



## VITEC's openGear Solution

Designed by Ross Video, openGear is an open-architecture modular frame system supported by a diverse range of equipment manufacturers. Suitable to IP video projects, openGear delivers reliability and performance for continuous operation, with adaptive cooling, redundant power supplies and hot swappable capability. The platform offers the freedom to choose technology from a wide range of products for the broadcast, enterprise and military markets. VITEC provides IP encoding and decoding openGear cards to address dense IPTV applications such as remote production, contribution, distribution, full motion video and more.

## VITEC openGear cards

An openGear card includes a main board and a rear I/O module which can be single or several slots wide. MGW Ace Decoder OG or MGW Diamond OG encoder from VITEC uses Full rear I/O modules which are two slots wide. VITEC openGear cards can be mounted both in OGX and OG3 chassis. The openGear flexibility coupled with VITEC openGear cards allow several configurations, such as fitting in a 2RU:

- ✓ x10 UHD HEVC decoder for multichannel / dense decoding applications such as contribution or direct-to-web applications (x10 MGW Ace Decoder OG)
- ✓ x10 UHD HEVC encoder for 4K contribution (x10 MGW Diamond OG)
- ✓ x40 HD HEVC/H.264 encoding channels for IPTV distribution (x10 MGW Diamond OG)
- ✓ x8 HD encoding/decoding channels for full-duplex applications (x2 MGW Diamond OG and x8 MGW Ace Decoder OG)
- ✓ x20 HD HEVC/H.264 encoding channels for IPTV distribution from HDMI (x10 MGW Diamond Hx OG)

OGX chassis delivers:

- ✓ 2RU height
- ✓ Redundant Power supply (as an option)
- ✓ Shared Gigabit Ethernet port for simplified card management and configuration
- ✓ Shared Genlock Reference across cards (x2)
- ✓ Dashboard client software for simplified management of openGear cards and chassis

# VITEC's openGear Solution

## MGW Ace Decoder OG

VITEC Ace Decoder OG is a single channel HEVC and H.264 decoding card allowing 4:2:2 10-bit up to UHDp60 quality video. MGW Ace Decoder is designed to always provide the best possible viewing experience and never miss a single frame.

VITEC's OpenGear IP decoding appliances deliver broadcast quality video decoding with low latency at any rate, on any network. The openGear card, combined with VITEC's 100% hardware processing make the decoder family ideal for any video streaming IPTV application, production studios, broadcast facilities or in the field.

- ✓ 4K HEVC and HD H.264 decoding of streams with optimal latency
- ✓ Broadcast quality decoding up to 4:2:2, 10 bits, 100Mbps
- ✓ Reliable, low-latency stream delivery with built-in Zixi, SRT, RIST and Pro-MPEG stream protection
- ✓ Up to 16 channels of audio decoding
- ✓ Rich, Industry standard video and audio output interfaces to match any setup
- ✓ Time-synchronized playback across several decoders
- ✓ KLV / STANAG metadata output over SDI



## MGW Diamond OG

VITEC Diamond OG encoder offers 4K or Multichannel HD HEVC and H.264 encoding from SDI inputs.

MGW Diamond captures up to 4x 3G/HD/SD-SDI or Composite inputs and streams live up to 8 channels, addressing diverse applications within sports, enterprise, defense and surveillance markets. Featuring Ultra High Definition and High Dynamic Range (HDR) support, MGW Diamond can capture and stream 4K60p HDR10 or HLG video from either its 4x3G-SDI or 12G-SDI inputs.

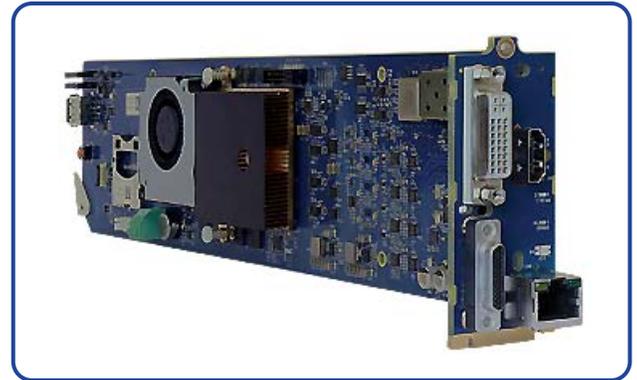
- ✓ Low latency streaming from 4x SDI/Composite sources simultaneously
- ✓ Support for Ultra High Definition (4K) and High Dynamic Range (HDR)
- ✓ Up to 8x output streams
- ✓ Next-generation HEVC (H.265) compression support to reduce network bandwidth utilization by up to 50% compared to H.264
- ✓ Stream protection for reliable video/audio and metadata transmission (Zixi, SRT, RIST and Pro-MPEG)
- ✓ KLV / STANAG metadata ingest from SDI, IP plus multiplexing – JITC Compliant





