VITEC Encoders & Decoders

Appliances and Modular Blade Systems

VITEC develops its own high-performance codecs to deliver low latency, high-quality video over a broad range of reliable and versatile encoder products.

VITEC encoders enable video to be streamed directly onto an IP network, creating channels from the output of a wide range of sources, including broadcast feeds, camera, TV set-top boxes, digital signage systems and computers. They are designed to minimise glass-to-glass latency over any IP network including the internet.

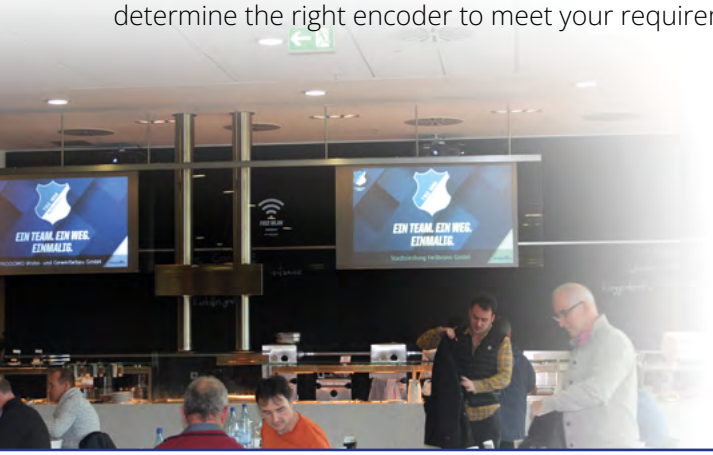
VITEC encoders are available in a variety of form factors;

- Portable appliances;
- Modular system
  - Blade system
  - openGear;
- Rugged appliances;
- PCIe cards

Refer to the table and speak to our sales teams to help you determine the right encoder to meet your requirements.

Features & Benefits

- Minimise glass-to-glass latency
- Send secure and reliable video streams over the internet using the Zixi™, SRT or RIST protocols
- Benefit from reliable, high quality compression and low power consumption per channel
- Enjoy hassle-free, intuitive set-up and an easy-to-manage interface
- IP multicast streaming enables delivery to an unlimited number of end points
- Provide live TV within digital signage or as part of an interactive IPTV portal
- Deliver video streams to mobile devices



VITEC Encoder Range comparison table

	MGW Diamond	MGW Diamond+ OG	MGW Diamond Hx OG	MGW Ace	MGW Nano	MGW Pico	MGES 7000	e38 series
4K HDR over 12G-SDI or 4 x 3G-SDI (2SI)	✓	✓					✓	
3G/HD-SDI	✓	✓		✓	✓	✓	✓	
SD-SDI	✓	✓		✓	✓	✓	✓	
HDMI			✓	✓	✓		✓	✓
DVI – (A&D)			✓	✓ (DVI-D)				
Composite	✓			✓		✓		
DVB-ASI Support				✓				
Analog Unbalanced Audio	✓	✓	✓	✓		✓		
Analog Balanced Audio & Digital Audio (2xAES)				✓				
Metadata (KLV/STANAG) Ingest & Stream	✓		✓	✓	✓	✓		
Dual Ethernet Port (Management/ Streaming)	✓	✓	✓	✓			✓	
HEVC/H.265	✓	✓	✓	✓			✓	
AVC/H.264	✓	✓	✓	✓	✓	✓	✓	✓
MPEG-2		✓						
JPEG2000								
Uncompressed SMPTE 2011		Roadmap					✓	
Audio Encoding channels (mono)	32	32	32	16	2	4	16	2
No. of Output Channels	8	4	4	2	1	2	8	2
UDP TS	✓	✓	✓	✓	✓	✓	✓	✓
RTP/RTSP	✓	✓	✓	✓	✓	✓		
RTMP	✓	✓	✓	✓				
Ultra Low Latency Mode				✓				
AES Encryption	✓	✓	✓	✓	✓	✓	✓	✓
Zixi, SRT, RIST & ProMPEG	✓	✓[1]	✓	✓	✓[3]	✓[3]	✓[2]	✓[2]
Web GUI	✓	✓	✓	✓	✓	✓	✓	✓
HTTPS API	✓	✓	✓	✓		✓	✓	✓
SNMP				✓				
Latency Monitoring Time-Synced Playback	✓	✓	✓	✓				
openGear	✓	✓	✓					
Appliance	✓			✓	✓	✓		
Blade Systems							✓	✓
AS Blade Systems								✓

1 Zixi, SRT & RIST only

2 SRT only

3 Zixi & ProMPEG only

Encoders

Our range of portable encoding and streaming appliances, openGear encoders and modular blade systems deliver broadcast-quality video with minimal latency, at any bit rate and broadcast-grade HEVC/H.264/MPEG-2 compression. The industrial-grade construction combined with VITEC's 100% hardware processing make the family of encoders ideal for any video streaming and IPTV application, stationary or in the field.

