PXIS-2719

19-Slot Smart PXI Chassis
with 700 W AC Power Suppl

User's Manual

Manual Rev. 2.00

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Using this manual

Audience and scope

This manual guides you when using the portable ADLINK PXI chassis. This manual is intended for system integrators, computer programmers, and hardware engineers with advanced knowledge of PXI/cPCI systems and PXI-based data acquisition.

How this manual is organized

This manual is organized as follows:

Chapter 1 Introduction: This chapter introduces the PXIS-2719 chassis including its features, specifications, and package contents.

Chapter 2 Chassis Overview: This chapter presents the chassis layout, location of basic components, dimensions, and backplane information.

Chapter 3 Installation: This part describes the procedures on how to install a system controller and peripheral modules into the PXIS-2719. It also contains information on OS and driver installations and touch panel usage.

Chapter 4 Remote Management: The chapter illustrates the remote management features of the PXIS-2719.

Appendix A: The Appendix comes with a troubleshooting section for common installation problems and tells you how to maintain the PXIS-2719 chassis.

Important Safety Instructions: This section lists important safety reminders that you have to observe when using the chassis.

Warranty Policy: This presents the ADLINK Warranty Policy terms and coverages.

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Conventions

Take note of the following conventions used throughout the manual to make sure that you perform certain tasks and instructions properly.

NOTE	Additional information, aids, and tips that help you perform particular tasks.
IMPORTANT	Critical information and instructions that you MUST perform to complete a task.
WARNING	Information that prevents physical injury, data loss, module damage, program corruption etc. when trying to complete a particular task.

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Table of Contents

Table of Contents i

List of Tables iii

List of Figures iv

1 Introduction 1
- 1.1 Features 3
- 1.2 Specifications 4
- 1.3 Unpacking Checklist 7

2 Chassis Overview 9
- 2.1 Chassis Description 9
  - PXIS-2719 Front View 9
  - PXIS-2719 Back View 10
  - PXIS-2719 Left View 11
  - PXIS-2719 Right View 11
  - PXIS-2719 Top View 12
  - PXIS-2719 Bottom View 13
- 2.2 Chassis Dimensions 14
  - PXIS-2719 Dimension (Front) 14
  - PXIS-2719 Dimensions (Side) 14
  - PXIS-2719 Dimension (Bottom) 15
- 2.3 Backplane overview 16
  - Interoperability with CompactPCI 16
  - System Controller Slot 16
  - Star Trigger Slot 16
  - Peripheral Slots 17
  - Local Bus 17
  - Trigger Bus 18
  - System Reference Clock 18

3 Installation 19
- 3.1 Cooling Consideration 19
- 3.2 Rack Mounting 20
- 3.3 Hardware Installation 23
  - Selecting 10 Mhz Reference Clock Source 23
  - Installing the System Controller 24

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Installing Peripheral Modules 27
Powering Up the System 29
3.4 Software Installation..... 31
OS Installation 31
Install the Chassis Description File (chassis.ini) 31

4 Remote Management..... 33
4.1 Installing the Monitor Utility..... 34
4.2 Monitoring the PXIS-2719..... 35
Using the Monitor Utility 35
Using the Monitoring/Control Function Library 39

A Troubleshooting and Maintenance 49
A.1 Installation Problems..... 49
A.2 Basic Troubleshooting 50
A.3 Maintenance 52
Changing the Fan Filter 52
Handling the Chassis 55
Cleaning the Exterior 55
Power Requirements 55

Important Safety Instructions..... 57

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List of Tables

Table 1-1: DC Output 4
Table 3-1: 10 MHz Reference Clock Settings 23

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List of Figures

Figure 2-1: PXI Bus Signal Routing 17

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1 Introduction

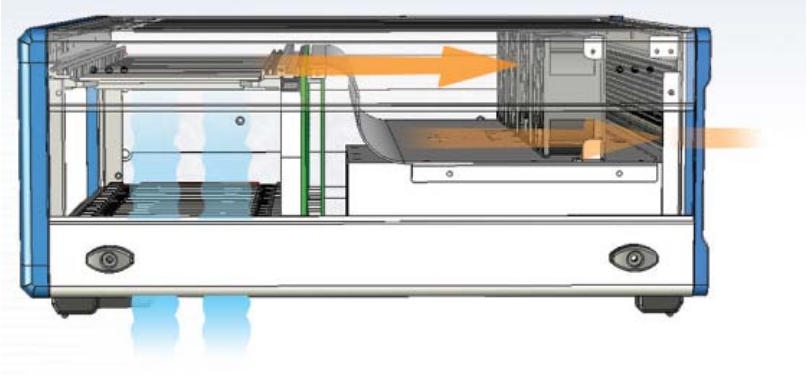


The ADLINK PXIS-2719 is a 3U PXI chassis with abundant advanced features. The PXIS-2719 is compliant with PXI and CompactPCI specifications and provides one system slot and eighteen peripheral slots. It is designed to meet or exceed the requirements of large capacity, wide operating temperature range, uniformity of heat dissipation and exceptional chassis weight and robustness.

The PXIS-2719 also offers an intelligent chassis control feature to manage the chassis status. Fan speed is automatically controlled according to inner temperature of chassis. DC voltages, fan speed, and inner temperature are monitored by the intelligent control board and can be exported to a remote computer via a standard RS-232 port.

ADLINK PXIS-2719 features an innovative cooling mechanism to provide superior heat dissipation capability. Four 68CFM fans are placed in the rear section of the chassis. Cool air is pulled in from the apertures on the bottom, flowed through PXI modules, and is exhausted to the rear side. With this new cooling mechanism, not only exceptional efficiency of heat dissipation, but also great uniformity for each PXI slot is delivered by the PXIS-2719 chassis.

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The PXIS-2719 comes with an Industrial-grade 700 W AC power supply to provide reliable power to the system, as well as a BNC connector for an external 10 MHz reference clock input, front panel LEDs, and easy-access PXI/CompactPCI slots with card guides for convenient installation and use. It is designed to accommodate a 3-slot PXI controller. ADLINK PXI-3950/3920/3910 PXI controllers are highly recommended. With innovative features and robust design, the PXIS-2719 is your best choices of PXI platform for all your test and measurement requirements.

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1.1 Features

- PXI Specification Rev. 2.2-compliant
- Rack-mount 19-slot PXI chassis, equipped with one system slot and 18 PXI/CompactPCI peripheral slots
- Advanced forced-cooling mechanism for efficient and uniform heat dissipation
- External 10 MHz reference clock input with BNC connector
- 0°C to 55°C extended operating temperature range
- Intelligent chassis monitoring/control
  - Automatic fan speed control
  - Chassis status monitoring and exporting
  - Remote chassis power on/off control
- 700 W industrial-grade AC power supply
- Power, temperature and fan monitoring LEDs

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1.2 Specifications

PXIS-2719 complies with the PXI Specification Rev. 2.2 and accepts modules compliant with the CompactPCI and PICMG 2.0 specification

Power Supply

AC Input

Input voltage range	90 to 264 VAC full range
Input voltage frequency	47 to 63 Hz
Input current rating	12 A for 115 VAC
	6 A for 230 VAC

DC Output

Total DC power output	700W

VDC	Minimum	Maximum	Load Regulation	Line Regulation	Maximum Ripple & Noise
+5V	2.5 A	50.0 A	±4%	±1%	60 mV
+12V	1.0A	32.0 A	±5%	±1%	100 mV
+3.3V	1.0A	45.0 A	±5%	±1%	60 mV
-12V*	0 A	4.5 A	±5%	±1%	100 mV

Table 1-1: DC Output

* -12V is provided by an internal +12VDC to -12VDC converting board

Cooling

Fans	4 sets of 68 CFM fans
Per-slot cooling capacity	25 W (verified by 55°C chamber test)

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Acoustic Emissions

Sound Pressure Level1 (dBA) (measured at operator position)

Minimum fan speed	49.7 dB
Maximum fan speed	57.7 dB

Tested in Accordance with ISO 7779:1999/Amd.1:2003(E)

Sound Power (dBA)

Minimum fan speed	59.8 dB
Maximum fan speed	69.1 dB

Tested in Accordance with ISO 7779:1999/Amd.1:2003(E)

Physical

Number of PXI slots	19 (1 system slot + 18 peripheral slots)
Dimensions	444 mm (W) x 178 mm (H) x 455 mm (D)
Weight	13.4 kg (29.5 lbs)

Operating Environment

Ambient temperature	0 to 55°C
Relative humidity	10 to 90%, noncondensing

Storage Environment

Ambient temperature	-20 to 70°C
Relative humidity	10 to 90%, noncondensing

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Shock and Vibration

Functional shock	30 G, half-sine, 11 ms pulse duration

Random Vibration

Operating	5 to 500 Hz, 0.31 Grms, 3 axes
Nonoperating	5 to 500 Hz, 2.46 Grms, 3 axes

Certification

Safety	IEC 61010-1/EN 61010-1
Electromagnetic Compatibility	
Emissions	EN 55011 Class A
Immunity	EN 61326-1

CE Compliance

PXIS-719 meets the essential requirements of applicable European Directives, as amended for CE Marking, as follows:

Low-Voltage Directive (safety)	73/23/EEC
Electromagnetic Compatibility Directive (EMC)	9/336/EEC

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1.3 Unpacking Checklist

Before unpacking, check the shipping carton for any damage. If the shipping carton and/or contents are damaged, inform your dealer immediately. Retain the shipping carton and packing materials for inspection. Obtain authorization from your dealer before returning any product to ADLINK.

