

TXP5004 - July 9, 2019

Item # TXP5004 was discontinued on July 9, 2019. For informational purposes, this is a copy of the website content at that time and is valid only for the stated product.

TXP SERIES SYSTEM CHASSIS

- ▶ Flexible Photonic Test & Measurement Platform
- ▶ Rack, Benchtop, and Single Module Versions
- ▶ TCP/IP Support via Ethernet or USB

Easy Setup User Interfaces



[Hide Overview](#)

OVERVIEW

3 Versions To Choose From:

- **Single Module Adapter:** The TXP5001AD for open operation without a chassis but directly linked to a computer via USB.
- **4 Slot Chassis:** The TXP5004 for a compact modularized benchtop test and measurement unit.
- **16 Slot Chassis:** The TXP5016 for industrial applications and integration into larger systems such as burn-in systems.

TXP5000 Features

- 3 Compatible Versions For 1, 4, and 16 Modules
- For R&D Lab And Industrial Applications
- Broad Family Of Powerful Optical T&M Modules
- Remotely Controllable Via TCP/IP
- Hot Pluggable Modules
- Localized Power Management On Each Module
- Easy To Setup
- Card Pooling For Complex Tasks
- Enhanced Macro Function Capabilities

Available Modules for the TXP5000 Platform

- Combination Laser Diode & TEC Temperature Controller: ITC5000
- WDM DFB Laser Sources: LS5000

Introduction

The **TXP5000 Series** is a powerful photonic test & measurement platform that bridges the gap between the research community and the industrial test and measurement market. The 4 slot, USB controlled **TXP5004** provides the basis for a modularized benchtop test and measurement unit while the 16 slot Ethernet controlled **TXP5016** provides scalable testing for the industrial community. The **TXP5001AD Adapter** allows the operation of one TXP module directly linked to a computer via the USB interface. The plug and play modules include integrated laser drivers and TEC controllers, DWDM DFB laser sources, and a tunable laser. All modules are interchangeable and can be integrated with LabVIEW™ and LabWindows™/CVI control. The TXP platform is operated and configured by a PC.

Modular Design

The **TXP5000 Series** is a scalable cost effective test and measurement platform. The intelligent card concept provides great flexibility for the combination of pluggable modules to meet the desired functionality. One aspect is the concept of **Advanced Card Pooling** that allows to group different modules into card pools controlled via high level command parameter for complex and application specific setups. For more info about the architecture, please see Architecture Tab.

Operation

Due to the “hot plug feature” any module can be replaced without interrupting other running processes of the same mainframe. All TXP5000 modules provide standard user interfaces that allow the operation of each module by the connected PC, like using a benchtop device, with easy automation and remote control facilities. All TXP5000 chassis offer TCP/IP support that eases remote control over a network.

Single Module Adapter TXP5001AD

The **TXP5001AD** is a low cost adapter for any module designed for the TXP5000 system. It provides a USB interface and allows a single module to be operated without any additional equipment except a PC. The adapter provides connection to the user PC via the included USB cable and comes with the TXP5000 software installation package, including LabVIEW™ and LabWindows/CVI™ drivers, similar to the TXP5004 chassis. The adapter offers the easiest and most cost effective way to start using the modules of the **TXP5000 Series**. A 48V power supply is included, which operates from 100 to 240 VAC, 50 to 60 Hz.

Interlock

The TXP chassis provide global interlocks to secure set-ups involving the TXP against external events, like opening of lab-doors, pushing of emergency switches, etc. The reaction of the TXP depends on the type of card inserted. Besides the global interlock, some TXP cards have an individual interlock line.

[Hide Specs](#)

