EuroTecH

CTR-1475
MPEG-4 Video Compressor with 4 Inputs

Features

Encoding Processor:
Integrated RISC Microcontoller
(to offload compression overhead from system CPU)

Video Input:
4 Analog Video Input Channels
(Up to 16 concurrent cameras can be supported with four
CTR-1475 in a single PC/104Plus stack)

Video Output (Analog):
1 Analog Video Output Channel
(for Monitoring)

Audio Input:
4 Audio Input Channels
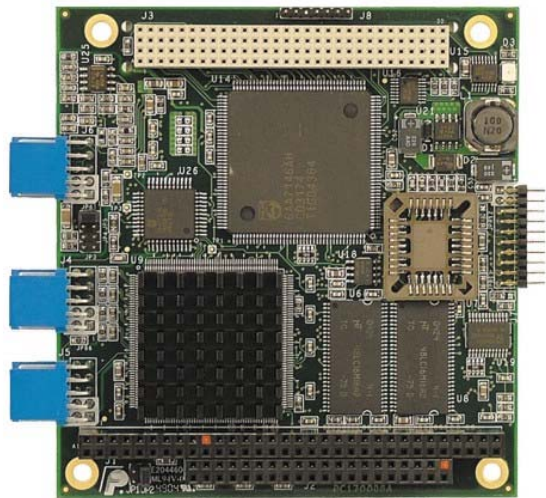(PCM, ADPCM Audio Compression)

Video Quality Control:
Programmable Quantization Values - Picture Size, Position,
Panning, Tilting, Freeze

Bit Rate Control:
Supports Variable Bit Rate (VBR), Constant Bit Rate (CBR)
and Hybrid Bit Rate (HBR)

General Purpose Digital I/O:
8 Digital I/O Channels

General Description

The CTR-1475 is a real-time MPEG-4 video compressor, encoder and frame grabber module designed to capture up to four concurrent high-quality analog video and audio streams, encode them in compressed MPEG-4 or AVI formats, and send them to an embedded computer over the 32-bit PCI bus.

Featuring an onboard RISC microcontroller dedicated to handling the computationally intensive video compression procedure, this PC/104-Plus form factor module supports up to four cameras at a time, enabling a lower-end system processor or up to four CTR-1475 modules to be used in a single system (supporting up to 16 cameras). Because of its compact size and rugged design, the board is especially suited for live video surveillance applications where rugged environmental conditions (vibration/extreme temperatures) and space constraints exist (i.e. in transportation, industrial and defence systems).

Featuring 4-channel NTSC/PAL/SECAM video decoders with composite video (CVBS) inputs, this modular MPEG-4 encoder provides dedicated hardware and rate control algorithms to produce a high quality MPEG-4 video stream. It can capture video (from PAL/NTSC cameras, VCR, and other video sources) in any of three modes: up to 30 frames/sec on one camera at full screen; up to 30 frames/sec on two cameras at 1/2 screen; or up to 30 frames/sec on four cameras at 1/4 screen. The board also provides an analog video output channel to perform real-time monitoring of the recording sequence.

Specifications

Static Gain Control:
Programmable or automatic static gain control for each CVBS channel

Motion Detection:
Programmable detection windows, motion velocity, motion sensitivity and Blind Camera Detection

Software:
Drivers, Source Code and Demonstration Software (IP Streaming and Capabilities Demo);

Hardware:
Compatible with Linux, Windows XPE/CE

Video Processing:
MPEG-4 (ISO/IEC 14496-2), MPEG-4 SOP @LEVEL3

Audio Processing:
- Supports ISO/IEC 11172-3 MPEG-1 Audio Layer 2
- Supports u-Law PCM and IMA-ADPCM for speech quality 48/44.1/32 Samplings Supported

NTSC Compression Capabilities:
352x240 @ 120fps, 720x480 @ 30fps

PAL Compression Capabilities:
352x288 @ 100fps, 720x576 @ 25 fps

System File Formats:
AVI, MP-4

Video Compression Modes:
Supports I, P, B Frame Compression

Scaling:
Built-in High Quality Scalar (1/2, 1/3, 2/3, 1/4)

Zoom:
Random-position high-quality linear Zoom (2X~4X)

Minimum System Requirement:
586 Class Processor

Bus Connectors:
PCI and ISA buses PC/104-Plus compliant

Potential Applications

Live video surveillance applications in rugged environmental conditions and space constraints (transportation, industrial and defence systems)

Physical Characteristics

Operating Temperature Range:
0ºC to +60ºC; (Extended range as option)

Storage Temperature:
-40° to +85°C

Power Input:
+5 Vdc

Power Consumption:
7W (typical), 10W (maximum)

Dimensions:
90 x 96 mm (3.550" x 3.775")

Architecture:
PCI Compatible

RoHS:
- RoHS (2002/95/CE) Compliant
- Replacement for CTR-1472

Options

- Conformal Coating
- Extended Operating Temperature Range (-40°C to +85°C)
- Custom Connectors

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