Check if the following items are included in the package.

- PXIS-2719 Chassis, 3U 19-Slot Smart PXI Chassis with 700W AC Power Supply
- Power cords (110 V and 220 V)
- Filler panel kit for unused/reserved slots including one 3-slot panel and eighteen 1-slot panels
- Two spare fan filters for replacement
- ADLINK All-in-One CD
- User's Manual

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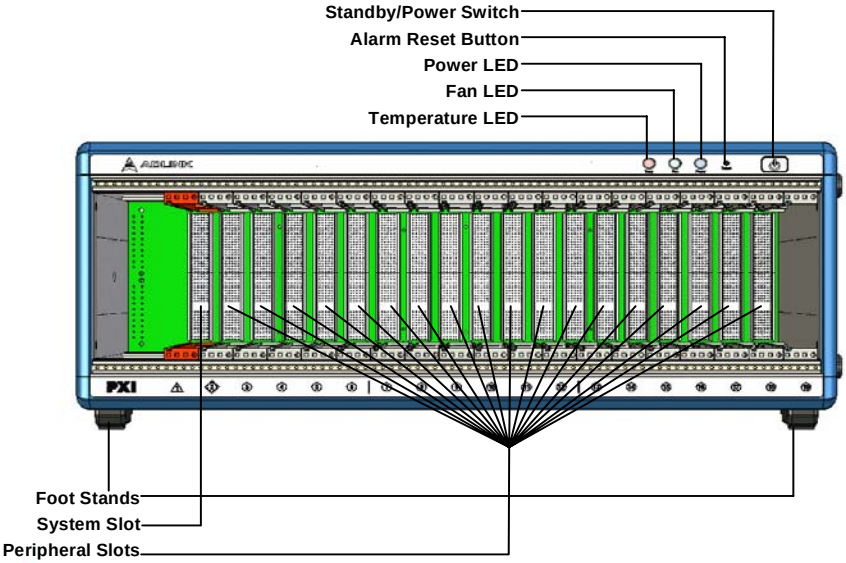
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2 Chassis Overview

This chapter illustrates each functional part of the PXIS-2719 and its dimensions. The PXI backplane in the PXIS-2719 is also described.

2.1 Chassis Description

2.1.1 PXIS-2719 Front View



LED Indicators

LED	Status		
	On	Off	Blinking
Power (Blue)	DC voltages are supplied normally.	No DC power is supplied.	5 V or 3.3 V exceeds ±7% range 12 V or -12 V exceeds ±12% range

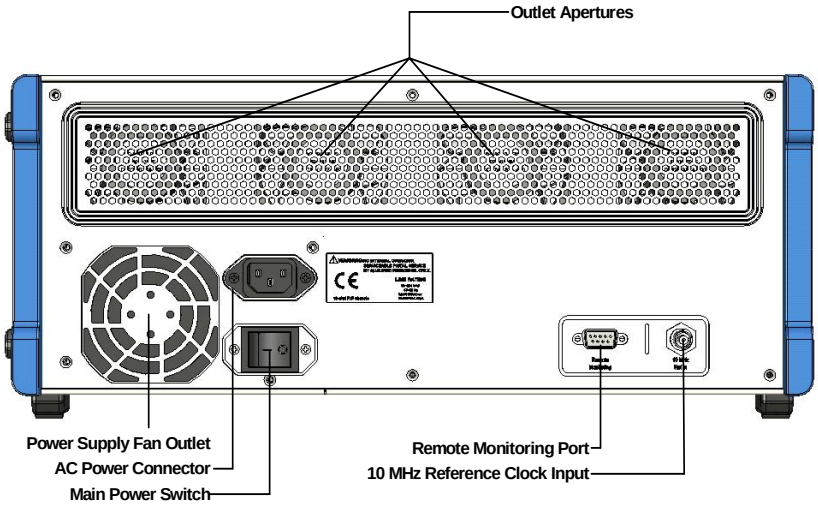
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Fan (Green)	Fans are operating normally.	The system is off.	Any of the fans is operating in a speed lower than 500 RPM
Temp (Amber)	Chassis temperature is normal	The system is off.	Chassis temperature exceeds 50°C

Alarm Reset Button

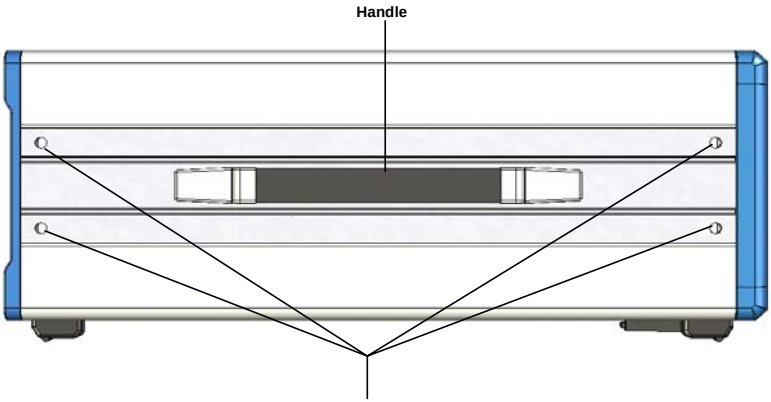
The alarm reset button enables you to stop the chassis alarm buzzer during an error or critical system event. To stop the alarm, press the alarm reset button.

2.1.2 PXIS-2719 Back View

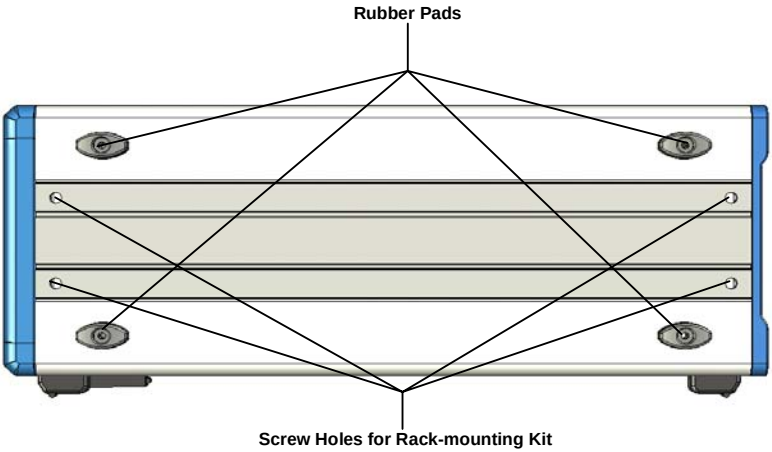


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2.1.3 PXIS-2719 Left View

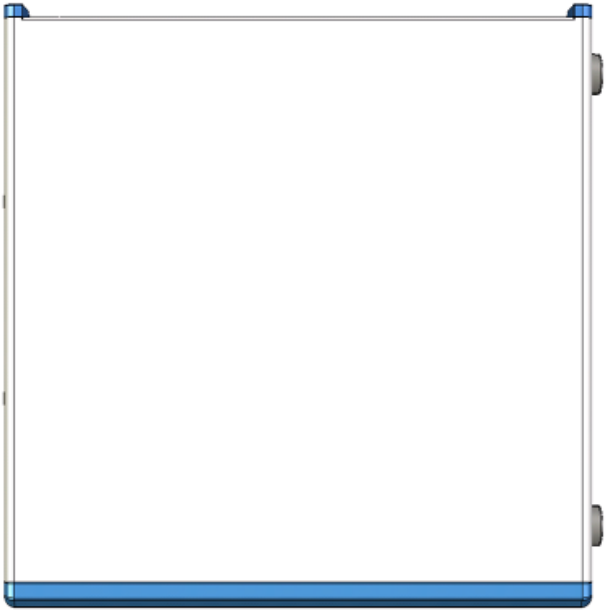


2.1.4 PXIS-2719 Right View



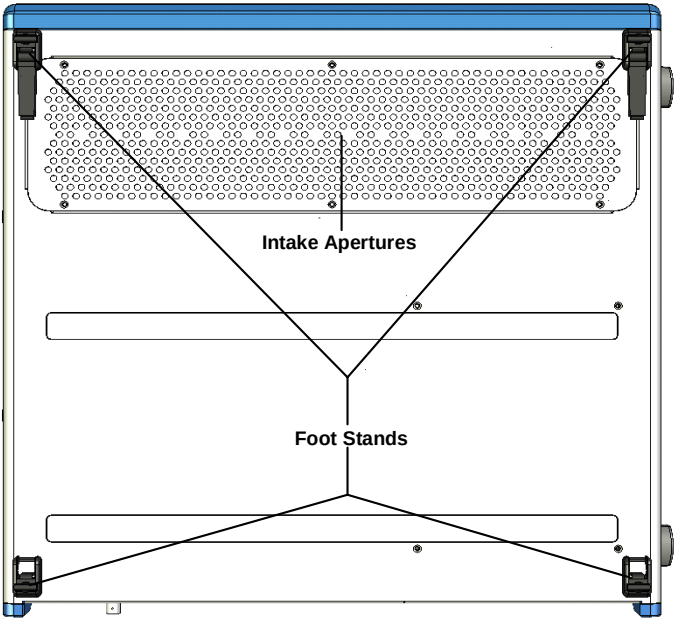
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2.1.5 PXIS-2719 Top View



