PLUTO SOLUTION PXM-100 PINIX Main Module User Manual

Contents

1 PLUTO SOLUTION PXM-100 PINIX Main Module
2 Product Information
3 Product Specification
4 Introduction of the product
5 Composition of the product
6 Appearance
7 Interface Port
8 Product Specifications
9 Product installation diagramHow to use PINIX Main Module
10 Power On
11 Precautions
12 FCC
13 Documents / Resources

PLUTOSOLUTION

PLUTO SOLUTION PXM-100 PINIX Main Module

Product Information

- **PINIX Main Module (PXM-100)**
- **Manufacturer:** PLUTOSOLUTION Inc.

Product Specification

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- The product image included in the specification sheet and the actual product may be slightly different.

Introduction of the product

PINIX Main Module” is a general purpose sensor gateway for collecting and transmitting data of various sensors and devices through various IF expansion module connections, and supports the connection o f up to two additional expansion interface modules.

Composition of the product

Basic configuration

<PINIX Main Module>

<Power Cable>

<24V 5A Power Adapter>

Expansion interface module (sold separately)

Division	Detail

	**Digital Interface Module** – Sensors (RS232, 485, 422) connection support – Input Power (24V/2A-8PIN Din, 24V/5A – Adapter) – Supports connection of up to 8 24V or 5V powered sensors (Fa ctory Option) Output : 24V 1) When supplying power to the adapter – MAX 96W (24V / 4A) * Up to 10W per port 2) When supplying power to the Main Module – MAX 40W (24V / 1 .66A) * Up to 10W per port Output : 5V 1) When supplying power to the adapter – MAX 40W (5V / 18A) * Up to 5W per port 2 When supplying power to the Main Module – MAX 40W (5V / 8A) * Up to 5W per port – Transmission of collected sensor data.
	**Analog Interface Module** – Supports connection of up to 4 analog sensors, connection of c urrent-to-voltage converters – Mainboard connection and power supply support – Ethernet 1(10/100) – Type : 8Pin Din – Analog Sensor 8-CH(Input Range: ±10 V, Sampling Rate: Max 8K Sampling Rate, CH Resolution: 16-bit) – Sampling Rate: All Channel 1K, 2K, 4K, 8K support Input Powe r 24V/2A 8PIN Din (M12) – Output Power 24V 800mA (24V/100mA per port)
	**Serial Interface Module** – Supports connection of up to 8 sensors (UART, I2C, RS485) – Mainboard connection and power supply support, Ethernet 1(1 0/100), 8-PIN Din – Input Power : 24V/2A – Output Power: Max 40W(5V/8A), Max 5W per port

Accessories (sold separately)

Division	Detail
	**Dedicated cable for interface expansion module connection** – DIN 8 PIN (M12)

Appearance

Appearance

Interface Port

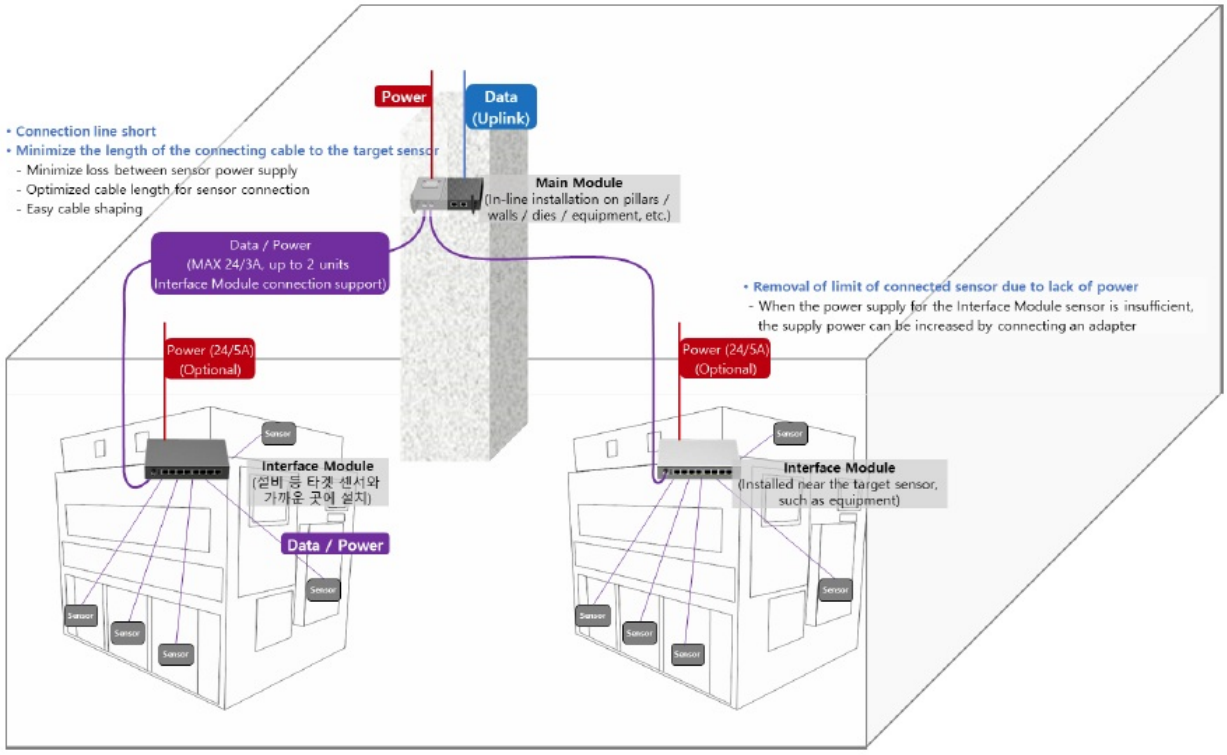
Num	Functions
	Display LCD
	Wi-Fi Antenna (2.4GHz / 5Ghz)
	Expansion Port (For expansion I/F connection) – Ethernet (DIN 8 PIN)
	Expansion Port (For expansion I/F connection) – Ethernet (DIN 8 PIN)
	ADB Debug Port – Micro USB 2.0
	UART Debug Port – Micro USB 2.0
	Eth1 External Ethernet (10/100, RJ-45) – For external connection (external connection to IO-Link Master)
	Eth0 External Ethernet (10/100/1000M, RJ-45) – For P-LTE Router/Uplink connection
	Power Switch (On/Off)
	3 Color LED (Blue: Power, Green : Network, Red: Status)
	Power Jack (24V / 5A)

