PO5/PO5e/PO5c/FO5
Optibit Interface

Hardware Reference



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Tucker-Davis Technologies
11930 Research Circle
Alachua, FL 32615 USA
Phone: +1.386.462.9622
Fax: +1.386.462.5365

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PO5/PO5e/PO5c/FO5 Optibit Interface



PO5 Interface Card



PO5e Interface Card



PO5c Interface Card

Optibit Overview

The Optibit system (Optical Gigabit) is designed for users that require high-speed real-time control of System 3 devices or precise system-wide device synchronization. The Optibit interface consists of a PCI card (PO5), PCIe card (PO5e), or PCI Cluster card (PO5c) that must be installed in the computer and one or more Optibit-to-zBus interface modules (FO5) that mount in the rear slot of a zBus device chassis or are built into RZ Processors. When using the Optibit interface, all devices are automatically phase locked to a single clock.

Part Numbers:

PO5 - Optical PCI Card for Optibit Interface

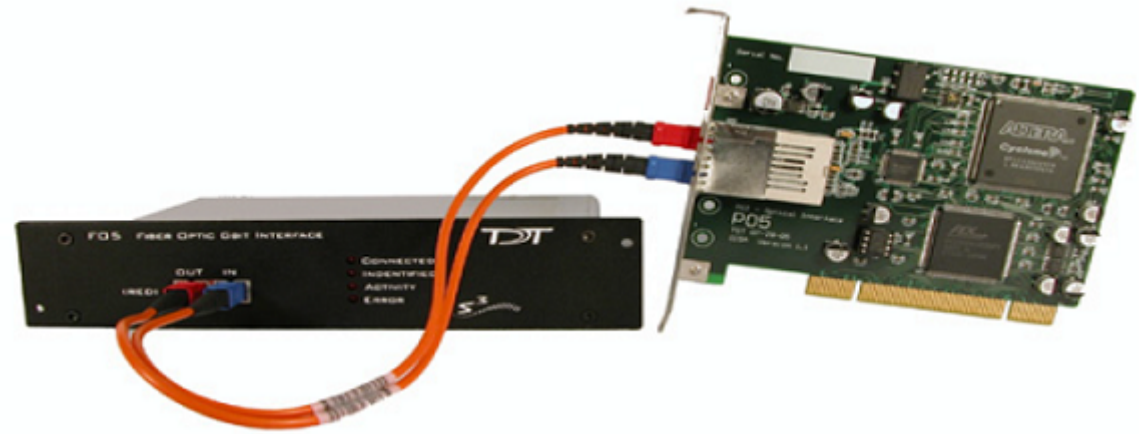
PO5e - Optical PCI Express Card for Optibit Interface

PO5c - Direct PCI Interface for Cluster Computing

FO5 - Optibit to zBus Interface

Fiber Optic Connection

Devices are connected in a simple loop using provided high speed noise immune fiber optic cabling. See the System 3 Install Guide for installation instructions. For setting up the PO5c card in Synapse, see Cluster Processing with Synapse.



FO5 Status LEDs

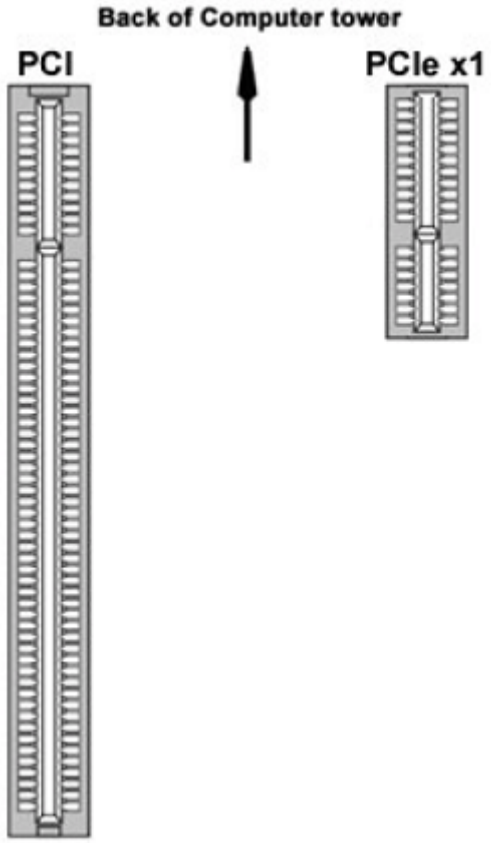
Four status LEDs on the face of the FO5 indicate the connection status of the interface.

