PXIS-2700

3U 18-Slot PXI Chassis and Accessories

User's Manual

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1

Introduction

ADLINK PXIS-2700 is an 18-slot PXI/CompactPCI chassis providing 17 PXI peripheral expansion slots and one system slot with two PXI-to-PXI bridges. The chassis incorporates all features defined by the PXI and CompactPCI specifications. Both PXI and CompactPCI modules can be used in the chassis. An internal 10MHz reference clock is available on all 17 PXI slots. The PXI trigger bus is divided into three segments. The star trigger signals are available from 3rd to 15th slots.

The PXIS-2700 is equipped with 460W + 460W redundant power units to provide reliable and easy to maintain power to the system. The status of system power supply, temperature, and cooling fans are monitored by the alarm module assembled in the chassis. Once a failure is detected, a LED and buzzer will be actuated. The failure fans can be removed from the front panel and hot swappable, which can effectively reduce MTTR (Mean-Time-To-Repair).

The PXI-3710 (3-slot version, without floppy disk drive) and PXI-3710F (4-slot version, with floppy disk drive) are designed to fit in the PXIS-2700 chassis. With all the powerful and convenient design, the PXIS-2700 is ideal for high performance applications and a large number of I/O modules.

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1.1 Unpacking Checklist

Check the shipping carton for any damages. If the shipping carton and contents are damaged, notify the dealer for a replacement. Retain the shipping carton and packing material for inspection by the dealer.

Check the following items in the package. If there are any missing items, contact your dealer.

- The PXIS-2700 Chassis, 18-slot 3U PXI/CompactPCI instrument chassis with RHH-6460P power supply unit
- This User's Manual
- Power Cord

Note: The package of the PXI-2700 OEM version (non-standard configuration, functionality, or package) may vary according to custom requests. The assigned controller or peripheral modules may be pre-installed and shipped with the chassis. Please check with the dealer for more options.

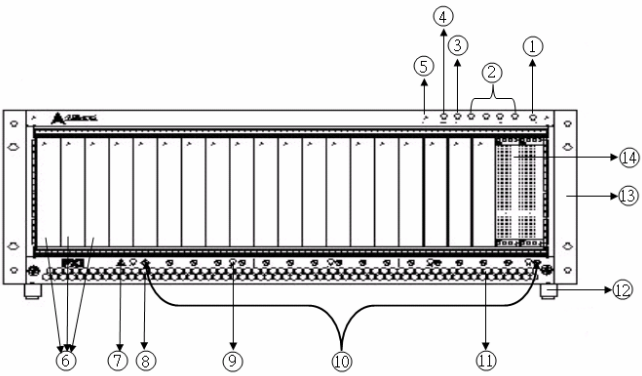
1.2 Features

The features of the PXIS-2700 include the following:

- Accepts both 3U PXI and CompactPCI modules
- One system slot and 17 PXI/CompactPCI peripheral slots
- PXI specifications Rev. 2.0 compliant
- IEEE 1101.10 mechanical packaging compliant
- Filtered, forced-air cooling
- 460W+460W redundant power supply with universal input
- Temperature, voltage and fan monitoring LED
- 4U high rackmount and benchtop installation
- Two PXI-to-PXI bridges

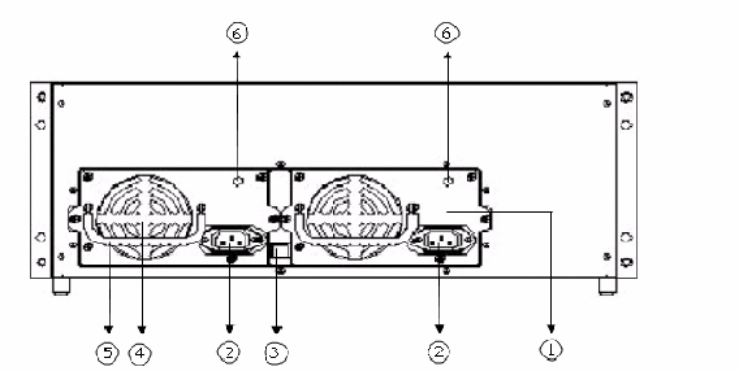
Figure 1-1, 1-2 show some of the feature, and components of the PXIS-2700 chassis. Figure 1-1 shows the front view of the PXIS-2700. Figure 1-2 shows the rear view of the PXIS-2700.

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1. Power On/Off Switch	6. Controller Expansion Slots	11. Removable Fan Cover
2. Power LED	7. System Controller Slot	12. Removable Feet
3. Temp. LED	8. Star Trigger Slot	13. Mounting Brackets
4. Alarm LED	9. Fan LED	14. Backplane Connector
5. Alarm RST	10. Peripheral Slots	

Figure 1-1 Front View of the PXIS-2700 chassis



1. Removable ATX Power	4. Power Fan
2. Universal AC Input	5. Remove Handle
3. Power RST Button	6. ATX Power LED

Figure 1-2 Rear View of the PXIS-2700 chassis

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1.3 OEM options

The standard PXIS-2700 chassis includes backplanes and a power supply unit in addition to the enclosure metal parts. The following sections depict the standard parts used in the PXIS-2700.

1.3.1 Backplane

PXIS-2700 equipped with cBX-3018L, 18-slot PXI backplane. Please refer to Appendix B for more technical information of the backplane.

Besides the standard backplanes, we provide more options for OEM customers, as long as the request backplane is PXI or 3U CompactPCI form factor compliant with 21-slot width limitation.

For example, application may require 32-bit only, rear I/O, or may need to use custom power supply connector and additional custom features on the backplane. ADLINK provides custom design and manufacturing services. Please contact us for more details.

1.3.2 Chassis Color and Logo

The standard color of PXI-2700 is beige. ADLINK provides custom chassis color or paint specific logo for OEM, with minimum order requirement. Please contact us for more details.

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2

Installation

2.1 Power Budget Consideration

Prior to installing any cards into the PXIS-2700 chassis, please calculate the system power requirement. The power budget for every DC power sources shall also be checked, including +5V, +3.3V, +12V, -12V supply rail. Please refer to Appendix A for the maximum usable power.

2.2 Step for Installation

Follow the step to power on the chassis.

Step 1: Make sure the power switch is in the OFF position.

Step 2: Plug in the AC power cord in each power supply unit.