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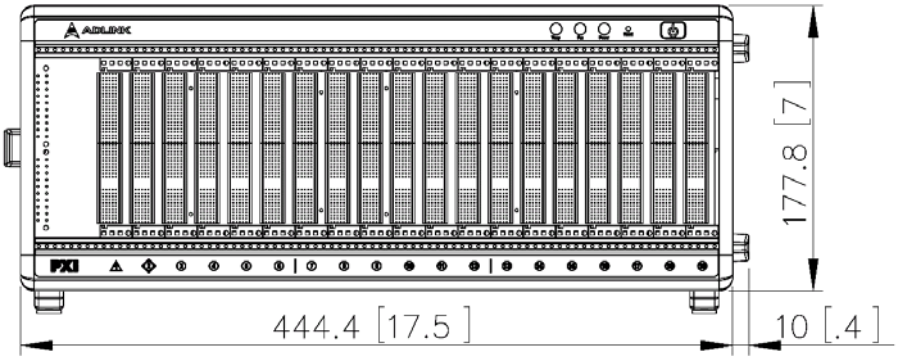
2.1.6 PXIS-2719 Bottom View



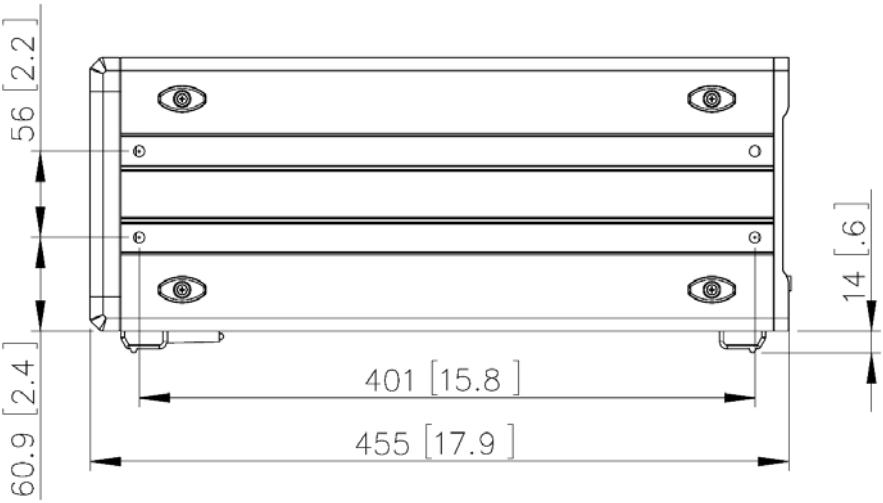
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2.2 Chassis Dimensions

2.2.1 PXIS-2719 Dimension (Front)

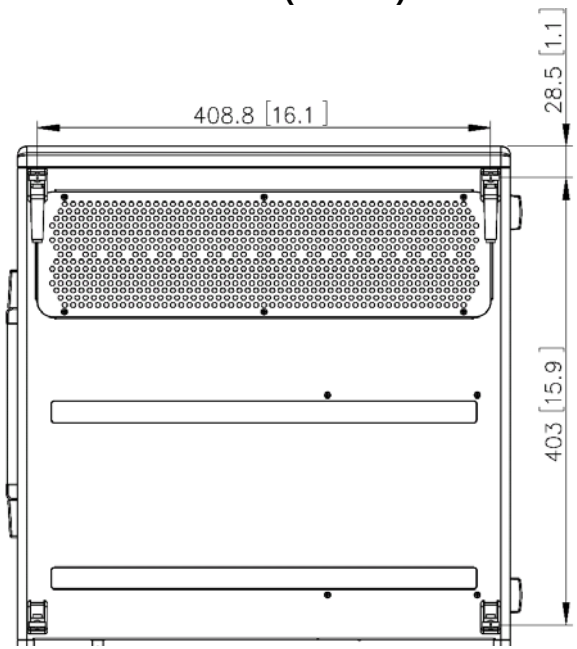


2.2.2 PXIS-2719 Dimensions (Side)



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2.2.3 PXIS-2719 Dimension (Bottom)



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2.3 Backplane overview

2.3.1 Interoperability with CompactPCI

PXIS-2719 is designed to be used with both PXI-compatible products and standard CompactPCI products. Its backplanes is compliant with PXI Specification Rev. 2.2.

The signals on the P1 connector of the backplane meet the requirements of the CompactPCI specification for both the peripheral and system modules.

The PXI-specific signals are located on P2. Only the signals that are reserved or not used in the CompactPCI 64-bit specification are found on PXI-specific signals. Therefore, peripheral modules that meet the requirements of the CompactPCI 64-bit specification will function in the PXIS-2719.

Note: Do NOT install CompactPCI peripheral modules which operate with rear I/O modules in PXIS-2719 due to the possible conflict between rear I/O signals and PXI-specific signals on J2.

2.3.2 System Controller Slot

The System Controller slot is Slot 1 of the chassis as defined by the PXI specification. The PXIS-2719 chassis can accommodate a PXI system controller that occupies up to 3 slots width. As defined in the PXI specification, two controller expansion slots allow the controller to expand to the left to prevent the controller from using up peripheral slots.

2.3.3 Star Trigger Slot

The Star Trigger (ST) slot is Slot 2. This slot has dedicated trigger lines between ST slot itself and slots 3-15. The star trigger functionality is intended to provide a precise trigger signal to the peripheral modules by installing a specific star trigger controller module in the ST slot. The star trigger slot can be also used as a general peripheral slot if you do not need the star trigger functionality.

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2.3.4 Peripheral Slots

There are 18 peripheral slots in PXIS-2719 (including the Star Trigger controller slot). Each peripheral slot can accommodate a 3U PXI/CompactPCI peripheral module.

Note:	**DO NOT** install a 3U CompactPCI module with rear I/O function in the PXIS-2719 chassis.

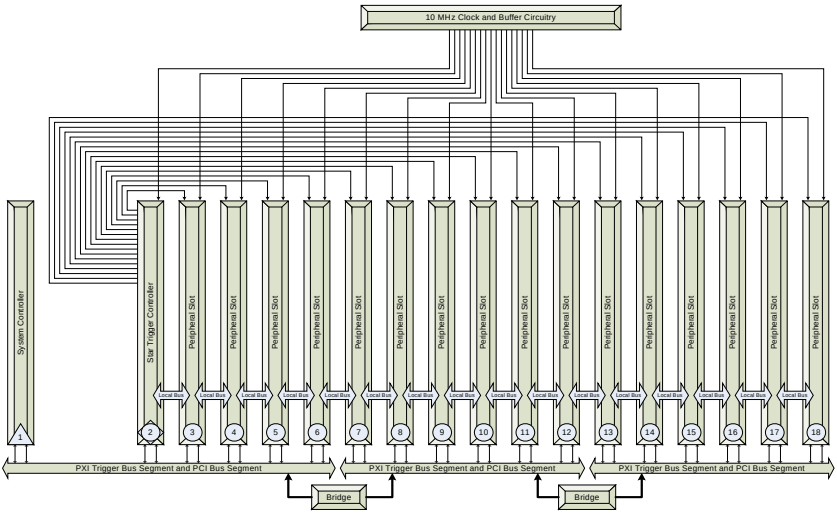


Figure 2-1: PXI Bus Signal Routing

2.3.5 Local Bus

The local bus on a PXI backplane is a daisy-chained bus that connects each peripheral slot with its adjacent peripheral slots to the left and right. Each local bus has 13 lines and can transmit analog or digital signals between modules. It can also provide a high-speed side-band communication path that does not affect the PCI bandwidth.

In accordance with the PXI specification, the local bus connects all adjacent slots except slots 1 and 2.

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2.3.6 Trigger Bus

The trigger bus is a 8-lines bus that connects all PXI slots in the same PCI segment. The trigger bus can be used to provide inter-module synchronization mechanism. PXI modules can transmit trigger or clock signals to one another through trigger bus, allowing precisely timed responses to asynchronous external events the system is monitoring or controlling.

2.3.7 System Reference Clock

PXIS-2719 supplies the PXI 10MHz system reference clock (PXI_CLK10) to each peripheral slot for inter-module synchronization. An independent buffer (having source impedance matched to the backplane and a skew of less than 1 ns between slots) drives the clock signal generated from a high-precision oscillator to each peripheral slot.

This common reference clock signal can be used to synchronize multiple modules in a PXI chassis.

