Cisco Video Surveillance IP Gateways

Cisco offers network-centric video surveillance software and hardware that support video transmission, monitoring, recording, and management. These products protect customers' existing investments in analog equipment, while enabling them to operate as part of an IP-based network-centric deployment. Cisco® video surveillance products enable any-to-any multivendor device interoperability, allowing customers to build best-in-class video surveillance systems that optimize price, performance, and capability.

Cisco Video Surveillance IP Gateway video encoders and decoders use a high-quality H.264 and MPEG-4 video compression technology that allows video streams to be switched over the IP network at up to full D1 resolution, and up to 30 frames per second, while consuming low bandwidth. Controlled by Cisco Video Surveillance Stream Manager software, the Cisco Video Surveillance IP Gateway enables you to connect your analog surveillance equipment to a digital network:

Figure 1. IP Gateway

Cisco Video Surveillance IP Gateway encoders enable a wide range of analog video cameras, including pan-tilt-zoom (PTZ) models, to be connected and controlled over an IP/Ethernet network. Similarly, Cisco Video Surveillance IP Gateway decoders allow users to use their existing investment in analog monitoring displays and keyboard/joystick controllers. The encoders and decoders run Cisco Video Surveillance Stream Manager Gateway software, which enables every Cisco Video Surveillance IP Gateway encoder and decoder to become part of a highly available, fully distributed "virtual matrix switch" that uses the power of an IP network. As a result, video surveillance deployment and operational costs can be reduced as the need for an analog matrix switch, fiber optic distribution amplifiers, and multiplexers can be eliminated in many cases—and physical security personnel can access the video in remote locations over the IP network.

Cisco Video Surveillance IP Gateway encoders and decoders are available in both standalone models (as shown in Figure 1) and as a chassis option, with up to 16 cards in a chassis.

The Cisco Video Surveillance IP Gateways offer a variety of benefits, including:

- **Multivendor interoperabilty.** The gateways provide multivendor analog camera, keyboard, and matrix switch signaling and format (protocols) support for interoperability.
- **High performance.** High-performance digital signal processors (DSPs) and application-specific integrated circuits (ASICs) support H.264 and MPEG-4 at D1/4CIF/2CIF/CIF resolution.
- **Dual streaming.** The gateways provide dual unicast and multicast bandwidth-efficient video streaming.
- **Rugged Design.** The gateways can operate in extended temperature ranges to address virtually all deployment scenarios.
- **Audio.** The gateways support Stereo **audio.**
- **Alarms.** The gateways include contact inputs and outputs.
- **Serial ports.** RS-422, RS-485, and RS-232 serial ports support motorized domes and cameras.

Features

Table 1 describes the features of the Cisco Video Surveillance IP Gateways.

Table 1. Cisco Video Surveillance IP Gateway Features

Item	Specification
Video Compression	MPEG-4 ISO/IEC 14496-2:1999 (simple profile), H.264 (main profile)
Audio Compression	G.711 A-Law, G.711 U-Law
Resolutions, Maximum Frame Rates	• NTSC/PAL • 720 x 480/576 @ 30/25 fps (D1) • 704 x 480/576 @ 30/25 fps (4CIF) • 704 x 240/288 @ 30/25 fps (2CIF) • 352 x 480/576 @ 30/25 (HHR) • 352 x 240/288 @ 30/25 fps (CIF)
Frame Rates	• NTSC 30, 15, 10, 7.5, 5, 3.75, 3, 2, 1 fps • PAL 25, 12.5, 6.25, 5, 2.5, 1 fps
Video Streaming	• Single-stream H.264 up to D1 720 x 480/576 @ 30/25 fps • Dual-stream H.264: ◦ Primary stream programmable up to 704 x 480/576 @ 30/25 fps • Secondary stream programmable up to 352 x 240/288 @ 5 fps • Single-stream MPEG-4 up to D1 720 x 480/576 @ 30/25 fps • Dual-stream MPEG-4: ◦ Primary stream programmable up to 704 x 480/576 @ 30/25 fps ◦ Secondary stream programmable up to 352 x 240/288 @ 15/12.5 fps
Protocols	Protocols: IP, Unicast/Multicast, User Datagram Protocol (UDP), Transmission Control Protocol (TCP), Real-Time Transport Protocol (RTP), Dynamic Host Control Protocol (DHCP), Address Resolution Protocol (ARP), Interior Gateway Management Protocol (IGMP) 2.0, and Simple Network Management Protocol (SNMP) 2.0
Quality of Service (QoS)	Differentiated services code point (DSCP) marking
Indicators	Power, video, serial

Connectors

Table 2 describes the connectivity and connectors of the Cisco Video Surveillance IP Gateways.

Table 2. Cisco Video Surveillance IP Gateway Connectors

Item	Specification
Network Connectivity	10/100 BASE-TX Ethernet with RJ-45 connector
Video	1 analog input/output BNC connector, 75 ohms
Audio	Stereo
Serial ports	1 RS-485/422 (2- or 4-wire), 1 RS-232
Alarm input	3 TTL, programmable, normally open/closed
Alarm output	1, SPST relay, normally open, 150 mA, 15 VDC
Power	8–18 VDC, through external power supply or chassis supply

Specifications

Table 3 provides mechanical specifications of the Cisco Video Surveillance IP Gateways.

Table 3. Cisco Video Surveillance IP Gateway Mechanical Specifications

Item	Specification
Housing	Aluminum
Indicators	Power, video, serial
Dimensions	• 7.0 x 4.9 x 1.0 in. • 17.8 x 12.4 x 2.5 cm
Weight	• < 2 lb • < 0.9 kg
Certifications	FCC, CE, and UL
Environment	• Operating: Standalone IP Gateways, –40 to 65ºC, ambient • Operating: Chassis Based IP Gateways, –40 to 50ºC, ambient • Storage: –40 to 85ºC, ambient • Relative humidity: 0 to 95% noncondensing

Availability

The Cisco Video Surveillance IP Gateways are available through Cisco Authorized Technology Provider (ATP) Partners.

Ordering Information

Table 4 lists the part numbers for the Cisco Video Surveillance IP Gateways and associated products.

Table 4. Ordering Information

Part Number	Description
CIVS-SG1BECMD-C16=	Cisco Video Surveillance 1-Port Encoder, Fast Ethernet chassis
CIVS-SG1BECOD-FE	Cisco Video Surveillance 1-Port Encoder, standalone
CIVS-SG1BDCMD-C16=	Cisco Video Surveillance 1-Port Decoder, Fast Ethernet chassis
CIVS-SG1BDCOD-FE	Cisco Video Surveillance 1-Port Decoder, Standalone
CIVS-SG1BDISP-C16=	Cisco Video Surveillance Hybrid 1-Port Decoder, Fast Ethernet chassis
CIVS-SG1BDISP-FE	Cisco Video Surveillance Hybrid 1-Port Decoder, Standalone
CIVS-PWRPAC-12V=	Cisco Video Surveillance Dual-Voltage Power Supply for Encoder/Decoder, spare

Part Number	Description
CIVS-CVG16-FE-WLD	Cisco Video Surveillance Fast Ethernet Chassis, 3-RU, 16-slot, internal dual-voltage power
CIVS-EXTPWR-CHS	Cisco Video Surveillance External Power Supply Chassis
CIVS-EXTPS-350=	Cisco Video Surveillance Fast Ethernet 350W Power Supply for EXTPWR-CHS

Service 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: 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 IP Gateways, visit http://www.cisco.com/go/videosurveillance or contact your local account representative.

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