Applications

- IPTV distribution
- Remote contribution
- Streaming Intelligence, Surveillance and Reconnaissance (ISR) video feeds from ground and airbourne vehicles over RF or satellite link
- Multi-site and/or multi channel IP Video contribution
- Streaming video to desktop/laptop, TV and mobile devices
- Broadcast Contribution over IP
- Provide live TV within digital signage or as part of an interactive IPTV portal
- Deliver video streams to mobile devices

	Encoder	Features & Benefits	Applications
HEVC/H.265 - AVC/H.264	**MGW Diamond Encoder** 4K/Multi-Channel HEVC & H.264 **Portable** Encoder  4K/Multi-Channel HEVC & H.264 **openGear** Encoder 	• 1x 4K60p or 4x HD HEVC/H.264 encoder from SDI/Composite • 1x 12G-SDI and 4x 3G-SDI inputs • Up to 8 streams output, 4:2:2 10-bit encoding • x32 audio channels, HDR, Closed captions and AES encryption • KLV/STANAG metadata processing • 1x Gb/s network for streaming and 1x 1Gb/s network for management (shared) • Available as an Ultra small form factor appliance • Available as an openGear card for use in the openGear chassis	• Multi-site and/or multi-channel IP video contribution • Dense IPTV distribution with up to x40 HD or x10 4K channels and 2RU (openGear card) • Remote contribution • Streaming ISR video feeds from ground and airbourne vehicles over RF or satellite link (portable appliance) • Streaming video to desktop/laptop, TV and mobile devices over bandwidth-constrained pipes
HEVC/H.265 - AVC/H.264	**MGW Diamond+ OG Encoder** 4K/Multi-Channel HD HEVC, H.264 & MPEG-2 Encoder 	• 1x 4K60p or 4x HD HEVC / H.264 encoder from SDI • 2x 12G-SDI and 2x 3G-SDI inputs • Up to 4 streams output, 4:2:2 10-bit encoding , x32 audio channels, HDR support • AES encryption to secure content and metadata • 2x 10Gb/s SFP, 1x 25Gb/s for SMPTE2110 (roadmap), 1x1Gb/s shared • For use with the openGear Chassis	• Broadcast Contribution over IP • Site-to-Site primary distribution • Remote production over any network • Remote/At Home production over the Internet/REMI • IPTV distribution
HEVC/H.265 - AVC/H.264	**MGW Diamond-Hx OG Encoder** 4K & Multi-Channel SD/HD HDMI Encoder 	• 1x 4K60p or 2x HD HEVC/H.264 encoder from HDMI/DVI/RGBHV • Encoder available as 2x HDMI inputs or 1x HDMI and 1x DVI/RGBHV inputs • Up to 4 streams output, 4:2:2 10-bit encoding, x32 audio channels, HDR support • AES encryption to secure content & metadata • 1x Gb/s network for streaming and 1x 1Gb/s network for management (shared) • For use with the openGear Chassis	• Multi-site and multi-channel IP Video contribution • IPTV Distribution from analog/digital video sources • Direct-to-Web from HDMI sources • Streaming Intelligence, Surveillance and Reconnaissance (ISR) video feeds from ground and airbourne sources across LANs and WANs • Streaming video to desktop/laptop, TV and mobile devices over bandwidth-constrained pipes • Distribution of TV content/PC screen on an organisational network