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3 Installation

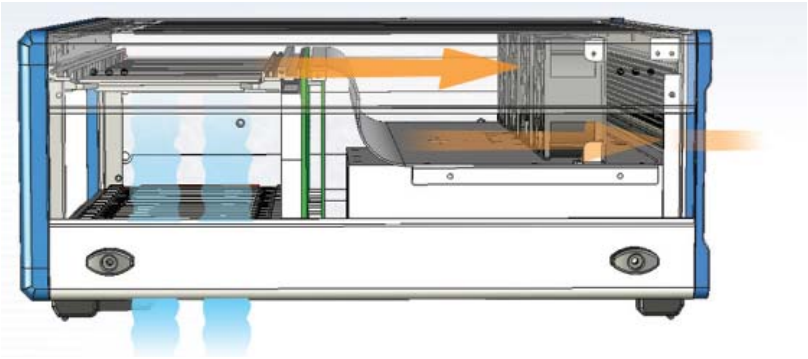
This chapter describes the procedures to set up the PXI chassis, install the PXI system controller and peripheral modules, and power up the system. It also provides information on cooling considerations, rack-mounting, and installing proper driver/software.

3.1 Cooling Consideration

The PXIS-2719 implements the forced air-cooling mechanism to provide efficient and uniform heat dissipation. The cold air is intaken through filters and fan inlets on the bottom of the chassis and the hot air is exhausted though the outlet apertures in the upper rear of the chassis. When you place the PXIS-2719 on a bench top, providing adequate clearance for the inlet apertures is necessary. And for better cooling efficiency, keep the feet stand if possible.

When rack mounting the PXIS-2719, at least 1U (44.5 mm/1.75 in.) clearance below the intake apertures is required. And please also keep other object or equipment at a minimum of 76.2 mm (3 in.) away from the outlet apertures in the rear region of the chassis.

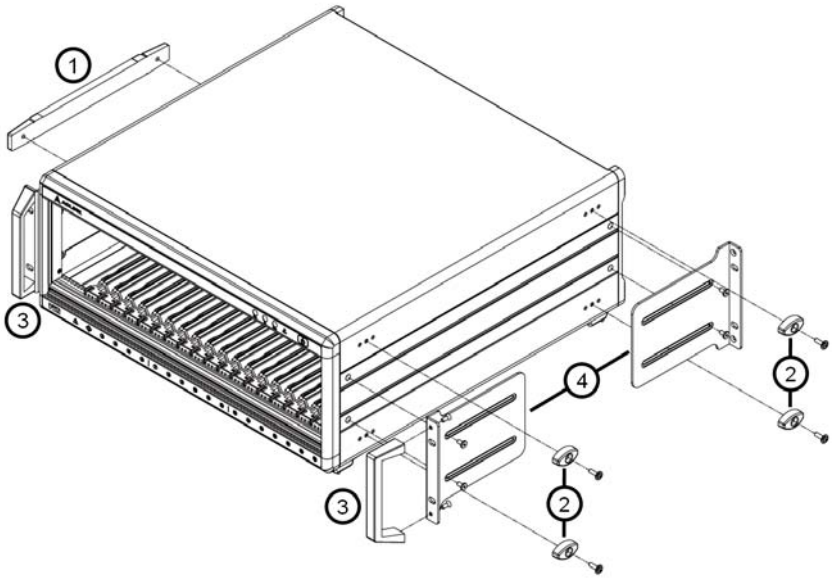
Note: The cooling design of PXI-2719 allows an air flow from bottom to the rear of chassis though PXI modules. To maintain an expected air flow, please always install filler panels for unused slots. The filler panels can be found in the package of the chassis.



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3.2 Rack Mounting

ADLINK provides an optional rack-mount kit to install the PXIS-2719 into a rack. The rack-mount kit can flexibly recess the PXIS-2719 in the rack to accommodate external mechanical parts on the front side, such as cables and mass interconnect modules.

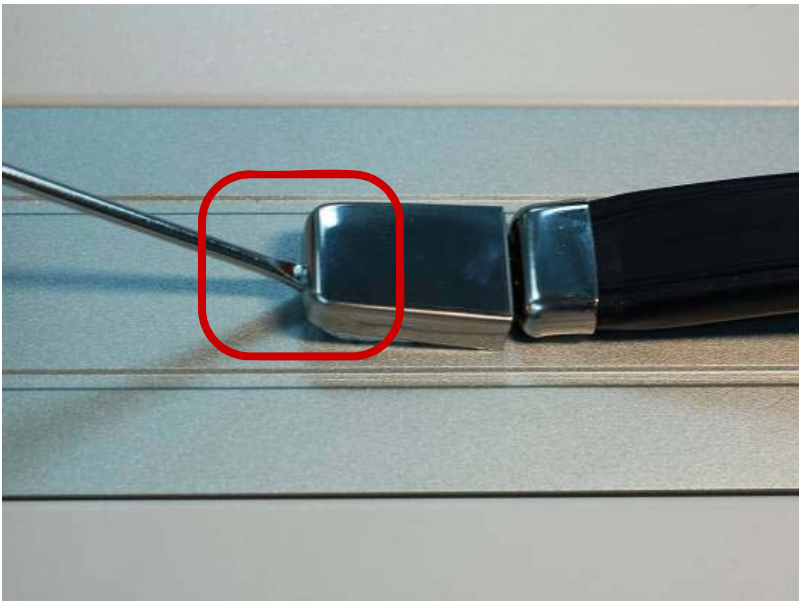


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To assemble the rack-mount kit and mount the PXIS-2719 in a rack:

1. Remove the handle on the left side (①).

1-1. Open the screw covers of the handle using a screw-driver



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1-2. Loosen the handle screws



2. Remove the four rubber foot stands on the right side (②).
3. Install the handle (③) to the mounting bracket (④) using two M4 screws supplied.
4. Install the mounting brackets (④) to the side of the chassis using two M4 screws supplied. You can adjust the position of mounting brackets to recess the chassis in the rack at any distance.
5. Install the chassis in the rack using eight screws (not included).

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3.3 Hardware Installation

3.3.1 Selecting 10 Mhz Reference Clock Source

The 10 MHz reference clock is an important mechanism in PXI specification for inter-module synchronization. PXI modules which have phase-locker loop circuit can lock the 10 MHz reference clock to generate an in-phase timebase.

The PXIS-2719 PXI chassis allows users to select the source of 10 MHz reference clock as

- Built-in accurate 10 MHz oscillator
- External 10 MHz clock through a BNC connector
- PXI_CLK10_IN pin on the star trigger slot

You can set the source of 10 MHz reference clock by a DIP switch on the front side of backplane. Please refer to Table 3-1 for the setting.



	P1	P2	P3
Built-in 10 MHz oscillator (default)	OFF	OFF	ON
External 10 MHz clock input	OFF	OFF	OFF
PXI_CLK10_IN of star trigger slot	OFF	ON	OFF

Table 3-1: 10 MHz Reference Clock Settings

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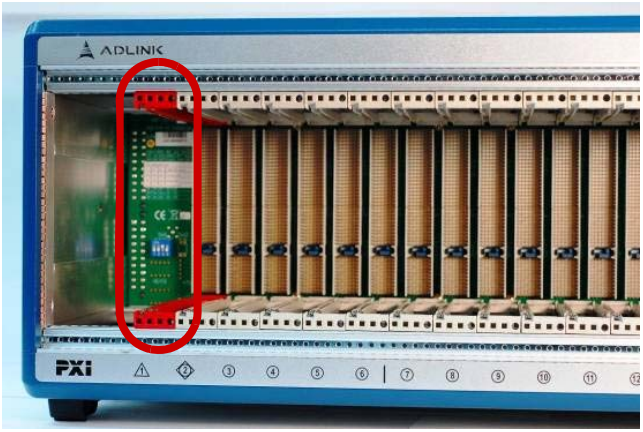
3.3.2 Installing the System Controller

The PXIS-2719 comes with a system controller slot that supports a PXI system controller of 3-slot width. We recommend the following system controllers for use with the PXIS-2719:

- ADLINK PXI-3950 Core 2 Duo PXI controller
- ADLINK PXI-3920 Pentium M PXI controller
- ADLINK PXI-3910 Celeron M PXI controller

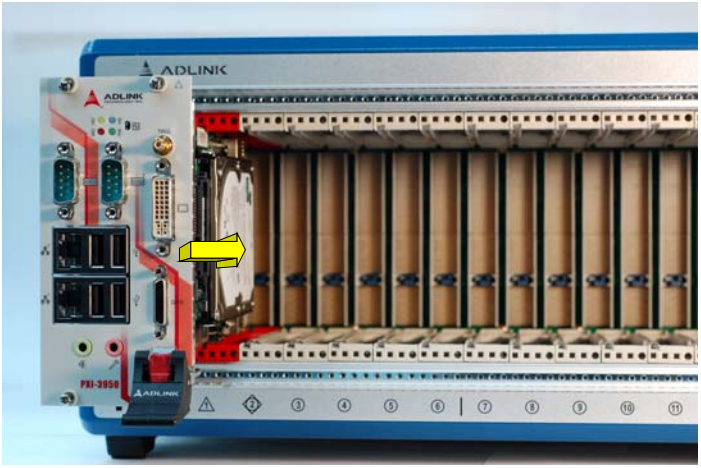
To install the system controller:

1. Make sure that the CPU, memory module(s), and storage device(s) are properly installed on the system controller.
2. Locate the system controller slot (Slot 1).

