Tool | | | | |
| Auto Search * Update Firmware Camera Group All Devices(6) Goline Devices(0) MyGroup New(2) | Rebool | Link to Cr Ilink to Cr Ilink to Cr 1 2 | amera VS Set IP Set IP Focus Name CAM2311 Cogin User Manager Configuration Maintenance Basic focus tool Device Group Select All Deslect All Delete from Tool Properties | + + | IP 172.30.10.62 172.30.10.143 Copy to Group Move to Group | Model CAM2311 CAM1320 | MAC 00D023603021 00D02360117A | Status online online |
| | | | | | | | | |
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| IP Camera Utility | | File Group | Camera Help | | | | - × |
|-------------------------------------|-----------------|---------------------|-----------------|------|-------|---------------|--------|
| 🔍 Auto Search 😽 Update Firmware 🥱 i | Reboot 💿 Link t | o Camera 🦞 Set IP | Login | | | | |
| | | | User Manager | | | | |
| Camera Group | Details | | Search | | | | |
| | Number | Name | Configuration | • | əl | MAC | Status |
| Online Devices(6) | 1 | CAM232 | Maintenance | • | 2321 | 00D0236037A0 | online |
| Gffline Devices(0) | 2 | CAM232 ⁻ | Device Group | • | | Copy to Group | online |
| New(2) | 3 | CAM230 ⁻ | Link to Camera | | 2301 | 00D0236012B9 | online |
| <u> </u> | a 4 | CAM337 ¹ | Properties | | 3371 | 00D023602BAE | online |
| | 5 | CAM2311 | 1 172.30.10.62 | CA | M2311 | 00D023603021 | online |
| | 6 | CAM1320 | 0 172.30.10.143 | 3 CA | M1320 | 00D02360117A | online |
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4. In the Select Group pop-up box select the destination group.

| samera ereap | |
|----------------|--|
| All Devices(6) | |
| | |
| | |
| MyGroup | |
| | |

5. Click **OK** to copy the selected camera(s) to the group.

5.6. Configuration Settings

Configuration can be downloaded and updated by selecting **Camera > Configuration**, or the process can be automated by downloading the configuration from one camera using the **Download Configuration** function, and then using the **Update Configuration** function to upload the changed configuration file.



| IP Camera Utility | | | File Group | Camera Help | | | | - × |
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| 🔍 Auto Search 🐐 Update Firmware 🤕 | Reb | oot 💿 Link to (Details | Camera 🦞 Set IP | Login User Manager Search | | | | |
| □, all Devices(6) | | Number | Name | Configuration | - ŀ. | | Download Configuration | Status |
| Online Devices(6) | 1 | 1 | CAM232 | Maintenance | 100 | | Update Configuration | online |
| Offline Devices(0) | Ĩ | 2 | CAM232 ⁻ | Device Group | • | | Reboot | online |
| MyGroup | 1 | 3 | CAM230 ⁻ | Link to Camera | | 2301 | 00D0236012B9 | online |
| INEW(2) | [| 4 | CAM337 ⁻ | Properties | | 3371 | 00D023602BAE | online |
| | [| 5 | @ CAM2311 | 172.30.10.62 | CAM | 2311 | 00D023603021 | online |
| | 1 | 6 | CAM1320 |) 172.30.10.143 | CAM | 1320 | 00D02360117A | online |
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Download Configuration

This function downloads a configuration file.

- 1. Select a camera by checking the box in the first column of its listing.
- Right-click the camera which you want to download from and select Configuration > Download Configuration, or select Camera > Configuration > Download Configuration from the menu bar. The Download Configuration popup will display.

| Download Configuration | | × |
|------------------------|--------|--------|
| | | Browse |
| Download | Cancel | |

- **3.** Click the **Browse** button to browse the computer and locate a destination.
- 4. Click **Download** to download the configuration file to the destination.

Update Configuration

- 1. Select one or more cameras by checking the box in the first column of their listing.
- 2. Right-click the camera(s) which you want to update to and select Configuration > Update Configuration, or select Camera > Configuration > Update Configuration from the menu bar. The Update Configuration popup will display.

| Update Configuration | |
|----------------------|--------|
| Update Cancel | Browse |

- **3.** Click the **Browse** button to browse the computer and locate a configuration file.
- 4. Click **Update** to upload the configuration file to the camera(s).

