



# **BX-Y1M Specification**

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## **Brief Introduction**

Thanks for ordering ONBON LED control card. The design of the control card is according to the international and industrial standard, but if the operations are incorrect, it will probably bring you personal injury and financial harm. As to avoid these and win more from your equipment, please obey the specifications of this file.

## **About software**

Cannot do any modification, decompilation, disassembling, decoding or reverse engineering on our software, it' s illegal.

## **Characteristics**

- Technical index is same with BX-Y1A ;
- Compatible with the mainstream technology platform agreement in the security industry and the mainstream traffic signal equipment agreement in the market, free of secondary development.
- Standard with normal sensor ports and RS485 environmental sensor port, relay on-off, 4 bits program port;
- Standard with 100M Ethernet+RS485/RS232 serial port+ RS485 environmental sensor port+ USB port+ WIFI port;
- UV three-protection glue for all types, national standard 85 protection level, dust prevention, dampproof, anti-static, salt-spray proof;
- -40 °C ~ 80 °C, 3.5v-5.5v wide voltage, 7 \* 24 hours power-on, fault rate ≤ 0.3%

## Guiding

### Safety Notes

- The Input voltage is 3.5V ~ 5.5V, please make sure the quality of the power supply of BX-Y series.
- ◆ Please make sure that all the power supply cables are plugged off when you want to connect or plug off any signal or controlling cables.
- ◆ Please make sure that all the power supply cables and signal cables are plugged off when you need to put in or take off the hardware equipment.
- ◆ Please take off the power supply of LED video processor before you do any hardware operations, and ESD by touching the ground.
- ◆ Please make sure the environment is clean, dry and ventilated when you use this product, also, do not put this product to a high temperature and wet environment.
- ◆ This product is electronic products, please keep away from fire, water source and flammable & combustible products.
- ◆ There's high pressure components in this products, please do not open the box and repair it by yourself.
- ◆ Turn off the power supply immediately when you find smoking, peculiar smell or something unusual. And contact with us soon.

## Function Introduction

### Main function

BX-Y1M controller supports Modbus protocol, seamlessly connects with PLC industrial equipment, and quickly connects various specifications of LED display screens to MODBUS industrial equipment and systems. No need secondary development. It is mainly used in the application of full-color LED display screen, with larger control size and more parameter data applications..

### Control size

BX-Y1M has 1 gigabit output Ethernet, total control pixels  $\leq 600K$  pixels: Ethernet port supports 1024×600, maximum control width is 8192, maximum height is 2048pixels. Flexible control area, rich display functions and high cost performance.

### MODBUS Bus control

BX-Y1M the on-board network port and RS485 serial port can support Modbus protocol. Support each communication port to send data at the same time, which is applicable to various industrial sites.

Modbus controller supports two system access modes of master or slave, and supports 0x03, 0x04, 0x06 and 0x10 function codes of Modbus protocol.

Host mode means that the controller is the host and takes the initiative to obtain equipment data;

Slave mode means that the controller is a slave and passively receives the data transmitted by MODBUS equipment;

The RS485 serial port of BX-Y1M controller supports  $\leq 20$  devices, and the number of devices supported by the network port is unlimited; Support unlimited parameter data;

BX-Y1M supports a lot of serial baud rates;

### Support multiple data types and operations

BX-Y1M supports data types of single precision floating-point type, signed short integer, signed long integer, unsigned short integer and unsigned long integer in ABCD / DCBA / BADC

/ cdab decoding order.

Data operation supports +, - ×、 ÷,% , 1 / N, A2,, and other common calculation formulas.

## **Initialization settings**

Select Modbus RTU master / slave mode and Modbus TCP master / slave mode as required, and input the corresponding ID, IP, port, function code, register starting address, timeout time, time interval, data type, data high and low order, etc. according to the Modbus device.

## **Display style of data**

The typesetting design of parameter data display style on LED screen is completed by using LedshowYQ software. We will further develop and improve the humanized design and user operation experience of this section.

## **Large storage capacity**

BX-Y1A, built in 4G storage for high resolution video. And support extending to 256GB.

## **Selecting Program by 4 IO**

Selecting program by outside IO is to choose program by outside signal, as to display different programs by different signal.