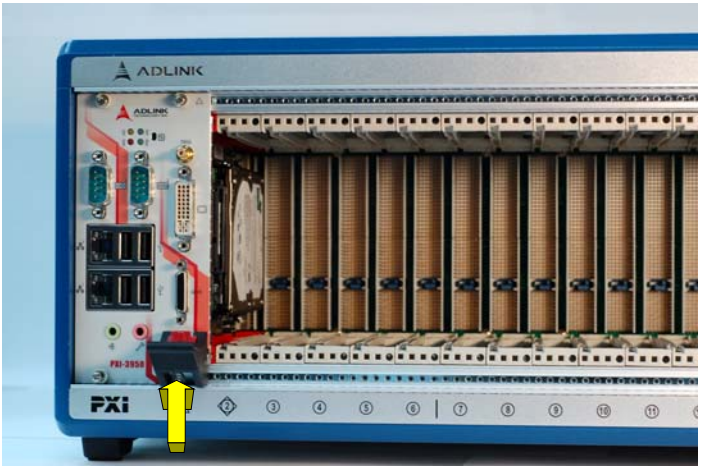


3. Push down (loosen) the system controller module's ejector/injector handle.
4. Align the module's top and bottom edges to the card guides, then carefully slide the module into the chassis.

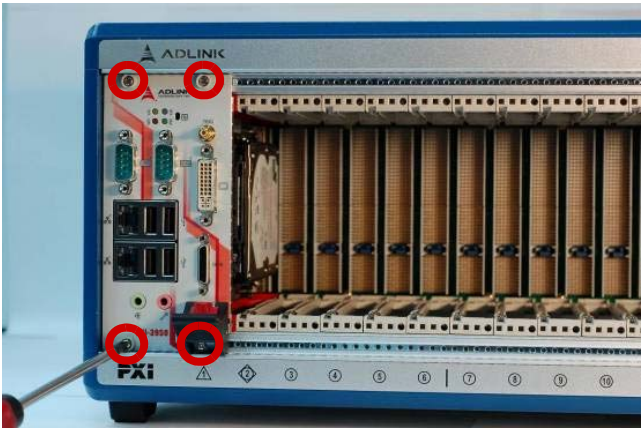
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5. Pull up the ejector/injector handle until the module is properly connected to the chassis backplane.



6. Fasten the screws on the module front panel, then connect all devices to the system controller.



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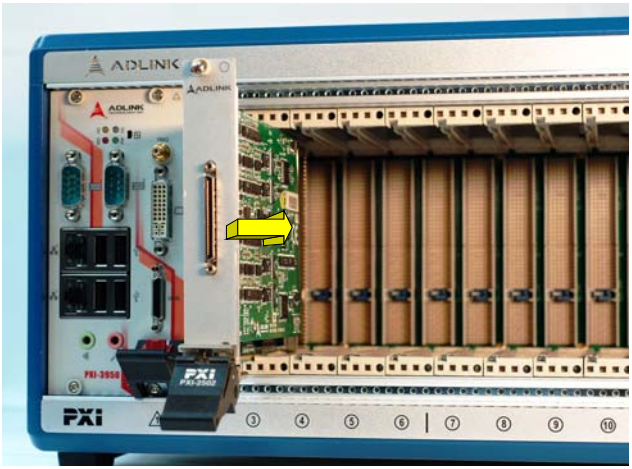
3.3.3 Installing Peripheral Modules

The PXIS-2719 supports up to eighteen PXI/CompactPCI peripheral modules, including a star trigger module.

Note:	**DO NOT** install a 3U CompactPCI module with rear I/O function in the PXIS-2719 chassis.

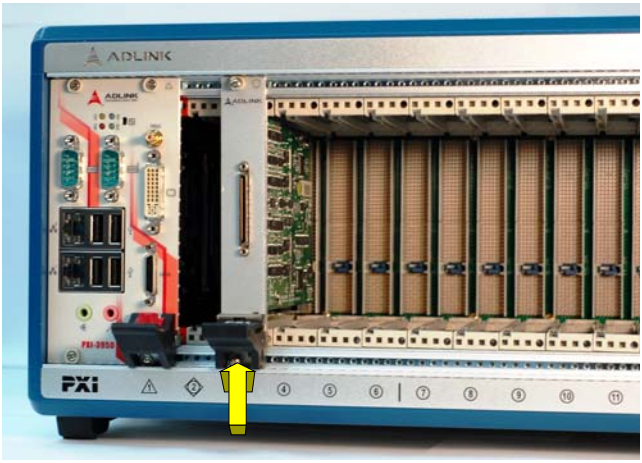
To install a peripheral module:

1. Select an available peripheral slot (slot 2 to 19)
2. Push down (loosen) the peripheral module's ejector/injector handle, then align the module's top and bottom edges to the card guides.
3. Carefully slide the modules into the chassis.

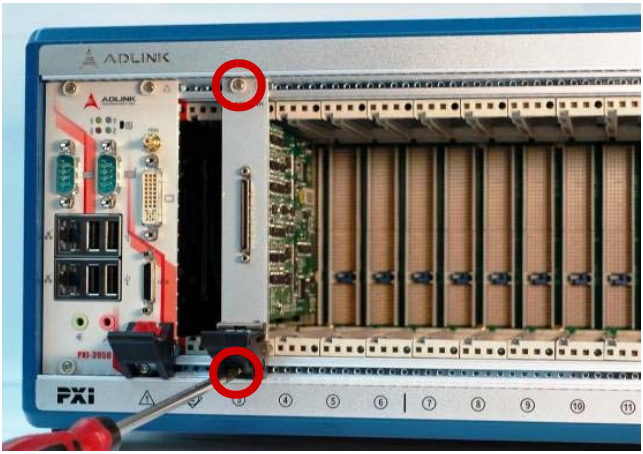


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4. Pull up the ejector/injector handle until the modules is properly connected to the chassis backplane.



5. Fasten the screws on the module's front panel.



6. Repeat step 1 to 5 to install another PXI peripheral module.

Note: To get better efficiency of heat dissipation, after installing all PXI modules, please install filler plates for unused slots if exists.

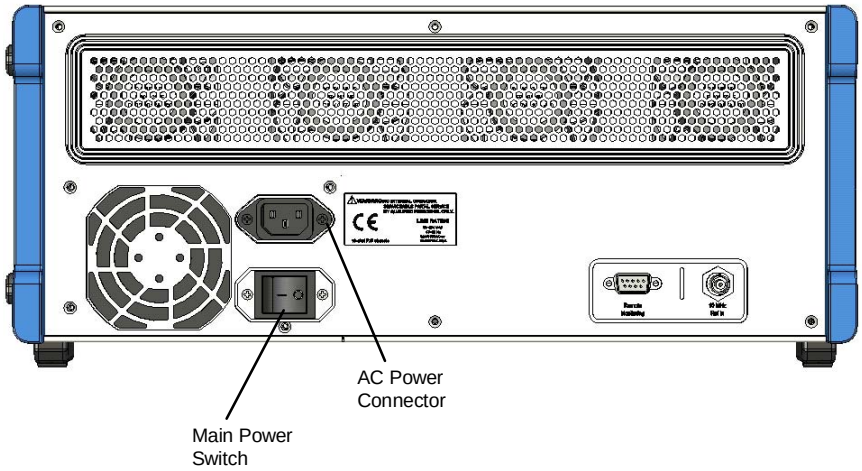
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3.3.4 Powering Up the System

The PXIS-2719 is equipped with a 90 VAC to 264 VAC universal power supply unit that does not require input voltage selection.

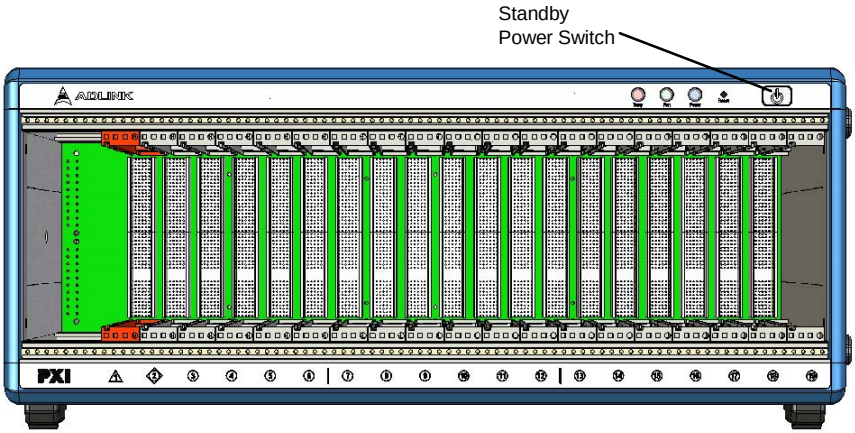
To power on the chassis, complete the following steps:

1. Connect one end of the supplied power cable to the power connector located at the rear side of the chassis.



2. Plug the other end of the AC power cord to a properly grounded wall socket or power strip.
3. Switch the main power switch to the ON (I) position.
4. Push the standby power switch. The Power LED (blue) lights up immediately, and Fan LED (green) and Temperature LED (amber) also light up 3 seconds later.

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To power off the chassis, complete the following steps

1. Push the standby power switch. The Power LED (blue), Fan LED (green) and Temperature LED (amber) turn off immediately.
2. And/or switch the main power switch to the OFF (O) position.

