

# 10G & 25G Ethernet 1G, 2G, & 4G Fibre Channel



**AVIONICS  
INTERFACE  
TECHNOLOGIES**  
A Teradyne Company

## PXIe-25G

### High Speed Optical Avionics Network Test Instrument for PXI Express

The PXIe-25G instrument is a PXI Express module that supports 10G Ethernet, 25G Ethernet, and Fibre Channel operations. The instrument provides (4) physical network interfaces and is user configurable to operate as a Fibre Channel, Ethernet, or a combined instrument. Additionally, synchronization to the PXIe Express backplane triggers and clock signals allows intermodule synchronization and synchronization to IRIG-B and IEEE-1588 master time.



#### Fibre Channel Operations

For network interfaces configured for Fibre Channel operations, the PXIe-25G operates as a multi-function, high performance intelligent Fibre Channel PXI Express module offering both data generation/simulation and monitor/analyzer functions. Uses can include simulation and test verification of nodes and/or switches communicating via the international communication protocol standards of Fibre Channel.

Supported upper layer protocols include ASM, RDMA, and ARINC 818/FC-AV.

#### Ethernet Operations

For network interfaces configured for Ethernet operations, the PXIe-25G provides Ethernet test and simulation features, for 10G and 25G Ethernet, including generation of periodic message data, precise scheduling and timing of generated Ethernet frames, and support for common upper layer protocols including IPv4/IPv6, Multicast Listener Discovering (MLD), Real-Time Publish Subscribe (RTPS), UDP, and TCP.

All Ethernet network data received by the instrument is time tagged. Advanced test features include the ability to insert precise time stamps into transmitted messages, and onboard generation of output data streams to provide high bandwidth output..

#### User Configurable

The PXIe-25G provides a flexible test platform which allows user applications to configure/re-configure the available (4) network interfaces to operate as either Ethernet (10G or 25G) or Fibre Channel.

#### Time Synchronization

The PXIe-25G operations (output scheduling and receive time tagging) can be synchronized to other instruments and to external time sources (such as IRIG-B and IEEE-1588) via the PXI Express backplane triggers and 100MHz reference clock.

#### PXIe-25G Ethernet & Fibre Channel Instrument

##### Key Features

- Supports 10G Ethernet (10GBASE-SR) & 25G Ethernet (25GBASE-SR)
- Supports 1Gbit/s, 2Gbit/s, & 4 Gbit/s Fibre Channel with user definable data rates (custom data rates also supported)
- Provides (4) Ethernet/Fibre Channel physical port interfaces
- Physical port interfaces are user configurable to operate as Ethernet or Fibre Channel
- Supports common Ethernet upper layer protocols including: IPv4/IPv6, UDP, TCP, Multicast Listener Discovery (MLD), and Real-Time Publish Subscribe (RTPS)
- Supports common Fibre Channel ULP's (ASM, RDMA, ARINC 818/FC-AV)
- 8GB RAM per Network Interface for buffering Tx/Rx Data
- PXI Express Instrument capable of synchronization to 100MHz Reference clock (Synchronize to IRIG-B and IEEE 1588 when used in AIT PXI Express Systems)
- Includes drivers for Windows, Linux, & LabVIEW Real Time
- Supported by high level C/C++ APIs
- Fibre Channel and Ethernet Analyzer & Simulator software applications also available

##### Ordering Information

###### PXIe-25GE-FC4-4

4 Port 10G/25G Ethernet & Fibre Channel Instrument for PXIe. Includes PXIe Timing & Sync.

###### PXIe-10GE-FC-4

4 Port 10G Ethernet & Fibre Channel Instrument for PXIe. Includes PXIe Timing & Sync.

###### PXIe-10GE-4

4 Port 10G Ethernet Instrument for PXIe. Includes PXIe Timing & Sync.

###### PXIe-25GE-4

4 Port 10G/25G Ethernet Instrument for PXIe. Includes PXIe Timing & Sync.

###### PXIe-FC4-4

4 Port Fibre Channel Instrument for PXIe. Includes PXIe Timing & Sync.