Data Sheet

EM-1000E

Energy Storage Gateway

DS01010101 V1.01 Date:2026/5/6

General Description

The EM-1000E is a high-performance ARM industrial computer developed by ZLG ZHIYUAN Electronics for the industrial control market.

The EM-1000E industrial PC's main controller features multiple Cortex-A55 cores with a maximum clock speed of 1.6GHz, along with 4GB of onboard memory and 16GB eMMC storage. It offers a comprehensive array of functional interfaces, including Gigabit Ethernet, LVDS, USB, CANFD, RS485, RS232, DI, DO, M.2 slots.

features

- Multi-core Cortex-A55 1.6GHz
- 4GB DDR4
- 16GB eMMC
- Rich hardware interface
  - 6 Gigabit Ethernet interfaces
  - 2 USB Host communication ports
  - 8 channels RS-485 1 M.2 interfaces
  - 2 channels RS-232 interfaces
  - 2 channels isolated CANFD interfaces
  - 1 SD card slot
  - 1 LVDS interface
  - 18 channels optocoupler isolation DI
  - 6 channels relay isolation DO
  - 2 high-side drive DO
  - 1 M.2 interface

Applications

- Industrial Computer
- Industrial Gateway

Ordering Information

Model	Temperature	configuration
EM-1000E	-40°C ~ +70°C	4+16GB

Product picture



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Revision History

Revision	Date	Summary
V0.90	2025/07/02	Create Document.
V1.00	2025/12/16	Update Version.
V1.01	2026/3/30	Add installation diagrams and instructions.

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1. General Description

1.1 Product picture

Figure 1 Shows the Front Interface of the EM-1000E, and Figure 2 Shows the Rear Interface of the EM-1000E.

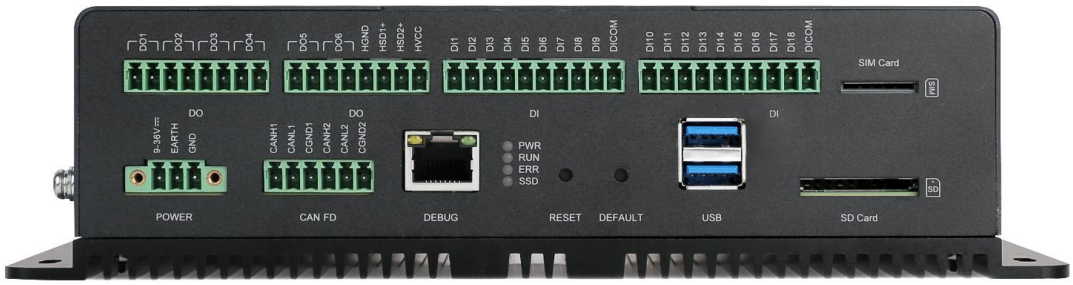


Figure 1 Front Interface of the EM-1000E

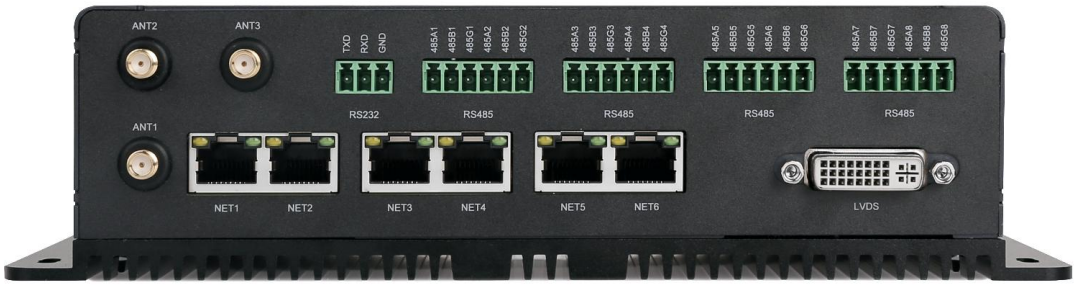


Figure 2 Rear Interface of the EM-1000E

Note: The appearance of the product is subject to the actual product sold, this document is only for illustration.

1.2 Main Parameter

Table 1 Main Parameters of EM-1000E

Parameter	Main Parameter
Processor	Multi-core 1.6GHz Cortex-A55 processor
RAM	4GB LPDDR4
ROM	16GB eMMC
Watchdog	board mounted hardware watchdog
Ambient Operating Temperature	-40 ~ +70℃
Ambient Operating humidity	5% ~ 95%
Ambient Operating altitude	<5000 meters
Weight	1340 g

1.3 Hardware Resource

Table 2 Hardware Resource

Interface/Peripheral	Count	Description
Ethernet	6	10/100/1000Mbps
USB	2	Host，USB3.0
CANFD	2	Isolation
RS485	8	Isolation
RS232	2	1 channels for communication，1 channel for Console Port
SD Card	1	
LVDS	1	The physical interface uses DVI terminals (including 1 USB port for touch control)
M.2	1	PCIe3.0 X1，supports SSD expansion
Dry contact DI	12	Internal pull-up 24V power supply
Wet contact DI	6	Input High level voltage: 9-24V, input low level voltage: 0-7V
DO	6	Relay contact resistance load 5A 250VAC/30VDC
High-side DO	2	MOS driver, external power supply 9-36V/2A
LED	4	PWR、RUN、ERR、SSD