Step 3: Install the controller. Please check the ejector/injector handle is pushed down. Align the controller edge to the “RED” card guide, sliding in to the rear of the chassis. Push up on the ejector/injector handle to fully inject the card into the chassis. Secure the screws on the module’s front panel.

Step 4: Install peripheral modules if any.

Step 5: Press the power switch on the front panel to power on the chassis.

Step 6: Check the LED to make sure the power input is ready. There are four green LED indicators of 3.3V, 5V, +12V, and -12V. The four LED will light when power turn on. The fans should become operational as well.

Note: If the chassis does not power on, see Chapter 4, troubleshooting and Preventative Maintenance.

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2.3 System Monitoring

There are LEDs on the front panel for system monitoring, including powers, temperature, and fans. Please refer to following for the detailed meaning of display status on LEDs.

System Monitoring

- Power LED (Voltage : 3.3V, 5V, +12V, -12V)
  - Color: Green
  - ON while supplied
- Temperature LED
  - Color: Amber
  - ON for normal condition
  - Flashes if exceeds temperature
- Fan LED
  - Color: Green
  - ON while normal fan speed
  - Flashes if abnormal fan speed
- Alarm LED
  - Color: Red
  - ON while normal condition
  - Flashes if alarm occurs

The Alarm Buzzer beeps continuously if any alarm occurs. When the Alarm Buzzer beeps, users can check the LED on the front panel to find out which kind of alarm occurs.

There is a black button labeled Alarm RST near by the Alarm LED on the front panel. When the Alarm LED flashes and the Alarm Buzzer continues beeping, you can push Alarm RST button to stop beeping.

Users can further refer to Chapter 4 for Troubleshooting.

There is one Green LED on each power supply unit in the rear and the red button between the power supply units is power RST. When the alarm buzzer beeps and the power LED extinguishes, you can push power RST button to stop beeping and refer to Chapter 4.5 to hot-swap the power supply unit..

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2.4 Grounding on the Mounting Holes

There are two kinds of grounding for the mounting holes of the backplane. The mounting holes labeled as “GND” with “circle soldering mask” are connected to the logic ground plane of the backplane. The mounting holes labeled as “FGND” with “square soldering mask” are not connected to the ground plane therefore it provides the isolation between the logic ground and the chassis ground.

The backplane is mounted on the PXIS-2700 through all mounting holes by default, therefore the chassis ground is short to the logic ground. For applications that require isolation between the logic ground and the chassis ground, users can remove the screws on the GND mounting holes.

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3

Backplane Overview

3.1 CompactPCI Compatibility

The PXIS-2700 backplane cBX-3018L is compatible with PXI-compatible products and standard CompactPCI products.

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, all modules that meet the requirements of the CompactPCI 64-bit specification will function in the PXIS-2700.

3.2 System Controller Slot

The System Controller slot is Slot 1 of the chassis as defined by the PXI specification. It has three controller expansion slots, which are used for system controller modules that are wider than one slot. As defined in the PXI specification, these slots allow the controller to expand to the left to prevent the controller from using up peripheral slots.

3.3 Star Trigger Slot

The Star Trigger (ST) slot is Slot 2. This slot has a dedicated trigger line between itself and slots 3-15 is intended for modules with ST functionality that can provide individual triggers to the peripherals.

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3.4 Peripheral Slots

There are 17 peripheral slots including the Star Trigger controller slot.

3.5 Local Bus

The local bus of PXI backplane cBX-3018L is a daisy-chained bus that connects each peripheral slot with its adjacent peripheral slots to the left and right. Each local bus is 13 lines wide and can pass analog signals between modules or provide a high-speed side-band communication path that does not affect the PXI bandwidth.

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

3.6 Trigger Bus

ADLINK PXIS-2700 has three PXI separate trigger bus segments. The PXI trigger bus is divided into three separate trigger bus at these locations. The trigger bus divisions represented by vertical bars on the front of the chassis. You can use triggers to synchronize the operation of several different PXI peripheral modules, or use one module to control carefully timed sequences of operations performed on other modules in the system. Modules can pass triggers to one another through trigger bus, allowing precisely timed responses to asynchronous external events the system is monitoring or controlling.

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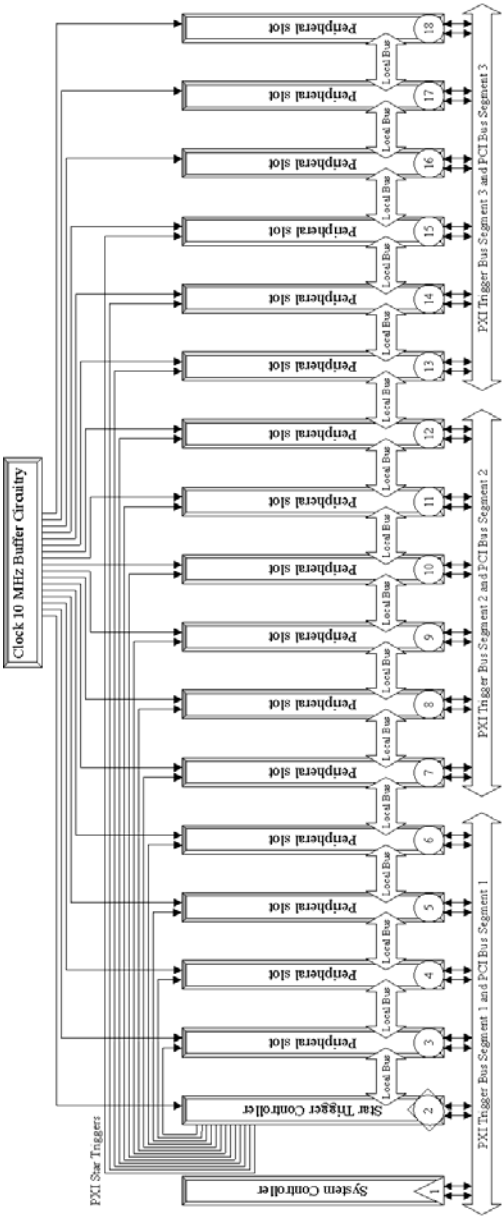


Figure 3.1 PXI Local Bus and Star Trigger Routing

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3.7 System Reference Clock

The PXIS-2700 supplies the PXI 10MHz system clock signal (PXI_CLK10) independently to every peripheral slot. An independent buffer (having a source impedance matched to the backplane and a skew of less than 1ns between slots) drives the clock signal to each peripheral slot. Users can use this common reference clock signal to synchronize multiple modules in a measurement or control system or drive PXI_CLK10 from an external source through the PXI_CLK10_IN pin on the P2 connector of the star trigger slot.

