comnet
Communication Networks

Video Encoder/Decoder Unit

CNVETX1

-40° TO +75° | COMPATIBLE | 1 | 1 | 1

The ComNet CNVETX1 is a single-channel, camera-ready H.264/MPEG-4/MPEG-2, and MJPEG intelligent video server/video encoder or decoder unit, with video quality of up to D1 at 1 to 30 FPS, and dual or triple encoding/streaming. The CNVETX1 is industrially hardened for deployment in unconditioned/out-of-plant operating environments. It is user-configurable for use as an encoder or decoder. Incorporating a distributed intelligent video architecture, analog/composite video NTSC or PAL CCTV cameras with IP or full-duplex serial data pan-tilt-zoom control may be easily integrated onto any IP network. Full command and control of the various video encoding parameters are provided, including resolution, bit rate, and frame rate. A simplex mono audio channel is included. The ComNet IVS (Integrated Video Server) software allows for multiple simultaneous video streaming, and enables onboard video content management.

FEATURES

› Tested and certified by an independent laboratory for full compliance with the environmental requirements (ambient operating temperature, mechanical shock, vibration, humidity with condensation, high-line/low-line voltage conditions and transient voltage protection) of NEMA TS-1/TS-2 and CALTRANS Traffic Signal Control Equipment Specifications.

› PoE (IEEE 802.3af) or +12 VDC Operating Power. PoE interface also provides +12 VDC local camera operating power

› User-Configurable for use as either a video encoder or video decoder.

› Multi-Encoding: Supports H.264, MPEG-4, MPEG-2, and MJPEG video compression standards

› High Video Quality: Up to D1 at 30 FPS. Scalable to 4CIF, CIF, and QCIF

› Dual & Triple Video Streaming

› Low End-to-End Latency: <135 Msec. (3-4 frames) (includes PTZ)

› Includes ComNet IVS GUI. Live video monitoring and optional mark-ups with on-screen display

› Integrated Premium Video Analytics Engine, with onboard rules management and responses, and video overlay display

› Pan-Tilt-Zoom Control Channel: Local serial data port, or remote control over IP

› Single Channel of simplex Audio with G.711 Compression, for intercom, paging and other applications

› Optional non-volatile 32 or 64 GB micro-SD cards, for local onboard storage and recording, with continuous & event-driven modes

› Optional Basic or Full Up analytics package

› Supports Numerous VMS Solution providers

› Alarm Input/Output Management and Contact Closures: Fully integrated via web interface, enterprise SNMP, and responses management user-interface

› Device automatically restarts upon a power failure.

› NTCIP Compliant

› Rugged, small profile aluminum housing for installations where space may be at a premium

› Ease of set-up and installation

APPLICATIONS

› NTSC or PAL composite analog video, baseband audio, and pan-tilt-zoom serial data transmission over any copper, fiber optic, or wireless Ethernet-based local or wide area network

› Simple and cost-effective conversion of existing or legacy analog CCTV cameras to IP

› Integration of CCTV video onto an existing enterprise network or other platform

› ITS roadside and city center CCTV surveillance, and surveillance of high-value or mission-critical assets

› ITS Video Detection Systems (VDS)

› Video monitoring of manufacturing/factory shop floor and other processes in petrochemical refineries, wastewater treatment facilities, and other industrial automation and control applications in harsh or out-of-plant environments

› Industrial Machine Vision

› Electrical Substation Surveillance; Combine CCTV video and substation SCADA onto one common IP-based network