Note: To protect the PXI modules in the chassis, a frequent ON/STANDBY switch is not allowed. After you switch the standby power switch, please wait for 3 seconds before operating another ON/STANDBY switch.

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3.4 Software Installation

3.4.1 OS Installation

Install the operating system that your system controller supports. For more information, refer to the documentation provided by the operating system vendor and the system controller manual. Most operating systems require installation from a floppy or optical disk drive. These devices must be configured, installed, and tested with the supplied drivers before attempting to install a new operating system. Consult the release notes and installation documentation provided by the operating system vendor for documentation discrepancies and/or compatibility issues, problems, and solutions.

3.4.2 Install the Chassis Description File (chassis.ini)

To allow inter-operability of PXI platform and modules from different vendors, the PXI specification requires hardware description files in ASCII text format to describe the hardware characteristics. System integrators can use the hardware description files to configure the system with various PXI controller, PXI chassis, and PXI modules.

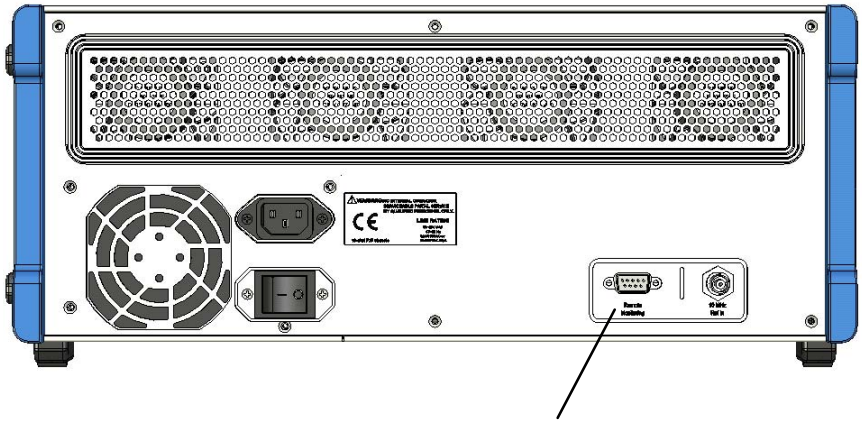
ADLINK provides a complete list of the chassis description file (chassis.ini) for PXI chassis. The chassis description file can be found in
X:\Driver Installation\PXI Platform\PXI Platform Description\
(X: is the CD-ROM drive where you placed the ADLINK All-in-One CD). A simple how-to document is also exists in the directory to illustrate the procedures of using the chassis description file with third-party software to build a PXI-based system.

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4 Remote Management

The PXIS-2719 chassis provide an advanced remote monitoring and control function. The chassis status, including internal temperature, fan speed, and DC voltages, are exported via a standard RS-232 port located in the rear side allowing you to monitor the system on a remote computer. You may also use a remote computer to turn the system on or off through the monitoring port by sending software commands.



To remotely monitor and control the PXIS-2719, you need to connect the remote monitoring port to a remote computer using a standard RS-232 cable.

Note: The remote monitor port is Rx-Tx/Tx-Rx crossed. You need to use a RS-232 cable which is Rx-Rx/Tx-Tx connected for the remote monitoring function.

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4.1 Installing the Monitor Utility

You can find a setup file to install the remote monitoring utility and function library in ADLINK All-in-One CD.

To install the monitoring utility:

1. Connect a USB CD-/DVD-ROM drive to the system controller.
2. Place the ADLINK All-in-Once CD in the optical drive.
3. Locate the monitoring utility in this folder:

   ```
   X:\Driver Installation\PXI Platform\PXI
        chassis\PXIS-2719\RemoteMon\
   ```

   (where X: denotes your CD-ROM drive)
4. Double-click on the Setup.exe file to begin installation.

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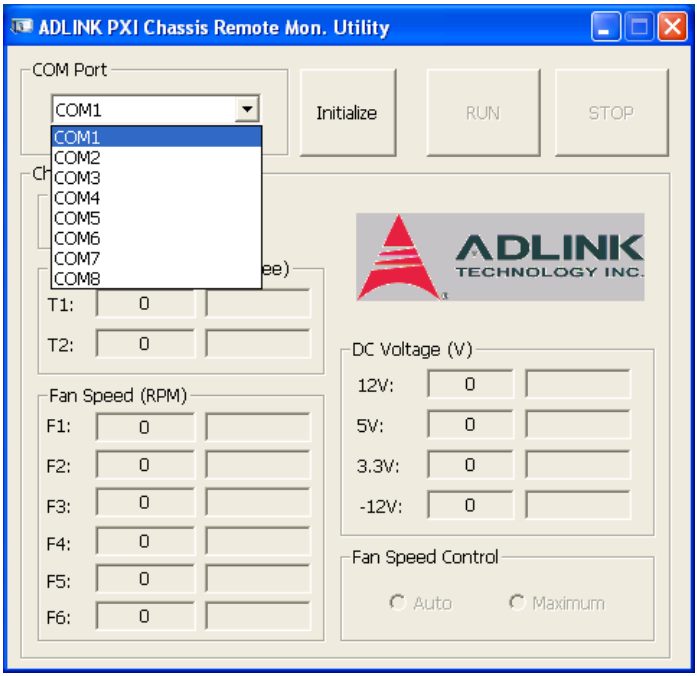
4.2 Monitoring the PXIS-2719

4.2.1 Using the Monitor Utility

ADLINK provides a GUI program (PXISRemoteMonUtil.exe) to monitor the status of PXIS-2719 by a remote computer.

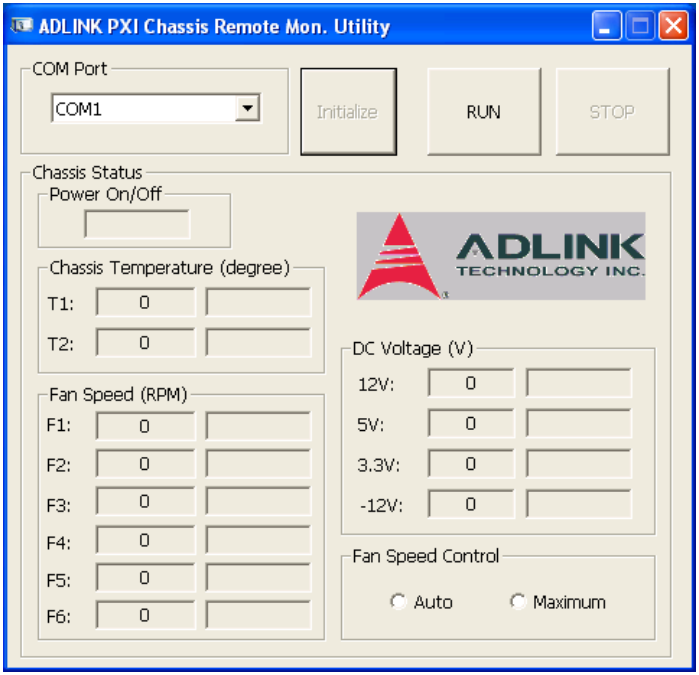
To monitor the system using the monitor utility:

1. Make sure you have proper connection between remote monitoring port of PXIS-2719 and a remote computer.
2. Launch the PXISRemoteMonUtil.exe on the remote computer.
3. Select the COM port on the remote computer connected to the PXIS-2719 (COM1, for example).



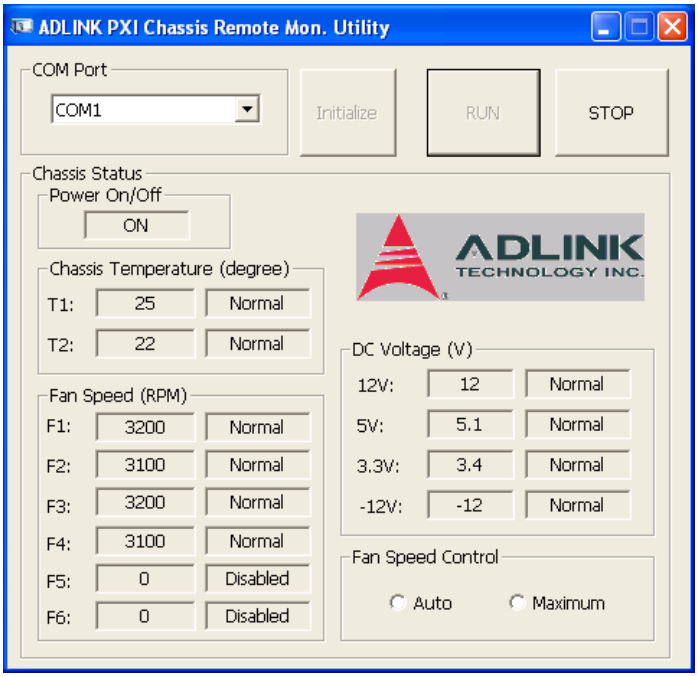
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4. Click **Initialize** to initialize the COM port. If the COM port is successfully initialized, the **RUN** button is enabled.



