LT-122-PCIE

3D/HD Video Acquisition and Compression Board

The LT-122-PCIE is an HD video dual channel capture board that applies H.264 or VC-1 compression to HDTV video in real-time without the use of host computer's CPU resources. The board is placed in a PCI Express slot.

This board captures video from two (SMTPE compliant) 3G/HD/SD SDI. In addition to external video sources, the LT-122-PCIE can compress from host internal video sources such as files or DirectShow devices including USB and FireWire cameras.
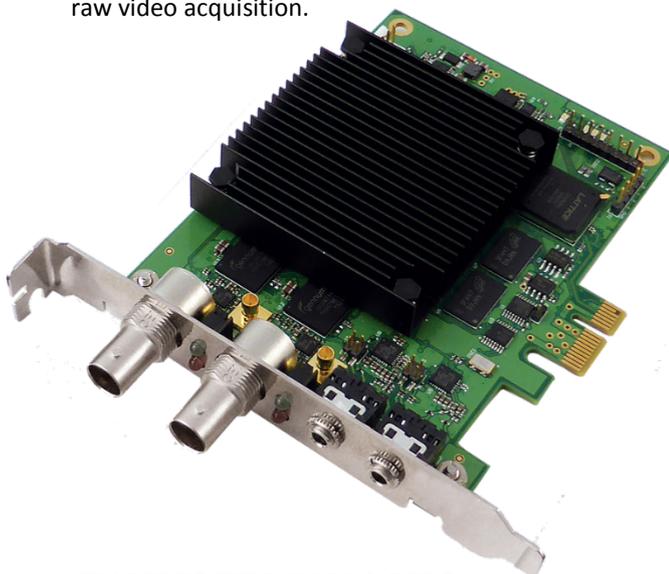
Used in 3D mode, the LT-122 can capture, synchronize and mix 3D video from 3D SDI-sources.

The LT-122-PCIE compresses video in compliance with the H.264 or with the VC-1 standard.

This high performance board can compress 1080P/I at up to 60 frames per second (fps) (when using only one channel). 2048x2048 can be compressed at 15fps. At lower resolutions the maximum compression frame rate increases. If the frame rate is higher than the board can handle, frame decimation can be enabled allowing high frame rate source to be acquired at a lower frame rate.

Compressed bitrates can vary between 64Kbit/s and 80Mbit/s depending on resolution, frame rate and quality desired.

An uncompressed video capture function is also available for simultaneous snapshots or continuous raw video acquisition.
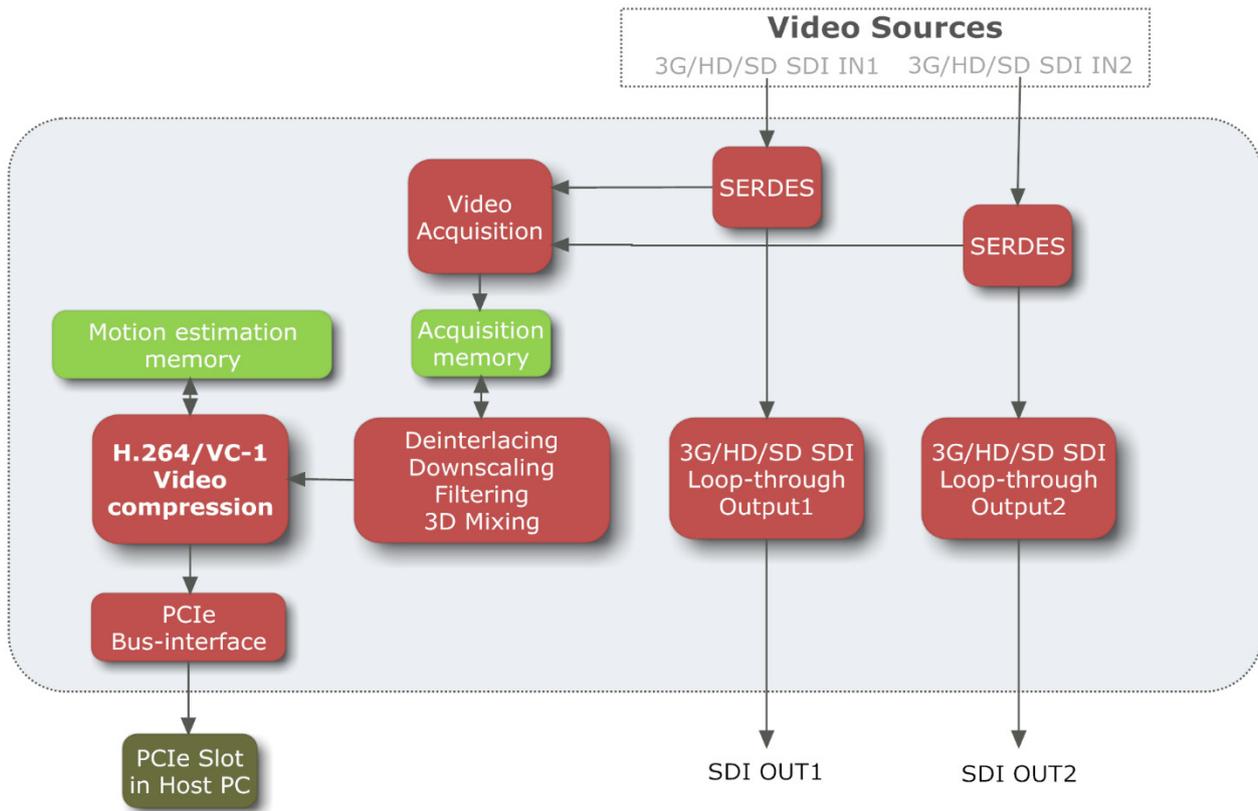
Features

