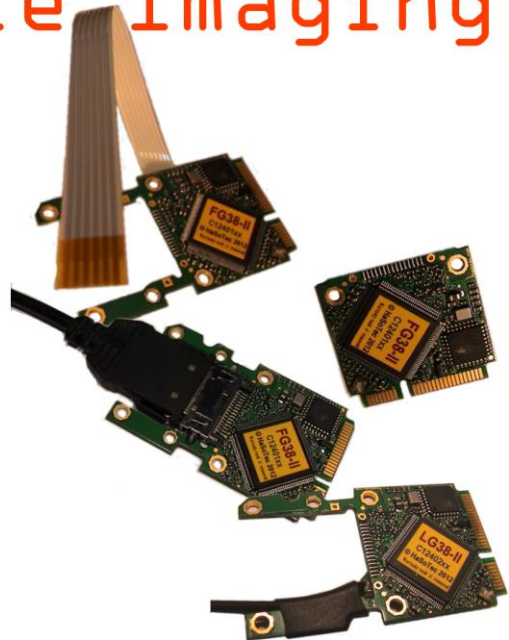
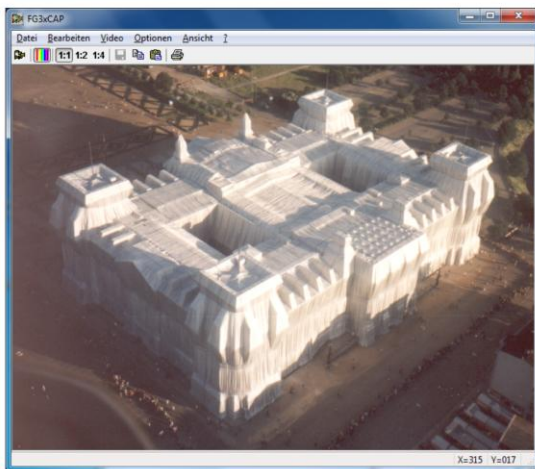


HD-38 miniPCIe HD-37 ExpressCard 34&54mm HD-SDI / 3G-SDI Framegrabber

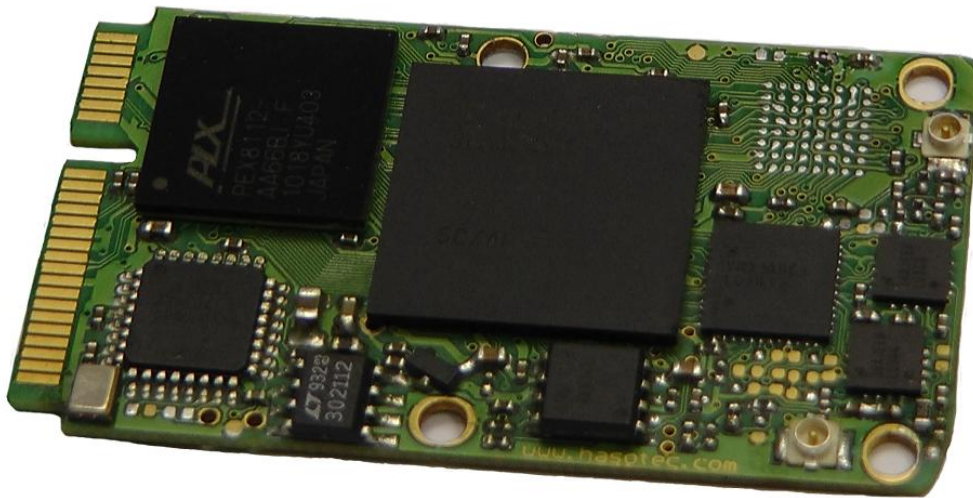
May 1 20 2014

HaSoTec Mobile Imaging



HaSoTec GmbH Burgwall 20-21 18055 Rostock
<http://www.hasotec.com> +49 381 4909834 info@hasotec.com

HD-38 mini PCI express



HD-37 34mm ExpressCard



HD-37 54mm ExpressCard



Connections, Cables and Signal chains

3G-SDI and HD-SDI are standards to bring a Full HD video stream uncompressed over a coaxial cable. This includes such formats as 1080p25, 1080p30, 720p60, 720p50, 720p30, 720p25 for example.

