

# PXI2307

## User's Manual

 **Beijing ART Technology Development Co., Ltd.**

## Contents

<i>Contents</i> .....	2
<i>Chapter 1 Overview</i> .....	3
<i>Chapter 2 Components Layout Diagram and a Brief Description</i> .....	4
2.2 Signal Input and Output Connectors .....	4
2.2 Jumper .....	4
2.3 The Definition of Signal Input and Output Connectors.....	4
<i>Chapter 3 Connection Ways for Each Signal</i> .....	6
3.1 Input Principle and Connection Method.....	6
3.2 Output Principle and Connection Method.....	7
<i>Chapter 4 Notes and Warranty Policy</i> .....	8
4.1 Notes .....	8
4.2 Warranty Policy .....	8
<i>Products Rapid Installation and Self-check</i> .....	9
Rapid Installation .....	9
Self-check.....	9
Delete Wrong Installation.....	9

## ***Chapter 1 Overview***

PXI2307 is an isolation digital input and relay output board, 16-channel digital input and 16-channel relay outputs. Mainly used for industrial control and related fields.

### **Unpacking Checklist**

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

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

- PXI2307 Data Acquisition Board
- ART Disk
  - a) user's manual
  - b) drive
  - c) catalog
- Warranty Card

### **FEATURES**

#### **Digital Input**

- 16-channel isolation digital input
- The change of digital input channel 0 (DIO) status can make computer generates hardware interrupt, the direction option.
- Input signal rate: 10KHz
- Isolation Voltage: 3750Vrms(Min.)
- Input Voltage: 5~24V

#### **Relay Output**

- 16-ch isolated relay output
- Each channel only has N.O. Contact, contact disconnects when power on.
- Switching capacity: maximum current 2A, voltage 60V<sub>DC</sub>/120V<sub>AC</sub>
- Transient Voltage: 2000V<sub>AC</sub>(20us)
- Contact Coil Voltage(max): 1500V<sub>AC</sub> 1min
- Contact Rating: 1A 24V<sub>DC</sub> / 120V<sub>AC</sub>
- Connection Time: 6ms
- Break Time: 4ms