## **Support Mobile App**

Y series supports management by mobile APP. APP software is very easy to understand and operate. Users can edit, send data by mobile phone, pad. APP supports searching screen, supports multi languages, supports dynamic preview, video trans-coding function. Supports zoom in and out manually

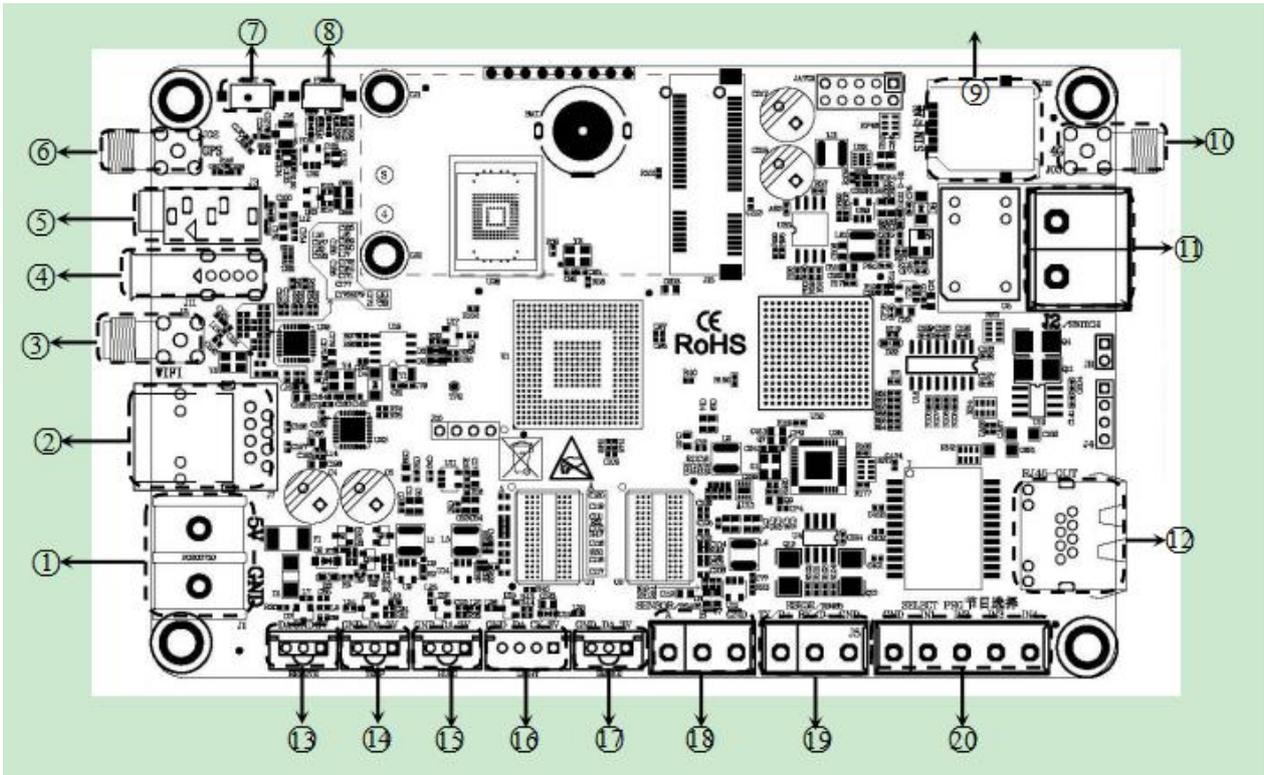
## Technical Specifications

Screen index	
Control size	Total pixels≤600K : 1024*600
Maximum width	8192
Maximum Height	2048

Specification	
Working voltage	5V ( 3.5V ~ 5.5V wide working voltage )
Power consumption	≤10W
Working temperature	-40°C ~ 80°C



## Interface Illustration



Interface define		
1	Power terminal	5V power interface, DC voltage input, rated 5V (support 3.5V ~ 5.5V)
2	100M	Ethernet interface, connecting computer
3	antenna	WIFI antenna
4	USB interface	USB interface , support Usb disk upload programs
5	AUDIO	Audio out
6	antenna	GPS antenna ( optional )
7	TEST	Test button
8	PROG	Program switch interface
9	SIM	Connect with SIM card ( optional )
10	antenna	4G antenna ( optional )
11	SWITCH	Relay switch interface
12	Lan out	Connect with receiving card
13	IR	IR interface
14	TEMP	Temperature sensor interface
15	HUMI	Temperature&humidity interface
16	LIGHT	Brightness sensor interface
17	SMOKE	Smoking sensor interface

18	Sensor interface	RS485 connect with variety sensors
19	RS485/ RS232	Standard RS485 , Can change to RS232
20	Program switch	4 bit program switch

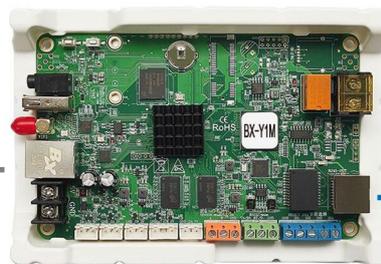
## Topological graph



LED Screen

Flat cable

BX-Y1M



Receiving card

Ethernet/WiFi/4G/Cloud

网线

Ethernet/RS232/RS485serial



PC/PAD/Mobile



MODBUS IPC

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ONBON APP