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THORLABS

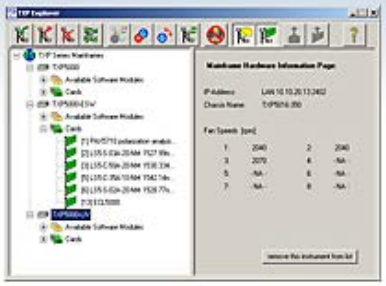
TXP5000-PILE - July 9, 2019

Item # TXP5000-PILE 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



TXP5004
4 Slot Chassis

TXP5016 16 Slot Chassis

TXP5001AD
Single Module
Adapter

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 plugable 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 modulesof 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

SPECS

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		

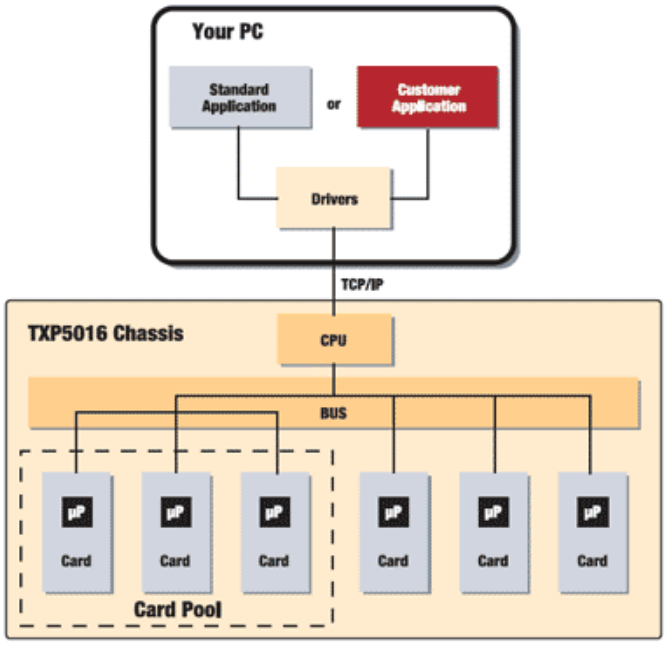
Warm-Up Time (typ.)	10 min		
Safety Measures	Global interlock	-	-
Dimensions (W x H x D)	449 x 133 x 435 mm	168 x 148 x 315 mm	124 x 23 x 112 mm
Chassis	19”, 3 U	1/3 19", 3 U	No Chassis
Weight (empty)	7 kg	3 kg	0.2 kg
Weight (maximum)	17 kg	5.5 kg	-

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

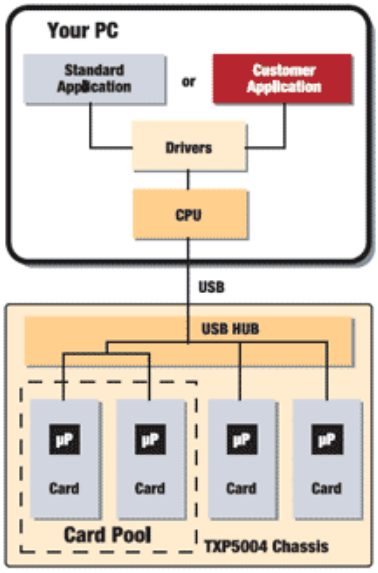
Hide Architecture

ARCHITECTURE

TXP5016 Architecture



TXP5004 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.

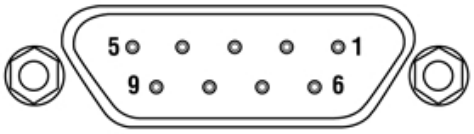
Hide Pin Diagrams

PIN DIAGRAMS

TXP5016 Connectors

Interlock Connection

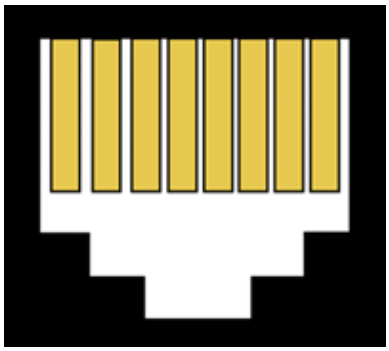
D-type Female



Computer Connection

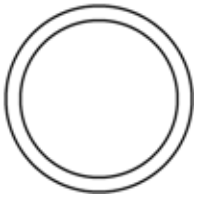
RJ-45 Ethernet

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



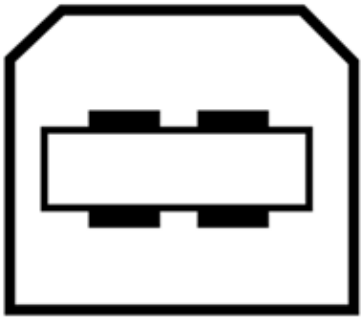
Chassis Ground

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.

Software

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