1.4 Software Resource

- Linux core;
- Ubuntu system;
- eMMC driver；
- Ext4 file system；
- PCIe and SSD drivers;
- LVDS display driver, LCD backlight driver, and touch screen driver;
- USB Host driver supporting USB keyboards, mice, flash drives.
- Gigabit Ethernet driver;
- CANFD driver;
- RS485/RS232 driver;
- SD card driver with hot-swappable capability;
- I2C driver, including EEPROM and RTC driver;
- LED indicator driver;
- General Digital I/O driver;
- Buzzer drive;
- Watchdog and reset driver;

1.5 Applications

- energy storage gateway
- industrial computer
- industrial gateway

2. Electrical Character

2.1 Limiting Working Condition

Table 3 Working Environment Conditions

Parameter	Working environment conditions
Ambient Operating Temperature	-40℃~+70℃
Ambient Operating humidity	5%~95%

Note:

If the device is stored power-off for six months or longer, electron drift inside the eMMC may lead to data corruption.Reprogram the firmware prior to reuse is recommended.

2.2 Power Specification and Power Characteristics

Table 4 Power Supply Specifications and Power

Parameter	Min	Typical	Max	Unit	Description
input voltage	9.0	24.0	36.0	V	Minimum and maximum voltage allowed with 10% fluctuation
Power rating	--	10	21	W	The CPU operates at full load during peak power consumption. The ZPM-101RTW-01 screen is connected, and all external interfaces are operational (M.2 ports remain unconnected, with reserved power for these interfaces).

Note: Use a power supply that meets the ES1 and PS2 specifications.

3. Hardware Interface

3.1 Interface Distribution

The Interface Distribution of the EM-1000E Is Shown in Figure 3 and Figure 4.

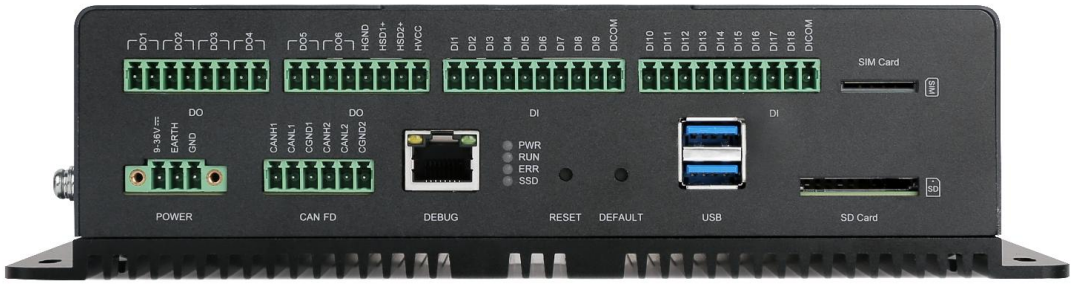


Figure 3 Front View of the EM-1000E

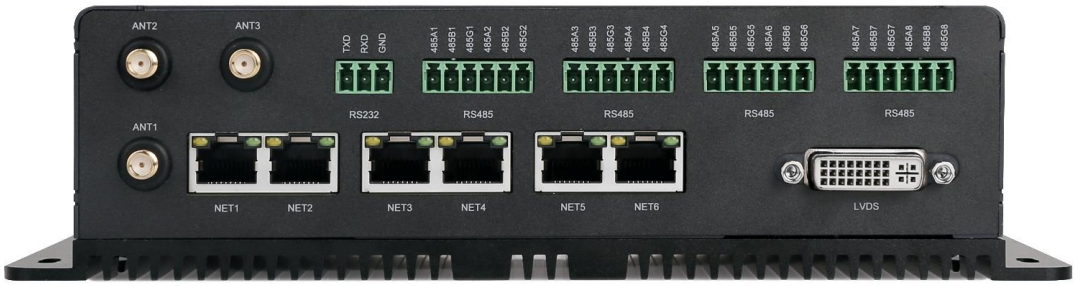


Figure 4 Back View of the EM-1000E

The lower front interface of the EM-1000E is shown from left to right in Table 5 .

Table 5 Front Lower Interface of EM-1000E

No.	interface/peripheral	interface/peripheral	Description
1	POWER	Power terminal socket	3.81-03P
2	CAN FD	CAN FD interface	3.81-10P
3	Debug	Console Port	RJ45
4	PWR RUN ERR SSD	Pilot lamp	LED
5	RESET、REFAULT	Tap the button	Rest and Default
6	USB1、USB2	USB dual-layer socket	USB3.0 x2
7	SD Card	SD card slot	

The upper interface on the front of the EM-1000E is shown from left to right in Table 6.

Table 6 Front Upper Interface of the EM-1000E

No.	interface/peripheral	interface/peripheral	Description
1	DO	Isolated DO interface	3.81-08P
2	DO	Isolated DO interface	3.81-08P
3	DI	Isolated DI interface	3.81-10P
4	DI	Isolated DI interface	3.81-10P
5	SIM Card	SIM card slot	This interface is currently unavailable for the current model.

The lower layer interfaces on the back of the EM-1000E are shown from left to right in Table 7.

Table 7 Lower-Layer Interfaces on the Back of the EM-1000E

No.	interface/peripheral	interface/peripheral	Description
1	ANT	Antenna	SMA，IPEX1 generation
2	NET1	Gigabit network port	RJ45
3	NET2	Gigabit network port	RJ45
4	NET3	Gigabit network port	RJ45
5	NET4	Gigabit network port	RJ45
6	NET5	Gigabit network port	RJ45
7	NET6	Gigabit network port	RJ45
8	LVDS	LVDS display interface	DVI

The upper interface on the back of the EM-1000E is shown from left to right in Table 8.

