

# LT-101-USB

## HD Video Acquisition and Compression Board

The LT-101-USB is an HD video capture module that compresses HDTV video in real-time without the use of host computer's CPU resources. The module is connected to a host system via high speed USB.

This board captures video from both analog and digital HD and SD video sources via DVI, RGB, VGA, component, S-video, or composite connectors. In addition to external video sources, the LT-101-USB can compress from host internal video sources such as files or DirectShow devices including USB and FireWire cameras. An HD/SD-SDI option is also available.

The LT-101-USB compresses video in compliance with the H.264/MPEG-4 Part 10 standard.

This high performance board can compress 1080P/I at up to 30 frames per second (fps). 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 (e.g. 1080P60), 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.

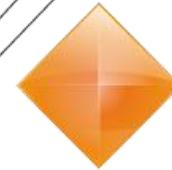
An uncompressed video capture function is also available for simultaneous snapshots or continuous raw video acquisition.



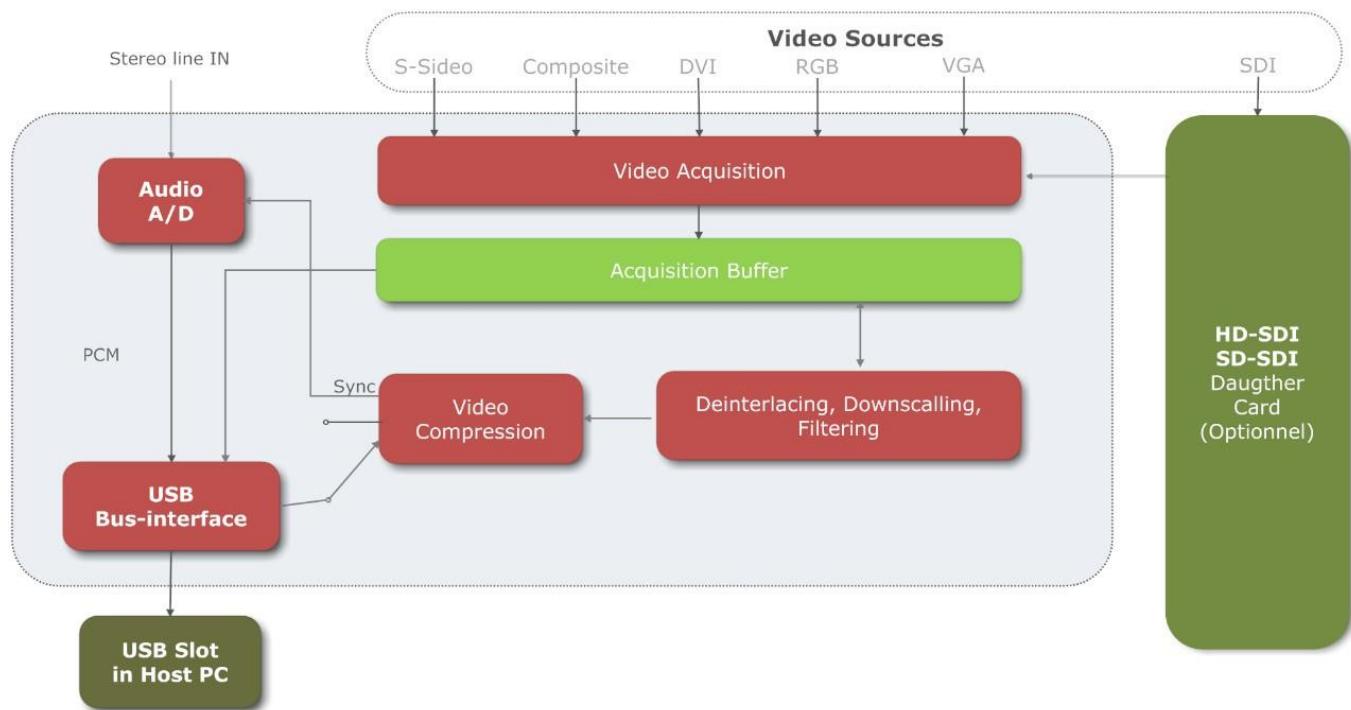
### Features

- ✓ H.264 HD video compression
- ✓ Real-time HD/SD video acquisition and compression
- ✓ Uncompressed video capture
- ✓ HDTV 1080p, 1080i, 720p, 576p, 576i, 480p, 480i compatible
- ✓ Graphics capture up to WUXGA
- ✓ Very low compression latency
- ✓ Multiple digital and analog video inputs including component, RGB, DVI, S-video, etc...
- ✓ HD-SDI/SD-SDI option
- ✓ Both PCI or USB bus support
- ✓ Synchronized audio capture
- ✓ Text overlay prior to compression
- ✓ IP or I only compression
- ✓ Bitrates from 64Kbit/s to 80Mbit/s
- ✓ DirectShow support
- ✓ Windows drivers
- ✓ Linux drivers





## LT-101-USB Block Diagram



## Key Features

- H.264 / MPEG-4 Part 10 High Profile level 5.0
- 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 on ASF container format
- DVI, VGA, RGB, component, S-video, composite video inputs.
- Optional HD/SD-SDI module
- PCI or USB host bus interface
- 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
- DirectShow support as well as simple SDK
- Windows 7, Windows 8, Windows 10 32bit/64bit driver

- Linux 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-101-USB                    LT-101 module for H.264, docs, drivers
- LT-101-SDI                    HD/SD-SDI option module  
(Also adapts for LT-101-PCI and LT102-PCIE)

## See Also

- LT-1xx                        Family product