Select the internal or external clock by setting the jumper JP1 in the back of the backplane.

JP1: 10MHz Reference Clock

	Pin #	Name
	1-2 (default)	Internal 10MHz system clock PXI_CLK10
	2-3	External clock through the PXI_CLK10_IN on star trigger slot

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4

Troubleshooting and Preventative Maintenance

4.1 Troubleshooting the PXIS-2700

Please refer to Table 4.1 to troubleshoot the PXIS-2700 chassis. The table lists possible causes for power failure and recommends ways to correct the problem.

Table 4.1 Troubleshooting

Possible Cause	What to Do
PXIS-2700 is not connected to power source.	Make sure that the PXIS-2700 is connected to a live electrical outlet. Try operating another piece of equipment from this outlet.
Power switch is not switched on.	Make sure that the power switch is set to the ON position.
The Alarm Buzzer is beeping	Push Alarm RST button to stop beeping and refer to Chapter 2.3 to find out which alarm occurs. ● Temperature LED flashes: Cool down the PXIS-2700 system under 50°C ● Fan LED flashes: Refer to Chapter 4.4 for the fan hot-swap replacement
The Power Buzzer is beeping	Check if both power supplies have power cord on it. If either one of the power supply failed, please refer to Chapter 4.5 for the power supply hot-swap replacement.

4.2 Cleaning

Cleaning procedures consist of two parts, interior and exterior cleaning of the chassis. Refer to your module user documentation for information about cleaning the individual CompactPCI or PXI modules.

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Note: Always power-off the chassis and disconnect the power cord before cleaning of servicing the chassis.

4.2.1 Interior Cleaning

Use a dry, low-velocity stream of air for cleaning the interior of the chassis. Clean around components with a soft-bristle brush. If you must use a liquid for minor interior cleaning, use a 75% isopropyl alcohol solution and rinse with deionized water.

4.2.2 Exterior Cleaning

Use a dry lint-free cloth or a soft-bristle brush to clean the exterior surfaces of the chassis. If any dirt remains, moisten a cloth to wipe the exterior surfaces of the chassis in a mild soap solution. Wipe with a cloth moistened with clear water to remove any soap residue. Do not use abrasive compounds on any part of the chassis.

4.3 Temperature Detection

If the system overheats, an Amber Temp LED flashes and a buzzer beeps continuously. There are three values of temperature setting, 50°C, 60°C, and 70°C. The default is 50°C. Contact ADLINK if you need to change setting.

4.4 Fan Hot-Swap Replacement

There is a LED for each fan for system monitoring. When any one of the fans is defective, the corresponding LED flashes and the alarm buzzer keeps beeping. Please refer to the following for the fan hot-swap replacement.

Fan Hot-Swap Replacement Procedure

1. Press the Alarm RST button on the front panel to stop the beeping.
2. Remove the front panel cover of fans.
3. Pull out the defective fan.
4. Replace with a new fan.
5. Cover back the fans panel cover.

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4.5 Power Supply Unit Hot-Swap Replacement

For the PXIS-2700 chassis, there are four Green LED indicators for 3.3V, 5V, +12V, and -12V. There is also a Green LED for each power supply unit on the rear panel. The power unit is defective if the LED on the rear panel is extinguished or if the buzzer beeps continuously.

The red bottom between the power supply units is power RST. When alarm buzzer beeps caused by power defective, you can push power RST bottom to stop beeping.

PSU Hot-Swap Replacement Procedure

1. Press the red button on the rear panel to stop the buzzer beeping.
2. Locate the defective power by examining the indication of the individual LED on the rear panel.
3. Unplug the power cord of defective power supply from AC inlet.
4. Unscrew all mounting screws fixing the defective power supply unit.
5. Pull out the defective unit.
6. Replace with a new power supply unit.
7. Screw all mounting screws to fix the new power supply unit.
8. Plug in the power cord.

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A

Specifications

Complies with PXI specifications and accepts modules compliant with CompactPCI, PICMG 2.0 specifications.

Electrical

AC Power Supply

- 460W + 460W hot swappable 1+1 redundant power supply
- Input voltage: 90-264V_{AC} universal, full range
- Input frequency: 47 to 63Hz
- Input current per power module
  - o $4A_{RMS}$ for $230V_{AC}$
  - o $8A_{RMS}$ for $115V_{AC}$
- Inrush current per power module
  - o $75A_{RMS}$ for $230V_{AC}$
  - o $55A_{RMS}$ for $115V_{AC}$
- Built-in active power factor correction
- Output
  - o Maximum usable power: 460 W+460 W
  - o Output characteristics per module

VDC	Minimum	Maximum	Ripple and Noise Max	Load Regulation	Line Regulation
+5 V	5.0 A	40 A	60 mA	±5%	±1%
+12 V	2.5 A	27 A	100 mA	±5%	±1%
-5 V	0 A	0.8 A	100 mA	±5%	±1%
-12 V	0 A	1.0 A	100 mA	±5%	±1%
+3.3 V	1.0 A	30 A	60 mA	±5%	±1%
+5Vsb	0.1 A	2 A	60 mA	±5%	±1%

  - o +5V and +3.3V maximum total output: 50A

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- International standards of power supply
  - Safety: UL 1950/CSA 22.2 No. 950, TUV IEC 950
  - EMI: FCC Class B, CISPR22 Class B
- Efficiency: Typically 65% at full load
- Power supply dimension: 195 (D) mm x 356 (W) mm x 99 (H) mm

Over-Load protection

	Over Current Protection	Over Voltage Protection
+5V	44A-60A	5.7V-6.5V
+3.3V	33A-45A	3.9V-4.3V
+12V	27.5A-37.5A	13.6V-15V

System Monitoring

- Power LED
  - Voltage: +3.3V, +5V, +12V, -12V
  - Color: Green
  - ON while supplied
- Temperature LED
  - Temperature setting: 50°C (default), 60°C, 70°C
  - Color: Amber
  - ON for normal condition
  - Flashes if exceeds setting temperature
- Fan LED
  - Fan speed monitoring
  - Color: Green
  - ON while normal fan speed
  - Flashes if abnormal fan speed
- Alarm LED
  - Color: Red
  - ON while normal condition
  - Flashes if alarm occurs
- Alarm Buzzer
  - Beep if any alarm occurs
- Alarm RST button
  - Reset the alarm monitor system

