Cisco® Video Surveillance 6400 IP Camera

Product Overview

The Cisco® Video Surveillance 6400 IP Camera is an outdoor, high-definition, full-functioned video endpoint with an integrated infrared illuminator and industry-leading image quality and processing power. The camera is capable of full 1080p resolution at 30 frames per second (fps) while optimizing network usage with either H.264 or MJPEG compression. Contact closures and two-way audio allow integration with microphones, speakers, and access control systems. With its open, standards-based design, the camera shown in Figure 1 provides an ideal platform for integration and operation as an independent device or as part of a Cisco Video Surveillance network.

Figure 1.   Cisco Video Surveillance 6400 IP Camera

The Cisco Video Surveillance 6400 IP Camera offers a variety of benefits, including:

- **True high-definition video:** The camera streams crisp and clear 1080p (1920 x 1080) (2.1 megapixel) video at 30 fps while maintaining low network bandwidth.
- **Motorized focus and zoom:** The lens on the 6400 IP Camera allows the focus and zoom to be controlled remotely, greatly simplifying installations and field of view adjustments.
- **Integrated infrared illuminator:** The infrared illuminator can light an area up to 30 meters away.
- **Outdoor-ready:** An IP66-rated enclosure and an included mounting bracket allow for outdoor mounting straight out of the box.
- **Dual streaming:** The camera can stream H.264 and MJPEG video simultaneously. Each video stream can be configured with individual resolution, quality, and frame-rate settings.
- **Day/night operation:** The camera provides true day/night functionality and includes an infrared filter that automatically switches to night mode in low-light scenes. This function can be set to manual, automatic, or scheduled control.
- **Privacy regions:** The camera supports up to four user-defined privacy regions. Any video within a privacy region is masked in the video stream.
- **Local storage:** Video data can automatically be recorded to an SD card when the camera loses network connectivity.
- **Bidirectional audio:** The camera supports full-duplex audio and options for half-duplex operation.

- **Open API.** Support for ONVIF 2.0 allows for standards based interoperability and communications with other ONVIF appliances.
- **Flexible power options:** The camera supports Power over Ethernet (PoE) 802.3af, 12 VDC, or 24 VAC power through an optional external power supply.
- **Mounting options:** The camera can be installed with a fixed mount or with an optional external pan-tilt mount and motorized zoom lens.
- **Medianet support:** The camera supports the Cisco Medianet interface. When connected to a Cisco switch that also supports Medianet, the switch recognizes the camera as a video endpoint and then uses SmartPort macros to set the right network parameters for the video stream on the network. In addition, the camera can be automatically discovered and configured when connected to Cisco Video Surveillance Manager 7.0, thereby minimizing installation time and cost.

Features

Table 1 describes the features of the Cisco Video Surveillance 6400 IP Camera.

Table 1.   Cisco Video Surveillance 6400 IP Camera Features

Item	Specification
Imaging device	1/2.7-in. progressive-scan CMOS
Image control	Automatic white balance (AWB), automatic gain control (AGC), automatic exposure shutter (AES), and auto and manual iris
Wide dynamic range	Approximately 69 dB
Minimum illumination	- Color: 0.5 lux - B/W: 0 lux w/illuminator active
Lens	3-9 mm DC-Iris Remote focus and zoom
Field of view	37.5° to 95.98° (horizontal) 21.6° to 53.80° (vertical) 42.6° to 109.46° (diagonal)
Shutter speed	1/5 to 1/32,000 sec
Video compression	H.264 and MJPEG
Audio compression	G.711 A-Law, G.711 U-Law, G.726
Resolution and frame rate (H.264)	Refer to Tables 2 and 3
Resolution and frame rate (MJPEG)	Refer to Tables 2 and 3

Video streaming	- Single-stream H.264 or MJPEG up to 1080p (1920 x 1080) @ 30 fps
	- Dual-stream H.264 and MJPEG
	  ◦ Primary stream programmable up to 1280 x 720 @ 30 fps
	  ◦ Secondary stream programmable up to 960 x 544 @15 fps

