VITEC's Professional Series of Portable H.264 Encoding and Streaming Appliances

Complete line of small and ultra-small H.264 encoders for Low-latency delivery of SD and HD video on any IP network

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Faster, denser, more powerful and more cost-effective - VITEC's diverse offering of portable, industrial-grade, H.264 streaming appliances offer a wide range of video and audio inputs formats combined with broadcast-grade compression quality.

With TurboVideo™ IP streaming technology, VITEC's Portable MGW appliances are ideal for low latency distribution of high-definition and standard-definition video sources across the enterprise network and to remote sites.

Built-in Zixi™ and ProMPEG packet recovery and error correction technologies guarantee artifacts-free content delivery over the public internet.

Designed for stationary and portable applications, the portable encoders are uniquely designed without any moving parts making the units more robust and 100% silent. Whether on the ground, in the air or at the sea – the MIL-STD certified MGW's ingest and stream video from any source - anytime, anywhere and in any bit-rate.

Market Leader in Streaming Capacity

The VITEC Family of Media Gateways (MGW) boasts advanced, hardware-based video compression engines that encode and stream High Definition and Standard Definition IP video from digital and analog feeds. The MGW Premium is the most dense, portable professional-grade H.264 AVC encoder in the market with processing power of up to 2xHD or 5xSD channels from unique video sources or a single input with up to 5 different compressed streams flavors.

Best-in-Class Connectivity Options

Integrating with any video environment - the Portable MGW appliances offers the largest selection of inputs types in the industry including 3G, HD-SDI, SD-SDI, DVI, HDMI, Composite, and S-Video. A built-in video matrix and scaler enable the operator to downscale incoming resolutions and frame rates as well as to route a single video source to multiple compression cores for encoding up to five different resolutions and frame rates at the same time.

Low latency Streaming over the LAN, WAN and Public Internet

Powered by VITEC's TurboVideo™ streaming technology. MGW Premium, MGW Nano and MGW Pico deliver superb HD quality streams with under than 65 milliseconds encoding latency, while ensuring uncompromised quality of service and smooth playback. The included hardware-based Zixi™ and ProMPEG FEC streaming modes enable error-free streaming of any content on any network - protecting against high error rates of up to 30%.

World's-smallest Professional Grade HD H.264 Encoder

MGW Pico, the smallest in the Portable MGW family, is a full featured HD/SD dual-channel H.264 encoding and streaming appliance with no moving parts. This pocket sized encoder has a low power consumption of under 7W and is offered with an enclosure or as board-only. This stand-alone device is ideal for integration projects, particularly in portable and demanding applications such as manned and unmanned airborne platforms or live field broadcasting.

Fully Secure End-to-End IP Video Delivery Solution

Featuring hardware-based AES encryption module – the portable MGW appliances can be used to provide a fully secure end-to-end IP video delivery solution in conjunction with VITEC's EZ TV and FITIS IPTV Software Systems or with the MGW Premium Decoder appliance that support the AES decryption capability.

The Most Complete Offering for Delivering Situational Awareness Video and ISR imagery with KLV Metadata

VITEC's Portable MGW encoders have been deployed on numerous manned and unmanned vehicles as well as in use by various corporate and education projects. The appliances feature a rugged design, with no moving parts, combined with real-time embedded video and metadata processing that ensures delivery of critical video and telemetry data in harsh environments. The units ingest Cursor-on-Target (CoT) and Key-Length-Value (KLV) metadata and generate MISB/STANAG compliant streams. Innovative image stabilization chip incorporated into the MGW Premium and Nano encoders enhance viewing quality in real-time and allows for reducing bandwidth requirements when streaming motion-intensive content.