Table 8 Upper Interface on the Rear Side of the EM-1000E

No.	interface/peripheral	interface/peripheral	Description
1	ANT*2	Antenna	SMA，IPEX1 generation
2	RS232	Isolate RS232 interface	3.81-03P
3	RS485	Isolate RS485 interface	3.81-06P
4	RS485	Isolate RS485 interface	3.81-06P
5	RS485	Isolate RS485 interface	3.81-06P
6	RS485	Isolate RS485 interface	3.81-06P

3.2 Front Panel Interface Description

3.2.1 Power

The EM-1000E industrial computer is powered by a DC power (9-36V/20W) supply. Please use a suitable power supply. The physical form of the interface is a green socket with 3Pin, 3.81 mm spacing and screw holes, as shown in Figure 5. The pin definition is shown in Table 9.

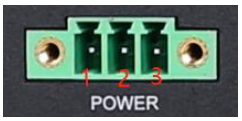


Figure 5 Power Interface

Table 9 Power Interface Pin Definitions

Pin	Pin name	Description
1	9~36VDC	Positive terminal of the power supply
2	EARTH	Chassis ground
3	GND	Negative terminal of the power supply

3.2.2 CANFD

The EM-1000E industrial PC features two CANFD interfaces as shown in Figure 6. The pin configuration from left to right is detailed in Table 10. For wiring, twisted-pair cables are recommended. In low-interference environments, unshielded cables may suffice. However, if field interference is present, shielded twisted-pair cables should be used with reliable single-point grounding of the shielding layer. In scenarios with severe electromagnetic interference, double-shielded twisted-pair cables are advised. For CAN interface connections, both the G pin and the opposite terminal should connect to the inner shielding layer, while the outer shielding layer should be grounded at a single point. The CANFD interface incorporates a software-controlled 120 Ω termination resistor, which can be activated or deactivated through software configuration.

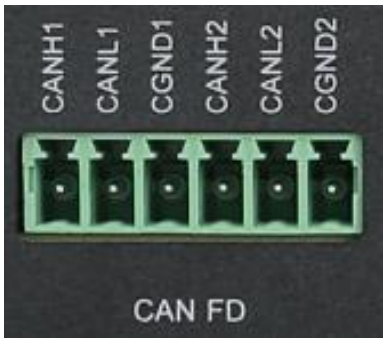


Figure 6 CANFD Interface

Table 10 CANFD Interface Pin Definitions

Pin	Pin name	Description
1	H1	Support CANFD
2	L1	Support CANFD
3	G1	G1 is isolated and cannot be connected to PE
4	H2	Support CANFD
5	L2	Support CANFD
6	G2	G2 is isolated and cannot be connected to PE

3.2.3 Debug

The EM-1000E industrial computer is equipped with two RS-232 interfaces. Among them, th e RS-232 interface with an RJ45 socket serves as a system debugging interface as shown in Figure 7. By connecting it to a computer via a serial extension cable and opening a serial port debugging tool, you can view system startup information and debugging information in the tool, facilitating t

he monitoring of the system status. The default serial port configuration is as follows: baud rate 1 15200 bps, 8 data bits, 1 stop bit, and no parity. See Table 11 for details.



Figure 7 Debug Interface

Table 11 Debug Interface Description

No.	Function	Description
3	TXD	/
4	GND	/
6	RXD	/

3.2.4 LED

The EM-1000E has four indicator lights, namely power indicator, operation indicator, error indicator and hard disk indicator, which are convenient to understand the operating status of the system under any circumstances. See Table 12 for details.

Table 12 Indicator Light Description

Symbol	Function	Description
PWR	Power indicator, red	ON: The device is powered on normally OFF: Power off the device
RUN	System status light: green	Flash: System running normally. ON/OFF: System crashed.
ERR	system error status light, red	ON: System error. OFF： System is running normally
SSD	Hard disk indicator, green	ON/Flash： The hard drive is normal. OFF： The hard drive is not in place or is abnormal.

3.2.5 Key

The EM-1000E front panel features a system reset button and a factory reset button, See Table 13 for details.

Table 13 Key Signal Description

No.	Symbol	Function	Description

No.	Symbol	Function	Description
1	RESET	System reset	Concealed
2	DEFAULT	Firmware burning	Concealed

To flash the factory firmware, insert the card into the SD card slot, hold the DEFAULT button, power on, wait 2 seconds, then release to start the firmware update.

3.2.6 USB

The dual-layer USB port supports various devices including USB flash drives, mice, keyboards, with the lower port dedicated to firmware updates.

Table 14 USB port Description

No.	Symbol	Function	Description
1	USB	USB 3.0	The upper USB port connects to the processor's USB2 port.
2	USB	USB 3.0	The upper USB port connects to the processor's USB2 port.

3.2.7 SD Card

The EM-1000E features a standard SD card slot for system debugging, firmware flashing, booting, and upgrades. Once the system is up and running, users can perform standard SD card operations.

3.2.8 DO

The EM-1000E provides 6 relay-isolated passive DO ports and 2 high-side drive DO ports, which can be used to control the power of external devices or as switches, etc.Table 15 shows the DO port signals.

