



OmniPeg-DVB-ASI-T™ Solid State Encoder and Transcoder Cards

PCI

MPEG-4
MPEG-2
MPEG-1
DVB-ASI

Real-Time
Streaming
Encoder/Decoder
Transcoder



Stand Alone Hardware Based
MPEG-2 or MPEG-4 (Simple Profile)
Transport Stream Encoder and
Decoder With Analog Inputs and
Outputs.

- Supports Analog S-Video and/or Composite Video In to DVB ASI Out
- DVB ASI In to S-Video and/or Composite Video Out.

Overview

These breakthrough products from OmniMedia Technology bring the power and functionality of latest video compression technology to streaming application. The OmniPeg-DVB-ASI-T™ is a single board transport stream encoder and decoder. At this time, it is unique in that it encodes and decodes MPEG-2 and MPEG-4. The OmniPeg-DVB-ASI-T™ supports composite video input and encodes to full D1 resolution with 4: 2: 0 chroma sampling. One of its strengths is its performance at low bit rates. Video quality looks very good with MPEG-2 at 3.5 Mbps and MPEG-4 at 2 Mbps.

Please note that this card is designed for OEMs and there is no end user software at this time. There are SDK's for Windows and Linux.

Applications

- Video servers
- Datacasting and monitoring
- Interface DVB MPEG-2 transport streams to the PCI bus
- IP – DVB interfaces
- Streaming video distribution over DSL, cable, ethernet, fiber and wireless networks
- Transcoding and transrating among DVB-ASI, MPEG-4, MPEG-2 and MPEG-1 streams
- Security, surveillance, traffic monitoring
- Webcasting -- Live sports, events, distance learning
- Video-on-demand servers

Key Features

- Drivers and applications for Windows and Linux operating systems
- S-video, composite video and stereo audio inputs with buffered DVB-ASI output
- DVB-ASI input with S-Video, composite video and stereo-audio outputs
- Real-time MPEG4, Mpeg-2, MPEG-1 and DVB-ASI encoding, decoding and transcoding
- Encoding and decoding simultaneously
- Support for MPEG-1, MPEG-2 MP@ML, MPEG-4 Simple Profile @ L1, L2 and L3, with extensions to full D1 and interlaced video
- Fully complies with ISO/IEC-11172-2, ISO/IEC-13818-2 and ISO/IEC-14496-2
- Constant or variable bit-rate from 256 Kb/s to 15 Mb/s
- Real-time streaming over IP networks with programmed low delay mode
- Recording and playback of MPEG4 and 2 files through Analog or DVB-ASI outputs
- Software selectable transmit clock source

Capabilities

- The OmniPeg DVB-ASI-T is supported with drivers and applications for Windows and Linux operating systems. The operation is facilitated through command line interface (described within the SDK manual).
- The vidserv2.exe application enables loading of driver and aids in the selection of various configurations, the vidserv2.cfg file defines the configurations for selection. The application controls the selection of the OmniPeg DVB-ASI-T (multiple OmniPeg DVB-ASI cards in the same system are supported), selection of configuration and also controls the streaming of data between two cards in the same system, or two cards anywhere on the IP network. In this case a second instant of vidctrl2.exe program is launched.
- Support for MPEG-1, MPEG-2 MP@ML, MPEG-4 Simple Profile @ L1, L2 and L3, with extensions to full D1 and interlaced video as well as DVB-ASI inputs and outputs are defined in the configuration files. A wide range of pre-configured files are available for testing. Bit rates, resolution and variety of inputs and outputs can be customized by the user and a new vidserv2.cfg file can be generated.
- Selecting appropriate configuration files and appropriate parameters in the configuration files via the vidctrl2.exe program also controls recording and playback of MPEG4 and 2 files through analog or DVB-ASI outputs, controls S-video, composite video and stereo audio inputs with buffered DVB-ASI output, controls DVB-ASI input with S-Video, composite video and stereo-audio outputs, controls real-time MPEG4, -2, -1 and DVB-ASI encoding, decoding and transcoding and controls encoding and decoding simultaneously.

Specifications

Video/Audio Input		Video/Audio Output	
Composite Video	BNC Connectors (daughter card)	S-Video	Mini-DIN
S-Video	Mini-DIN	Composite Video	BNC Connectors (daughter card)
Stereo Audio	3,5 mm stereo Connector	Stereo Audio	3.5 mm Stereo Connector BNC Connectors (daughter card)
DVB-ASI Input	BNC Connector	DVB-ASI Output	BNC Connector
Encoding		Decoding	
Video Encoding Format	MPEG-4, -2 and -1 encoding for NTSC or PAL	Video Decoding Format	MPEG-4, -2 and -1 decoding for NTSC or PAL
Video Bit rate	Constant or variable bit-rate from 22.5 Kb/s to 15 Mb/s	Video Bit rate	Constant or variable bit-rate from 22.5 Kb/s to 15 Mb/s
Audio encoding	<ul style="list-style-type: none"> • MPEG-1 Layer I, II and III (MP3) • MPEG-2 Layer I and II • Sampling frequencies: 8, 16, 22.05, 24, 32, 44.1, 48 and 96 KHz. 	Audio decoding	<ul style="list-style-type: none"> • MPEG-1 Layer I, II and III (MP3) • MPEG-2 Layer I and II • Sampling frequencies: 8, 16, 22.05, 24, 32, 44.1, 48 and 96 KHz.
Video Horizontal Resolution	Horizontal resolution between 128 and 720 pixels in 16-pixel steps	System Requirements	
Video Vertical Resolution	Vertical resolution between 80 and 480 pixels (NTSC) or 576 pixels (PAL) in 16-pixel steps	PC System	Windows XP or Windows 2000 Linux OS MMX266, PIII or Pentium 4 CPUs 32 bit PCI Mother boards
GOP Structure	Programmed GOP structure and length: I, IP, IBP and IBBP	Embedded pressure Gauge	0 to 50 PSI
Streaming or Storage Output	<ul style="list-style-type: none"> • MPEG-1 System Stream • MPEG-2 PS or TS • MPEG-4 embedded in MPEG-2 TS 	Embedded Temperature Gauge	-25 to 125 Degrees C
Delay	Programmed low delay mode	Electrical Requirements	
Mechanical Requirements		PCI Bus Power	5 Volts , 5Watts
PCI Card Size	7x5 in (18x12 cm)	Temperature	-20 to +70 Dgrees C Operating. MIL-810F specs per Methods 501.4 and 502.4.
Shipping Weight	1 lbs (0.6 Kgs)	Humidity	10% to 95% non-condensing
Ordering Information	Model Part #	OmniPeg-DVB-ASI-T 2104-10180-??	

Warranty: Limited one year warranty for defects in material and workmanship.



Also available as Model
OmniPeg-DVB-ASI-M™

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