Benefits

- High density with multiple encoding engines up to 2xHD or 4xSD concurrent channels
- Best selection of video inputs in a single platform: 3G, HD/SD-SDI, HDMI, DVI, Composite
- Compact form factor - ideal for mobile applications
- 100% silent, fan-less enclosure, optimized for extreme environments
- Transport infrastructure agnostic: Satellite, xDSL, LANs, WANs, 3G/4G/LTE and FTTx
- Zixi™ and SMPTE-2022 ProMPEG FEC
- Same video performance and in multiple size and density options - optimize your encoder selection for your specific application
- Low power consumption – drive encoders on-the-go with battery packs. Battery cables available by VITEC
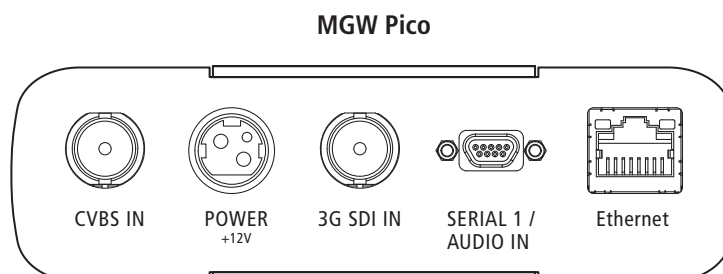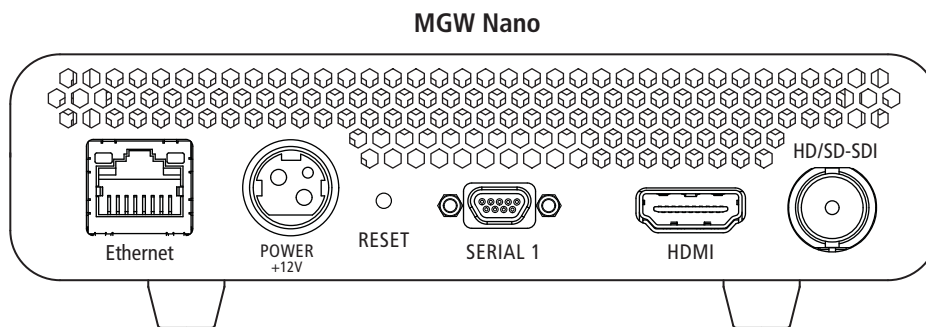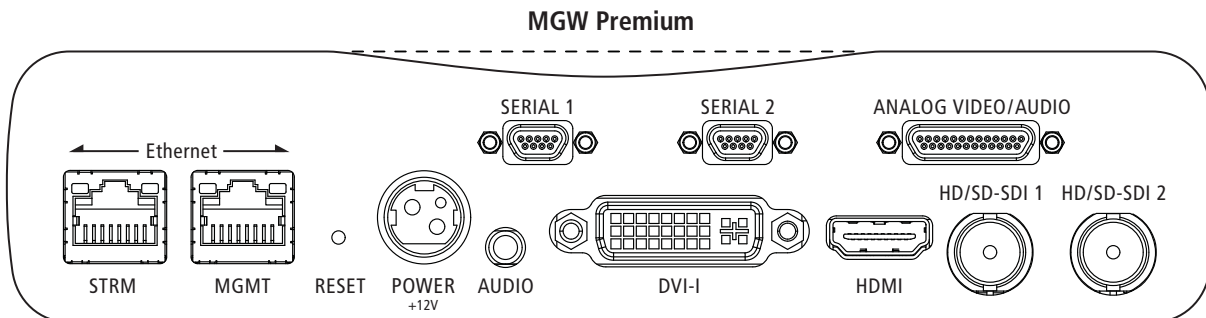
Applications

- Streaming IP video to TV's and desktops on any organization's network
- Point-to-Point contribution over the Internet using Zixi or ProMPEG
- Dissemination of Situational Awareness and FMV content across LANs and WANs
- Intelligence Security and Surveillance (ISR) video from mobile and airborne vehicles
- Full HD 1080p60 monitoring and Command and Control
- Encoding and multicasting High-Res HDMI / DVI / Computer sources
- Mirroring PC applications on large screens and software IPTV players
- Digital signage video streaming

Key Features

- Superb HD and SD H.264 AVC compression quality - up to Full HD 1080p
- Supports a wide range of bit rates, frame rates and resolutions
- Less than 65 milliseconds latency with metadata insertion
- Built-in AES encryption, interoperable with VITEC's software players and MGW Premium Decoder appliance
- KLV and CoT metadata processing – ingest from Serial, IP and SDI (VANC)
- Ability to encode a video source up to 5 times at different resolutions and data rates in parallel
- API for integrating control and monitoring using 3rd party software
- Built-in Scaler - convert and scale high resolution imagery to any size and rate

