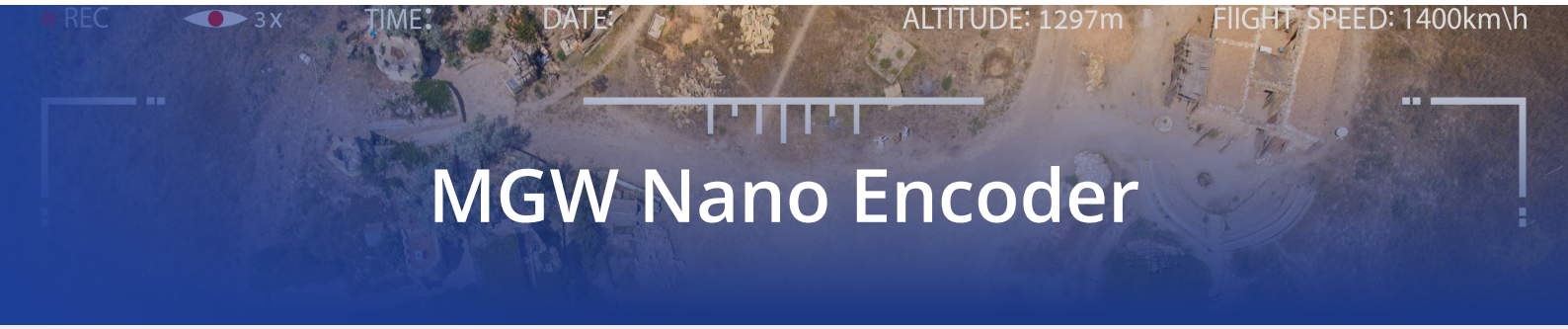

MGW Nano Encoder

Portable MPEG-4 H.264 encoding and streaming appliance featuring Full HD processing, HD/SD-SDI and HDMI inputs, KLV/STANAG metadata support and Error-free content delivery using Zixi™ technology and ProMPEG FEC.

Video Inputs

- 1 x 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)

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

- 1 x SDI Embedded audio (Stereo and Mono)
- 1 x HDMI Embedded audio (Stereo and Mono)

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

Features & Benefits

- Single channel, compact encoder 3G/HD/SD-SDI input
- H.264 or MPEG-2 compression support
- Dual encoding engine for High/Low encoding
- Supports UDP/RTP, RTMP, TCP, HLS, SRT, Zixi, FASP
- Up to 8 output targets from a single encoder
- Closed captioning and SCTE35, pattern generator (video/audio)
- Available as portable or 1-slot openGear card

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 L4.1
- Bit Rate: 100 Kbps - 14 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 1920x1080p30/1280x720p60
- Encoding Latency: 65 milliseconds (TurboVideo™ mode)

Network Protocols

- Streaming:
  - UDP, RTP, RTSP, SAP, MPEG-2 Transport encapsulation, unicast and multicast modes
- Error Correction:
  - Zixi™ technology for up to 30% packet loss recovery
  - SMPTE-2022 ProMPEG Forward-Error-Correction (FEC)
- 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

- UAS 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/Regulation

- Operating Temperatures:
  - -20° C to +50° C (-4° F to +122° F) encoder unit
  - 0° C to +40° C (32° F to +104° F) with supplied external power supply
- Relative Humidity:
  - 5% to 95% (non-condensing) encoder unit
  - 10% to 90% (non-condensing) with supplied external power supply
- MTBF: Ground – 9.00 years.
  Airborne – 12.70 years (As per MIL-HDBK-217F)
- EMC Standards: FCC part 15 class A and CE
- Power: 12VDC, 10W
- Not controlled under ITAR
- TAA-compliant

Physical

- 1.34" H x 5.51" W x 4.65" D
  (34.00mm H x 140.00mm W x 118.00mm D)
- Weight: 0.948lb (0.430kg)
- Enclosure: Industrial-grade aluminum case, rack-mount kit available as add-on
- Status LEDs for power, network activity, streaming and video source indications
- Fan-less, no moving parts design, 100% silent operation
- Mounting holes for seamless installation in vehicles/flat surface

Advanced Features

- Low latency HD streaming from SDI or HDMI sources with metadata
- Hardware based resolution and frame rate scaling
- Real-time image stabilisation and image cropping (Area of Interest isolation)
- Motion-adaptive adjustment of bit-rate utilisation in static scenes
- Built-in Zixi and ProMPEG FEC Error correction technologies

Ordering Information

18478 - MGW Nano HD

18479 - MGW Nano HD TS (UDP TS only)

Rear Panel Interfaces