	Encoder	Features & Benefits	Applications
HEVC/H.265 - AVC/H.264	**MGW Ace Encoder** Compact HEVC/H.265 hardware encoder 	• Ultra Low Latency mode 1080p60 4:2:2 10-bit HEVC encoding from SDI, HDMI and Composite • HDR support, Closed captions, AES encryption and x16 audio channels and DVB-ASI output • 2x 1Gb/s network for streaming and management • KLV/STANAG metadata processing • Portable, low-power hardware design	**Broadcast & Enterprise** • Satellite news gathering and field broadcasting • Low latency Point-to-point contribution over Internet using Zixi™, SRT or ProMPEG • Remote/At Home production (REMI) over dedicated transmission links or the Internet • Bandwidth-efficient HEVC point to-point streaming concurrently with live event distribution through Content Delivery Network using RTMP streaming (certified on Akamai's CDN and AWS Media Live) • Sharing PC Screen views over IP with local and remote users • Full HD 1080p monitoring **ISR** • Streaming Situational Awareness and FMV content across LANs and WANs with KLV STANAG metadata (up to 2 KLV streams supported) • ISR video from ground and airbourne vehicles over RF link or satellite • Streaming full motion video to desktop, TV and mobile devices over bandwidth-limited pipes
AVC/H.264	**MGW Nano Encoder** Low-Latency H.264 HD/ SD Streaming 	• Compact, fanless, 65 milliseconds encoding • 3G/HD/SD-SDI and HDMI inputs • Forward Error Correction (FEC) and Zixi™ support	• Point-to-point video contribution with low delay • Satellite news gathering and field broadcasting • Encoding and multicasting high-res HDMI/DVI sources • Distribution of TV content/PC screen on an organisational network • Full HD 1080p monitoring • Digital signage display from outputs • Intelligence security and surveillance (ISR) video from mobile and airbourne vehicles
AVC/H.264	**MGW Pico Encoder** Low-Latency pocket size H.264 Encoder 	• Ultra-small HD/SD encoder – under 6W power • 3G/HD/SD-SDI and Composite input • KLV/STANAG metadata processing for ISR	• Point-to-point video contribution requiring low delay • Satellite news gathering and field broadcasting • Intelligence security and surveillance (ISR) video from mobile and airbourne/ground vehicles over RF link or satellite • Dissemination of situational awareness and full motion video (FMV) content across LANs and WANs • Full HD 1080p monitoring

	Encoder	Features & Benefits	Applications
HEVC/H.265 - AVC/H.264	**MGES 7000** 	• High Density 4K/UHD/HD HEVC & H.264 IPTV Encoding Blade • SDI, HDMI or SMPTE-2110 inputs • 8x 1080p60 or 4x UHD60 encoding in HEVC or H.264, up to 4:2:2 • x16 audio channels, HDR, Closed captions and AES encryption • High availability architecture with no moving parts for 24/7 application reliability • Built-in scalar converts HD to HD or HD to SD in various resolutions and frame rates • For use with Modular Blade Chassis	• Enterprise and Corporate IPTV • Replacement of legacy cable TV Systems with efficient TV over IP • Video monitoring and video confidence • Over-the-Top (OTT) web streaming • Telco IPTV • Terrestrial and mobile TV • Training and distance learning
AVC/H.264	**38-series** 	• Stream AES-protected audio-visual streams to an unlimited number of end points • Minimise glass-to-glass latency with full multicast delivery when streaming live video • Encode HD or SD H.264 streams from an HDMI video input over your existing network • Send secure and reliable video streams over the internet using the SRT protocol • Deliver high-quality streams into NDI production environments • Highly reliable modular blade-into-chassis design allows 'hot swapping' to minimise downtime • For use with Avedia Chassis	• Enterprise and Corporate IPTV

Decoders

	Decoder	Features & Benefits	Applications
4K HEVC, H.264 & MPEG-2	MGW Ace Decoder (OG)) Professional Portable 4K HEVC & H.264 Decoder 	• HEVC/H.264/MPEG-2 decoding of 4K/HD/SD feeds • Broadcast quality decoding up to 4:2:2, 10 bits, 100Mbits • x16 audio channels decode • DVB-ASI In, CC, Stream forwarding, Latency Monitoring • KLV over SDI • Available as an openGear for use in the openGear OGX chassis • Available as a portable appliance	• DSNG contribution decode over satellite, cellular networks and more • Remote/At Home production (REMI) over dedicated transmission links or the Internet • Point-to-point live contribution on private or public networks • Low latency point-to-point contribution over the Internet using Zixi™ or SMPTE 2022 ProMPEG • Situational awareness and Full Motion Video (FMV) display on video walls and monitors • HEVC, H.264 or MPEG-2 IP feed monitoring over SDI/HDMI or Composite

Chassis options

Chassis

openGear Chassis

The openGear OGX chassis is a 2RU frame with redundant power capability housing up to 20 openGear® single-slot cards or up to 10 dual-slot cards. It targets a wide range of market and applications.

Modular Blade Chassis

VITEC Modular Chassis is a professional IPTV carrier-grade platform available in a 1RU, 4RU or 10RU form factor. It can host respectively up to 2, 6 or 13 blades reaching up to 192 streaming channels.

Avedia Chassis

Avedia Chassis is targeting IPTV distribution applications and can host from 1 to 10 RF Gateway and e-38 series Encoder blades. It is designed for a wide range of configurations and budgets.

c1101

Single slot chassis

c1103

Chassis with three hot-swap module slots

c1210

Chassis with ten hot-swap module slots