BOSCH

Invented for life

VIP X1 Single-channel Video Encoder

▸ **Single-channel encoder**

▸ **High-quality MPEG-4 @ full D1/4CIF/2CIF/half D1/CIF/ QCIF**

▸ **USB and iSCSI recording**

▸ **Storage-efficient Dual Streaming**

▸ **Ultra-compact size**

▸ **Multicast and Internet streaming**

▸ **Alarm inputs & relay output**

▸ **FastEthernet interface**

▸ **Serial data port**

▸ **Audio and PoE models**

The VIP X1 features DVD-like quality MPEG-4 video, at up to 30 images per second, over IP networks. This unit supports PAL/NTSC sources.

The audio models of the VIP X1 provide bidirectional audio communication in parallel to video. Besides the standard line level interface, built in amplifiers allow direct connection to microphone and speaker.

The VIP X1 Power-over-Ethernet models can be power-fed via the network cable.

The VIP X1 provides Dual Streaming. It is able to generate two independently configurable MPEG-4 video streams. The VIP X1 is ultra-compact, so it is perfect for any application that depends on space-saving solutions.

Functions

Viewing

The VIP X1's video can be viewed on a PC using a simple Web browser such as Internet Explorer, or in VIDOS, or the Bosch Video Management System. It can also be integrated into other video management systems using the Bosch Video SDK.

By routing the IP video to a high performance VIP XD video decoder or a VIDOS Monitor Wall you can present the video with ultimate clarity on an analog CCTV or large, flat-screen VGA monitor or TV.

Recording

The VIP X1 offers unparalleled recording options - locally on a USB hard disk, network-attached utilizing iSCSI devices, and of course centrally using Network Video Recorders. The iSCSI RAID5 storage enables the VIP X1 to act as a conventional DVR as well as to stream high performance live video across the network.

Dual Streaming

The VIP X1 uses Dual Streaming to generate two independent IP video streams per channel. This allows viewing and recording at two different quality levels to save disk space and bandwidth. On alarm, it may send out email with JPEG images attached.

Access security

The VIP X1 encoder offers various security levels for accessing the network and the unit. Besides password protection with 3 levels, it supports 802.1x authentication, using a RADIUS server for identification. Web browser access can be secured by HTTPS using a SSL certificate that is stored in the unit.

Increased intelligence

With built-in video content analysis, VIP X1 supports increased intelligence at the edge. VIP X1 comes with MOTION+ video motion detection built-in.

MOTION+ is a pixel change based motion detection algorithm that includes object size filtering capabilities and sophisticated tamper detection capabilities including:
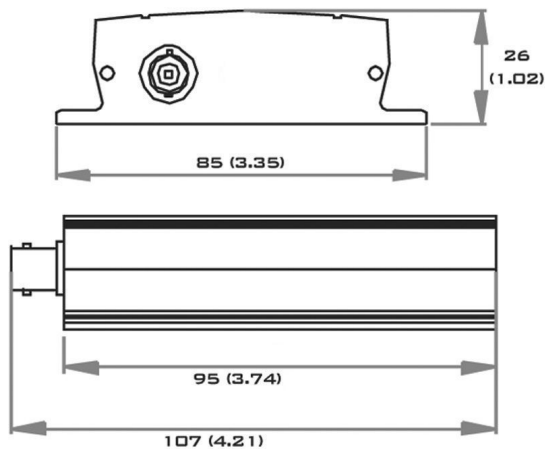
- video loss
- image too bright (detect blinding)
- image too dark (hooding, spray painting)
- image too noisy (camera defocused)
- gross scene change (camera repositioned)

More advanced video content analysis (VCA) applications are offered with Bosch's Intelligent Video Motion Detection (IVMD). A licensable option, the IVMD algorithm is based on digital imaging technology and uses multi-level image analysis of pixel, texture and motion changes.

IVMD dynamically adapts to global lighting changes and weather conditions (e.g. rain, snow, blowing leaves, etc.). IVMD detects objects entering or leaving an area (detector field) and includes user definable filters for object size, direction of travel (single and dual), and speed. IVMD includes the same tamper detection filters as MOTION+.

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

Installation/Configuration Notes
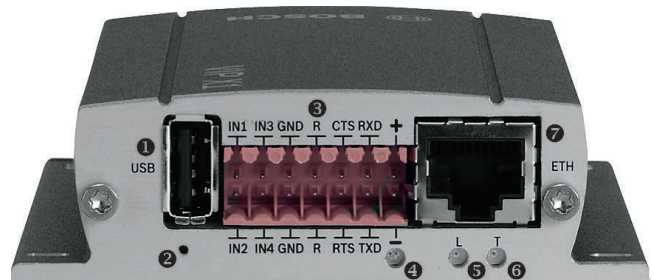

Dimensions in mm (inches)

