Professional Video Encoder

QVENC - H.264/MPEG-2 Encoder

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

AdvancedDigital Inc.

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 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
- Streaming Web and 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 and SDI inputs
  - Video formats up to **1080p50/60**, PAL & NTSC
  - IP (ASI opt) encoded audio/video output
  - SD and HD Encoding
  - Down Scaling
  - Patented 2-Pass Live Real-time Encoding
  - CEA-608/CEA-708 Line21 Closed Captioning
  - AES 128 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
  - RTMP (Flash Media), HLS & RTSP
- 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

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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:	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

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, RIST, SRT, Zixi, HLS, RTSP, RTMP/Flash.
IP Bitrate:	160 Kbps to 30 Mbps , 15Mbps w/ARQ
Error Correction:	QVidium® ARQ, RIST, SRT, Zixi US Patents:7551647 & 7522528; SMPTE 2022 FEC annex B

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-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)
Installation:	Two units in 19" 1RU rack space 19'' 1 RU rack mounting kit (optional)

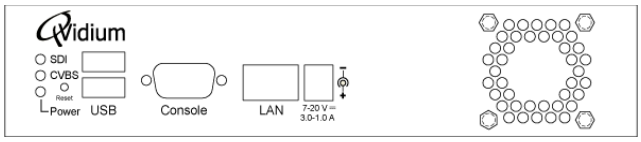
Environmental Conditions

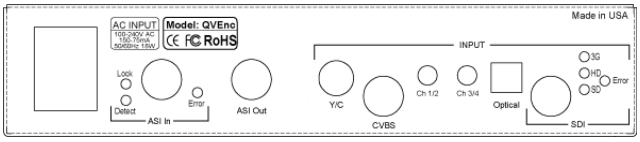
Operating Temperature:	0°C - +55°C
Storage Temperature:	-20°C - +70°C
Relative Humidity:	5% to 95%(non condensing)

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

QVENC - SD H.264 and MPEG-2 encoder, 3G/HD/SD-SDI, Composite and S-Video inputs, IP output

Includes: UDP, RTP, ARQ, RIST, SRT, Zixi, HLS, RTMP/Flash, RTSP

Available Options:

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

QVRM-KIT - 1RU rack mount kit

Contact info: sales@advanceddigital.com **WEB:** http://www.advanceddigital.com Tel: +1 416 479 0480
+1 416 848 071