Table 15 DO Interface Signal Description

Symbol	Function	Description	Remarks
DO1	DO1 output	Relay isolation	Contact normally open, resistive load 3A/5A 250VAC/30VDC
DO2	DO2 output	Relay isolation	Contact normally open, resistive load 3A/5A 250VAC/30VDC
DO3	DO3 output	Relay isolation	Contact normally open, resistive load 3A/5A 250VAC/30VDC
DO4	DO4 output	Relay isolation	Contact normally open, resistive load 3A/5A 250VAC/30VDC
DO5	DO5 output	Relay isolation	Contact normally open, resistive load 3A/5A 250VAC/30VDC
DO6	DO6 output	Relay isolation	Contact normally open, resistive load 3A/5A 250VAC/30VDC
HGND	High-side drive power supply negative terminal	Input GND	

Symbol	Function	Description	Remarks
HSD1+	High side drive channel 1	Optocoupler isolation	Continuous overcurrent capacity 2A
HSD2+	High side drive channel 2	Optocoupler isolation	Continuous overcurrent capacity 2A
HVCC	High-side drive power supply positive terminal	Input VCC	

Figure 8 Shows the Schematic Diagram of the High-Side Drive Interface.

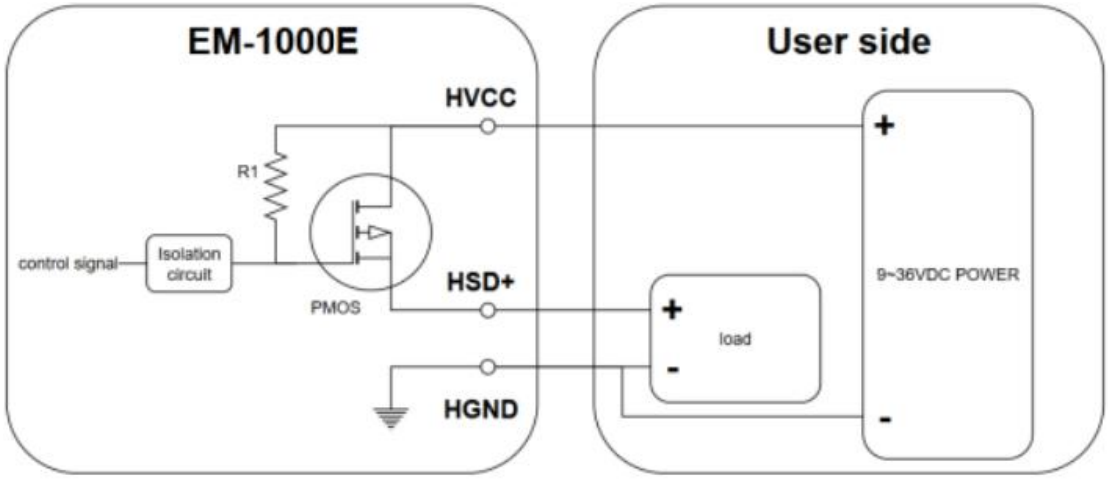


Figure 8 Schematic Diagram of High-Side Drive Interface Usage

3.2.9 DI

The EM-1000E features 18 optocoupler-isolated digital input(DI) channels with two internally interconnected common terminals (COM). Channels DI1 to DI12 are dry contacts designed for passive switch signals and sensor inputs, while DI13 to DI18 serve as wet contacts for +9~24V active switches. These wet contacts function as low-voltage side trigger signals to control external device power, or as interrupt enable signals for switches and triggers. This configuration maximizes channel capacity while ensuring signal independence and universal usability.Table 16 details the signal specifications for both dry and wet contact DI interfaces.

Table 16 DI Interface Signal Description

Symbol	Function	Description	Remarks
DI1	DI1 Input	Optocoupler LED+ Pole Pull-Up 24V Power Supply	Dry contact
DICOM	DI signal ground	Connect to DI signal ground	DI common port
DI18	DI18 Input	Connect to the optocoupler LED+ pole	Wet contact, +9~24V
DICOM	DI signal ground	Connect to DI signal ground	DI common port

Figure 9 and Figure 10 are Schematic Diagrams of the EM-1000E Dry Contact and Wet Contact DI Circuit, Respectively.

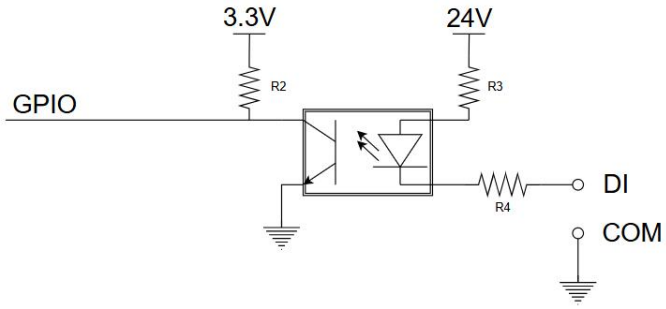


Figure 9 Schematic Diagram of the Circuit Principle for the Dry Contact DI

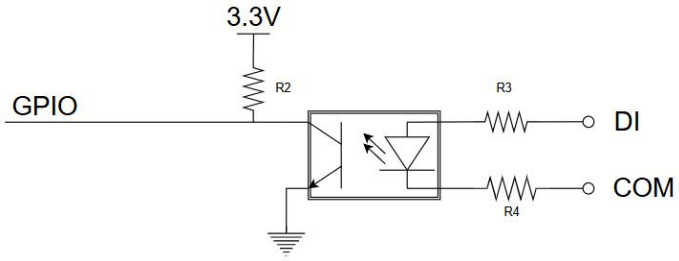


Figure 10 Schematic Diagram of the Circuit Principle of Wet Contact DI

The signal logic on the input side of the dry contact and wet contact and on the GPIO side is shown in Table 17.