Product Specifications

Division	Specifications
Product name	PINIX Main Module
Model name	PXM-100
Main Platform	• Quad 1.8GHz A53 • DDR4 4GB Memory • EMMC 32GB Storage
WiFi	• 802.11 a/b/g/n/ac (2.4, 5GHz)
Power	• 24V / 5A – Power supply through dedicated adapter • 24V / 3A (Output Power) – Sum of port output: 72W

Port	• 1GB Ethernet (1) – RJ45 • 10/100MB Ethernet (1) – RJ45 • ADB Debug Port (1) – Micro USB 2.0 • UART Debug Port (1) – Micro USB 2.0 • Expansion Port (For expansion I/F connection) – Ethernet(2) – DIN 8 PIN(M12)
Display	1.8inch LCD – Communication status display for each connected sensor port
Indicator	3 Color LED (Blue: Power, Red: Error, Green : Network)
Operating Temperature	0 ℃ ~ 50 ℃
Storage temperature	-20°C to 70 °C
Material	Anodized Aluminum Case
Weight	816±0.5g
Size(W*L*H)	215 * 124 * 35 / ±0.5 mm

Product installation diagram



How to use PINIX Main Module

Num.	Functions
	Display LCD
	Wi-Fi Antenna
	Expansion Port (For expansion I/F connection) – Ethernet (DIN 8 PIN)
	Expansion Port (For expansion I/F connection) – Ethernet (DIN 8 PIN)
	ADB Debug Port – Micro USB 2.0
	UART Debug Port – Micro USB 2.0
	Eth1 External Ethernet (10/100, RJ-45)
	Eth0 External Ethernet (10/100/1000M, RJ-45)
	Power Switch (On/Off)
	3 Color LED (Blue: Power, Green : Network, Red: Error)
	Power Jack (24V / 5A)

Power On

※ Please connect the interface module in the power 'Off' state and use it. Turn on the power switch to 'On' to start the operation of the PINIX Main Module.

1. **Power On**
   Blue LED of 'On' and 'Power' of LCD screen always 'On'
2. **Network communication**
   Green LED of 'Network' part is always 'On' After installing the product, when connecting to the network, it may take several seconds depending on the environment and conditions of the installation site.
3. **Expansion interface module connection**
   Connection with expansion interface module is possible through Expansion port. 24V Power Out is supported when an expansion module is connected.

How to check network communication status through PINIX Main Module Display LCD

1. Check network communication status
   You can check the operation status of the main body through the LCD display screen. When network communication is ready, you can check the co mmunication status of each expansion module on the LCD screen.
2. Check the network communication status of the extension interface module
   You can check the operation status of the expansion interface module through the LCD display screen.
   1. Ready Connect to the IF Module' : No connection with expansion module.
   2. Red LED 'On' when the expansion module is connected : Not connected to PINIX Main Module
   3. Green LED 'On' when the expansion module is connected : port is not active

Data transmission cycle
The data transmission cycle of PINIX Main Module is transmitted according to the cycle set in the DS IoT server.

Precautions

1. Be sure to use connectors and cables of the standard for the connection terminals. Using a connector o ther than the dedicated connector may cause product malfunction or malfunction.
2. Fix the product firmly without shaking in the place to be installed.
3. Do not install in a place exposed to water or rainwater or in a humid place.
4. Be careful not to let moisture or other foreign substances enter the product.
5. Be careful not to drop the product or subject it to external impact.
6. Do not disassemble, modify or change the product arbitrarily.
7. This product is designed for use in the temperature range of 0°C to 6 0°C. It is not recommended for use in extremely low or high temperatures outside this range.
8. Do not install in a place that does not meet the purpose of the product or use it outside of its intended use.
9. If there is a burning smell when operating the prod uct, immediately remove the power and contact the Pluto Solution Customer Support Center ((+82 031 337 6780).

FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause u ndesired operation.

Any changes or modifications (including the antennas) to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.
Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates , uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful in terference in which case the user will be required to correct the interference at his own expense This d evice is installed inside the facility. This device is used at a distance of more than 20cm from the human body.
❖ **RF Exposure Statement**
FCC RF Radiation Exposure Statement: This equipment complies with FCC RF Radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be colocated or operating in conjunction with any other antenna or transmitter. The material included in this product specification is the property of PLUTOSOLUTION Inc., and if it is reproduced or used without permission, you may be subject to legal punishment. The product image included in the specification sheet and the actual product may be slightly different. PINIX Main Module Product Specification PXM 100

Documents / Resources

	PLUTO SOLUTION PXM-100 PINIX Main Module [pdf] User Manual PXM-100, 2AZ8A-PXM-100, 2AZ8APXM100, PINIX Main Module, PXM-100 PINIX Main Module , Main Module, Module