## MGW Diamond-Hx OG

VITEC Diamond-Hx OG encoder offers 4K or Multichannel HD HEVC and H.264 encoding from HDMI, DVI-I, RGBHV inputs. MGW Diamond-H OG captures up to 2x 4K HDMI, DVI-I or RGBHV inputs and streams live up to 4 channels, addressing diverse applications within sports, enterprise, defense and surveillance markets. Featuring Ultra High Definition and High Dynamic Range (HDR) support, MGW Diamond-Hx OG can capture and stream 4K60p HDR10 or HLG video from either HDMI, DVI-I or RGBHV inputs.



- ✓ Low latency streaming from 2x HDMI, DVI-I or RGBHV sources simultaneously
- ✓ Support for Ultra High Definition (4K) and High Dynamic Range (HDR)
- ✓ Up to 4x output streams
- ✓ Next-generation HEVC(H.265) compression support to reduce network bandwidth utilisation by up to 50% compared to H.264
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- ✓ KLV/STANAG metadata ingest from IP plus multiplexing – JITC Compliant

## T21 9261-EB

T21 9261-EB is a 1-slot wide openGear encoder dedicated to Direct-to-Web H.264 applications. This SDI encoder goes above and beyond industry norms in density, efficiency and versatility.



- ✓ Universal network protocol support
- ✓ Dual encoding from single SDI input
- ✓ H.264 or MPEG-2 compression support
- ✓ One to many routes per encoder
- ✓ Large protocol support including UDP/RTP, RTMP, TCP, HLS, SRT, Zixi and FASP
- ✓ 1-slot openGear card for 20 cards in OGX chassis

## openGear OGX chassis

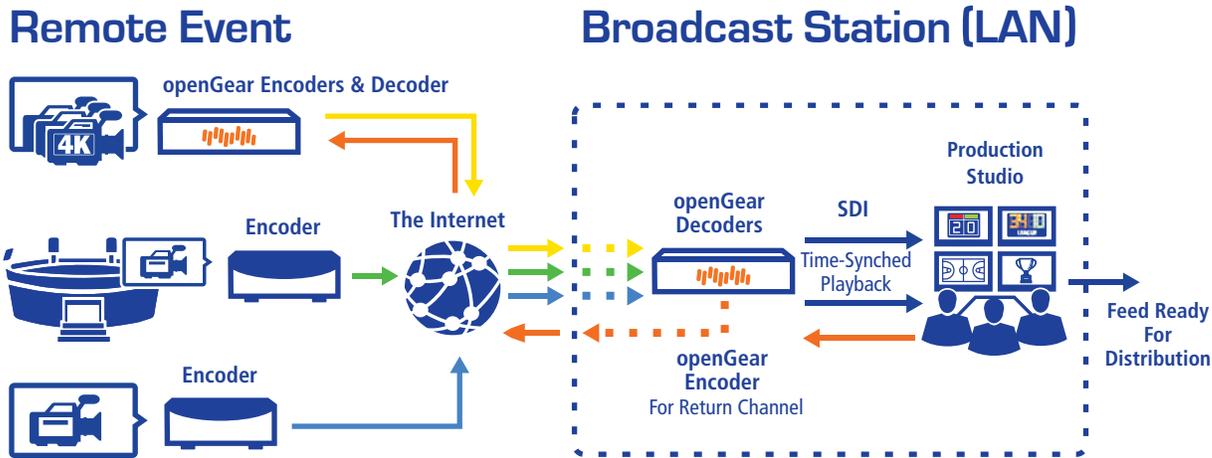
The openGear chassis provides density and flexibility allowing a mix and match of cards between vendors and allows up to 20 single slot cards in the same chassis. Most openGear cards from VITEC, including MGW Ace Decoder OG and MGW Diamond OG fit within 2 slots leading to a density of up to 10 cards per chassis.



- ✓ Operating Temperatures: 0 °C to +40 °C (32°F to 104 °F)
- ✓ Dimensions: 3.5" H x 19" W x 16.82" D (90mm H x 483mm W x 427mm D)
- ✓ Max Power: 600W (45W per 2-slot card)

# Remote Contribution

Live feeds from the remote event are captured and streamed back to the broadcast station for production then distribution.



## VITEC Solution's Highlights

- ✓ Scalable and flexible solution with VITEC openGear cards
- ✓ Reliable solution thanks to VITEC proven hardware and openGear chassis redundant power supply
- ✓ SD to 4K support, HEVC end to end solution
- ✓ Large protocol support for best interoperability
- ✓ Reliable Stream Transport protection for QoS (support for Zixi, SRT, RIST and Pro-MPEG)

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