Protocols	Dynamic Host Control Protocol (DHCP), Hypertext Transfer Protocol (HTTP), Secure HTTP (HTTPS), Network Time Protocol (NTP), Real-Time Transport Protocol (RTP), Real-Time Streaming Protocol (RTSP), Simple Mail Transfer Protocol (SMTP), Secure Sockets Layer/Transport Layer Security (SSL/TLS), TCP/IP, Cisco Discovery Protocol, Bonjour, Simple Network Management Protocol (SNMP), and Secure Shell (SSH) Protocol
Quality of service (QoS)	Differentiated-services-code-point (DSCP) marking and class-of-service (CoS) marking
Power	12 VDC or 24 VAC through optional external power supply, available separately PoE (802.3af)

Item	Specification
Power consumption (max)	DC: 9.6W AC: 12.5W PoE: 12.2W

Table 2 lists the video stream support for the Cisco Video Surveillance 6400 IP Camera for 16:9 aspect ratios.

Table 2.   Cisco Video Surveillance 6400 IP Camera Video Stream Support for 16:9 Aspect Ratios

Primary (H.264)	Maximum fps	Secondary (H.264 or MJPEG)	Maximum fps
1920 x 1080	30	NA	-
1920 x 1080	15	1024 x 576 960 x 544 768 x 432 704 x 400 640 x 368 352 x 208 320 x 192 192 x 112 160 x 96	15
1536 x 864	30	1024 x 576 960 x 544 768 x 432 704 x 400 640 x 368 352 x 208 320 x 192 192 x 112 160 x 96	15
1472 x 832	30	1024 x 576 960 x 544 768 x 432 704 x 400 640 x 368 352 x 208 320 x 192 192 x 112 160 x 96	15
1280 x 720	30	1024 x 576 960 x 544 768 x 432 704 x 400 640 x 368 352 x 208 320 x 192 192 x 112 160 x 96	15

Primary (H.264)	Maximum fps	Secondary (H.264 or MJPEG)	Maximum fps
1024 x 576	30	1024 x 576 960 x 544 768 x 432 704 x 400 640 x 368 352 x 208 320 x 192 192 x 112 160 x 96	15
960 x 544	30	960 x 544 768 x 432 704 x 400 640 x 368 352 x 208 320 x 192 192 x 112 160 x 96	15
768 x 432	30	768 x 432 704 x 400 640 x 368 352 x 208 320 x 192 192 x 112 160 x 96	15
704 x 400	30	704 x 400 640 x 368 352 x 208 320 x 192 192 x 112 160 x 96	15
640 x 368	30	640 x 368 352 x 208 320 x 192 192 x 112 160 x 96	15
352 x 208	30	352 x 208 320 x 192 192 x 112 160 x 96	15
320 x 192 192 x 112 160 x 96	30	320 x 192 192 x 112 160 x 96	15
192 x 112 160 x 96	30	192 x 112 160 x 96	15
160 x 96	30	160 x 96	15

Table 3 lists the video stream support for the Cisco Video Surveillance 6400 IP Camera for 4:3 aspect ratios.

Table 3.   Cisco Video Surveillance 6400 IP Camera Video Stream Support for 4:3 Aspect Ratios

Primary (H.264)	Maximum fps	Secondary (H.264 or MJPEG)	Maximum fps
720 x 480/576	30/25	720 x 480/576 704 x 480/576 352 x 240/288	15
704 x 480/576	30/25	704 x 480/576 352 x 240/288	15
352 x 240/288	30/25	352 x 240/288	15

Connectors

Table 4 describes the connectivity and connectors of the Cisco Video Surveillance 6400 IP Camera.

Table 4.   Cisco Video Surveillance 6400 IP Camera Connectors

Item	Specification
Network connectivity	100 BASE-TX Ethernet with RJ-45 connector
Alarm input	One logic level programmable
Alarm output[*]	One logic level programmable
Storage	SD card slot
Audio	• 3.5-mm audio jack: Audio input for optional external microphone and audio output for optional external speaker supported through Y-cable adapter • Two-way (full- and half-duplex), one-way, or audio off
Power input	Terminal block

[*] Not supported when the camera is used with Cisco Video Surveillance Manager.

Software

Table 5 describes the primary features of the Cisco Video Surveillance 6400 IP Camera software.