Table 17 Explanation of DI Interface Signal Logic

Interface type	Digital input(DI)	Signal Output（GPIO）	Remarks
Dry contact	High level	High level	Switching signal
Dry contact	Low level	Low level	Switching signal
Wet contact	High level	Low level	Input high-level voltage: +9~24V
Wet contact	Low level	High level	Input high-level voltage: +9~24V

3.3 Back Panel Interface Description

3.3.1 RS232

The RS-232 interface with 3.81-3pin socket is an isolated communication interface, which can communicate with external RS-232 devices through serial port. Please refer to Table 18 for details.

Table 18 RS232 Serial Port Pin Specifications

Symbol	Signal	Description
TXD	RS232 TXD	EM-1000E Send
RXD	RS232 RXD	EM-1000E receiver
GND	GND	Signal ground

3.3.2 LVDS

The LVDS display interface of the EM-1000E industrial PC features a DVI socket containing power supply (when screen power exceeds 3W, this interface should be used exclusively for signal transmission with the screen powered by an independent external power source; when

powering the screen through this interface, keep the cable length under 1.5 meters to prevent screen distortion or other malfunctions), LVDS signals, backlight control PWM signals, and USB signals. The USB port supports touch screen functionality. The pin configuration ofthe DVI socket is shown in Figure 11, while signal definitions for each pin are detailed in Table 19. Note that screen cables must comply with DVI dual-channel specifications to avoid display or touch anomalies. Under no circumstances should the screen be plugged in or unplugged while powered, as this poses risks of damaging both the host unit and the display.

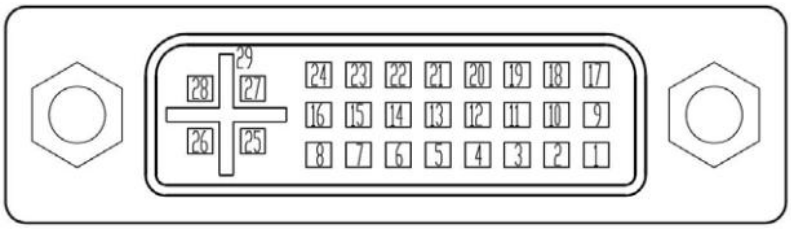


Figure 11 Front View of DVI Socket Pin Arrangement

Table 19 DVI Socket Pin Signal Definitions

Pin number	Signal	Description
1	OLDI0_A2_N	LVDS Data Channel 2 Differential Negative
2	OLDI0_A2_P	LVDS Data Channel 2 Differential Positive
3	GND	Signal ground
4	OLDI0_PWM	PWM signal for backlight control
5	NC	NC
6	5.0V	5VDC Power ouput
7	5.0V	5VDC Power ouput
8	NC	NC
9	OLDI0_A1_N	LVDS Data Channel 1 Differential Negative
10	OLDI0_A1_P	LVDS Data Channel 1 Differential Positive
11	GND	Signal ground
12	OLDI0_A3_N	LVDS Data Channel 3 Differential Negative
13	OLDI0_A3_P	LVDS Data Channel 3 Differential Positive
14	5.0V	5VDC Power ouput
15	GND	Signal ground
16	GND	Signal ground
17	OLDI0_A0_N	LVDS Data Channel 0 Differential Negative
18	OLDI0_A0_P	LVDS Data Channel 0 Differential Positive
19	GND	Signal ground
20	USB_TS_N	USB Differential Negative
21	USB_TS_P	USB Differential Positive
22	GND	Signal ground
23	OLDI0_CLK_P	LVDS clock Differential Positive
24	OLDI0_CLK_N	LVDS clock Differential Positive
25	NC	NC

Pin number	Signal	Description
26	NC	NC
27	NC	NC
28	NC	NC
29	GND	Signal ground

3.3.3 Ethernet

The EM-1000E industrial PC features 6 Ethernet ports with RJ45 physical connectors. NET1 and NET2 are chip-native Ethernet ports, while NET3,NET4,NET5,NET6 support PCIe expansion. The factory firmware configures all four ports to automatically switch between 10Mbps, 100Mbps, and 1000Mbps modes. For optimal performance, we recommend using the 1000Mbps mode. The port configuration is detailed in Figure 12.

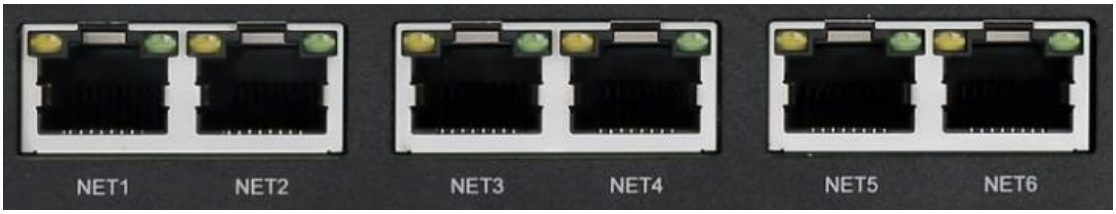


Figure 12 Distribution of Network Port Labels

Table 20 shows the channels of the 6 network ports.

Table 20 Channel Description of Network Ports

Symbol	Signal	Description
NET1	RGMII	Chip native network port.
NET2	RGMII	Chip native network port.
NET3	PCIe	PCIe expansion port.
NET4	PCIe	PCIe expansion port.
NET5	PCIe	PCIe expansion port.
NET6	PCIe	PCIe expansion port.

There are two LED indicators on each port, as shown in Table 21.