SPECIFICATIONS

Video

Video	Video interface supports Electronic Industries Alliance (EIA) EIA-170 standard.
Input	Single channel, composite video (1 Vpp 75 Ohm NTSC/PAL)
Output	Single channel, composite video (1 Vpp 75 Ohm NTSC/PAL)
Resolution	D1, 4CIF, CIF, QCIF at 1 - 30 fps (programmable for all resolutions)
Compression	H.264, MPEG-4, MPEG-2, MJPEG
Bit Rate	Configurable from 32Kbps to 20Mbps
Streaming	Dual and triple streaming
Streaming Methods	Unicast, Multicast, and TCP-Interleaved
Streaming Auto-Start	Up to 2 auto-starting multicast streams
GOP Structure	Configurable via web browser and/or XML API
Video Settings	User-selection of hue, contrast, brightness, saturation, and sharpness
On-Screen Display	Non-volatile display of logo, free text, and real-time clock (RTC). RTC displays time of day, calendar, alarm interrupts, and watch-dog timer. Century, year, month, date, day, hour, minute, second, 1/10th and 1/100th of a second are displayed in 24 hour BCD format.
Analytics	› Optional Basic Video Motion Detection (VMD) Object classification (vehicle, person and other). › Optional Full-Up VMD – Includes object classification and tripwire event detection, multi-line tripwire event detection, “Enters”, “Exits”, “Appears”, Disappears”, “Inside of”, “Loitering”, “Leave Behind”, “Take Away”, Scene Change”, and “Multi-view” event detection
VMS Support	RTSP integration & streaming supports numerous VMS solutions, including FLIR 360 Cameleon V4 version 2014.1.x, American Dynamics HDVR; Cisco Systems VSOM 4.x/VSMS 6.x; Exacq exacqVision; Milestone Systems XProtect 6.5f, XProtect Corporate 4, XProtect Professional 8, XProtect Enterprise 8; OnSSI NetDVMS; Orsus (NICE) Situator; DVTel Latitude 6.0; Genetec Omnicast 4.5 and higher; ICX 360 Cameleon; InsightVideoNet (MediaSolv) MMS 5.x; Smith Detections FirstView.

Audio

Protocol	Simplex communications Audio Maps Video
Audio Input	Line-Level Input: 0.1V RMS, balanced or unbalanced
Audio Output	Line-Level Output: 1.0V RMS, balanced or unbalanced
Input/Output Impedance	Hi-impedance or 600 ohms. Minimum load impedance 600 ohms
Sampling Rate	96Khz, Max.
Resolution	16-bit, with oversampling
Audio Compression	G.711

Network

Interface	10/100Base-TX Fast Ethernet
Protocols	RTP, RTSP, HTTP, UDP, DHCP, NTP, TCP/IP, IGMPv3, ARP, SNMPv2, ICMP

Alarms / Contacts

Alarm/Sensor Inputs	Two TTL
Alarm/Sensor Outputs	Two solid-state relays & one DPDT electro-mechanical relay. Solid- state relay contacts rated at 400 Nanoamps @ 300 VDC, non-inductive load. DPDT relay contacts rated at 0.3 A @ 125 VAC or 1.0 A @ 30 VDC, non-inductive load.

Serial Data

Interface	One channel, full duplex RS-232, RS-422, or RS-485 (2 or 4 wire)
Data Rate	115 Kbps, Max.
PTZ Support	American Dynamics D-RS-422, Phillips-TC7560, Pelco-D, Pelco-P, RS-422-Dome, & Vicon. Advanced Virtual Serial Port (VSP) API + Remote Control over IP, Bosch Bi-Phase, BBV Star Card, CyberScan 1

System

Processor Speed	594MHz
Flash Memory	32MB
DDR Memory	256MB DDR II
Optional Onboard Storage	Non-volatile, with 32 or 64 GB of capacity available for local/edge-of-network recording via micro SD Card
Embedded OS	Linux 2.6.x

Connectors

Audio	3.5mm audio jack
Video	BNC, Gold-plated center pin
Ethernet/PoE	RJ-45
Serial Data	12-pin terminal block. Mating connector included
Alarm / Contacts	Shared with serial data connector
Power	2 mm THT, male. Mating connector (female plug) included

