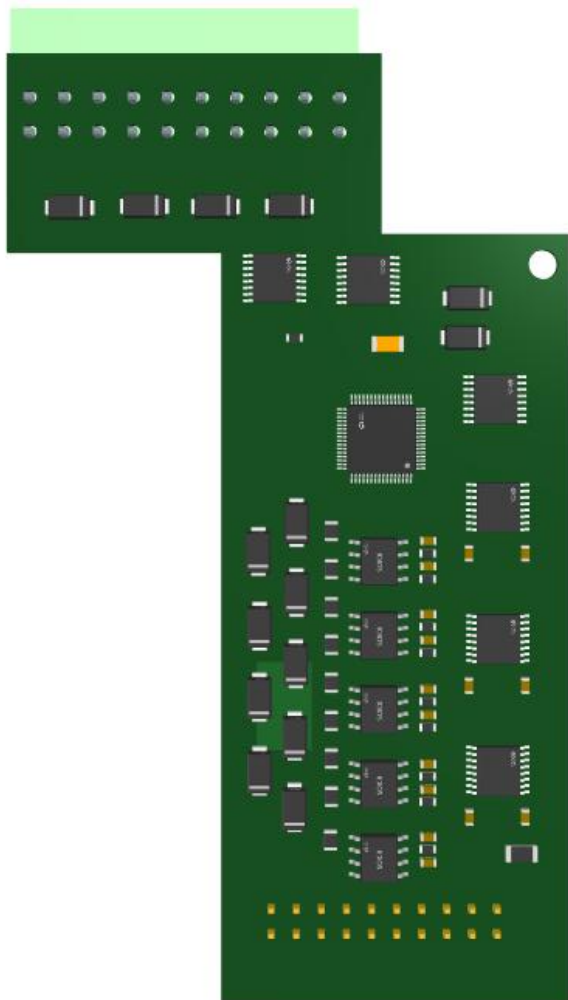


X Series I/O Modules

16CH GPIO Module X30



X30 User Manual

Version: V1.0

Date: 2025-4-9

Shenzhen Beilai Technology Co.,Ltd

Website: <https://www.bliiot.com>

Preface

Thanks for choosing BLIIOT X series I/O modules. These operating instructions contain all the information you need for operation of X series I/O modules.

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Disclaimer

This document is designed for assisting user to better understand the device. As the described device is under continuous improvement, this manual may be updated or revised from time to time without prior notice. Please follow the instructions in the manual. Any damages caused by wrong operation will be beyond warranty.

Revision History

Revision Date	Version	Description	Owner
2025/4/9	V1.0	Initial Release	PH

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1 Introduction

1.1 Overview

X30 is an industrial-grade expansion module specially designed for the ARMxy series ARM embedded computers. The module features overvoltage protection, fault protection, and overcurrent protection circuit designs to ensure stability and reliability in complex industrial environments. X30 provides 16 GPIO channels, greatly expanding the I/O capabilities of the ARMxy series ARM embedded computers.

The 16 GPIO channels of the X30 can be freely configured as input or output.

1.2 Technical Specifications

Name	Parameter	Description
Power Supply	Operating Power	Internal Voltage
	Working Voltage	12V-24V
	Power Consumption	1.5W
Digital Output	Output Mode	Single-ended output
	Output Voltage	High level: 3.3V Low level: 0.7V
	Maximum Output Current per Channel	5mA
Digital Input	Withstand Voltage	Maximum voltage: 3.5V Minimum voltage: 0V
	Logic Level	Logic 1: 3.0V ~ 3.5V Logic 0: 0V ~ 1.0V
	Input Current	5mA
Certifications	EMC	IEC 61000-4-2 (ESD) Level 3

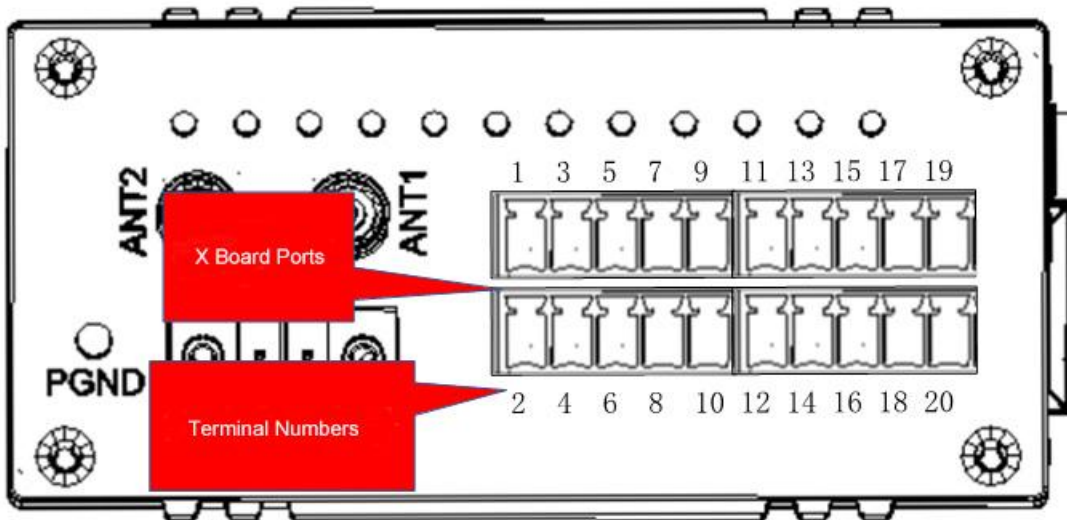
The GPIO ports do not support electrical isolation and cannot withstand transient high voltage or large current.

1.3 Model Selection

No.	Name	Model	Signal Type
1	16CH GPIO Module	X30	Digital Input and Digital Output

2 Wiring

2.1 Terminal Definitions



Notice: Please refer to the product's label for the specific terminal numbering sequence.

Terminal NO.	Definition	Description	Terminal NO.	Definition	Description
1	GPIO1	DI DO 1	11	GPIO2	DI DO 2
2	GPIO3	DI DO 3	12	GPIO4	DI DO 4
3	GPIO5	DI DO 5	13	GPIO6	DI DO 6
4	GPIO7	DI DO 7	14	GPIO8	DI DO 8
5			15		
6	GND	Ground Terminal	16	GND	Ground Terminal
7	GPIO9	DI DO 9	17	GPIO10	DI DO 10
8	GPIO11	DI DO 11	18	GPIO12	DI DO 12
9	GPIO13	DI DO 13	19	GPIO14	DI DO 14
10	GPIO15	DI DO 15	20	GPIO16	DI DO 16

3 Warranty Terms

- 1) This equipment will be repaired free of charge for any material or quality problems within one year from the date of purchase.
- 2) This one-year warranty does not cover any product failure caused by man-made damage, improper operation, etc

4 Technical Support

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