- ✓ H.264 or VC-1 HD video compression
- ✓ 2 channel Real-time 3G/HD/SD video acquisition and compression
- ✓ SDI loop-through output for each input.
- ✓ Uncompressed video capture
- ✓ HDTV 1080p, 1080i, 720p, 576p, 576i, 480p, 480i compatible
- ✓ Very low compression latency
- ✓ Audio capture from SDI embedded audio
- ✓ Text overlay prior to compression
- ✓ IP or I only compression
- ✓ Bitrates from 64Kbit/s to 80Mbit/s
- ✓ Windows and DirectShow support
- ✓ Linux support
- ✓ Mac OS X support
- ✓ Solaris support

LT-122-PCIE Block Diagram

Video Sources
3G/HD/SD SDI IN1   3G/HD/SD SDI IN2

Video Acquisition

SERDES

SERDES

Motion estimation memory

Acquisition memory

H.264/VC-1 Video compression

Deinterlacing Downscaling Filtering 3D Mixing

3G/HD/SD SDI Loop-through Output1

3G/HD/SD SDI Loop-through Output2

PCIe Bus-interface

PCIe Slot in Host PC

SDI OUT1

SDI OUT2

Key Features

- H.264 / MPEG-4 Part 10 High Profile level 5.0 or VC-1/SMPTE-421M advanced profile level 3 video compression.
- I only or IP compression with variable GOP size
- VBR (variable) and CBR (constant) bitrate control
- 1024x512 motion vector search range covered
- Bitrates from 64Kbit/s to 80Mbit/s
- 1 frame maximum latency (can be reduced to a few milliseconds under special circumstances)
- MPEG-TS or ASF container format
- 3G/HD/SD-SDI video input
- 1080P60 compression available when using only one channel
- Simultaneous uncompressed video capture
- 2 channel audio capture
- Synchronized audio/video acquisition
- Advanced hardware deinterlacing
- Frame rate reduction feature available
- Video downscaling prior to compression
- Denoise filter prior to compression
- Text overlay prior to compression
- Bitrate reduction via monochrome mode when color is not needed
- Synchronization to external events
- Extensive Motion statistics for all frames
- Windows XP/Vista Win7, Windows 8 32bit/64 bit driver
- DirectShow support as well as simple SDK
- Linux support
- Solaris support

Applications

- HDTV capture and storage
- Digital video recorders
- Video Medical systems
- Endoscopy DVR
- Video surveillance systems
- Internet broadcasting
- Teleconferencing
- Video over LAN
- Inspection systems
- Machine vision video recorders

Product Codes

- LT-122-PCIE   LT-122 board for H.264/VC-1, docs, drivers

See Also

- LT-102-PCIE