5.7. Firmware Actions

Update Firmware

Once a new version of the camera firmware is obtained, the firmware can be updated using the following steps:

| boot Camera Details Number 1 2 3 4 5 6 6 File boot Camera Details Number | Yi Set IP Focus Tool Name Configuration CA Login CA User Manager CA Basic focus too CA Basic focus too CA Device Group Select All Delete from To Properties Properties | IP 10.71 10.102 10.69 Update 10.143 ol 10.143 | Model CAM2321 CAM2321 CAM2301 e Firmware CAM1320 | MAC 00D0236037A0 00D023603BB3 00D0236012B9 0D023602BAE 0D023603021 00D02360117A | Status online online online online online |
|---|--|---|---|---|--|
| Details Number 1 2 3 4 5 6 6 File boot © Link to Camera Details Number | Name CA Login User Manager CA Basic focus too CA Basic focus too CA Basic focus too Select All Delete from To Properties CA Select All Delete from To CA Select All Delete from To Properties CA Select All Delete from To Properties Select All Delete from To Properties Select All Delete from To Properties CA Select All Delete from To Properties Select All Delete from To Properties Select All CA Select All Delete from To Select All CA Select All Delete from To Select All CA Select All | IP 10.71 10.69 ↓ Update 0.143 01 10.143 10.143 | Model CAM2321 CAM2321 CAM2301 e Firmware CAM1320 | MAC 00D0236037A0 00D023603BB3 00D0236012B9 00023602BAE 00D023603021 00D02360117A | Status online online online online online |
| Number 1 2 3 4 5 6 6 File boot CLink to Camera Details Number | Name CA Ca Login User Manager Ca Ca Maintenance CA Basic focus to CA Device Group Select All Destet from To Properties CA Group Camera He String Camera He C | IP 10.71 10.102 10.69 Update 10.143 ol 10.143 | Model CAM2321 CAM2321 CAM2301 e Firmware CAM1320 | MAC 00D0236037A0 00D023603BB3 00D0236012B9 0D023602BAE 00D023603021 00D02360117A | Status online online online online online online online online |
| File boot Camera Details Number | e Group Camera He ¥∳ Set IP ⊙ Focus Tool | m blp | | | |
| Number | | | | | |
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| | CAM2321 | 172.30.10.71 | CAM2321 | 00D0236037A0 | online |
| | CAM2301 | 172.30.10.102 | CAM2321 | 00D0236012B9 | online |
| | CAM2301 | 172 30 10 39 | CAM2301 | 00D023602B4E | online |
| | CAM2311 | 172 30 10 62 | CAM2211 | 00D023603021 | online |
| | CAM1320 | 172 30 10 1/3 | CAM1320 | 00D023601174 | online |
| | | | | | |
| | | 4 CAM3371 5 CAM2311 6 CAM1320 | 4 CAM3371 172.30.10.39 5 CAM2311 172.30.10.62 6 CAM1320 172.30.10.143 | 4 CAM3371 172,30.10.39 CAM3371 5 CAM2311 172,30.10.62 CAM2311 6 CAM1320 172,30.10.143 CAM1320 | 4 ● CAM3371 172.30.10.39 CAM3371 00D023002BAE 5 ● CAM2311 172.30.10.62 CAM2311 00D023603021 6 ● CAM1320 172.30.10.143 CAM1320 00D02360117A |

Note: You must be logged into the camera to update the camera firmware.

- 1. Select one or more cameras by checking the box in the first column of their listing.
- 2. Click the Update Firmware button; right-click the camera(s) which you want to update to and select Maintenance > Update Firmware; or select Camera > Maintenance > Update Firmware from the menu bar. The Update Firmware popup will display.

| Update Firmware | X |
|-----------------|--------|
| | Browse |
| Update Cancel | |

- 3. Click the **Browse** button to browse the file system and locate a firmware file.
- 4. Click **Update** to upload the firmware to the camera(s).

5.8. Focus Tool

The Focus Tool is used as a reference for focus precision. Click the Focus Tool button to open it.

| IP Camera Utility | , 📻 | | File Group Camera | a Help | | | X |
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| 🔍 Auto Search 🙀 Update Firmware 🧔 | Reboot (|) Link to C | Camera 🦞 Set IP 🗿 Focus | s Tool | | | |
| Camera Group | Detai | ls | | - C | | | |
| All Devices(6) | N | lumber | Name | IP | Model | MAC | Status |
| | | 1 | CAM2321 | 172.30.10.71 | CAM2321 | 00D0236037A0 | online |
| Gffline Devices(0) | | 2 | CAM2321 | 172.30.10.102 | CAM2321 | 00D023603BB3 | online |
| New(2) | | 3 | CAM2301 | 172.30.10.69 | CAM2301 | 00D0236012B9 | online |
| | | 4 | CAM3371 | 172.30.10.39 | CAM3371 | 00D023602BAE | online |
| | | 5 | CAM2311 | 172.30.10.62 | CAM2311 | 00D023603021 | online |
| | | 6 | CAM1320 | 172.30.10.143 | CAM1320 | 00D02360117A | online |
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Information of *Best Focus Value*, *Current Focus Value* and *Focus Percent* will be shown at the bottom of the Focus Tool Window. You can click **Refresh** to get a new data after focus adjustment is done.



Note: When the Focus Percent is higher, the focus is more precise.