

SpaceWire Recorder

The SpaceWire Recorder is designed to support the validation and debugging of complete SpaceWire systems. Using advanced SpaceWire technology from STAR-Dundee Ltd and the very latest solid state data storage technology, the SpaceWire Recorder offers exceptional SpaceWire recording capabilities.

Integrated in a single unit and incorporating the necessary recording, display and analysis software, the STAR-Dundee SpaceWire recorder is ready to operate out of the box with performance guaranteed. The SpaceWire links to be recorded are passed into one SpaceWire connector of the recorder unit and out of another and monitored transparently. The recorder is then able to record SpaceWire packets and time-codes flowing through the SpaceWire link in both directions. The high performance recording technology allows recording of a link sending data at full speed over a 200 Mbits/s SpaceWire link (160 Mbits/s data rate in each direction). Up to four links can be recorded simultaneously and displayed in the same high-resolution time-frame. Remote operation can be performed using integrated Gigabit Ethernet ports.

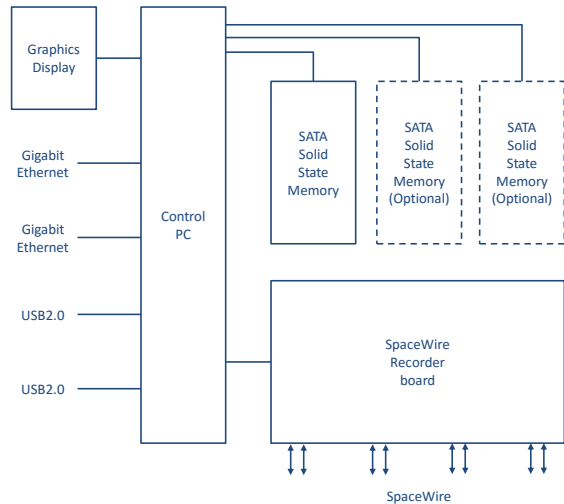
SpaceWire Recorder Key Features

- Maximum aggregate recording data rate of 600 Mbits/s.
- Can monitor up to four SpaceWire interfaces.
- Complete solution with integrated host PC and SATA solid state disc drive(s).
- 960 GByte recording capacity with each disc.
- Recording, display and analysis software included.
- Large spooling memory to give high recording rate.
- Uses STAR-System technology.



SpaceWire Recorder Unit

The SpaceWire Recorder unit comprises a half-width 3U PXI/cPCI rack, fitted with a SpaceWire Recorder board, a control computer and one or more SATA solid state disc drives. The SpaceWire Recorder board has eight SpaceWire interfaces which are able to support recording of SpaceWire packets running over both directions of up to four links. The control computer provides a range of interfaces to the SpaceWire recorder including dual Gigabit Ethernet for remote control or data logging. The SpaceWire Recorder is fitted as standard with one 960 GByte SATA solid state disc drive to give the ultimate in recording data rate and reliability. The unit is mains powered and can operate as a desktop unit or be rack mounted.



SpaceWire Recorder Block Diagram

Each SpaceWire link can operate at up to 200 Mbits/s link speed. The SpaceWire recorder can operate with a locally connected graphics display and keyboard, or remotely via Gigabit Ethernet.

Specifications

Size: 3U rack housed in a 4U high unit.

Power: Mains 110/240V AC.

SpaceWire Ports:

- 8 SpaceWire ports, micro-D connectors on the front panel.
- ECSS-E50-12A and ECSS-E-ST-50-12C compliant.
- Link speed up to 200 Mbits/s.

Spooling Memory:

- Large spooling memory inside the SpaceWire Recorder card.
- Improves overall recording data rates.

Data Storage:

- SATA solid state hard drive.
- Capacity 960 GByte.

Data Recording:

- Records SpaceWire packets, time-codes and link errors.
- Maximum aggregate data rate of 600 Mbits/s (performance is dependent on packet size).
- For example:
 - two links transmitting 1024Byte packets at 150 Mbits/s in both directions,
 - all four links transmitting 1024Byte packets in both directions at 75 Mbits/s

SpaceWire recording, display and analysis software included:
Operates under Windows.