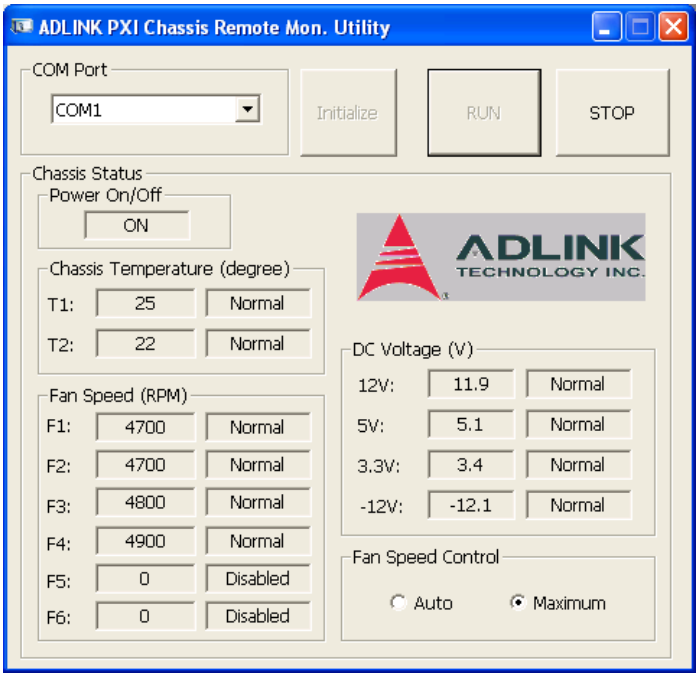
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5. Click the **RUN** to display the chassis temperature, fan speed, and DC voltages. These values automatically update.



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6. The **Fan Speed Control** can be set as **Auto** (automatically control fan speed according to internal temperature) or **Maximum** (force the fans to operate in full speed).



7. Click **STOP** to stop monitoring.

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4.2.2 Using the Monitoring/Control Function Library

The monitoring/control function library can be used to create a customized program that would monitor and control the PXIS-2719. Refer to the data structure and function library below.

Data Structure

In the library, a data structure is defined to describe the chassis status.

```
typedef struct tagChassisStatus
{
     BYTE       PowerStatus

     //Fan status and RPM
     BYTE       Fan1Status;
     BYTE       Fan2Status;
     BYTE       Fan3Status;
     BYTE       Fan4Status;
     BYTE       Fan5Status;
     BYTE       Fan6Status;
     float      Fan1RPM;
     float      Fan2RPM;
     float      Fan3RPM;
     float      Fan4RPM;
     float      Fan5RPM;
     float      Fan6RPM;

     //Temperature sensor status and reading in
     degree centigrade
     BYTE       Temp1Status;
     BYTE       Temp2Status;
     float      Temp1Reading;
     float      Temp2Reading;

     //DC status and reading
     BYTE       DC1Status;
     BYTE       DC2Status;
     BYTE       DC3Status;
     BYTE       DC4Status;
     float      DC1Reading;
     float      DC2Reading;
     float      DC3Reading;
```

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```
        float      DC4Reading;
        BYTE       Reserve1;
        BYTE       Reserve2;
    } ChassisStatus;
```

The variables in the data structure are illustrated below.

Variable	Description	Type	Value
PowerStatus	Power On/Off status	BYTE	0: Off 1: On
Fan1Status	Fan#1 operating status	BYTE	0: Normal 1: Abnormal 2: Disabled 3: Stopped
Fan2Status	Fan#2 operating status	BYTE	
Fan3Status	Fan#3 operating status	BYTE	
Fan4Status	Fan#4 operating status	BYTE	
Fan5Status	Fan#5 operating status	BYTE	
Fan6Status	Fan#6 operating status	BYTE	
Fan1RPM	Fan#1 speed in RPM	float	RPM value
Fan2RPM	Fan#2 speed in RPM	float	
Fan3RPM	Fan#3 speed in RPM	float	
Fan4RPM	Fan#4 speed in RPM	float	
Fan5RPM	Fan#5 speed in RPM	float	
Fan5RPM	Fan#6 speed in RPM	float	
Temp1Status	Temperature sensor #1 status	BYTE	0: Normal 1: Abnormal
Temp2Status	Temperature sensor #2 status	BYTE	
Temp1Reading	Reading of temperature sensor#1 in °C	float	Temperature value
Temp1Reading	Reading of temperature sensor#2 in °C	float	
DC1Status	DC 12 V status	BYTE	0: Normal 1: Abnormal
DC2Status	DC 5 V status	BYTE	
DC3Status	DC 3.3 V status	BYTE	
DC4Status	DC -12 V status	BYTE	
DC1Reading	DC 12 V voltage reading	float	Voltage value
DC2Reading	DC 5 V voltage reading	float	
DC3Reading	DC 3.3 V voltage reading	float	
DC4Reading	DC -12 V voltage reading	float	

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Function Reference

InitCOM

Description

Initializes the remote computer COM port connected to the remote monitoring port of the PXIS-2719.

Syntax

```
HANDLE InitCOM(LPCSTR com)
```

Parameter

com	A string denotes the COM port. Can be COM1 ~ COM8.

Return Value

A handle to the initialized COM port. If the function returns NULL, the initialization of COM port failed.

Example

```
HANDLE     hCOM;
hCOM= InitCOM(“COM1”);
```

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GetChassisStatus

Description

Gets the chassis status and stores the status in a ChassisStatus structure. You can invoke this function periodically to update the chassis status.

Syntax

```
BOOL GetChassisStatus(HANDLE hCom, ChassisStatus*
     Status)
```

Parameters

hCom	The initialized COM port.
Status	ChassisStatus data structure that stores the chassis status

Return Value

TRUE if the function succeeded. FALSE if the function failed.

Example

```
ChassisStatus   status;
BOOL            ret;
ret= GetChassisStatus(hCom, &status);
```

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SetChassisPowerOn

Description

Powers on the PXIS-2719.

Syntax

```
BOOL SetChassisPowerOn (HANDLE hCom)
```

Parameter

com The initialized COM port.

Return Value

TRUE if the function succeeded. FALSE if the function failed.

Example

```
BOOL            ret;
ret= SetChassisPowerOn (hCom);
```

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SetChassisPowerOff

Description

Powers off the PXIS-2719. You should shut down the system controller via the operating system before turning off the chassis power.

Syntax

```
BOOL SetChassisPowerOff (HANDLE hCom)
```

Parameter

com The initialized COM port.

Return Value

TRUE if the function succeeded. FALSE if the function failed.

Example

```
BOOL            ret;
ret= SetChassisPowerOff (hCom);
```

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SetFanSpeedMax

Description

Set fan speed control as Max mode (force the fans to operate in full speed)

Syntax

```
BOOL SetFanSpeedMax (HANDLE hCom)
```

Parameter

com: An initialized COM port

Return Value

TRUE if the function succeeded.

FALSE if the function failed.

Example

```
BOOL            ret;
ret= SetFanSpeedMax (hCom);
```

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SetFanSpeedAuto

Description

Set fan speed control as Auto mode (automatically control fan speed according to internal temperature)

Syntax

```
BOOL SetFanSpeedAuto (HANDLE hCom)
```

Parameter

com: An initialized COM port

Return Value

TRUE if the function succeeded.

FALSE if the function failed.

Example

```
BOOL            ret;
ret= SetFanSpeedAuto (hCom);
```

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CloseCOM

Description

Closes the initialized COM port.

Syntax

```
BOOL CloseCOM(HANDLE hCom)
```

Parameter

com The initialized COM port.

Return Value

TRUE if the function succeeded. FALSE if the function failed.

Example