Standard coaxial cable, such as RG-58, RG-59 used before for analog Video connections can be used for HD-SDI for small distances up to 20m

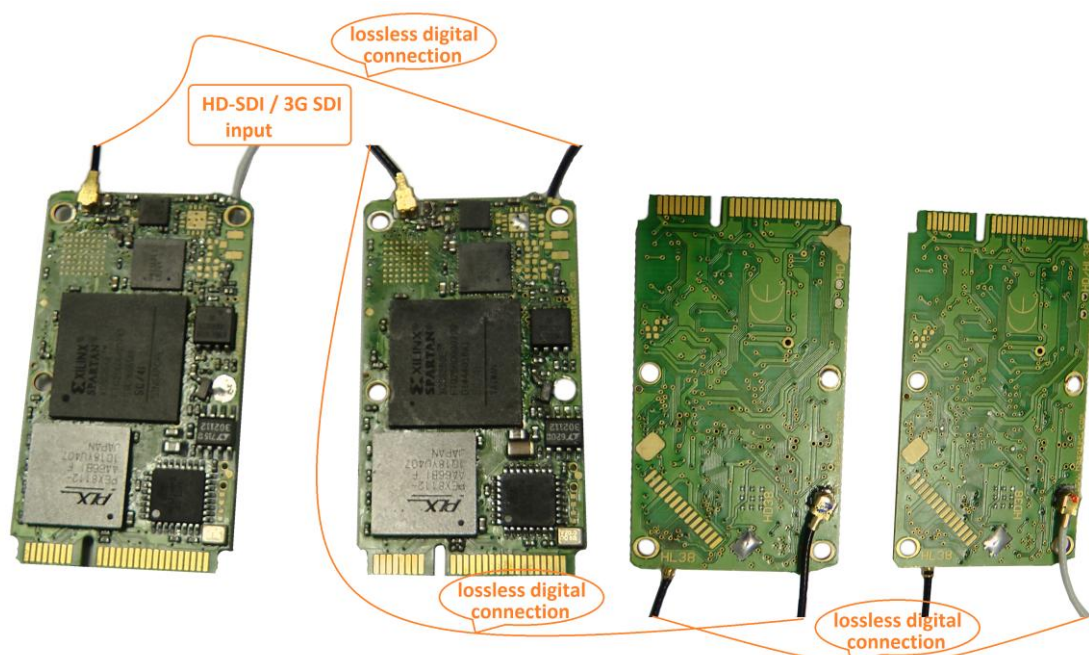


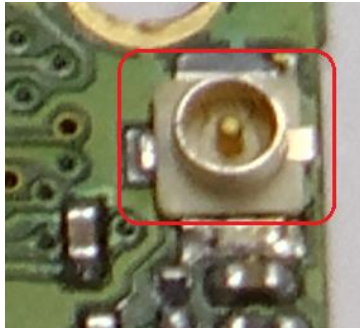
Special HD-SDI cable, such as Belden cable can be used for Distances up to ~100m.



HaSoTec frame grabbers HD-37 and HD-38 have up to two HD-SDI inputs and one output. The second input is an option and allows to have 2 sources connected over a software controlled switch. The output is always present with HD-38 mini PCIe and is customer defined present for HD-37 ExpressCards. This output is an equalized digital signal and its possible cable length restarts from this point.

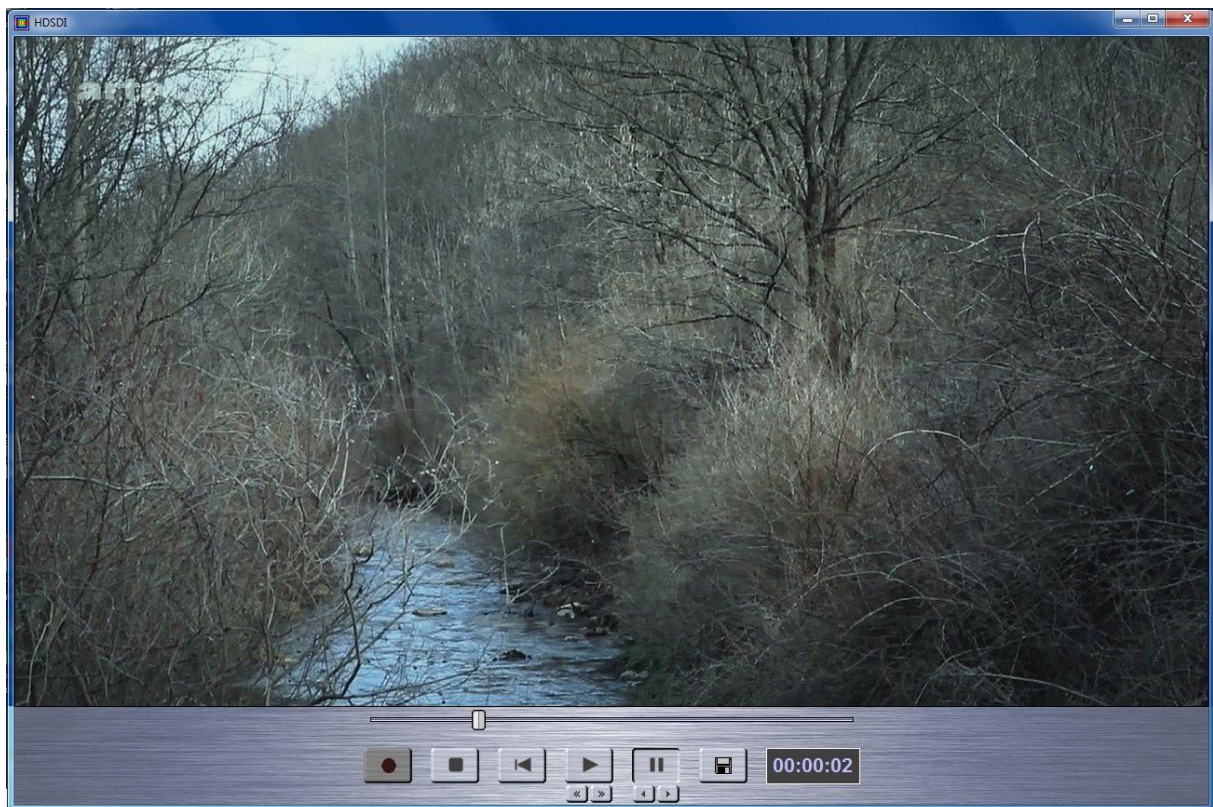
Chained signals is a powerful feature to allow real-time analysis with PC-based clusters or to have additional displays.





