

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
    - Dual encoding from same input
    - CEA-608/Line21 Closed Captioning
    - CEA-708 Closed Captioning (HD-SDI)
    - 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)
  - MPEG Transport Stream
- 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

## 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-phon, 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/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  
 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

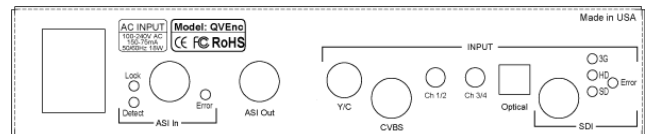
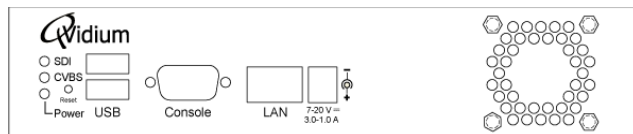
### Environmental Conditions

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: 1080p, 1080i/720p, SDI, DualEncode, NoARQ, ASI/Trancode Daughtercard)**