Table 5.   Cisco Video Surveillance 6400 IP Camera Primary Software Features

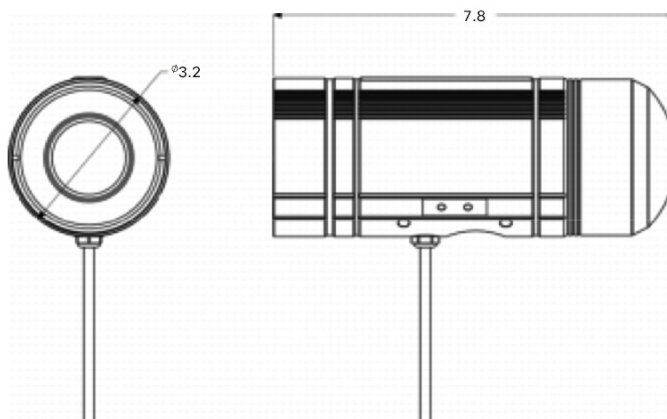| Item	Specification
Activity detection	User-definable alerts with configurable sensitivities and thresholds, email alert, and HTTP notifications
Video format	NTSC and PAL
Image settings	Configurable brightness, sharpness, contrast, saturation, hue, and white balance
Overlay capabilities	Time, date, and text
Selectable bit rate	Support for constant bit rate or variable bit rate
IP filtering	Users can enter a list of allowed or blocked IP addresses for viewing video and configuring camera settings
Discovery	Cisco Discovery Protocol and Bonjour Zero-Configuration discovery
Configuration	• Browser-based using Internet Explorer 8.0 or later • Two levels of user access with password protection
Security	Support for IEEE 802.1X authentication

Specifications

Table 6 provides mechanical specifications of the Cisco Video Surveillance 6400 IP Camera.

Table 6.   Cisco Video Surveillance 6400 IP Camera Mechanical Specifications

Item	Specification	
Housing	Aluminum	
LEDs	Power and activity	
Dimensions (D x L)	3.2 x 7.8 in. (81 x 199 mm)	
Weight	1296 g	
Certifications	**Safety:** • UL60950-1 2nd edition • CSA22.2-No.60950-1 • IEC/EN60950-1 2nd edition • IEC/EN60825	**EMC-Requirements:** • CISPR22 Class B • ICES-003 • EN55022 • EN55024 • EN61000-3-2/-3-3 Class A • VCCI Class B • KN22 Class B • KN24
Operating Temperature	-4 to 122 °F (-20 to 50 °C)	

Figure 2 shows the dimensions of the Cisco Video Surveillance 6400 IP Camera.

Figure 2.   Cisco Video Surveillance 6400 IP Camera Dimensions

Package Contents

Table 7 describes the items that ship with the Cisco Video Surveillance 6400 IP Camera.

Table 7.   Package Contents

Item
Cisco Video Surveillance 6400 IP Camera
Mounting arm and bracket
Installation template
Documentation reference card
Regulatory documentation

Availability

The Cisco Video Surveillance 6400 IP Camera is available through Cisco Authorized Technology Provider (ATP) Partners.

Ordering Information

Table 8 lists the part numbers for the Cisco Video Surveillance 6400 IP Camera.

Table 8.   Ordering Information

Part Number	Description
CIVS-IPC-6400	Cisco Video Surveillance IP Camera, HD Bullet Camera
CIVS-IPCA-PWR12V	12 VDC Power Supply

Using the Camera with Cisco Video Surveillance Manager

Features that are marked with an asterisk (*) are not supported when using the camera with Cisco Video Surveillance Manager. Please refer to the release notes for Cisco Video Surveillance Manager 6.3 for more information:
http://www.cisco.com/en/US/docs/security/physical_security/video_surveillance/network/vsm/release_notes/6_3/vsm_rn_63.html.

Services and Support

Cisco and our certified partners can help you accelerate success and improve the return on your investment in a Cisco Physical Security solution. The Cisco lifecycle approach to services defines the requisite activities at each phase of the solution lifecycle. This approach allows you to:

- Reduce deployment costs by identifying the features that will best meet your business requirements
- Accelerate migration by assessing the readiness of your network to support the system and by developing a sound design
- Support smooth implementation through effective planning and expert installation, configuration, and integration
- Increase operational efficiency and extend the value of your investment with award-winning technical support

For more information about Cisco services, visit http://www.cisco.com/go/services.

For More Information

For more information about the Cisco Video Surveillance 6400 IP Camera, please visit http://www.cisco.com/go/physec or contact your local Cisco account representative.

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