QVidium® Professional Video Encoder

QVENC H.264/MPEG2 IP Video Encoder

QVidium's QVENC encoder is part of a reliable, high-performance solution for the 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 QVidium® 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.

QVidium'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 for cost-effective audio/video broadcast, web streaming & IPTV solutions.

Applications

- Professional broadcast video distribution
- Live Event / Electronic News Gathering
- Confidence monitoring
- Streaming Web & IPTV systems

Key Features

- Real-time HD Video Encoding & Transcoding
  - 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 and SDI inputs
  - Video formats up to **1080p50/60**, PAL & NTSC
  - IP or ASI encoded audio/video output
  - SD and HD Encoding
  - Down Scaling
  - Multiple streams from same input
  - CEA-708/CEA-608/Line21 Closed Captioning
  - Patented 2-Pass Live Real-time Encoding
  - Low Latency: <300ms QVDEC,<80ms Software
  - AES128 Video Encryption
- Robust transmission of Video & Audio
  - Patented QVidium® ARQ error correction
  - Industry std. ProMPEG FEC (SMPTE-2022)
  - SRT, RIST, & Zixi® Feeder Support
- Web Support for Live Streaming Video
  - Option for RTMP (Flash Media), HLS, & RTSP
- Compact, cost-effective solutions
  - Complete encoder / transcoder ½ width - 1RU
- User-friendly configuration and control
  - WEB-based remote configuration & control
  - SNMP Trap support for NMS systems

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Specification

Video/Audio Interfaces

Video Inputs:	1x 3G-SDI / HD-SDI / SDI (SMPTE 425M(A&B), 424M, 292M, 259M), 1x CVBS, 1x S-Video, 1xASI 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 & Decoding:	MPEG4-AVC (H.264) ►High Profile, up to Level 4.1 ►High, Main, and Baseline Profiles MPEG-2 Main Profile Constant bit rate or Variable bit rate 128 Kbps to 30 Mbps (w/o ARQ)
Bit rate:	MPEG4-AVC (H.264), MPEG-2
Closed Captioning:	CEA/EIA-608, CEA-708
Minimum Latency:	<300 ms QVDEC, <80 ms 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, Option: SRT, RIST Option: HLS, RTMP/Flash, RTSP
IP Bitrate:	160 Kbps to 27 Mbps , 15Mbps w/ARQ
Error Correction	QVidium® ARQ, Opt: SRT, RIST, Zixi US Patents:7551647 & 7522528; SMPTE 2022 FEC annex B, RIST Certified Zixi Feeder Support
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, 1080i60/59.94/50, and 720p60/59.94/50

Storage & Network Interfaces

Networking port:	10/100/1000 Base-T 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
Typ. Input Current:	85mA@120VAC, 0.65A@12VDC
Max Input Current:	150mA
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 mount, Coupler: 2 in 1RU (Both rack-mount accessories optional)

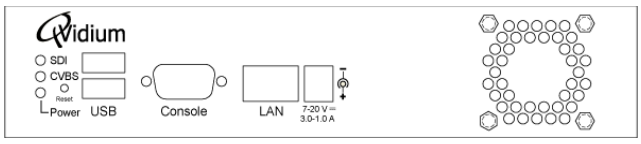
Environmental Conditions

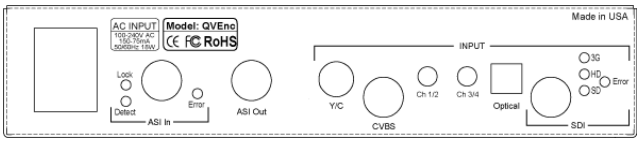
Operating Temperature:	0°C - +55°C
Storage Temperature:	-20°C - +70°C
Relative Humidity:	5% to 95%(non condensing)

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

Model #: QVENC (options: **SRT/RIST, Zixi Feeder, ASI/Transcode Daughtercard, QVRM-KIT, QVRM3-KIT**)**

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