Connected	The Connected LED is lit when the interface is powered on and the fiber optic cable labeled IN is connected properly. Although the Connected LED will light if only the IN cable is connected, both cables have to be connected properly for communication to take place.
Identified	The Identified LED lights when a software signal sent from the PC is recognized by the interface. This takes place when launching TDT software such as zBUSMon or running a Synapse experiment.
Activity	The Activity LED is lit when data is being sent to or from the TDT hardware.
Error	The Error LED lights when there is a connection or communication error. For example, this LED will light if the fiber optic cables are not connected properly.

PO5/PO5e/PO5c Technical Specifications

Interface transfer rates vary by transfer type and device. See Interface Transfer Rates for more information.

Below is a diagram of the compatible PCI and PCIe slots used with the PO5 and PO5e/PO5c Optibit Interface cards.



PO5

The PO5 zBus to PC interface card must be installed in a standard size, compliant 3.3 V slot.

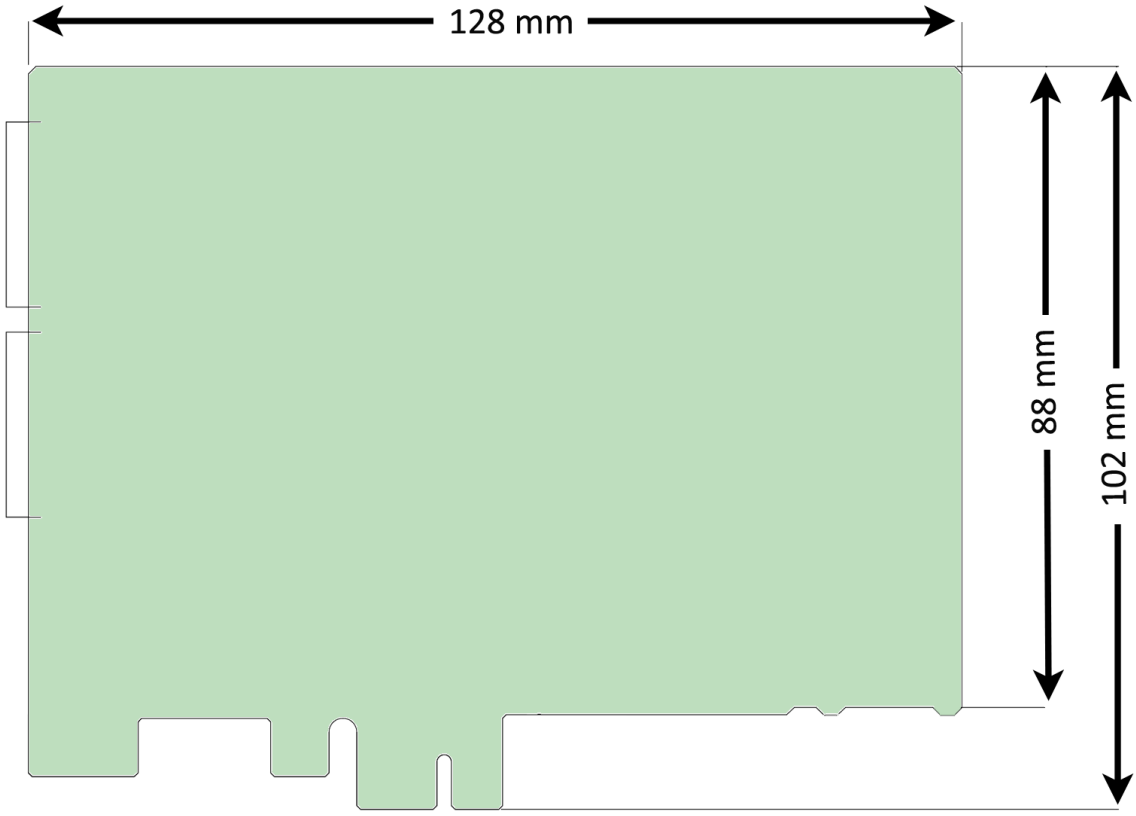
PO5e / PO5c

The PO5e and PO5c must be installed in a PCI Express slot. The PO5e card uses a single lane (x1) but may be used in any PCIe slot size (x1, x2, x4, x8 or x16).

