BOSCH

Invented for life

VIP X2 Dual-channel Video Encoder

▸ **Dual-channel encoder with Dual Streaming**

▸ **High-quality MPEG-4 from QCIF to 4CIF**

▸ **USB and iSCSI recording**

▸ **Ultra-compact size**

▸ **Multicast and Internet streaming**

▸ **Alarm inputs and relay output**

These ultra-compact IP video encoders support two video channels that can convert both PAL and NTSC signals into MPEG-4 video, at up to 25/30 images per second on each channel. A Web browser or Bosch's comprehensive video management system can receive and display the images.

The VIP X2 is available as an audio model, VIP X2A providing bi-directional audio communication in parallel to video. Besides the standard line-level interfaces for both audio channels, it has integrated amplifiers to connect a microphone and speaker to channel 1 directly.

Functions

Viewing

View the video on a PC using Bosch's comprehensive video management system or in a Web browser. Integrate it into other video management systems using the Bosch VideoSDK.

Present images clearly on analog CCTVs, large, flat-screen monitors, or on TVs by routing the IP video to a high-performance VIP XD video decoder or a VIDOS Monitor Wall.

Recording

The VIP X2 has many recording options:

* locally on a USB hard disk,
* on network-attached iSCSI devices,
* centrally, using network video recorders.

If iSCSI RAID storage is available, it enables the VIP X2 to act as a conventional DVR, as well as streaming high-performance live video across the network.

Dual Streaming

The VIP X2 uses Dual Streaming to generate two independent IP video streams per channel if sufficient computational power is available. This allows viewing and recording at two different quality levels, saving disk space and bandwidth. Program it to send out e-mail with JPEG images attached when triggered by an alarm.

Access Security

The VIP X2 encoders offer various security levels for accessing the network, the unit, and the data channels. As well as password protection with three levels, they support 802.1x authentication using a RADIUS server for identification. You can secure Web browser access by HTTPS using a SSL certificate that is stored in the unit. For total data protection, each communication channel—video, audio, or serial I/O—can be independently AES encrypted with 128-bit keys, once the Encryption Site License has been applied.

Intelligence

The VIP X2 supports increased intelligence at the edge that includes detection of video loss, masking, hooding, defocusing, and diverted camera. These detection features provide tamper detection for various unified picture causes. Bosch offers Intelligent Video Motion Detection (IVMD) as an additional licensable option. This provides video content analysis (VCA) directly at the video input for even more advanced VCA.

These powerful devices represent the cutting edge of high-performance Video-over-IP for CCTV today.

Easy Upgrade

Remotely upgrade the VIP X2 encoders whenever new firmware becomes available. This ensures up-to-date products, thus protecting investment with little effort.

Certifications and Approvals

Approvals

Region	Certification	
Europe	CE	VIP X
USA	UL	VIP X
		UL online certifications directory (link)

Safety

IEC 60950

Electromagnetic Compatibility

Region	Number
EU	EN55103-1 Video and audio equipment
	EN55103-2 Video and audio equipment
	EN50130-4 Alarm systems
	EN55022 ITE
	EN55024 ITE
	EN61000-3-2
	EN61000-3-3
US	FCC 47 CFR Chapter 1 Part 15

Installation/Configuration Notes
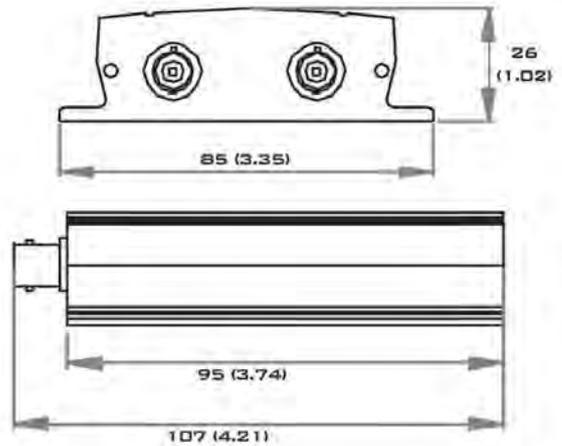
Dimensions in mm (in)

Front Connectors and Indicators

Non-audio model

1	Video In 1	2	Video In 2

Audio model

1	Video In 1	4	Line Out
2	Line In	5	Video In 2
3	Microphone in , speaker out		

Rear Connectors and Indicators
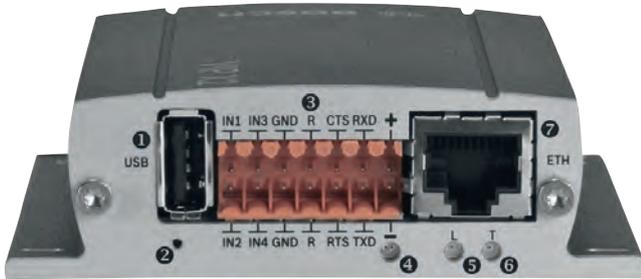
All models