S P E C S

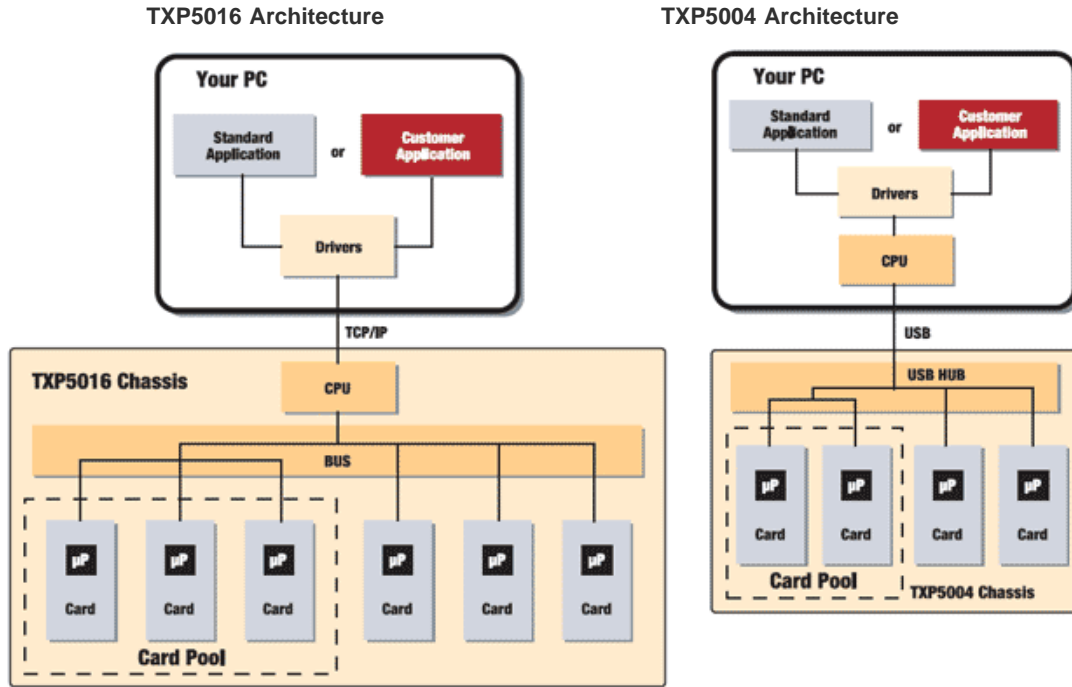
| Item # | TXP5016 | TXP5004 | TXP5001AD |
|--|---|----------------------|--------------|
| Number of Slots | 16 | 4 | 1 |
| Max. Allowed Power Consumption per Slot | 40 W | 25 W | 36 W |
| Max. Allowed Total Power Consumption for all Slots | 320 W | 100 W | 36 W |
| Remote Control Port | Ethernet, 10BaseT | USB 2.0 (Full Speed) | |
| System Requirements | Windows 2000, XP | | |
| Operation | Graphical User Interface on PC | | |
| Network Remote Control (TCP/IP) | Direct Connection to Network (internal server) | via connected PC | |
| Drivers | Driver DLL with support for NI LabView™, NI LabWindows/CVI™, MS Visual C++™, Borland C++™ | | |
| Service Control | RS-232C | - | - |
| Internal Circuit Power Supply via USB | - | - | +5V / 100 mA |
| Mains Voltage | 100V ... 240V ± 10% | | |
| Mains Frequency | 50 ... 60 Hz ± 5% | | |
| Maximum Power Consumption | 400 VA | 150 VA | 75 VA |
| Operating Temperature | 0 °C to +40 °C | | |
| Storage Temperature | -40 °C to +70 °C | | |
| Relative Humidity | Max. 90% up to 31 °C, decreasing to 50% at 40 °C | | |
| Pollution Degree (indoor use only) | 2 | | |
| Operation Altitude | < 2000 m | | |

| | | | |
|------------------------|--------------------|--------------------|-------------------|
| Warm-Up Time (typ.) | 10 min | | |
| Safety Measures | Global interlock | - | - |
| Dimensions (W x H x D) | 449 x 133 x 435 mm | 168 x 148 x 315 mm | 124 x 23 x 112 mm |
| Chassis | 19", 3 U | 1/3 19", 3 U | No Chassis |
| Weight (empty) | 7 kg | 3 kg | 0.2 kg |
| Weight (maximum) | 17 kg | 5.5 kg | - |

(All technical data are valid at 23 ± 5 °C and 45 ± 15% rel. humidity)

[Hide Architecture](#)

ARCHITECTURE



Advanced Card Pooling

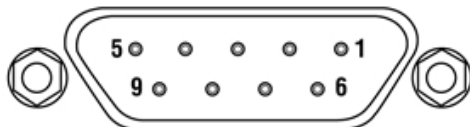
Different modules can be grouped into card pools and controlled via high level command parameters. This allows one to build complex and application specific setups with simplified operation and reduced data transmission at the same time. Using specialized software modules, new "devices" can be made from the same set of TX5000 modules.

[Hide Pin Diagrams](#)

PIN DIAGRAMS

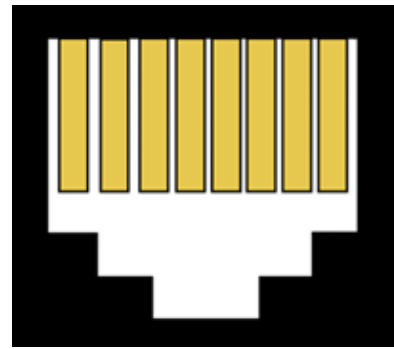
TXP5016 Connectors

Interlock Connection
D-type Female

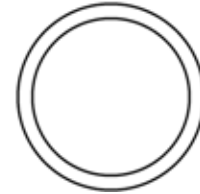


Computer Connection
RJ-45 Ethernet

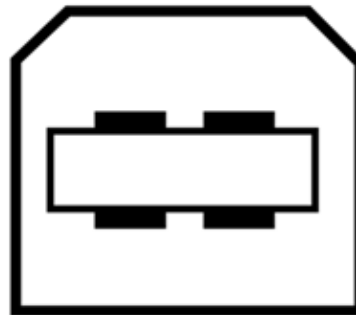
| Pin | Name | Function |
|-----|---------|---------------------------------------|
| 1 | REL_ON | Connected to 2 if Interlock is Closed |
| 2 | REL_SEL | Control Relay-Switch |
| 3 | AUX_IN+ | Auxilliary Input + |
| 4 | ALARM- | Interlock Optcoupler - Input |
| 5 | CC_OUT | Constant Current Output (1.25 mA) |
| 6 | REL_OFF | Connected to 2 if Interlock is Open |
| 7 | AUX_IN- | Auxilliary Input - |
| 8 | CHASSIS | Chassis Ground |
| 9 | ALARM+ | Interlock Optcoupler + Input |



**Chassis Ground
4mm Banana Plug**



**TXP5004 and TXP5001AD
Computer Connection - USB Type B**



[Hide Software](#)

SOFTWARE

Software for the TXP5000 Platform

TXP Software

Version 3.1.5

Standard full TXP software packages:
Applications, Drivers, and Firmware.