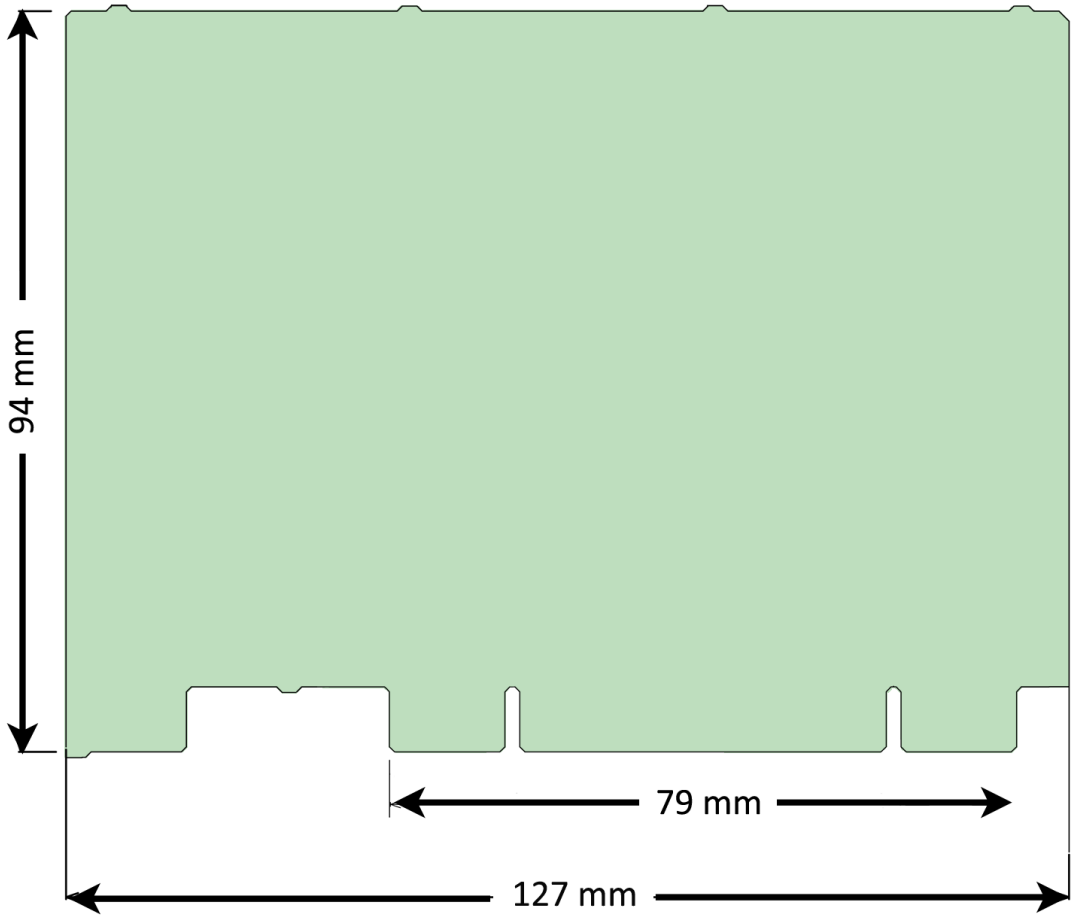
> **Important**
>
> Do not attempt to install in low-profile PCI slots. While low profile and standard PCI cards maintain the same electricals, protocols, PC signals, and software drivers as standard PCI expansion cards, the low profile bracket is not compatible with standard card size.

Fiber Optics

Standard cable length is 5 meters. Longer cables (up to 30 meters) are available on request.



PO5e and PO5c dimensions



PO5 dimensions