AVIONICS INTERFACE TECHNOLOGIES
A Teradyne Company

High Performance Ethernet Test Instruments
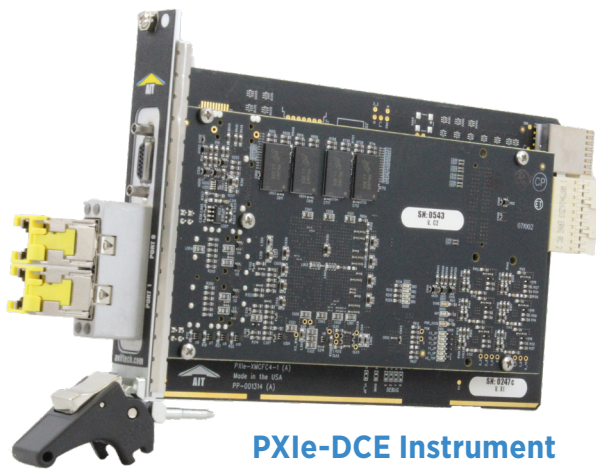
Aviftech.com/Ethernet

PXIe-DCE Instrument

OVERVIEW

The AIT family of Dual Channel Ethernet (DCE) instruments and supporting software applications provide extensive, high performance Ethernet Test & Simulation Capabilities. The DCE instruments are available in multiple form factors including PCI Express, PXI Express, and XMC Mezzanine modules. Each of the DCE instruments provides (2) Ethernet physical ports via Small Form Factor Pluggable (SFP) modules allowing the instruments to support both optical and copper Ethernet interface types. All of the instruments support from 10Mbit/s up to 1Gbit/s network speeds. Additionally, the AIT PXIe-10GE instrument is available for 10Gbit/s Ethernet applications.

The DCE Instruments are supported by a suite of software tools which includes:
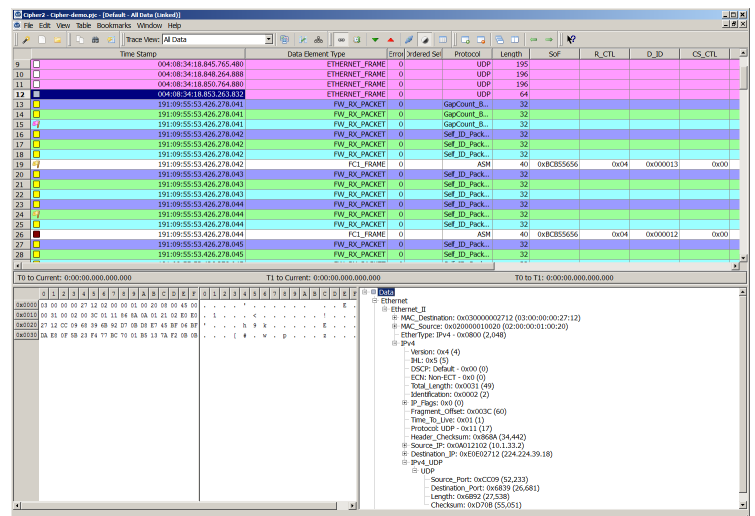
• **FrameBuilder**: Easy to use, application for building and editing Ethernet transmit frame schedules for use with the DCE instruments

• **Flight Simulyzer:** Software application used to control the transmission of Ethernet simulation data created with the FrameBuilder application. Additionally, provides control of the DCE instruments Ethernet Data Capture capabilities.

• **Cipher:** Network traffic analyzer. Provides advanced search and filter functions, protocol decode and analysis, and network traffic compare functions supporting advanced Ethernet traffic analysis.

KEY FEATURES

• 2 Port Instruments available for PXI Express, PCI Express, and XMC Mezzanine

• Supports IEEE 802.3 10/100/1000 Mbit/s Full-Duplex Ethernet. 10G Ethernet Instruments also available.