## Chapter 2 Components Layout Diagram and a Brief Description

### 2.2 Signal Input and Output Connectors

CN1: signal input and output connector

### 2.2 Jumper

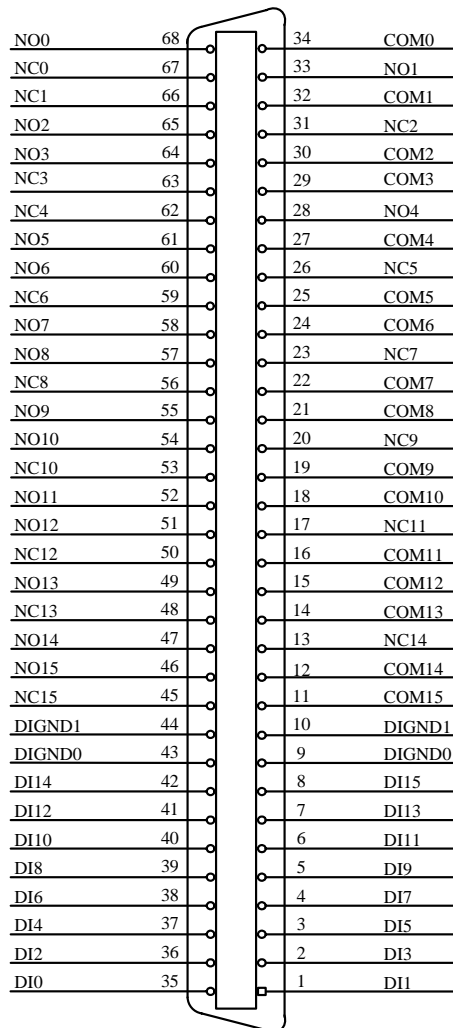
JP1: Interrupt mode selected

1-2 shorted: Interrupt when DI0 signal has a rising edge

2-3 shorted: Interrupt when DI0 signal has a falling edge

### 2.3 The Definition of Signal Input and Output Connectors

68 core SCSI plug on the CN1 pin definition



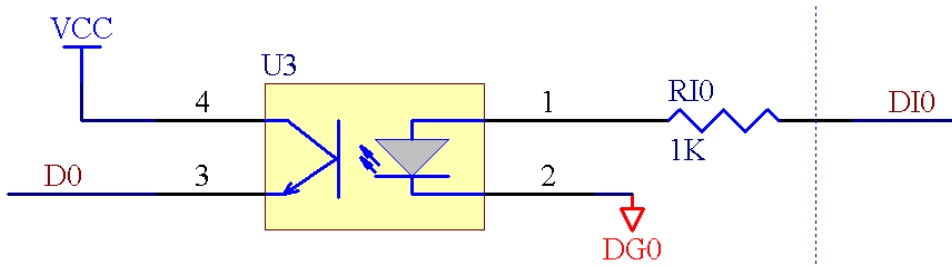
Pin definition aboutCN1:

Signal Name	Type	Definition
DI0~DI15	Input	Digital signal input pins
NO0~NO15	Output	Relay normal on contact, relay output pins
NC0~NC15	Output	Relay normal close contact, relay output pins
COM0~COM15	Output	Relay common contact, COMi correspond with NOi,NCi
DIGND1	Input	Digital ground, DI8~DI15 reference ground
DIGND0	Input	Digital ground, DI0~DI7 reference ground

## Chapter 3 Connection Ways for Each Signal

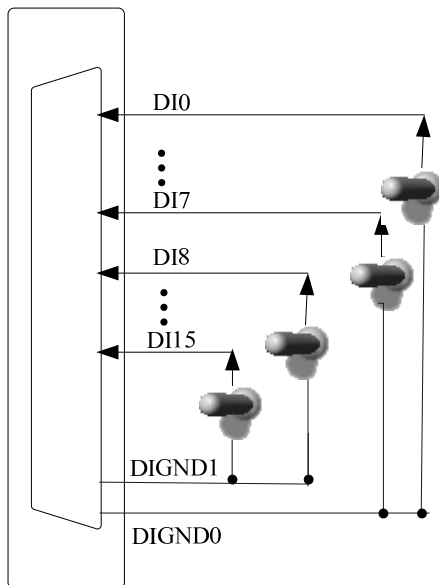
### 3.1 Input Principle and Connection Method

DI0~DI15 input principle are the same, the following is schematic diagram about DI0.



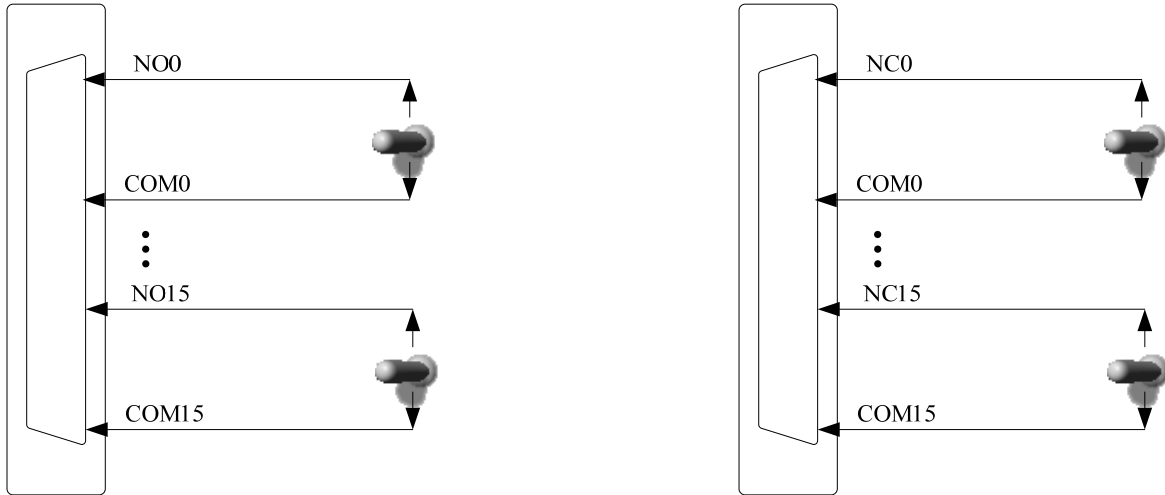
DI0 is the input signal. The following is the working principle of DI0: when DI0 is low-level, there is no differential pressure between the 1 and 2 pin (namely, between the VDI and DI0) of the optocoupler U3, the interior does not have the electric current, therefore the light-emitting diode is nonluminous, the internal dynatron is not conduction, in other words, the 3-pin and 4-pin are not connected together, the output signal DO is low-level. When DI0 is high-level, the result is contrary to above.