Cooling

Fans

- Front-access hot swappable fan trays
- Five 31CFM fans trays at the bottom of the chassis
- Fan speed: 2900 ± 300RPM
- Power: $12V_{DC}$ @ 0.17 A each fan
- Noise: 36dB(A)
- Air filter: removable from the bottom of the chassis

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Physical

- Number of PXI/CompactPCI slots: 18 (1 controller, 17 peripherals)
- Number of controller expansion slots: 3 (left of controller slot)
- Dimensions: 445mm x 482.6mm x 177.8 mm (L x W x H, w/o handle)
- Weight: 19kg

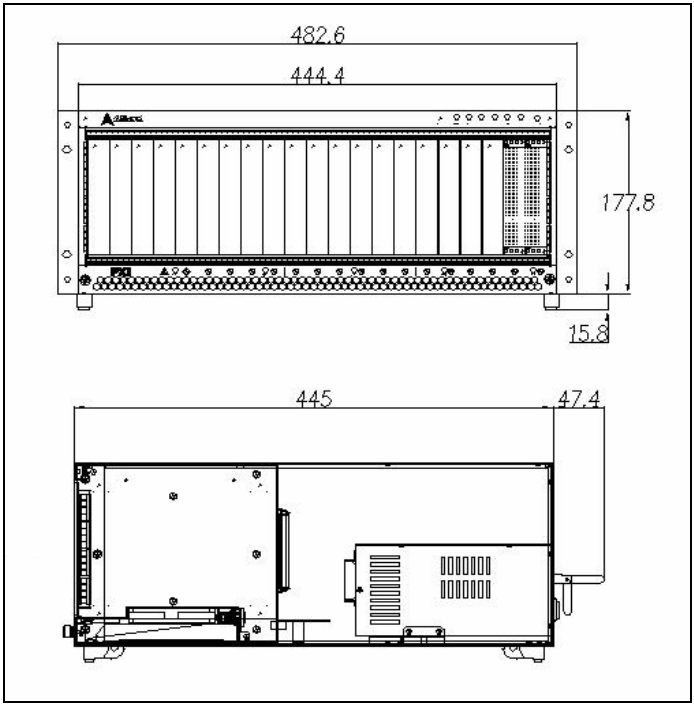


Figure A.1 PXIS-2700 Dimensions

Operating Environment

- Ambient temperature range: 0 to 40°C
- Relative humidity: 10 to 90%, non-condensing

Storage Environment Temperature

- Ambient temperature range: -20 to 70°C
- Relative humidity: 5 to 95%, non-condensing

Backplane

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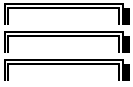
- Backplane bare-board material: UL 94V-0 rated
- Backplane connectors: Conforms to IEC-917 and IEC 1076-4-101,UL 94V-0 rated
- Number of PXI/CompactPCI slots: 18 (1 controller, 17 peripherals)
- PXI peripheral slots with star trigger signals: from the 3rd slot to the 15th slot
- PXI trigger bus segments: 3 (slot 1-6, slot 7-12, slot 13-18)
- PXI local bus: All
- Number of PXI-to-PXI bridges: 2

Shock and Vibration

- Shock : 15G peak-to-peak, 11ms duration, non-operation
- Random Vibration
    - Operating: 5 to 500Hz, $0.5G_{RMS}$, each axis
    - Non-operating: 5 to 500Hz, $1.88G_{RMS}$, each axis

Safety and EMC/EMI Compliance

- Safety: CE/LVD (EN60950)
- EMC/EMI: CE, FCC Class A



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B

Backplane Drawing and Pin Assignments

B.1 Backplane Mechanical Drawing

The following figures show the two parts of the backplanes and Mechanical Drawing.

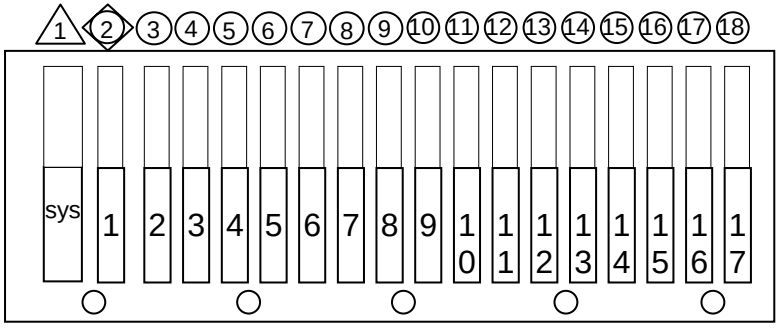


Figure B.1 cBX-3018L front view Drawing

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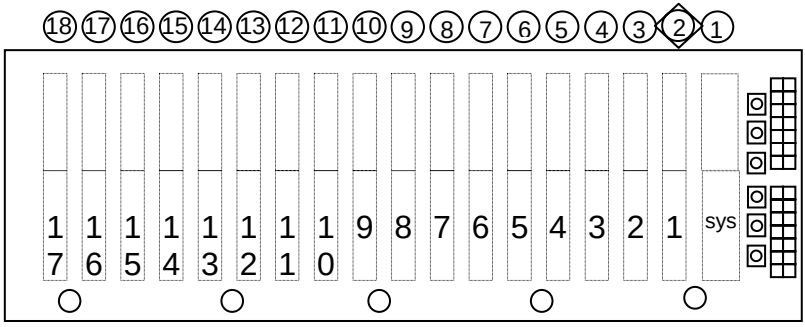
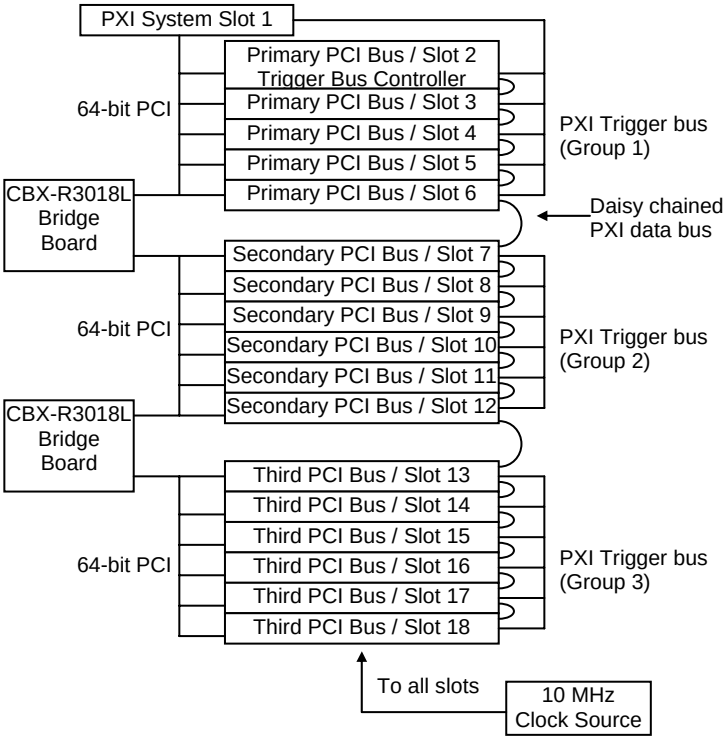