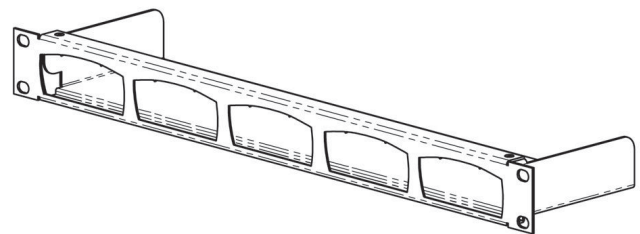Front view VIP X1, non audio models

1   Video In 1

Front view VIP X1 audio models

1	Video In 1	3	Microphone In , Speaker Out
2	Line In	4	Line out

Rear view all models

1	USB port	5	LED Link
2	Reset: Factory Default	6	LED Traffic
3	Alarm in, Relay out, Power, COM (RS232/422/485)	7	10/100 Base-T Fast Ethernet
4	LED Power		

Rack mount kit (optional)

Parts Included

Quantity	Component
1	VIP X1 Single-channel Video Encoder
1	International plug-in power supply
1	RS-232 null modem cable
1	Quick Installation Guide
1	CD-ROM containing manual, software and tools

Technical Specifications

Electrical

Video Standards	MPEG-4; M-JPEG; JPEG
Video Data Rate	9.6 Kbps–6 Mbps
Video Resolution	704 x 576/480 (4CIF/D1: 25/30 IPS)
	704 x 288/240 (2CIF: 25/30 IPS)
	464 x 576/480 (2/3 D1: 25/30 IPS)
	352 x 576/480 (Half D1: 25/30 IPS)
	352 x 288/240 (CIF: 25/30 IPS)
	176 x 144/120 (QCIF: 25/30 IPS)
GOP Structure	I, IP
Overall Delay	MPEG-4: 120 ms
Network Protocols	RTP, Telnet, UDP, TCP, IP, HTTP, HTTPS, SNTP, IGMP V2/V3, ICMP, ARP, SNMP, DHCP
Software Update	Flash ROM, remote programmable
Configuration	Configuration Manager, Web browser

Interfaces

Video In	1x analog composite: NTSC/PAL; BNC connector 75 ohm switchable, 0.7-1.2 Vpp
Alarm In	4x (non-isolated closure contact type),
	max. activation resistance 10 ohm
Relay Out	1x, 30 Vpp, 2 A
Connectors	14 position spring clamp contact for alarm, relay and COM port
COM Port	1x RS-232/422/485, spring clamp contacts
USB Port	1x 2.0 external interface
Ethernet	10/100 Base-T, auto-sensing, half/full duplex, RJ-45

Audio Models VIP X1A, VIP X1AP

Audio Standard	G.711; 300 Hz - 3.4 kHz
Audio Data Rate	80 kBit/s
Audio Sampling Rate	8 kHz
Line In	Single channel via stereo jack 3.5 mm,
	9 kohm typ., 5.5 Vpp max.
Line Out	Single channel via stereo jack 3.5 mm,
	16 ohm min., 3 Vpp max.
Microphone In	CombiCon plug, 2 kohm typ., 2.8 Vpp max.
	-20 dB, supply 2.3 V typ.
Speaker Out	CombiCon plug, 4 ohm min., 6 Vpp max.,
	power RMS 1 W

PoE Models VIP X1P, VIP X1AP

Power-over-Ethernet (PoE)	802.3af, class 2
Power output	2.5 W max., spring clamp contacts

Environmental

Input Voltage	12–24 VDC, spring clamp contact
Power Consumption	Approx. 6 VA
Power Supply	VIP-X-PS included in the box
Weight	Approx. 0.17 kg (0.37 lb)
Operating Temp	0°C to 50°C (32°F to 122°F) ambient temperature
Humidity	20 to 80%, atmospheric humidity (not cond.)
Complies with	CE: IEC 60950; UL 1950; AS/NZS 3548; EN 55103-1, -2; EN 50130-4; EN 55022; EN 55024; EN 61000-3-2; EN 61000-3-3; FCC 47 CFR Ch.1 Part 15

Ordering Information

VIPX1 MPEG-4 dual-stream 1 ch encoder, USB, serial I/O, alarm in, relay	**VIPX1**
VIP-X1A MPEG-4 dual-stream 1 ch transmitter, USB, audio, serial I/O, alarm in, relay	**VIPX1A**
VIP-X1P MPEG-4 dual-stream 1 ch transmitter, USB, PoE, serial I/O, alarm in, relay	**VIPX1P**
VIP-X1AP MPEG-4 dual-stream 1 ch transmitter, USB, audio, PoE, serial I/O, alarm in, relay	**VIPX1AP**
Accessories	
VIPRMK1HU VIP X/10/1000 Rack Mount Kit (5 units in 1HU)	**VIPRMK1HU**
VIP-X-PS Power supply	**VIP-X-PS**
DVA-12T-04050RA iSCSI RAID5, 12 bay 1.5 TByte net capacity (4 hard drives installed)	**DVA-12T-04050RA**
DVA-12T-12050RA iSCSI RAID5, 12 bay, 5.5 TByte net capacity (12 hard drives installed)	**DVA-12T-12050RA**
Software Options	
VIP-X1-FS1 VIP X1 IVMD 1.0 VCA Software License	**VIP-X1-FS1**
SFT-VASA Hybrid IP - Analog/Matrix Video over IP Integration Software	**SFT-VASA**