



The SFI2501 sFPDP-USB Interface is a bench top instrument that extends the capabilities of an existing PC, allowing it to interact with an sFPDP data link.

The SFI2501 is designed to work out-of-the-box, with a standard PC running Microsoft Windows. It allows the software running on the PC to control and exchange data with an sFPDP data link, without the complexity of first installing and testing a firmware core.

Its compact size and rugged enclosure means that the SFI2501 is ideally suited to laboratory or field-testing.

Applications

The SFI2501 can be used in following example applications:

- Recording sFPDP data on a PC platform
- Control of systems over sFPDP link
- Stimulation of a radar-processing unit where the actual radar is not available to provide signals
- Automated testing of sFPDP based systems
- Testing radar and sonar algorithms by injecting pre-recorded or simulated data streams

Interfaces

The SFI2501 uses a USB3 port to connect to a user's PC or Laptop computer.

The sFPDP interface may be fibre-optic (LC) or wire (RJ45).

sFPDP-USB Interface SFI2501

Features

- ✓ 2.5Gb/s sFPDP line rate
 - Others available
- ✓ SFP modules
 - Fibre optic - LC
 - 850nm (multimode)
 - 1310nm (single mode)
 - 1550nm (single mode)
 - Copper - RJ45
- ✓ USB3.0
- ✓ Portable / rugged enclosure
- ✓ API Library

Applications

- ✓ Digital signal processing
- ✓ Radar
- ✓ Sonar
- ✓ High speed data acquisition
- ✓ High resolution video
- ✓ Simulation
- ✓ Stimulation
- ✓ Lab-based testing
- ✓ Field testing
- ✓ Automated testing

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Test and Verification
Equipment for
Imaging Sensors

10/11/2015

Functional specification

Data rate

- 2.5Gb/s line rate is supported as standard
- Other line rates up to 3.125Gb/s are available on request
- Sustained Tx data rate up to 140MBytes/s (from RAM on an i7 platform)
- Sustained Rx data rate up to 240MBytes/s (to RAM on an i7 platform)
Sustained data rates are platform dependant; Rates shown are for single direction use only and do not include processing

API libraries

- C#
- Other languages are available on request
- Allows the SFI2501 to be integrated into customers systems
- Shortens time from algorithm development to working with data over sFPDP
- MATLAB support is planned for future releases (please contact us for more information)
- Flexible methods to effectively manipulate the data stream, including:
 - TxAction(bool SyncWithoutData, bool SyncWithData, bool DIR, bool PIO1, bool PIO2, ...List<uint>)
 - SendTxBuffer
 - RecieveToBuffer
 - GetNextRxBlock
 - SetNrdy
 - GetNrdy
 - SetPioValue
 - GetPioValue
 - GetDataRates
 - SetCrcMode
 - SetFlowControlEnable
 - SetTimeCode
 - GetTimeCode

Physical specification

- Connectors: USB3.0 (for connection to host computer *(not included)*)
Power supply input
SFP (A) (sFPDP input/output)
SFP (B) (repeat of input on SFP (A))
- Indicators: Power (blue) Status (green/blue)
Link (yellow) Data (green/red)
- Supply voltage: 12V @ 1A
- Power consumption: <10W
- Operating temperature: 0°C ~ 40°C
- Operating humidity: 5% ~ 95% non-condensing
- Dimensions: 150mm *Length* x 105mm *Width* x 55mm *Height*
- Weight: 0.82Kg

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