IPITEK
INTEGRATED PHOTONICS TECHNOLOGY
ISO 9001 Registered

IMTRAN® CONVERTER MODULES

8-bit/10-bit Analog-to-Digital/Digital-to-Analog

FEATURES & BENEFITS

- **Uncompressed Digital Video**
- **Broadcast Quality Signal Performance (RS250C short haul)**
- **≥67 dB Video Signal to Noise Ratio (10-bit version)**
- **Up to Four Baseband Audio Channels**
- **Additional RS-232 Transmit/Receive Data Channel**
- **Plug and Play**
- **Video & Audio Monitoring Capabilities**
- **External Alarm Output**

The IMTRAN® analog-to-digital (A/D) and digital-to-analog (D/A) converter modules are used with IPITEK® IMTRAN CQ-Series transmission systems to provide digital fiber-optic transport of baseband analog video, audio and data signals. These modules provide precision 8-bit or 10-bit, uncompressed linear Pulse Code Modulation (PCM) conversion of composite NTSC video signals to digital data streams suitable for digital fiber-optic transmission. Additionally, a composite NTSC video signal with a 4.5 MHz audio sub-carrier can be converted and transported.

The modules can transport up to four high quality audio channels with each video. All baseband analog audio channels are digitized by linear PCM methods, without the use of compression or companding. The audio signals and digitized video stream are then multiplexed without any interaction or degradation of the signal quality. The modules also include a data channel for transport of RS-232 data up to speeds of 19.2 Kb/s.

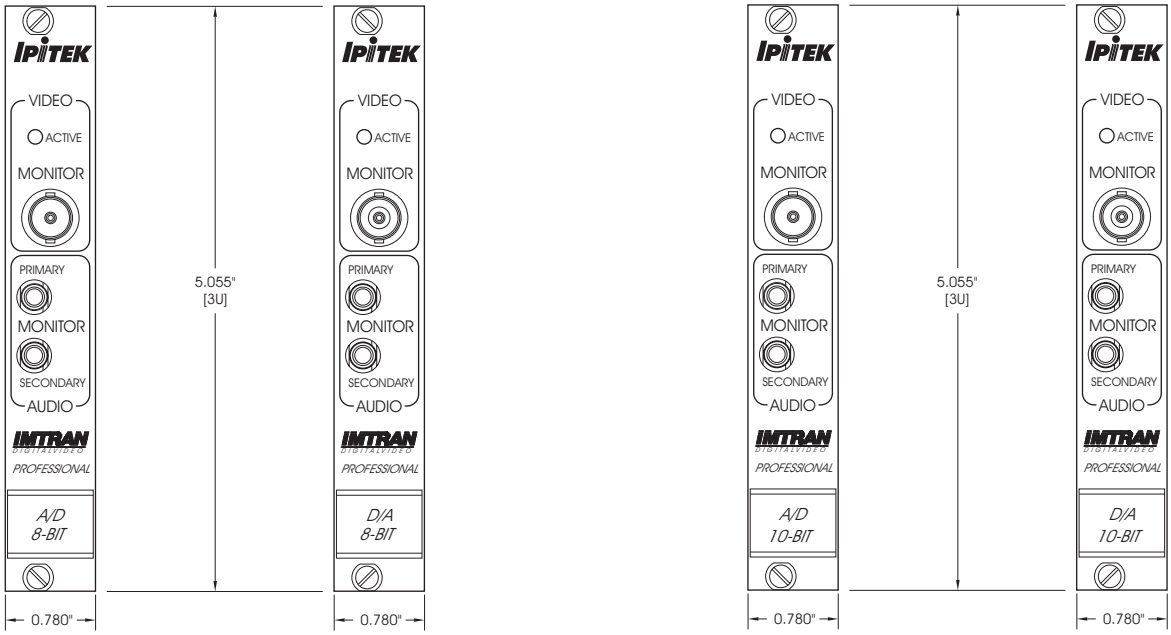
Front panel connectors provide convenient monitoring of the applied video and audio signals. The video monitor connector is 75-ohm impedance and can be used with video measuring equipment. The audio monitoring jacks are convenient for headphone monitoring use.

Alarm and status monitoring are included with the modules. Front panel LED indicators provide visible monitoring of video presence. The modules also provide an external loss of video alarm, for use with the IMTRAN NodeWizard® network management system or other monitoring systems. Optional, non-volatile memory is utilized in the module for identification addressing when used with a network management system.

The A/D and D/A modules are compatible with all IPITEK IMTRAN CQ-Series chassis and may be easily installed without any adjustments or system down-time.

IPITEK FIBER OPTIC DIGITAL TRANSPORT

MECHANICAL



SPECIFICATIONS

8-bit Video

Signal-to-Noise Ratio:	≥ 56 dB
Video Bandwidth:	±0.3 dB to 5.3 MHz
	-3 dB @ 5.8 MHz
Chrominance-to-Luminance Intermodulation:	2 IRE
Chrominance-to-Luminance Delay Inequality:	±26 ns
Differential Gain:	≤ 4%
Differential Phase:	≤ 1.5º
Output Level:	1 volt peak - peak

10-bit Video

Signal-to-Noise Ratio:	≥ 67 dB
Video Bandwidth:	±0.1 dB to 5.3 MHz
	-3 dB @ 5.8 MHz
Chrominance-to-Luminance Intermodulation:	1 IRE
Chrominance-to-Luminance Delay Inequality:	±20 ns
Differential Gain:	≤ 2%
Differential Phase:	≤ 0.7º
Output Level:	1 volt peak - peak

Audio

Signal-to-Noise Ratio:	≥ 76 dB
Total Harmonic Distortion:	≤ 0.5%
Input Level:	12 dBm max.
Frequency Response:	±0.1 dB, 20 Hz - 15 KHz
	±0.5 dB, 20 Hz - 20 KHz

Data

RS-232:	≤ 19.2 kbps

Environmental

Operating Temperature:	0ºC - 50ºC
Operating Humidity:	85% non-condensing
Storage:	-55ºC - 75ºC, 24 hrs.
Mounting:	Any CQ chassis

ORDERING INFORMATION

IM	-	CQ	-	XXXX	-	X
IMTRAN		CQ		**TYPE** **DA08** = 8-bit Digital to Analog Decoder **AD08** = 8-bit Analog to Digital Encoder **DA10** = 10-bit Digital to Analog Decoder **AD10** = 10-bit Analog to Digital Encoder		**Audio Channels** **4** = 4 Audio, 1 RS-232 Channel **2** = 2 Audio, 1 RS-232 Channel **0** = 0 Audio, 1 RS-232 Channel

IPITEK
2330 Faraday Avenue • Carlsbad • CA • 92008
(760) 438-1010 • Toll Free (888) 4-IPITEK (447-4835)

FAX (760) 438-2412 • sales@ipitek.com • www.ipitek.com

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