Figure B.2 cBX-3018L rear view Drawing

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B.2 PXI / PCI Bus Architecture



- PXI data bus is daisy chained on all peripheral slots.
- PXI 10MHz clock sources on all peripheral slots are provided from backplane or trigger slot controller.
- PXI Star-trigger are from trigger slot to peripheral slot #3 to slot #15
- PXI trigger bus is divided into 3 groups.

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B.3.1 PXI Connectors Pin Assignments

System Slot (Slot #1) P1 Pin Assignment

Pin	Z	A	B	C	D	E	F
25	GND	+5V	REQ64#	ENUM#	+3.3V	+5V	GND
24	GND	AD[1]	+5V	V(I/O)	AD[0]	ACK64#	GND
23	GND	+3.3V	AD[4]	AD[3]	+5V	AD[2]	GND
22	GND	AD[7]	GND	+3.3V	AD[6]	AD[5]	GND
21	GND	+3.3V	AD[9]	AD[8]	GND	C/BE[0]#	GND
20	GND	AD[12]	GND	V(I/O)	AD[11]	AD[10]	GND
19	GND	+3.3V	AD[15]	AD[14]	GND	AD[13]	GND
18	GND	SERR#	GND	+3.3V	PAR	C/BE[1]#	GND
17	GND	+3.3V	IPMB_SCL	IPMB_SDA	GND	PERR#	GND
16	GND	DEVSEL#	GND	V(I/O)	STOP#	LOCK#	GND
15	GND	+3.3V	FRAME#	IRDY#	GND	TRDY#	GND
12-14	Key						
11	GND	AD[18]	AD[17]	AD[16]	GND	C/BE[2]#	GND
10	GND	AD[21]	GND	+3.3V	AD[20]	AD[19]	GND
9	GND	C/BE[3]#	GND	AD[23]	GND	AD[22]	GND
8	GND	AD[26]	GND	V(I/O)	AD[25]	AD[24]	GND
7	GND	AD[30]	AD[29]	AD[28]	GND	AD[27]	GND
6	GND	**REQ#** (1)	GND	+3.3V	**CLK** (1)	AD[31]	GND
5	GND	BRSVP1A5	BRSVP1B5	PCIRST#	GND	**GNT#** (1)	GND
4	GND	IPMB_PWR	GND	V(I/O)	INTP	INTS	GND
3	GND	**INTA#** (1)	**INTB#** (1)	**INTC#** (1)	+5V	**INTD#** (1)	GND
2	GND	TCK	+5V	TMS	TDO	TDI	GND
1	GND	+5V	-12V	TRST#	+12V	+5V	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

System Slot (Slot #1) P2 Pin Assignment

Pin	Z	A	B	C	D	E	F
22	GND	PXI_BRSVA22	PXI_BRSVB22	PXI_BRSVC22	PXI_BRSVD22	PXI_BRSVE22	GND
21	GND	**CLK6**	GND	NC	NC	NC	GND
20	GND	**CLK5**	GND	NC	GND	NC	GND
19	GND	GND	GND	**SMBDATA**	**SMBCLK**	**SMBALERT-**	GND
18	GND	PXI_TRIG3	PXI_TRIG4	PXI_TRIG5	GND	PXI_TRIG6	GND
17	GND	PXI_TRIG2	GND	***PRST#***	**REQ6#**	**GNT6#**	GND
16	GND	PXI_TRIG1	PXI_TRIG0	***DEG#***	GND	PXI_TRIG7	GND
15	GND	PXI_BRSVA15	GND	***FAL#***	**REQ5#**	**GNT5#**	GND
14	GND	AD[35]	AD[34]	AD[33]	GND	AD[32]	GND
13	GND	AD[38]	GND	V(I/O)	AD[37]	AD[36]	GND
12	GND	AD[42]	AD[41]	AD[40]	GND	AD[39]	GND
11	GND	AD[45]	GND	V(I/O)	AD[44]	AD[43]	GND
10	GND	AD[49]	AD[48]	AD[47]	GND	AD[46]	GND
9	GND	AD[52]	GND	V(I/O)	AD[51]	AD[50]	GND
8	GND	AD[56]	AD[55]	AD[54]	GND	AD[53]	GND
7	GND	AD[59]	GND	V(I/O)	AD[58]	AD[57]	GND
6	GND	AD[63]	AD[62]	AD[61]	GND	AD[60]	GND
5	GND	C/BE[5]#	GND	V(I/O)	C/BE[4]#	PAR64	GND
4	GND	V(I/O)	PXI_BRSVB4	C/BE[7]#	GND	C/BE[6]#	GND

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3	GND	**CLK4**	GND	**GNT3#**	**REQ4#**	**GNT4#**	GND
2	GND	**CLK2**	**CLK3**	GND (SYS#)	**GNT2#**	**REQ3#**	GND
1	GND	**CLK1**	GND	**REQ1#**	**GNT1#**	**REQ2#**	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