1	USB port	5	LED Link
2	Reset: factory default	6	LED Traffic
3	Alarm in, relay out, power, COM (RS-232/422/485)	7	10/100 Base-T Fast Ethernet
4	LED Power		

Rack Mounting Kit (Optional)
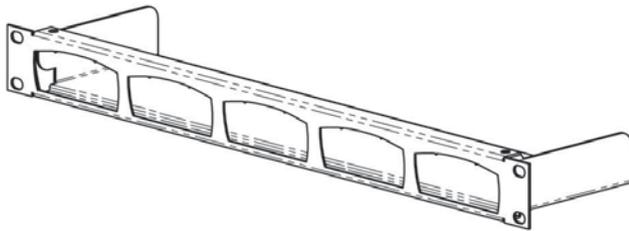
Parts Included

Quantity	Component
1	VIP X2 dual-channel video encoder or
	VIP X2A dual-channel video/audio encoder
1	International plug-in power supply
1	RS-232 null modem cable
1	Quick Installation Guide
1	CD-ROM with software and documentation

Technical Specifications

Electrical

Power supply	VIP-X-PS included in the box
Input voltage	12 to 24 VDC
Power consumption	Approx. 10 VA

Input/output

Video		2 x input
•	connector	BNC
•	impedance	75 ohm, switchable
•	signal	Analog composite, 0.7 to 1.2 Vpp, NTSC or PAL
Audio (audio version only)		1 x mono line in, 1 x mono line out, 1 x microphone input, 1 x speaker output
•	connector	2 x 3.5 mm stereo jack, 1 x CombiCon
•	signal line in	9 kohm typical, 5.5 Vpp max
•	signal line out	16 ohm min, 3.0 Vpp max
•	signal microphone	2 kohm typical, 2.8 Vpp max at -20 dB, 2.3 Vpp typical
•	signal speaker	4 ohm min, 6 Vpp max, 1 W RMS
Alarm		4 x input
•	connector	Clamp (non-isolated closing contact)
•	activation resistance	10 ohm max
Relay		1 x output
•	connector	Clamp
•	signal	30 Vpp, 2 A
COM port		Clamp, RS-232/422/485

Video

Standards	MPEG-4, M-JPEG, JPEG
Data rates	9.6 kbps to 6 Mbps per channel
Resolution	Horizontal x vertical PAL/NTSC
• 4CIF	704 x 576/480 (25/30 ips*)
• 2CIF	704 x 288/240 (25/30 ips*)
• 2/3 D1	464 x 576/480 (25/30 ips*)
• 1/2 D1	352 x 576/480 (25/30 ips*)
• CIF	352 x 288/240 (25/30 ips*)
• QCIF	176 x 144/120 (25/30 ips*)
	* Depending on picture content and movement
GOP structure	I, IP
Overall IP delay	120 ms
Frame rate	1 to 50/60 (PAL/NTSC)

Audio (audio version only)

Standard	G.711; 300 Hz to 3.4 kHz
Data rate	80 kbps at 8 kHz sampling rate

Network

Ethernet	10/100 Base-T, auto-sensing, half/full duplex, RJ45
Protocols	RTP, Telnet, UDP, TCP, IP, HTTP, HTTPS, FTP, DHCP, IGMP V2/V3, ICMP, ARP, SMTP, SNTP, SNMP, 802.1x
Encryption	TLS 1.0, SSL, AES (optional)

Control

Software update	Flash ROM, remote programmable
Configuration	Configuration Manager or Web browser

Connections

USB port	1 x USB 2.0 high-speed port, 2.5 W max feed

Mechanical

Dimensions (H x W x D)	26 x 85 x 107 mm (1.02 x 3.35 x 4.21 in)
Weight	Approx. 0.2 kg (0.44 lb)

Environmental

Operating temperature	0 °C to +40 °C (+32 °F to +104 °F) ambient temperature
Relative humidity	20 to 80% atmospheric humidity, non-condensing
Thermal value	82 BTU/h max

Ordering Information

VIPX2 MPEG-4 dual-stream 2-channel encoder, USB, serial I/O, alarm in and relay	**VIPX2**
VIPX2A MPEG-4 dual-stream 2-channel encoder, USB, audio, serial I/O, alarm in, relay	**VIPX2A**
Accessories	
DVA-12T-04100RA iSCSI Diskarray 12-bay 4 HDD, 4 TB	**DVA-12T-04100RA**
DVA-12T-12100RA iSCSI Diskarray 12-bay 12 HDD, 12 TB	**DVA-12T-12100RA**
VIPRMK1HU VIP X/10/1000 rack-mount kit for 5 units (1HU)	**VIPRMK1HU**
VIP-X-PS Power supply	**VIP-X-PS**
Software Options	
SFT-VASA Hybrid IP - Analog/Matrix Video over IP Integration Software	**SFT-VASA**
MVC-FENC-AES BVIP AES 128 Bit Encryption BVIP AES 128-bit encryption site license. This license is required only once per installation. It enables encrypted communication between BVIP devices and management stations.	**MVC-FENC-AES**