SPECIFICATIONS

Power

Power Input	+12 VDC @ 0.5 A max
PoE	+48 VDC. IEEE 802.3aF compliant. Unit functions as a PD (Powered Device)
Output Power	+12 VDC @ 0.5 A available for CCTV cameras requiring +12 VDC operating power
Power Consumption	Encoder or decoder: 4.5W Typical; 6W Max. Encoder or decoder, when powering CCTV camera: +12V DC @ 1.0 A (12 watts max.)
PoE Power Class	Class 0

Mechanical

Indicating LEDs	Power Video Analytics Engine
Size (L × W × H)	3.48 × 2.6 × 1.67 in (8.85 × 6.62 × 4.26 cm)
Shipping Weight:	<0.5 lb /2.5 kg

Environmental

MTBF	>100,000 hours
Operating Temp	-40° C to +75° C
Storage Temp	-40° C to +85° C
Relative Humidity	0% to 95%, with condensation

AGENCY COMPLIANCE

FC PART 15 COMPLIANT CE cULus RoHS

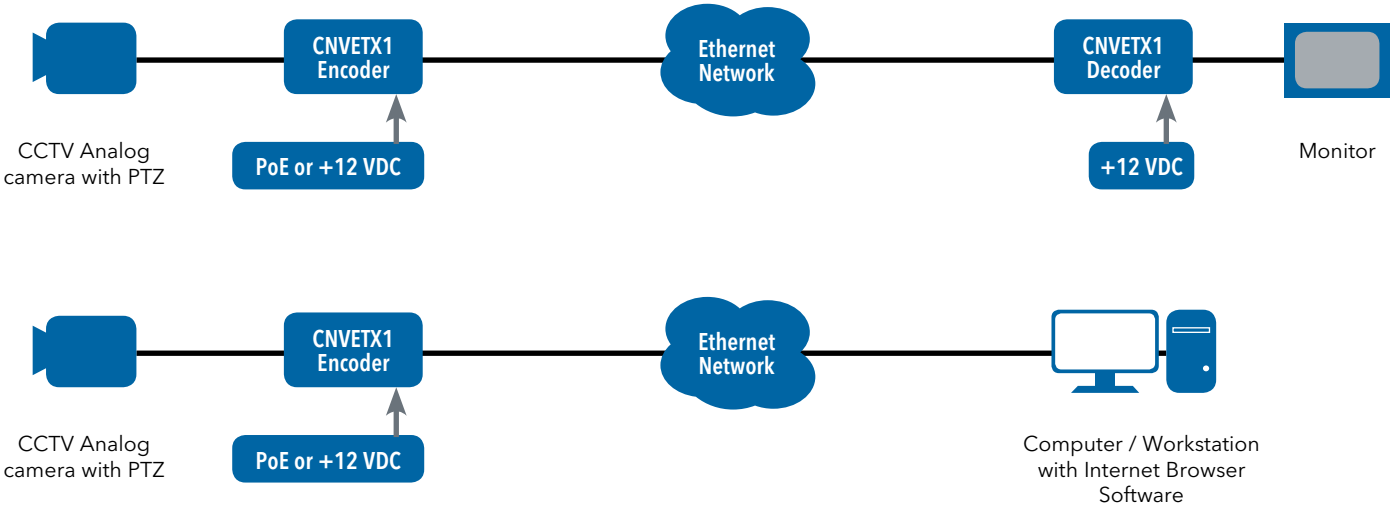
Low Power Consumption

ORDERING INFORMATION

Part Number	Description
CNVETX1	Video Encoder / Decoder
Options (Sold Separately)	Industrially Rated DC Plug-in Power Supply, 90-264 VAC, 50-60 Hz (-40° to +75° C) Commercial Grade DC Plug-in Power Supply, 90-264 VAC, 50-60 Hz (0° to +40°C) Optional non-volatile 32 or 64 GB micro-SD card for local onboard storage and recording Basic Video Motion Detection (VMD) & Object Classification Full-Up VMD & Object Classification

In a continuing effort to improve and advance technology, product specifications are subject to change without notice.

TYPICAL APPLICATIONS



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