

Zigbee1086

User's Manual

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

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Chapter 1 Overview

Zigbee is the specification of a low-cost, low-power wireless communications solution, meant to be integrated as the main building block of ubiquitous networks.

Zigbee1086 is a data acquisition module based on Zigbee wireless transmission. It can sample data and transfer the data to processing device to constitute the laboratory, product quality testing center and systems for different areas of data acquisition, waveform analysis and processing. It may also constitute the monitoring system for industrial production process.

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.

- Zigbee1086
- ART Card
 - a) user's manual (pdf)
 - b) drive
 - c) catalog
- Warranty Card

FEATURES

- Input Range: 0~5V, 0~10V, ±5V, ±10V, 0~20mA, 4~20mA, ±20mA (Customers need to specify the range, other non-standard ranges can be customized)
- 16-bit resolution
- Sampling Frequency: 10Hz
- Analog Input Mode: 1-ch differential
- Digital Input: dry contact (non-isolated)
- Open-collector Output: external power supply: +5V, output 40mA (Max)
- Built-in Watchdog
- Power Supply: regulated +10V ~ +30 V_{DC}
- Power Consumption: 0.48W @ 24V_{DC} (module does not use XBEE network to transmit data)

Configuration Table

■ TABLE1 Analog Input Type Code and the Error Table

Input Type	Input Range	Typical Accuracy (%)	Maximum Error (%)	Code (Hex)
±5V	±5V	±0.03	±0.05	08
±10V	±10V	±0.03	±0.05	09
±20mA	±20mA	±0.05	±0.08	0A
0~20mA	0~20mA	±0.05	±0.08	0B

4~20mA	4~20mA	± 0.05	± 0.08	0C
0~5V	0~5V	± 0.03	± 0.05	0D
0~10V	0~10V	± 0.03	± 0.05	0E

Chapter 2 Components Layout Diagram and a Brief Description

2.1 The Main Component Layout Diagram



2.2 The Function Description for the Main Component

2.2.1 Wiring Terminal

GND: power negative

+Vs: power positive

AI0+ ~ AI0-: 1 channel analog input

DI0: digital input

DO0: digital output

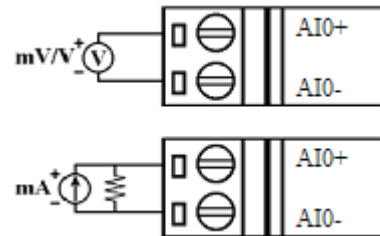
2.2.3 Status Indicator

Red Light: power indicator, ON for normal.

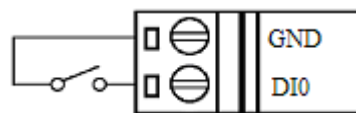
Green Light: communication indicator, when ZIGBEE1086 communicate with the data center, this light is flashing

Chapter 3 Wiring diagram

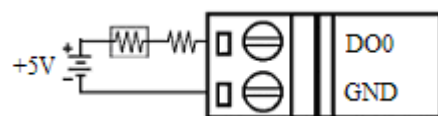
3.1 Analog Input



3.2 Dry Contact Signal Input



3.3 Open Collector Output



Chapter 4 Notes and Warranty Policy

4.1 Notes

In our products' packing, user can find a user manual, a Zigbee1086 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 Zigbee1086, in order to prevent the IC (chip) from electrostatic harm, please do not touch IC (chip) in the front panel of Zigbee1086 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.
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.