Star Trigger Slot (Slot #2) P1 Pin Assignment

Pin	Z	A	B	C	D	E	F
25	GND	+5V	REQ64#	ENUM#	+3.3V	+5V	GND
24	GND	AD[1]	+5V	V(I/O)	AD[0]	ACK64#	GND
23	GND	+3.3V	AD[4]	AD[3]	+5V	AD[2]	GND
22	GND	AD[7]	GND	+3.3V	AD[6]	AD[5]	GND
21	GND	+3.3V	AD[9]	AD[8]	M66EN	C/BE[0]#	GND
20	GND	AD[12]	GND	V(I/O)	AD[11]	AD[10]	GND
19	GND	+3.3V	AD[15]	AD[14]	GND	AD[13]	GND
18	GND	SERR#	GND	+3.3V	PAR	C/BE[1]#	GND
17	GND	+3.3V	IPMB_SCL	IPMB_SDA	GND	PERR#	GND
16	GND	DEVSEL#	GND	V(I/O)	STOP#	LOCK#	GND
15	GND	+3.3V	FRAME#	IRDY#	GND	TRDY#	GND
12-14	Key						
11	GND	AD[18]	AD[17]	AD[16]	GND	C/BE[2]#	GND
10	GND	AD[21]	GND	+3.3V	AD[20]	AD[19]	GND
9	GND	C/BE[3]#	**IDSEL** (1)	AD[23]	GND	AD[22]	GND
8	GND	AD[26]	GND	V(I/O)	AD[25]	AD[24]	GND
7	GND	AD[30]	AD[29]	AD[28]	GND	AD[27]	GND
6	GND	**REQ#** (1)	GND	+3.3V	**CLK** (1)	AD[31]	GND
5	GND	BRSVP1A5	BRSVP1B5	PCIRST#	GND	**GNT#** (1)	GND
4	GND	IPMB_PWR	GND	V(I/O)	INTP	INTS	GND
3	GND	**INTA#** (1)	**INTB#** (1)	**INTC#** (1)	+5V	**INTD#** (1)	GND
2	GND	TCK	+5V	TMS	TDO	TDI	GND
1	GND	+5V	-12V	TRST#	+12V	+5V	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

Star Trigger Slot (Slot #2) P2 Pin Assignment

Pin	Z	A	B	C	D	E	F
22	GND	PXI_BRSVA22	PXI_BRSVB22	PXI_BRSVC22	PXI_BRSVD22	PXI_BRSVE22	GND
21	GND	PXI_LBR0	GND	PXI_LBR1	PXI_LBR2	PXI_LBR3	GND
20	GND	PXI_LBR4	PXI_LBR5	PXI_STAR0 (2)	GND	PXI_STAR1 (2)	GND
19	GND	PXI_STAR2 (2)	GND	PXI_STAR3 (2)	PXI_STAR4	PXI_STAR5	GND
18	GND	PXI_TRIG3	PXI_TRIG4	PXI_TRIG5	GND	PXI_TRIG6	GND
17	GND	PXI_TRIG2	GND	N/C	PXI_CLK10_IN	PXI_CLK10	GND
16	GND	PXI_TRIG1	PXI_TRIG0	N/C	GND	PXI_TRIG7	GND
15	GND	PXI_BRSVA15	GND	N/C	PXI_STAR6	PXI_LBR6	GND
14	GND	AD[35]	AD[34]	AD[33]	GND	AD[32]	GND
13	GND	AD[38]	GND	V(I/O)	AD[37]	AD[36]	GND
12	GND	AD[42]	AD[41]	AD[40]	GND	AD[39]	GND
11	GND	AD[45]	GND	V(I/O)	AD[44]	AD[43]	GND
10	GND	AD[49]	AD[48]	AD[47]	GND	AD[46]	GND
9	GND	AD[52]	GND	V(I/O)	AD[51]	AD[50]	GND
8	GND	AD[56]	AD[55]	AD[54]	GND	AD[53]	GND
7	GND	AD[59]	GND	V(I/O)	AD[58]	AD[57]	GND
6	GND	AD[63]	AD[62]	AD[61]	GND	AD[60]	GND
5	GND	C/BE[5]#	GND	V(I/O)	C/BE[4]#	PAR64	GND

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4	GND	V(I/O)	PXI_BRSVB4	C/BE[7]#	GND	C/BE[6]#	GND
3	GND	PXI_LBR7	GND	PXI_LBR8	PXI_LBR9	PXI_LBR10	GND
2	GND	PXI_LBR11	PXI_LBR12	N.C (SYS#)	PXI_STAR7	PXI_STAR8	GND
1	GND	PXI_STAR9	GND	PXI_STAR10	PXI_STAR11	PXI_STAR12	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

General Peripheral Slot (Slot #3~#6) P1 Pin Assignment

Pin	Z	A	B	C	D	E	F
25	GND	+5V	REQ64#	ENUM#	+3.3V	+5V	GND
24	GND	AD[1]	+5V	V(I/O)	AD[0]	ACK64#	GND
23	GND	+3.3V	AD[4]	AD[3]	+5V	AD[2]	GND
22	GND	AD[7]	GND	+3.3V	AD[6]	AD[5]	GND
21	GND	+3.3V	AD[9]	AD[8]	M66EN	C/BE[0]#	GND
20	GND	AD[12]	GND	V(I/O)	AD[11]	AD[10]	GND
19	GND	+3.3V	AD[15]	AD[14]	GND	AD[13]	GND
18	GND	SERR#	GND	+3.3V	PAR	C/BE[1]#	GND
17	GND	+3.3V	IPMB_SCL	IPMB_SDA	GND	PERR#	GND
16	GND	DEVSEL#	GND	V(I/O)	STOP#	LOCK#	GND
15	GND	+3.3V	FRAME#	IRDY#	GND	TRDY#	GND
12-14	Key						
11	GND	AD[18]	AD[17]	AD[16]	GND	C/BE[2]#	GND
10	GND	AD[21]	GND	+3.3V	AD[20]	AD[19]	GND
9	GND	C/BE[3]#	**IDSEL** (1)	AD[23]	GND	AD[22]	GND
8	GND	AD[26]	GND	V(I/O)	AD[25]	AD[24]	GND
7	GND	AD[30]	AD[29]	AD[28]	GND	AD[27]	GND
6	GND	**REQ#** (1)	GND	+3.3V	**CLK** (1)	AD[31]	GND
5	GND	BRSVP1A5	BRSVP1B5	PCIRST#	GND	**GNT#** (1)	GND
4	GND	IPMB_PWR	GND	V(I/O)	INTP	INTS	GND
3	GND	**INTA#** (1)	**INTB#** (1)	**INTC#** (1)	+5V	**INTD#** (1)	GND
2	GND	TCK	+5V	TMS	TDO	TDI	GND
1	GND	+5V	-12V	TRST#	+12V	+5V	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