HD-38 equipped with U.FL connectors allows easy panel connections. A small diameter coax cable directly mounted is used for HD-37 and also possible for HD-38.

Recording Software



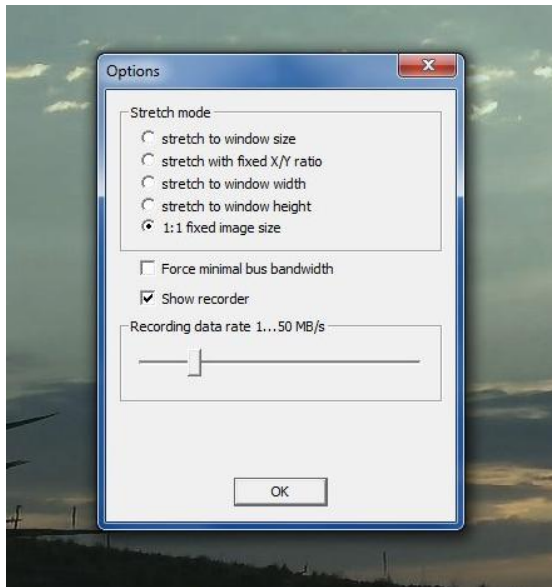
Hx3xCAP shows a live video display. Pressing the recording button a counter shows the current length of the record.



Recording in WMV-Format needs no additional Codecs. The integrated Media Player can play back recordings in different speeds. It can step single frames forward and back to set cutting positions (red areas shown in the bar of the left picture). Finally the

software can generate a new file from selected pieces. These recording functions can be turned off to convert the window of this software into a display-only mode.

Displaying Software



There are several display options. On small displays one can zoom into details to make high camera resolutions on small screen resolutions useable:

When the software displays live video it shows frames scaled into the size of the window. One can click onto a position of the frame to show this part of the frame zoomed and unscaled during the live video display.

Technical Data

There are several card types:

| | |
|------------|---|
| HD-38 | mini PCI express card, standard temperature range 0...60°C |
| HD-38 ExT | mini PCI express card, extended temperature range -40...70°C |
| HD-37-34mm | ExpressCard 34mm, standard temperature range 0...60°C |
| HD-37-54mm | ExpressCard 54mm, standard temperature range 0...70°C |
| HD-37-ExT | ExpressCard 54mm, extended temperature range -40...70°C |

Bitrates:

2.970 Gbit/s, 2.970/1.001 Gbit/s,
1.485 Gbit/s, 1.485/1.001 Gbit/s and 270 Mb/s.

Input timings:

480i@59.94, 576i,
720p@50/59.94/60,
1080i@50/59.94/60,
1080p@23.98/24/25/29.97/30/50/59.94/60.

480i/576i SD-SDI standard SMPTE 259M-C operates at bitrates of 270 Mbit/s and supports an output distance up to 300m.

720p/1080i HD-SDI standard SMPTE 292M operates at bitrates of 1.485 Gbit/s or 1.485/1.001 Gbit/s and supports an output distance up to 200m.

1080p 3G-SDI standard SMPTE 424M/425M-AB operates at bitrates of 2.970 Gbit/s and 2.970/1.001 Gbit/s and supports an output distance up to 100m.

Inputs

- 1 x Coax (SDI/HD-SDI/3G-SDI) standard
- 2 x Coax (SDI/HD-SDI/3G-SDI) as an option.

The software can select one of the inputs.

Outputs

- 1 x Coax (SDI/HD-SDI/3G-SDI)

The Transmission Rate of the input is used 1:1 to generate the equalized output signal

Dimensions:

- HD-38: 52mm x 28mm x 3 mm
- HD-37-34mm: 75mm x 34mm x 5 mm
- HD-37-54mm: 75mm x 54mm x 5 mm

Weight:

- HD-38: 7g
- HD-37-34mm: 20g
- HD-37-54mm: 23g

Relative Humidity: 20 ~ 90% RH (Non-condensing)