Table 21 Description of Network Port Indicators

LED position	Pigment	Function	Description
Right	Green	Link	Network connection always on.
left	Yellow	Active	Flash when the network is active.

3.3.4 RS485

The EM-1000E industrial computer provides eight isolated RS-485 interfaces, which are drawn out using four 3.81-6P sockets. Each 3.81-6P socket has two sets of RS-485 signals.Table 22 lists the signals of one of the sockets, and the other three sockets are similar.

Table 22 RS485 Pin Definitions

Symbol	Signal	Description

Symbol	Signal	Description
485A1	Channel 1 RS-485 A port signal	Isolation
485B1	Channel 1 RS-485 B port signal	Isolation
485G1	Channel 1 RS-485 signal ground	Isolation
485A2	Channel 2 RS-485 A port signal	Isolation
485B2	Channel 2 RS-485 B port signal	Isolation
485G2	Channel 2 RS-485 signal ground	Isolation

3.4 Extensible Interface

3.4.1 M.2

The EM-1000E industrial PC features a single M.2 expansion slot supporting PCIe3.0 x1 channel, enabling expansion of PCIe3.0 x1 compliant M.2 SSDs in 2280 and 2242 formats (note: customers must provide their own mounting screws and bolts when using the 2242 specification). SSDs must support PCIe protocol with physical interfaces labeled M_KEY or B&M_KEY, as illustrated in Figure 13,14,15 and 16.

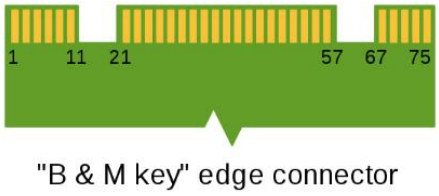


Figure 13 Schematic Diagram of the B&M KEY

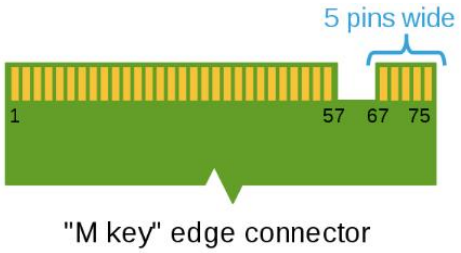


Figure 14 Schematic Diagram of the M KEY

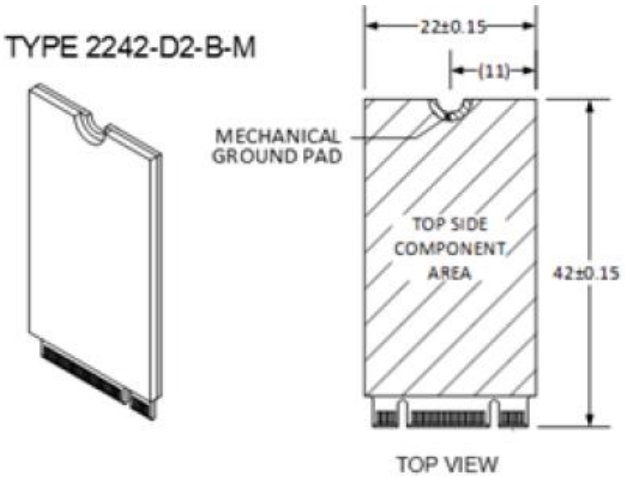


Figure 15 B&M KEY 2242 SSD Dimensions and Key Layout Diagram

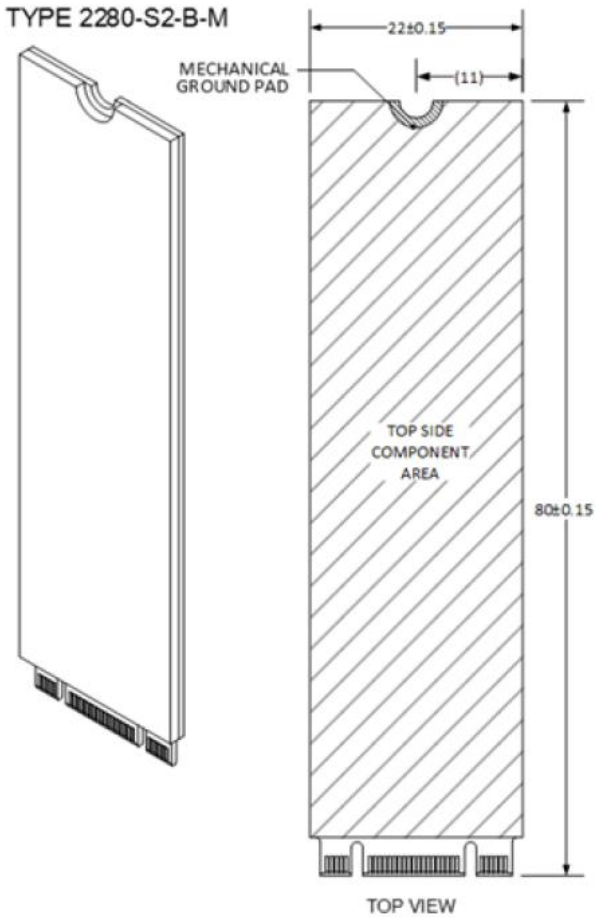


Figure 16 B&M KEY 2280 SSD Dimensions and Key Layout Diagram

3.5 Performance

3.5.1 SD Card Storage Performance Parameters

Table 23 SD Card Storage Performance Parameters

Test Item	Test Condition	Min	Max	Unit	Remarks
Writing rate	Write 1GB of data	-	16	MB/s	SanDisk-Ultra 32GB
Read rate	Read 1GB of data	-	36	MB/s	SanDisk-Ultra 32GB