DI0~DI7 are input signals, DIGND0 is the common ground. DI8~DI15 are also input signals, DIGND1 is the common ground.



### 3.2 Output Principle and Connection Method

NO0 ~ NO15 are 16-channel relay normal on output signal, NC0~NC15 are 16-channel relay normal close output signal, COM0~COM15 are the common ground.



## Chapter 4 Notes and Warranty Policy

### 4.1 Notes

In our products' packing, user can find a user manual, a PXI2307 module and a quality guarantee card. Users must keep quality guarantee card carefully, if the products have some problems and need repairing, please send products together with quality guarantee card to ART, we will provide good after-sale service and solve the problem as quickly as we can.

When using PXI2307, in order to prevent the IC (chip) from electrostatic harm, please do not touch IC (chip) in the front panel of PXI2307 module.

### 4.2 Warranty Policy

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

1. Before using ART's products please read the user manual and follow the instructions exactly. When sending in damaged products for repair, please attach an RMA application form which can be downloaded from: [www.art-control.com](http://www.art-control.com).
2. All ART products come with a limited two-year warranty:
  - The warranty period starts on the day the product is shipped from ART's factory
  - For products containing storage devices (hard drives, flash cards, etc.), please back up your data before sending them for repair. ART is not responsible for any loss of data.
  - Please ensure the use of properly licensed software with our systems. ART does not condone the use of pirated software and will not service systems using such software. ART will not be held legally responsible for products shipped with unlicensed software installed by the user.
3. Our repair service is not covered by ART's guarantee in the following situations:
  - Damage caused by not following instructions in the User's Manual.
  - Damage caused by carelessness on the user's part during product transportation.
  - Damage caused by unsuitable storage environments (i.e. high temperatures, high humidity, or volatile chemicals).
  - Damage from improper repair by unauthorized ART technicians.
  - Products with altered and/or damaged serial numbers are not entitled to our service.
4. Customers are responsible for shipping costs to transport damaged products to our company or sales office.
5. To ensure the speed and quality of product repair, please download an RMA application form from our company website.



## Products Rapid Installation and Self-check

### Rapid Installation

Product-driven procedure is the operating system adaptive installation mode. After inserting the disc, you can select the appropriate board type on the pop-up interface, click the button **【driver installation】** ; or select CD-ROM drive in Resource Explorer, locate the product catalog and enter into the APP folder, and implement Setup.exe file. After the installation, pop-up CD-ROM, shut off your computer, insert the PXI card. If it is a USB product, it can be directly inserted into the device. When the system prompts that it finds a new hardware, you do not specify a drive path, the operating system can automatically look up it from the system directory, and then you can complete the installation.

### Self-check

At this moment, there should be installation information of the installed device in the Device Manager (when the device does not work, you can check this item.). Open "Start -> Programs -> ART Demonstration Monitoring and Control System -> Corresponding Board -> Advanced Testing Presentation System", the program is a standard testing procedure. Based on the specification of Pin definition, connect the signal acquisition data and test whether AD is normal or not. Connect the input pins to the corresponding output pins and use the testing procedure to test whether the switch is normal or not.

### Delete Wrong Installation

When you select the wrong drive, or viruses lead to driver error, you can carry out the following operations: In Resource Explorer, open CD-ROM drive, run Others-> SUPPORT-> PXI.bat procedures, and delete the hardware information that relevant to our boards, and then carry out the process of section I all over again, we can complete the new installation.