[Hide Applications](#)

APPLICATIONS

The TXP5000 platform is designed to build customized and automated solutions for complex test & measurement applications. The special system architecture and the **Card Pooling** feature allow a setup of different modules to behave like a single system performing complex tasks.

Example:

- **Laser Diode Burn-In Systems:** System to burn-in and test many laser diodes simultaneously

[Hide Shipping List](#)

SHIPPING LIST

| TXP5016 | TXP5004 | TXP5001AD | Part |
|---------|---------|-----------|--|
| x | | | TXP 16 Slot Chassis with Ethernet Control (TXP5016) |
| | x | | TXP 4 Slot Chassis with USB Control (TXP5004) |
| | | x | TXP Single Card Interface with USB Control (TXP5001AD) |
| x | x | | Front Cover Plates for all unused Slots (TXP5000C) |
| x | | | Ethernet Cable (TXPCABETH) |
| x | | | CrossLink Cable (TXPCABCRO) |
| x | | | RS-232C Serial Nullmodem Service Cable (TXPCABSER) |
| | x | x | USB Cable (TXPCABUSB) |
| x | | | Interlock Bypass Connector (TXP5016-IBC) |
| x | x | x | Software CD ROM |
| x | x | x | LabVIEW™ and LabWINDOWS/CVI™ Driver Set |
| x | x | x | Operating Manual |
| x | x | x | Power Cord |
| | | x | Desk Top Power Supply |

[Hide TXP Series System Chassis](#)

TXP Series System Chassis

- ▶ **TXP5001AD:** Single module adapter for open operation without a chassis but directly linked to a computer via USB.
- ▶ **TXP5004:** 4 slot chassis for a compact modularized benchtop test and measurement unit.
- ▶ **TXP5016:** 16 slot chassis for industrial applications and integration into larger systems such as burn-in systems.

| Part Number | Description | Price | Availability |
|-------------|--|------------|--------------|
| TXP5001AD | TXP Single Card Interface with USB Control | \$298.37 | Lead Time |
| TXP5004 | TXP 4 Slot Chassis with USB Control | \$1,335.31 | Lead Time |
| TXP5016 | TXP 16 Slot Chassis with Ethernet Control | \$3,835.74 | Lead Time |

[Hide TXP Accessories](#)

TXP Accessories

- ▶ **TXP5000-PILE:** Stack multiple TXP5016 or TXP5004 Chassis by means of these four feet which can be easily mounted or removed.
- ▶ **TXP5000C:** Single slot cover plate for unused slots in TXP Chassis. To maintain proper air flow inside a TXP Chassis, all unused slots must be closed by a TXP5000C Cover.
- ▶ **TXP5000-R32:** 19" Rack Mounting Kit for TXP5016 Chassis.

| Part Number | Description | Price | Availability |
|--------------|------------------------------------|---------|--------------|
| TXP5000-PILE | Stacking Kit for TXP Chassis | \$49.38 | Lead Time |
| TXP5000-R32 | Rack Mounting Kit, 19" for TXP5016 | \$77.22 | Lead Time |
| TXP5000C | Front Cover Plate for TXP chassis | \$52.53 | Lead Time |

[Hide TXP Replacement Items](#)

TXP Replacement Items

- ▶ **TXP5016-IBC:** Interlock Bypass Connector: Global Interlock Connector for the TXP5016 Chassis.
- ▶ **TXPCABCRO:** Crosslink Cable with two RJ-45 Connectors, length 2 m. It allows a direct connection of the TXP5016 to a PC without local network.
- ▶ **TXPCABETH:** Connection Cable between the TXP5016 and a local Ethernet hub, length 2 m.
- ▶ **TXPCABSER:** RS232 Crossover Cable (nullmodem). It is used for the basic configuration of a TXP5016 and for firmware updates.
- ▶ **TXPCABUSB:** USB connection cable between TXP5004 or TXP5001AD and a PC, length 2 m.

| Part Number | Description | Price | Availability |
|-------------|--|---------|--------------|
| TXP5016-IBC | TXP5016 Interlock Bypass Connector | \$25.21 | Lead Time |
| TXPCABCRO | TXP5016 CrossLink Cable, 2m | \$25.74 | Lead Time |
| TXPCABETH | TXP5016 Ethernet Cable, 2m | \$25.74 | Lead Time |
| TXPCABSER | TXP5016 Serial Service Cable for SW Upgrades | \$33.36 | Lead Time |
| TXPCABUSB | TXP5004 USB Cable, 2m | \$33.36 | Lead Time |