3.5.2 DI Interface Performance Parameters

Table 24 DI interface performance parameters

Interface type	Enter the high-level voltage range	Enter the low voltage range
Wet contact（DI13~DI18）	9~24V	0~7V-

3.5.3 DO Interface Performance Parameters

Table 25 DO interface performance parameters

Interface type	Contact resistive load	Max switching voltage	Max switching current	Max switching power
Relay	5A 250VAC/30VDC	250VAC/125VDC(at0.3A)	5A	1250VA/150W

3.5.4 Ethernet Interface Performance Parameters

Table 26 Ethernet Interface Performance Parameters

Test Item	Test Condition	Min	Max	Unit	Remarks
Transmission rate	Unidirectional transmission	-	119	MB/s	-
Receiving rate	Unidirectional reception	-	118	MB/s	-

3.5.5 USB Interface Performance Parameters

Table 27 USB Interface Performance Parameters

Test Item	Test Condition	Min	Max	Unit	Remarks
Writing rate	Write 1GB of data	-	16	MB/s	Kingston USB flash drive USB3.0 32GB
Read rate	Read 1GB of data	-	36	MB/s	Kingston USB flash drive USB3.0 32GB

3.5.6 High-Side DO Performance Parameters

Table 28 Performance Parameters of High-Side DO

Input voltage	Continuous current carrying capacity	Max power under load	Testing environment
9~36VDC	3A	108W	+70℃

3.5.7 RS232/RS485 Interface Performance Parameters

Table 29 RS232/RS485 Interface Performance Parameters

Test Item	Min	Max
Baud rate	1200bps	115200bps
Transmission rate	-	11KB/s
Receiving rate	-	11KB/s

3.5.8 CAN/CANFD Interface Performance Parameters

Table 30 CAN/CANFD Interface Performance Parameters

Test Item	Test Condition	Min	Max	Unit
Baud rate	CAN	5	115200bps	Kbps
Baud rate	CANFD	50	11KB/s	Kbps
Transmission rate	CAN, 1Mbps baud rate, 8 bytes	-	11KB/s	fps
Receiving	CAN, 1Mbps baud rate, 8 bytes	-		fps

Test Item	Test Condition	Min	Max	Unit
rate				
Transmission rate	CANFD, arbitration field baud rate 1Mbps 80%, data field baud rate 5Mbps 75%, send extended data frame(accelerated), 64 bytes	-		fps
Receiving rate	CANFD, arbitration field baud rate 1Mbps 80%, data field baud rate 5Mbps 75%,64 bytes	-		fps

3.5.9 LVDS Interface Performance Parameters

Table 31 LVDS Interface Performance Parameters

Parameter	Default	Max
Resolution ratio	1280*800@60Hz	1920x1080@60Hz

4. Electromagnetic Compatibility

Table 32 Summary of Electromagnetic Compatibility Tests

Test Item	Test Interface	Test Criteria	Test Class
Electrostatic discharge immunity test	Power and signal ports	GB/T 17626.2	Level 3
Electrical fast transient pulse group immunity test	Power and signal ports	GB/T 17626.4	Level 3
Surge immunity test	Power supply (24V) and signal ports	GB/T 17626.5	Level 3
Test of Conductive Interference Resistance of RF Field Induction	Power and signal ports	GB/T 17626.6	Level 3
Radio frequency electromagnetic field radiation immunity	/	GB/T 17626.3	Level 3

5. Environmental Suitability

Table 33 Summary of Environmental Adaptability Tests

Test Item	Test criteria	Test Condition
Low temperature start-up and operation test	GBT 2423.1-2008	Test environment temperature: -40℃
High temperature start-up and operation test	GBT 2423.2-2008	Test environment temperature: +70℃
Steady-state damp heat test	GB/T 2423.3-2016	Test environment temperature and humidity: +40℃/95%RH
Change of temperature test	GB/T 2423.22-2012	Temperature Change Test of Product in Power On Test State from-40℃ to +70℃

