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
**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 3/PDIF

### Video Encoding (HD & SD)

- **Video Encoding & Decoding:** MPEG-4 AVC (H.264)
- **Bit rate:** Constant bit rate or Variable bit rate
- **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 27 Mbps, 15Mbps w/ARQ
- **Error Correction:** QVidium® ARQ (feedback-based)
  - US Patents: 7551647 & 7522528; SMPTE 2022 FEC annex B
  - 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, and 720p60/59.94/50

### Storage & Network Interfaces

- **Networking port:** 10/100/1000 Base-TGigabit Ethernet
- **Protocols:** IEEE802.3 Ethernet
- **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)
- **EMC:** 89/336/EEC (Electromagnetic compatibility)
- **Safety:** IEC60950 and EN60950
- **EMC:** EN55022, EN55024, EN61000-3-2

---

**Front & Rear Connection Diagrams**

**Ordering Information**

**Model #: QVENC (options: 1080p, 1080i/720p, SDI, DualEncode, NoARQ, ASI/Trancode Daughtercard)**

QVidium Technologies, Inc.
12989 Chaparral Ridge Rd. Tel: +1 858 792 6407 Email: info@qvidium.com
San Diego, CA 92130 USA Fax: +1 858 792 9131 WEB: http://www.qvidium.com