



MGW Premium Encoder



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Multi-channel portable encoding MPEG-4 H.264 appliance featuring Full HD processing, best-in-class connectivity options, low latency streaming and KLV metadata support. The ideal encoding solution for portable encoding applications combining cost effective, low latency streaming and broadcast quality video.

Technical Specifications - General

Video Inputs

- 2 x 3G/HD-SDI/SD-SDI (SMPTE 259M-C, SMPTE 292M, SMPTE 274M, SMPTE 296M, SMPTE 424M, SMPTE 425M)
- 1 x HDMI (support for HDCP and non-HDCP protected sources)
- 1 x DVI-I (Y, Pb, Pr / RGBHV analog DVI-A sources and Y, Cb, Cr digital DVI-D sources)
- 4 x Composite (RCA via provided break-out cable)
- 4 x S-Video Y/C (RCA via provided break-out cable)

Input Resolutions / frame rates:

1920x1080p @ 60, 59.94, 50, 30, 29.97, 25, 24 Hz

1920x1080i @ 60, 59.94, 50 Hz

1600x1200p @ 85, 60, 50 Hz

1366x768p @ 60, 50 Hz

1280x800p @ 60, 50 Hz

1280x768p @ 60, 50 Hz

1024x768p @ 60, 50 Hz

1280x720p @ 60, 59.94, 50, 30, 29.97, 25 Hz

720x480p @ 30, 29.97 Hz

720x480i @ 59.94 Hz

720x576p @ 25 Hz

720x576i @ 50 Hz

Audio Inputs

- 2 x SDI Embedded audio
- 1 x HDMI Embedded audio
- 1 x Analog unbalanced stereo audio, AC-coupled (mini-jack)
- 4 x Analog unbalanced stereo audio pairs (RCA L/R via provided break-out cable)



Video Output

- H.264 (ISO/IEC 14496-10 AVC MPEG-4 part 10). Modes:
 - Baseline Profile L3
 - Main Profile L3 and L4
 - High Profile L4 and L4.2
- Bit Rate: 100 Kbps - 10 Mbps
- Frame Rate: 5-60 fps. Down sampling modes: third, half, three quarters
- Bit Rate Regulation Modes: Constant (CBR), Variable (VBR)
- Output Resolutions: Configurable from QCIF up to full HD 1920x1080p60
- Encoding Latency: 65 milliseconds (TurboVideo™ mode)

Audio Output

- MPEG-4 AAC-LC (ISO/IEC 14496-3), MPEG-1 L2
- Stereo and mono modes
- Bit Rate: 32Kbps - 256Kbps in Stereo, 16Kbps - 128Kbps in Mono
- Sampling Rate: 16 kHz - 48 kHz

Network Protocols

- Streaming:
 - UDP, RTSP, SAP, MPEG-2 Transport encapsulation, unicast and multicast modes
- Peripheral:
 - HTTPS, DHCP, NTP, SSH, SAP

Management

- Secure Web based remote management interface (HTTPS)
- Dashboard with dynamically updating I/O signal detection and streaming stats
- SSH interface with "get/set" or XML API for integration with 3rd party control software
- Autostart mode recovers saved configuration after power cycle
- Remote firmware and software upgrade capability via command line
- System and channel event logging

Security

- Real-time AES encryption for video, audio and metadata. Interoperability with EZ TV and FITIS systems
- Password-protected HTTP and CLI control interfaces

Metadata

- CoT over serial RS-232, KLV over IP, KLV over SDI (VANC per SMPTE 336M)
- UAS Datalink Local Metadata Set (MISB STD 0601.5, STD 0902)
- Time Stamping and Transport of Compressed Motion Imagery and Metadata (MISB STD 0604.2)
- Cursor on Target (CoT) Conversions to Key-Length-Value (KLV) Metadata (MISB EG 0805)
- Security Metadata Universal and Local Sets for Digital Motion Imagery (MISB STD 0102.8)
- STANAG 4609 output stream over UDP/IP

Environmental

- Operating Temperatures: -20° C to +50° C (-4° F to 122° F)
- Relative Humidity: 5% to 95% (non-condensing)
- EMC Standards: FCC part 15 class B and CE
- MIL-STD810F Certified
- MIL-STD461F Certified
- Power: 9-12VDC, 13W Max
- MTBF: Ground - 6.70 years. Airborne - 8.47 years (As per MIL-HDBK-217F)

Physical

- With enclosure: 1.75" H x 7.48" W x 4.66" D (44.6mm H x 190mm W x 118.4mm D)
2.42lb (1.098Kg)
- Board only: 1.38" H x 7.08" W x 4.52" D (35.1mm H x 180mm W x 115mm D)
0.372lb (0.169Kg)
- Enclosure: Industrial-grade rugged aluminum case, rack-mount kit available as add-on
- Status LED's for power, network activity, streaming and video source indications
- Fan-less, no moving parts design, 100% silent operation
- Adjustable mounting holes for seamless installation in vehicles / onto flat surfaces

Advanced Features

- Encode and stream single source in up to five different compression settings to multiple destinations
- Hardware based resolution and frame rate scaling
- Real-time image stabilization chip optimized for footage from ground and airborne vehicles
- Motion-adaptive adjustment of bit-rate utilization during static scenes
- PID re-mapping for audio and video programs
- High profile HD encoding for broadcast-grade applications

Ordering Information

AMP0999 - 12899 → MGW Premium ENC SD - 4 x Standard Definition channels

AMP1000 - 12299 → MGW Premium ENC HD - 1 x High Definition or 4 x Standard Definition channels

AMP1086 - 14383 → MGW Premium ENC HD - Dual : 2 x High Definition or 4 x Standard Definition channels

AUP8677 - 14716 → MGW Premium ENC SD to HD upgrade license

AUP8863 - 14384 → MGW Premium ENC HD to HD Dual upgrade license

Note: Customers may upgrade SD units to HD or Dual-HD licenses by purchasing a firmware upgrade

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