

Professional Video Encoder

QVENC - H.264 IP Video Encoder

3G/HD/SD-SDI, CVBS, S-Video inputs, IP output



QVENC encoder is part of a reliable, high-performance solution for the high quality encoding and transport of SD and HD video/audio signals for broadcast applications.

Advanced H.264 High Profile compression, coupled with QVidium's patented ARQ Video Transport and Error correction, helps to maintain broadcast quality video distribution over nearly any IP network, including wireless networks and the Internet.



The QVENC is part of the high quality professional line of advanced video codecs; a line of compact, powerful and cost-effective products designed for real-time encoding, and decoding for Content Gathering, Monitoring, and Distribution of broadcast quality video over IP networks.

QVENC 's advanced video transport couples broadcast and networking standards with patented error correction to take advantage of the inherent flexibility of IP and the Internet, providing broadcasters an efficient, affordable and scalable solution for professional quality video distribution quality over nearly any IP network.

The QVENC provides H.264 High Profile video compression, up to **1080p50/60**, along with support for up to 4 audio channels, multicasting and multi-unicasting, and closed captioning to allow cost-effective audio/video broadcast and IPTV solutions.



Applications

- Professional broadcast video distribution
- Live Event / Electronic News Gathering
- Confidence monitoring
- Video conferencing
- IPTV systems

Key Features

- **Real-time HD Video Encoding**
 - MPEG-4 AVC / H.264 High, Main and Baseline
 - ▶ Only 1.5 to 6 Mbps required for HD Encoding
 - ▶ Supports CBR & VBR bitrates up to 30 Mbps
 - ▶ Up to level 4.1
 - MPEG-2 Main Profile
 - Up to 4 audio channels (2 stereo pairs)
 - AC3 Pass-Through on S/PDIF
 - Video formats up to **1080p50/60**, PAL & NTSC
 - IP encoded audio/video output
 - SD and HD Encoding
 - Down Scaling
 - Dual encoding from same input
 - CEA-608/Line21 Closed Captioning
 - CEA-708 Closed Captioning (HD-SDI)
- **Robust transmission of Video & Audio**
 - Patented QVidium® ARQ error correction
 - Industry std. ProMPEG FEC (SMPTE-2022)
 - MPEG Transport Stream
- **Compact, cost-effective solutions**
 - Complete encoder ½ width - 1RU
- **User-friendly configuration and control**
 - WEB-based remote configuration & control
 - SNMP Trap support for NMS systems

QVENC H.264/MPEG2 IP Video Encoder

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3G/HD/SD-SDI, CVBS, S-Video inputs, IP output



Specification

Video/Audio Interfaces

Video Inputs: 1x 3G-SDI / HD-SDI / SDI (SMPTE 425M(A&B), 424M, 292M, 259M), 1x CVBS, 1x S-Video, 1x ASI I/O (opt)
 Audio Inputs: 2x Stereo Audio, 1x AC3 Pass-Through
 Input Connectors: 2x Female BNC, 1x 4-pin DIN, 2x Mini-Phono, 1x S/PDIF

Video Encoding (HD & SD)

Video Encoding: MPEG4-AVC (H.264)
 ▶ High Profile, up to Level 4.1
 ▶ High, Main, and Baseline Profiles
 MPEG-2 Main Profile
 Bit rate: Constant bit rate or Variable bit rate
 128 Kbps to 30 Mbps (w/o ARQ)
 MPEG4-AVC (H.264), MPEG-2
 Closed Captioning: CEA/EIA-608, CEA-708
 Minimum latency: 300ms with QVDEC, 80ms with SW decoder

Audio Encoding

Audio Encoding: MPEG-1 Layer2, MPEG-2 & MPEG-4 AAC-LC, AC3 (Pass-Through)
 Sample rate: 32, 44.1, & 48 KHz
 Bit rate: 16 Kbps (mono) to 384 Kbps (stereo)
 Audio Channels: 4 mono-audio channels (2 stereo pairs)

IP Encapsulation

IP Encapsulation: MPEG-2 Transport Stream over RTP/UDP/IP, UDP/IP
 Option: HLS, RTMP/Flash, RTSP
 IP Bitrate: 160 Kbps to 30 Mbps, 15Mbps w/ARQ
 Error Correction: QVidium® ARQ (feedback-based)
 US Patents: 7551647 & 7522528;
 SMPTE 2022 FEC annex B
 Encryption: AES128 Video Encryption

Video Resolutions

SD Video 625 lines, 25 frames/s (576i)
 525 lines, 29,97 frames/s (480i)
 HD Video 1080p60/59.94/50/30/25/24/23.98,
 (w/ option) 1080i60/59.94/50, and 720p60/59.94/50

Storage & Network Interfaces

Networking port: 10/100/1000 Base-TX Gigabit Ethernet
 Protocols: IEEE802.3 Ethernet
 RTP, IPv4, TCP/UDP, IGMP v3
 Connectors: 1x RJ45
 External storage: Flash & Hard drives via 2 USB connectors

Control and Management

Type: 10/100/1000 Base-T Gigabit Ethernet
 Features: Element control through HTTP/WEB.
 SNMP traps for integration with Network Management System (NMS)
 Protocol: HTTP, SNMP v2 traps
 Connector: RJ45
 USB Ports: 2
 Maintenance Port: 1x RS232 9 pin D-SUB

Physical and Power

Input Voltages: 100-240VAC, 50-60Hz or 7-16 VDC
 Input Currents: 150-75 mA for AC or 0.65A@12VDC
 Input Power: Typical: 8W(DC), 10W(AC); Max: 18W
 DC Connector: 2.5mm I.D. x 5.5mm O.D. x 9.5mm Female
 Chassis: 209 x 135 x 44 mm (WxDxH)
 8.25"x 5.32"x 1.75"
 Two units in 19" 1RU rack space
 Installation: 19" 1 RU rack mounting kit

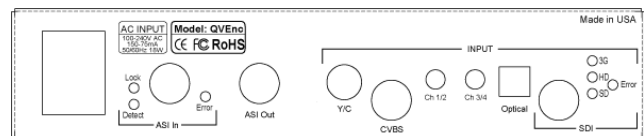
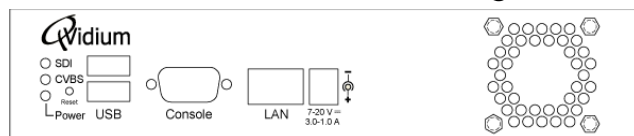
Environmental Conditions

Operating Temperature: 0°C - +55°C
 Storage Temperature: -20°C - +70°C
 Relative Humidity: 5% to 95%(non condensing)

Compliance

CE: 73/23/EEC (Low voltage equipment)
 89/336/EEC (Electromagnetic compatibility)
 Safety: IEC60950 and EN60950
 EMC: EN55022, EN55024, EN6100-3-2

Front & Rear Connection Diagrams



Ordering Information

QVENC - SD H.264 and MPEG-2 encoder, Composite and S-Video inputs, IP output

Available Options:

QVENC-ARQ-Opt - ARQ error correction license

QVENC-SDI-Opt - License for SDI input

QVENC-HD-Opt - License for 720p, 1080i, 1080p24/25/30 HD encode

QVENC-1080p-Opt - License for 720p, 1080i, 1080p24/25/30/50/60 HD encode

QVENC-ASI-Opt - License for ASI (Daughtercard to add ASI I/O)

QVRM-KIT - 1RU rack mount kit

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