```
BOOL            ret;
ret= CloseCOM (hCom);
```

Appendix A Troubleshooting and Maintenance

This chapter describes basic troubleshooting techniques, as well as instructions of the maintenance of PXIS-2719 chassis.

A.1 Installation Problems

Failure to start the system usually results from incorrect installation of the system controller, peripheral modules, and other components. Go through the following checklist before you start up the system.

- The system controller is properly installed and secured.
- All peripheral modules are properly seated on the slots.
- All cables are properly connected to the system controller/ peripheral modules.
- All peripheral modules installed are compatible for use in the chassis.
- The power cord is properly plugged into the chassis power connector and power outlet/wall socket/power strip.

If the system fails to turn on even after all installation conditions are met, remove all peripheral modules that you installed, then try again. If the system turns on properly, try installing one peripheral module at a time, then test if the system will power-up. You may also try installing the modules into different slots until you get the desired result.

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A.2 Basic Troubleshooting

Problem	What to Do
System fails to power up	▶ Check if the power cord is properly plugged into the chassis power connector and wall socket/power strip. ▶ Check if the wall socket/power strip is live. ▶ Check if the main power switch at the back of the chassis is turned on. ▶ Make sure the standby power button at the chassis front panel is turned on.
There is no video output in the external display	▶ Check if your external display is functioning. ▶ Check your display settings and make sure you enable external video.
Power LED (blue) is blinking	▶ Make sure there is no short circuit caused by your PXI modules. Remove all PXI modules (PXI controller and peripheral modules) and check if the condition remains. ▶ If the condition remains, contact you dealer for further assistance.
Fan LED (green) is blinking	▶ Check if any object blocks the fan and makes it stopped. ▶ If the condition remains after clearing the object, contact you dealer for further assistance.

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Problem	What to Do
Temperature LED (amber) is blinking	▶ Check if there is a smooth air flow from the outlet apertures. If not, check if adequate clearance for the inlet apertures is provided. ▶ If the temperature of exhausted air is normal (below 50 degrees centi-grade) but the temperature LED is still blinking, contact you dealer for further assistance.

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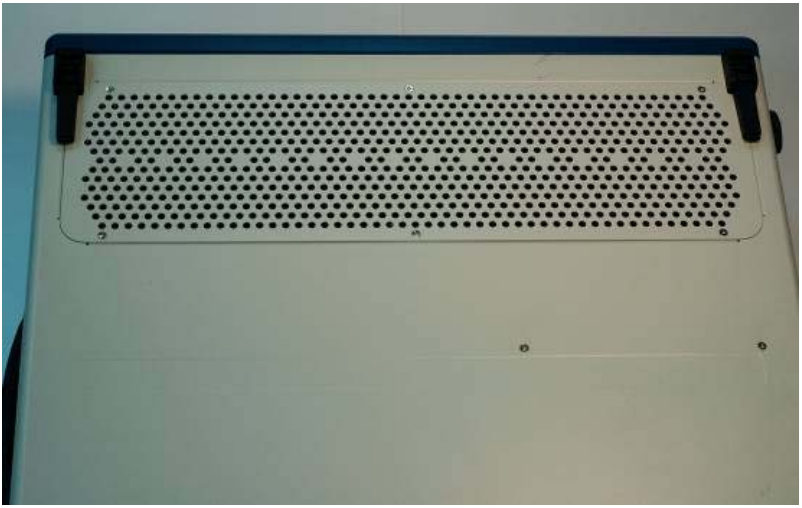
A.3 Maintenance

Changing the Fan Filter

The air inlet fans installed at the bottom of the chassis comes with a filter to prevent dirt and dust from entering the chassis. You need to periodically replace the air filter to maintain good chassis airflow.

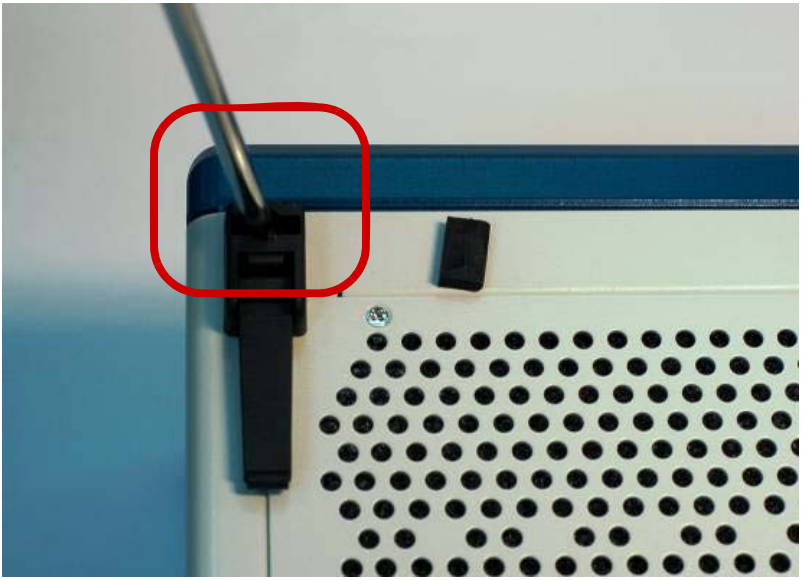
To change the fan filter:

1. Turn off the chassis, then disconnect all cables connected to the chassis, system controller, and peripheral modules.
2. Lay the chassis upside down in a flat and stable surface.

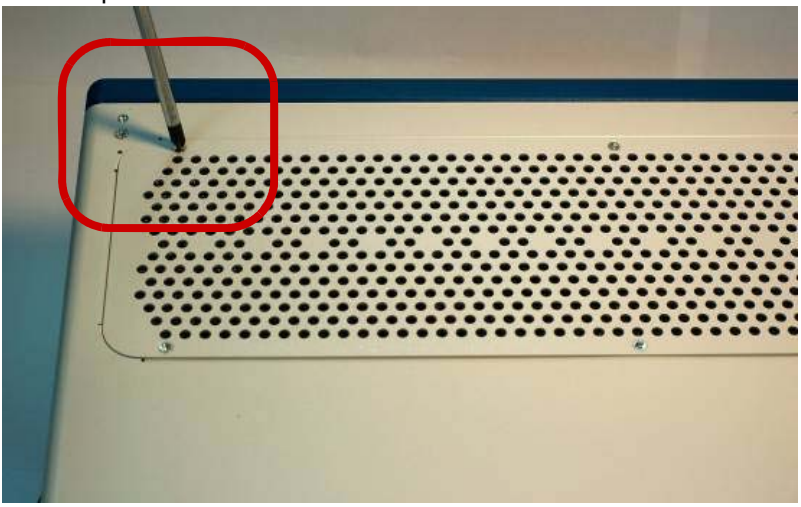


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3. Remove the rubber pad of foot-stand. And loosen the screws for both foot stands.



4. Loosen the six screws to remove the metal plate for inlet apertures.

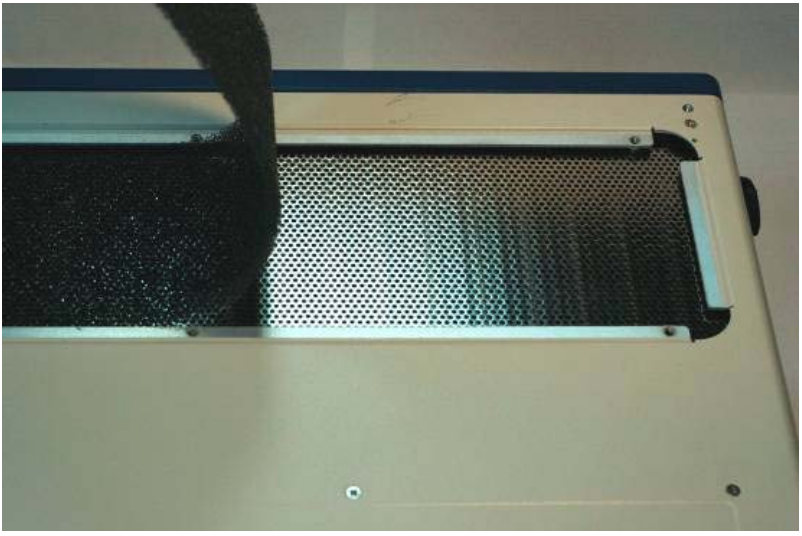


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5. Removing the metal plate exposes the filter. The filter will be visible



6. Replace the old filter with a new one.



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7. Replace the metal plate and fasten the screws and foot stand.

Handling the Chassis

The PXIS-2719 is designed for both rack-mounting and bench-top usage. When you transport or carry the chassis, it is recommended that you use the handle. The handle is designed to carry the weight of the chassis for superior portability and balance.

The PXIS-2719 weights 13.4 kg. Please be carefully when moving the chassis to avoid any possible injury.

Cleaning the Exterior

Make sure that you turn the system off before cleaning the chassis exterior. Wipe the exterior with a clean cloth starting from areas that easily accumulate dust or dirt such as the area in and around the chassis and power supply air inlet apertures.

Power Requirements

Make sure that the power cord is in good condition before plugging it into the system. You also need to check the reliability of the power source. The PXIS-2719 power supply is capable of handling 90 V to 264 V AC within the 47 Hz to 63 Hz range. Do not connect the PXIS-2719 on an already overloaded circuit.

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Important Safety Instructions

Read and follow all instructions marked on the product and in the documentation before operating the system. Retain all safety and operating instructions for future use.

- Read these safety instructions carefully.
- Keep this user's manual for future reference.
- The equipment should be operated in an ambient temperature between 0°C to 50°C.
- The equipment should be operated only from the type of power source indicated on the rating label. Make sure the voltage of the power source is correct when connecting the equipment to the power outlet.
- If the user's equipment has a voltage selector switch, make sure that the switch is set to the proper position for the area. The voltage selector switch is set at the factory to the correct voltage.
- For pluggable equipment, ensure they are installed near a socket-outlet that is easily accessible.
- Secure the power cord to prevent unnecessary accidents. Do not place anything over the power cord.
- If the equipment will not be in use for long periods of time, disconnect the equipment from the power outlet to avoid being damaged by transient over voltage.
- All cautions and warnings on the equipment must be noted.
- Keep this equipment away from humidity.
- Do not use this equipment near water or a heat source.
- Place this equipment on a stable surface when installing to prevent injury.
- Never pour any liquid into the product to prevent fire or electrical shock.

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- Openings in the chassis are provided for ventilation. Do not block or cover these openings. Make sure there is adequate space around the system for ventilation when setting up the work area. Never insert objects of any kind into the ventilation holes.
- To avoid electrical shock, always unplug all power and modem cables from wall outlets before removing the system covers.
- The equipment must be serviced by authorized technicians when:
  - The power cord or plug is damaged.
  - Liquid has penetrated the equipment.
  - It has been exposed to moisture.
  - It is not functioning or does not function according to the user's manual.
  - It has been dropped and damaged.
  - It has an obvious sign of breakage.
- Never attempt to fix the equipment. For safety reasons, the equipment should only be serviced by qualified personnel.

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