General Peripheral Slot (Slot #3~#6) P2 Pin Assignment

Pin	Z	A	B	C	D	E	F
22	GND	PXI_BRSVA22	PXI_BRSVB22	PXI_BRSVC22	PXI_BRSVD22	PXI_BRSVE22	GND
21	GND	PXI_LBR0	GND	PXI_LBR1	PXI_LBR2	PXI_LBR3	GND
20	GND	PXI_LBR4	PXI_LBR5	PXI_LBL0	GND	PXI_LBL1	GND
19	GND	PXI_LBL2	GND	PXI_LBL3	PXI_LBL4	PXI_LBL5	GND
18	GND	PXI_TRIG3	PXI_TRIG4	PXI_TRIG5	GND	PXI_TRIG6	GND
17	GND	PXI_TRIG2	GND	N/C	PXI_STAR (2)	PXI_CLK10	GND
16	GND	PXI_TRIG1	PXI_TRIG0	N/C	GND	PXI_TRIG7	GND
15	GND	PXI_BRSVA15	GND	N/C	PXI_LBL6	PXI_LBR6	GND
14	GND	AD[35]	AD[34]	AD[33]	GND	AD[32]	GND
13	GND	AD[38]	GND	V(I/O)	AD[37]	AD[36]	GND
12	GND	AD[42]	AD[41]	AD[40]	GND	AD[39]	GND
11	GND	AD[45]	GND	V(I/O)	AD[44]	AD[43]	GND
10	GND	AD[49]	AD[48]	AD[47]	GND	AD[46]	GND
9	GND	AD[52]	GND	V(I/O)	AD[51]	AD[50]	GND
8	GND	AD[56]	AD[55]	AD[54]	GND	AD[53]	GND
7	GND	AD[59]	GND	V(I/O)	AD[58]	AD[57]	GND
6	GND	AD[63]	AD[62]	AD[61]	GND	AD[60]	GND

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5	GND	C/BE[5]#	GND	V(I/O)	C/BE[4]#	PAR64	GND
4	GND	V(I/O)	**PXI_BRSVB4**	C/BE[7]#	GND	C/BE[6]#	GND
3	GND	**PXI_LBR7**	GND	**PXI_LBR8**	**PXI_LBR9**	**PXI_LBR10**	GND
2	GND	**PXI_LBR11**	**PXI_LBR12**	N/C (SYS#)	**PXI_LBL7**	**PXI_LBL8**	GND
1	GND	**PXI_LBL9**	GND	**PXI_LBL10**	**PXI_LBL11**	**PXI_LBL12**	GND
Pin	**Z**	**A**	**B**	**C**	**D**	**E**	**F**

Note 1: Please refer the following table for the routing of the Bus Mastering (REQ/GNT), IDSEL, PCI CLK and Interrupt signals.

	Slot #	IDSEL	REQ# /GNT#	PCI CLK	PXI P1 Pin A3	PXI P1 Pin B3	PXI P1 Pin C3	PXI P1 Pin E3
BUS #1	**Slot 1(SYS)**	**-**	**-**	**-**	**INTA#**	**INTB#**	**INTC#**	**INTD#**
	Slot 2	AD30	1	5	INTC#	INTD#	INTA#	INTB#
	Slot 3	AD29	2	1	INTB#	INTC#	INTD#	INTA#
	Slot 4	AD28	3	3	INTA#	INTB#	INTC#	INTD#
	Slot 5	AD27	4	4	INTD#	INTA#	INTB#	INTC#
	Slot 6	AD26	5	0	INTC#	INTD#	INTA#	INTB#
B1	Bridge1	AD31	0	2	INTD#	INTA#	INTB#	INTC#
BUS #2	Slot 7	S1_AD30	S1_1	S1_1	INTB#	INTC#	INTD#	INTA#
	Slot 8	S1_AD29	S1_2	S1_2	INTA#	INTB#	INTC#	INTD#
	Slot 9	S1_AD28	S1_3	S1_3	INTD#	INTA#	INTB#	INTC#
	Slot 10	S1_AD27	S1_4	S1_4	INTC#	INTD#	INTA#	INTB#
	Slot 11	S1_AD26	S1_5	S1_5	INTB#	INTC#	INTD#	INTA#
	Slot 12	S1_AD25	S1_6	S1_6	INTA#	INTB#	INTC#	INTD#
B2	Bridge2	S1_AD31	S1_0	S1_0	INTC#	INTD#	INTA#	INTB#
BUS #3	Slot 13	S2_AD31	S2_0	S2_0	INTB#	INTC#	INTD#	INTA#
	Slot 14	S2_AD30	S2_1	S2_1	INTA#	INTB#	INTC#	INTD#
	Slot 15	S2_AD29	S2_2	S2_2	INTD#	INTA#	INTB#	INTC#
	Slot 16	S2_AD28	S2_3	S2_3	INTC#	INTD#	INTA#	INTB#
	Slot 17	S2_AD27	S2_4	S2_4	INTB#	INTC#	INTD#	INTA#
	Slot 18	S2_AD26	S2_5	S2_5	INTA#	INTB#	INTC#	INTD#

Note 2: Please refer the following table for the routing of the PXI_STAR addressing signals from the trigger slot to peripheral slots.

Physical Slot Number	PXI_STAR (P2-D17)
Slot 2 (Star Trigger Slot)	PXI_STAR0 ~ PXI_STAR12
Slot 3	PXI_STAR0
Slot 4	PXI_STAR1
Slot 5	PXI_STAR2
Slot 6	PXI_STAR3
Slot 7	PXI_STAR4
Slot 8	PXI_STAR5
Slot 9	PXI_STAR6
Slot 10	PXI_STAR7
Slot 11	PXI_STAR8
Slot 12	PXI_STAR9
Slot 13	PXI_STAR10

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Slot 14	PXI_STAR11
Slot 15	PXI_STAR12
Slot 16	(No Star Trigger)
Slot 17	(No Star Trigger)
Slot 18	(No Star Trigger)

B.3.2 Miscellaneous Connectors Pin Assignments

CN1, CN7: ATX-like DC Power input connectors

Signal Name	Pin #	Pin #	Signal Name
V2SENSE	1	11	V2 (+3.3V)
V2 (+3.3V)	2	12	V4 (-12V)
GND	3	13	GND
V1 (+5V)	4	14	INH#
GND	5	15	GND
V1 (+5V)	6	16	SRTN
GND	7	17	GND
FAL#1	8*	18*	V3(+12V)SENSE
DEG#1	9*	19	V1(+5V) SENSE
V3 (+12V)	10	20	V1 (+5V)

Note 1: Pin #8, #9, and #18 are not standard ATX power definitions.

