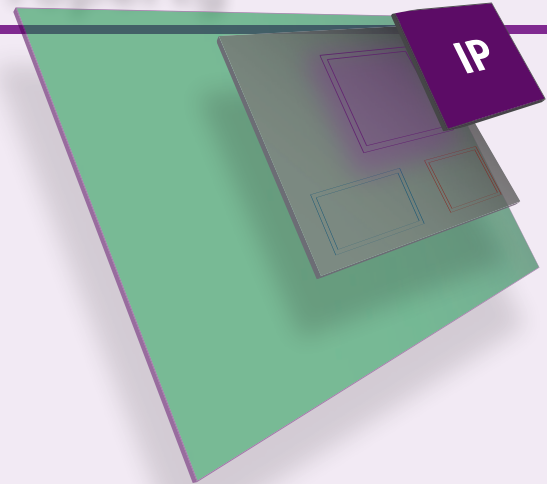


Video over IP Intellectual Property

Cores for ST2022-1/2/5/6/7,
ST2110, ST2059, Sony NMI and
Aspen



- Transport video over LAN with full redundancy
- Transport video over metro / carrier with low latency
- Media-convert video from SDI to IP protocols
- Transport 4K over 10G network with light compression

Macnica's suite of Intellectual Property implements all of the standards associated with live video transport over IP networks.

Macnica actively participates in the Society of Motion Picture and Television Engineers (SMPTE), Video Services Forum (VSF), Joint Task Force on Networked Media (JT-NM), Alliance for IP Media Solutions (AIMS), Advanced Media Workflow Association (AMWA), the ASPEN Alliance and the Sony IP Alliance organizations.

Supported Standards:



- ST2110 packet transport
- ASPEN packet transport
- Sony Network Media Interface (Sony NMI), FEC, packetization and LLVC
- ST2022-2/6 1G and 10G packetization
- ST2022-1/5 1G and 10G FEC
- ST2022-7 hitless diversity switch

Features:

- Support for up to 256 channels of video, audio and meta-data
- Protocols can be configured on a per-channel basis (mix Sony, ASPEN, ST2110, ST2022-6)
- Integration with JPEG2000 and TICO compression
- ST 2059-1/2 time synchronization
- Clock recovery from video stream or external sync signal
- Integration with SDI interface

Macnica offers flexible licensing terms. IP is shipped with a full verification environment, UDP based configuration SW and API.

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Video over IP Intellectual Property

Cores for ST2022-1/2/5/6/7, ST2110, ST2059, Sony NMI and Aspen

IP networks will offer broadcasters many advantages: lower cost, increased flexibility, use of off-the-shelf HW, and the ability to leverage cloud computing technology

Test set up

A diagram of Macnica's HW test setup is shown below. Video is sourced and synchronize using Video Clarity equipment, switched on a standard Ethernet switch and passed through a PacketStorm network emulator. This allows random and defined packet loss as well as the introduction of network jitter. Macnica's IP is fully tested to the SMPTE specifications.

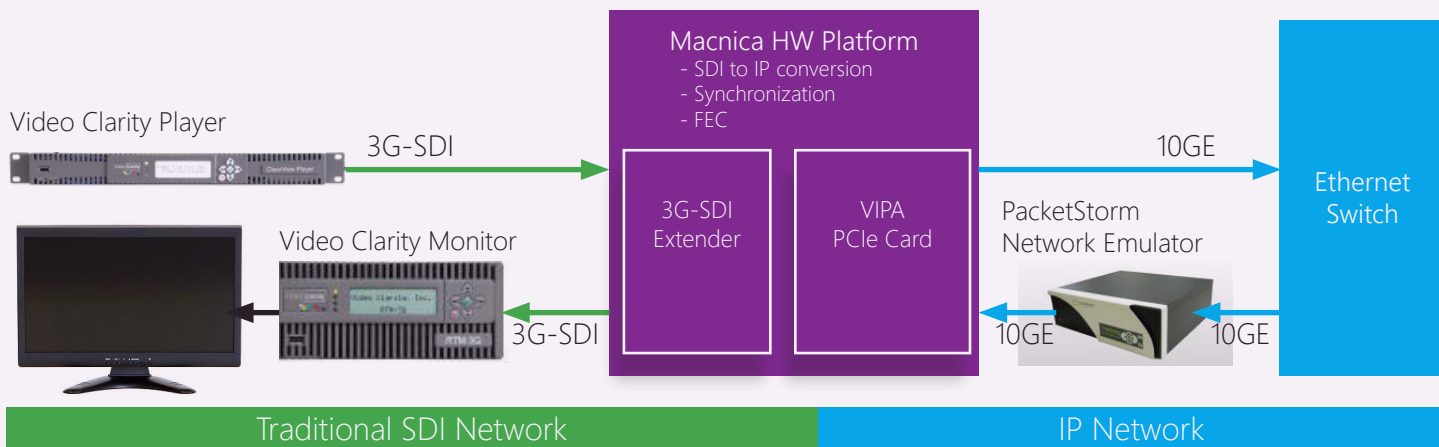
Clock recovery

Macnica has a patent pending clock recovery methodology that allows the video clock to be derived from the packet stream over a wide range of network jitter conditions.

Deliverables

The IP is supplied complete with a full verification and simulation environment allowing customers to integrate, develop and maintain the code on their own. Support is included with the IP, and regular updates are delivered as the IP continues to develop. Macnica also provides a UDP based setup GUI, driver and API support to help customers integrate the IP into their own SW environment. Documentation is available under NDA.

Test Set Up



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MACNICA

**Revolutionizing
Live Video
Transport**

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