• Instruments utilize SFPs to provide support for both copper and optical interface types

• Supports simultaneous full rate transmit and data capture on all network interfaces simultaneously

• Provide precise timing & synchronization of transmitted network data. Also supports replay of captured data.

• Network data capture with synchronized, precise (8nS resolution) timestamping of all frames.

• IRIG-B Time synchronization

• Supports Error injection at all protocol levels including transmit of short IFG, short (runt) frames, and invalid Ethernet FCS

• Software tools compatible with industry standard (PCAPNG) file formats

Cipher Analyzer Application

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PXIe-DCE

Dual Port, 3U PXI Express, Ethernet 10/100/1000 Mbit/s Test Instrument for use in PXI Express Test Systems. Supports time synchronization to IRIG-B or PXI 10MHz Clock.
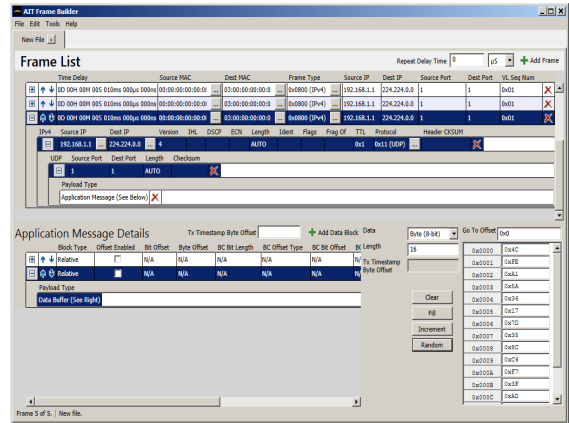

PCIe-DCE

Dual Port, PCI Express (x4 lane), Ethernet 10/100/1000 Mibt/s Test Instrument for use in PC Workstations. Supports time synchronization to IRIG-B.
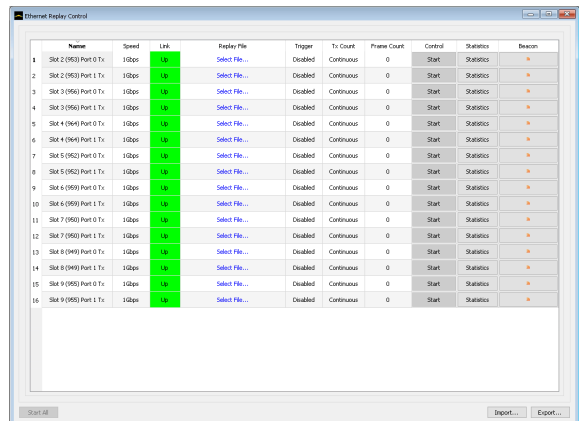

XMC-DCE

Dual Port Ethernet 10/100/1000Mbit/s, XMC Mezzanine with x4 lane PCI Express host interface. Supports time synchronization to IRIG-B. For use on Single Board Computers or with host system adapters (XMC carriers).

Cipher

Windows Application, provides advanced network protocol analysis features and functions. Compatible with DCE capture file formats and industry formatted data (PCAPNG)

PXIe-10GE

Dual Port, PCI Express, 10Gbit/s Ethernet Test Instrument for use in PXI Express Test Systems. Supports time synchronization to PXI 10MHz Clock.

FrameBuilder

Windows Application, provides utilities to build and edit Ethernet transmit data schedules. Allows import from capture files and standard file formats (PCAPNG).
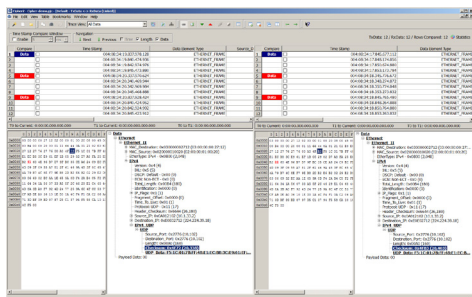

Flight Simulyzer DCE

Windows Application, provides control of DCE Instrument's data simulation, data replay, and data capture functions. Controls and synchronizes multiple DCE devices.

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