PCI VIO Selection Screw Terminals



Position	Signal Name
J1	+5V
J3	V(I/O)
J4	+3.3V

Note that the V(I/O) must be shorted to either +3.3V or +5V. The default factory setting is to short V(I/O) to +5V.

J6 INH#: DC power inhibit signal



Pin #	Signal Name
1	INH#
2	GND

J8 RST#: System reset signal



Pin #	Signal Name
1	RST#
2	GND

J9 FAL#: Power supply fail input

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J9	Pin #	Signal Name
	1	FAL#
	2	GND

J5: Connector for LED power status

J5	Name	Pin #	Pin #	Name
	GND	8	7	+3.3V
	GND	6	5	+5V
	GND	4	3	-12V
	GND	2	1	+12V

CN2: SMB (system managing bus) connector

CN2	Pin #	Name
	1	IPMB_CLK
	2	GND
	3	IPMB_DATA
	4	IPMB_PWR
	5	ALERT

The SMB is connected to the P2 of the system slot.

JP1: 10MHz Reference Clock

	Pin #	Name
	1-2 (default)	Internal 10MHz system clock PXI_CLK10
	2-3	External clock through the PXI_CLK10_IN on star trigger slot

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SAFETY INSTRUCTIONS

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

1. Please read these safety instructions carefully.
2. Please keep this User's Manual for later reference.
3. The equipment can be operated at an ambient temperature of **40**ºC.
4. Two AC Inlets provided and service as Disconnect Devices, disconnect the equipment from both AC outlets use these AC Inlets before servicing or clearing. Use moisture sheet or cloth for cleaning.
5. For pluggable equipment, that the socket-outlet shall be installed near the equipment and shall be easily accessible.
6. Place the power cord such a way that people can not step on it. Do not place anything over the power cord.
7. If the equipment is not use for long time, disconnect the equipment from mains to avoid being damaged by transient overvoltage.
8. Make sure the voltage of the power source when connect the equipment to the power outlet.
9. All cautions and warnings on the equipment should be noted.
10. Please keep this equipment from humidity.
11. Do not use this equipment near water or a heat source.
12. Lay this equipment on a reliable surface when install. A drop or fall could cause injury.
13. Never pour any liquid into opening, this could cause fire or electrical shock.
14. Never open the equipment. For safety reason, the equipment should only be opened by qualified service personnel.
15. If you use ADLINK PXI-3710 or PXI-3710F as the PXI controller, there is a Lithium Battery provided in the PXI-3710/3710F for real time clock. Please contact ADLINK for replacing.

"**CAUTION – Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions."**

16. If one of the following situations arises, get the equipment checked by

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a service personnel:

a. The Power cord or plug is damaged.

b. Liquid has penetrated into the equipment.

c. The equipment has been exposed to moisture.

d. The equipment has not work well or you can not get it work according to user‘s manual.

e. The equipment has dropped and damaged.

f. If the equipment has obvious sign of breakage.

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Warranty Policy

Thank you for choosing ADLINK. To understand your rights and enjoy all the after-sales services we offer, please read the following carefully:

1. Before using ADLINK's products please read the user manual and follow the instructions exactly.

2. When sending in damaged products for repair, please attach an RMA application form.

3. All ADLINK products come with a two-year guarantee, repaired free of charge.

   - The warranty period starts from the product's shipment date from ADLINK's factory.
   - Peripherals and third-party products not manufactured by ADLINK will be covered by the original manufacturers' warranty.
   - End users requiring maintenance services should contact their local dealers. Local warranty conditions will depend on local dealers.

4. This warranty will not cover repair costs due to:

   - Damage caused by not following instructions.
   - Damage caused by carelessness on the users' part during product transportation.
   - Damage caused by fire, earthquakes, floods, lightening, pollution, other acts of God, and/or incorrect usage of voltage transformers.
   - Damage caused by unsuitable storage environments (i.e. high temperatures, high humidity, or volatile chemicals.
   - Damage caused by leakage of battery fluid.
   - Damage from improper repair by unauthorized technicians.
   - Products with altered and/or damaged serial numbers.
   - Other categories not protected under our guarantees.

5. Customers are responsible for shipping costs to transport damaged products to our company or sales office.

6. To ensure the speed and quality of product repair, please use the RMA form attached in next page or you can download the form from our company website: http://www.adlinktech.com/news/Company/RMA.doc. Damaged products with attached RMA forms receive priority.

For further questions, please contact our FAE staff.

ADLINK:service@adlinktech.com

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RMA Request & Confirmation Form

Dear Customer, **Page 1 of 2**

Please fill out and fax back this form to obtain the RMA number for your returned or repaired product. Thank you very much!

Your Company Name :	
Your Name :	
Invoice No. :	

Part No.	Qty.	Serial No.	The reason of defect	Received Qty. by ADLINK

ADLINK RMA #:

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Note:

1. Please give specific details of the defect. Do not give general reasons like, “not working, error, dead, etc. “

2. Please ship prepaid by Speed post (EMS) (If items are shipped via freight forwarder, we will not cover the extra handing charges)

3. Please show a value of US$10 for each item and include the RMA number. Also, be sure to write on shipping invoice, “for repair, no commercial value” for customs. (Please note that the amount must be under US$200 for customs purposes only)

4. Enclose this form (page 1 & 2) in the package for fast identification.

5. Please sign this form (page 1 & 2) and fax it back to us for confirmation within three days. Otherwise, we will process your request according the stated on the RMA Request Form.

6. We will charge for items no longer under warranty.

Please let us know your preferred shipping method for returning reworked items to you.

☐ Ship with your next shipment
☐ Ship separately by air parcel
(Note: we do not accept liability for items shipped by air parcel)

☐ Other _____

ADLINK Technology Inc. Accepted & Confirmed by

_____ _____

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