Rear Panel Interfaces

MGW Premium

Ethernet — STRM — MGMT — RESET — POWER +12V — AUDIO — SERIAL 1 — SERIAL 2 — DVI-I — HDMI — ANALOG VIDEO/AUDIO — HD/SD-SDI 1 — HD/SD-SDI 2

MGW Nano

Ethernet — POWER +12V — RESET — SERIAL 1 — HDMI — HD/SD-SDI

MGW Pico

CVBS IN — POWER +12V — 3G SDI IN — SERIAL 1 / AUDIO IN — Ethernet

Technical Specifications - By Platform

	MGW Pico	MGW Nano	MGW Premium
Input / Output Interfaces			
Ethernet (MGMT + STRM)	✓	✓	✓
3G / HD-SDI / SD-SDI	✓ (HD / SD-SDI)	✓	✓ x2
HDMI / DVI-D		✓	✓
DVI-I (Analog + Digital)			✓
Composite	✓		✓ x4
S-Video			✓ x4
Serial RS-232	✓	✓	✓ x2
Embedded Audio Support	SDI	SDI + HDMI	SDI + HDMI
Analog Audio in	✓ (breakout cable)		✓ (Mini-jack)
Streaming and Encapsulation			
Concurrent unique HD channels	1	1	2
Concurrent unique SD channels	2	1	4
No. of secondary proxy streams	1		3
RTP Streaming		✓	✓
UDP Streaming	✓	✓	✓
Zixi™ and ProMPEG Error Correction	✓	✓	✓
TurboVideo™ Low Latency Streaming		✓	✓
Transport Stream Multiplexing	✓	✓	✓
Session Announcement Protocol (SAP)	✓	✓	✓
Smoothing / Traffic Shaping	✓	✓	✓
Video Compression			
AVC MPEG-4 Part-10 H.264 Baseline	L3	L3	L3
AVC MPEG-4 Part-10 H.264 Main	up to L4	up to L4	up to L4
AVC MPEG-4 Part-10 H.264 High	up to L4.1	up to L4.1	up to L4.2
SIF to Full HD 1920x1080 Streaming	✓	✓	✓
Resolution and frame rate Scaling	✓	✓	✓
PC Source to Broadcast format conversion		✓	✓
Audio Compression			
MPEG-1 L2		✓	✓
AAC-LC	✓	✓	✓
Signal Processing & Metadata			
CoT input over serial	✓	✓	✓
MISB KLV/STANAG input over UDP/IP	✓	✓	✓
MISB KLV/STANAG over SDI	✓	✓	✓
AES Encryption	✓	✓	✓
Image Stabilization		✓	✓
Physical - With Enclosure			
Fan-less enclosure 100% silent	✓	✓	✓
Rack-Mounting ears for 19" IT Racks			✓
Mounting holes for secure install	✓	✓	✓
Height	1.02" (26mm)	1.34" (34mm)	1.75" (44.6mm)
Width	4.33" (110m)	5.51" (140mm)	7.48" (190mm)
Depth	2.91" (74mm)	4.65" (118mm)	4.66" (118.4mm)
Weight	0.55lb (0.25Kg)	0.948lb (0.430Kg)	2.42lb (1.098Kg)
Physical - Board Only			
Height	0.59" (15mm)	0.78" (20mm)	1.38" (35.1mm)
Width	2.16" (55mm)	4.92" (125mm)	7.08" (180mm)
Depth	3.03" (77mm)	4.52" (115mm)	4.52" (115mm)
Weight	0.143lb (0.065Kg)	0.304lb (0.138Kg)	0.372lb (0.169Kg)
Power			
VITEC Secure-lock Power Port	✓	✓	✓
Power input	12 VDC	9-12 VDC	9-12 VDC
Maximum power consumption	6W	10W	13W

MIL-STD 810F CERTIFIED   MIL-STD 461F CERTIFIED

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