6. Mechanical Dimension

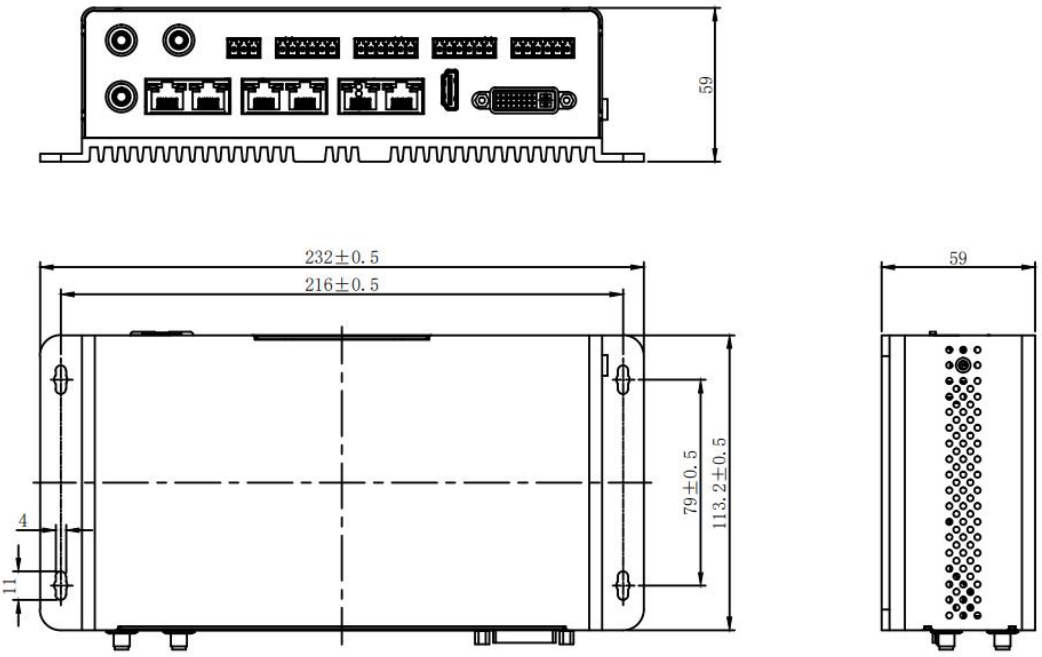


Figure 17 Mechanical Dimension

7. Installation Mathod

The EM-1000E supports wall mounting and DIN rail installation. Rail clips and mounting screws are included in the package; please refer to the packing list for details.

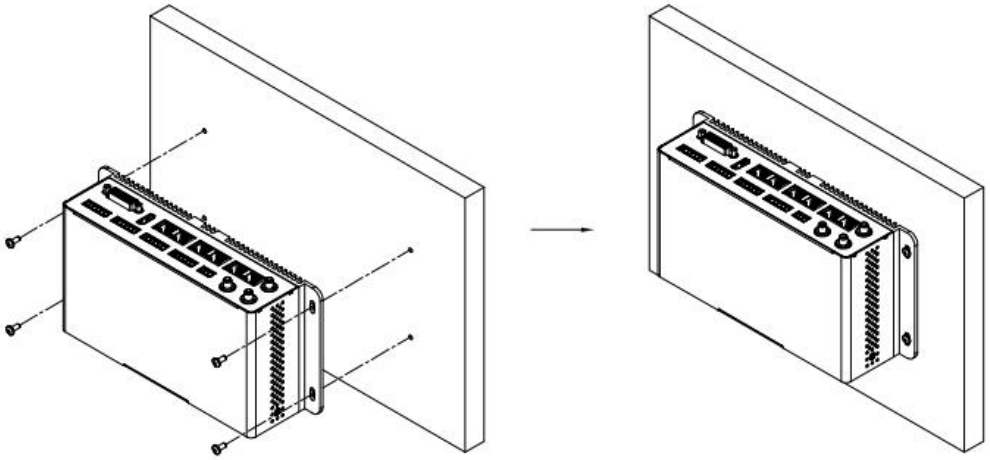


Figure 18 Wall mouanting diagram

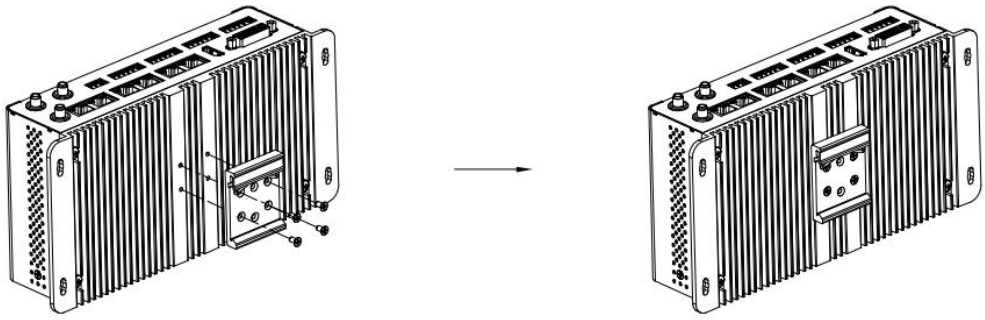


Figure 19 Rail clip installation diagram

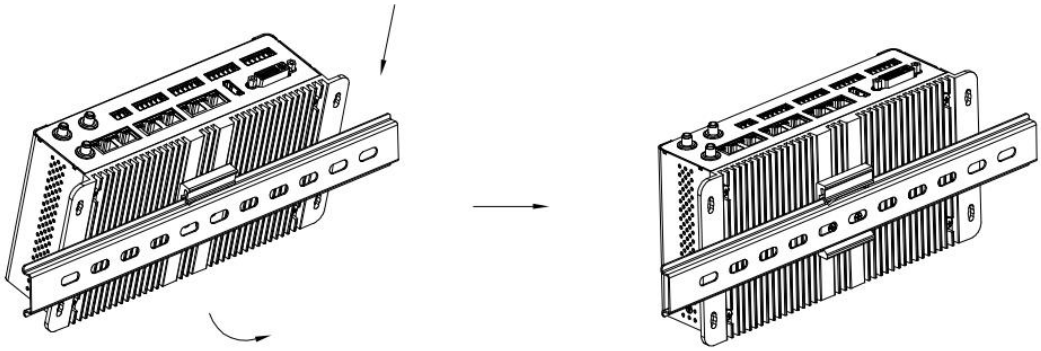


Figure 20 Installation using rail clips

8. Supported Accessories

Table 34 Tested Accessories Supported

No.	Name	Model	Manufacturer	Description
1	LCD display screen	ZPM-101RTW-01	ZLG	10.1 寸，1024*600，resistive touch, 250nits
2	LCD display screen	ZPM-101RTW-02	ZLG	10.1 寸，1280*800，resistive touch，800nits
3	LCD display screen	ZPM-101CTW-02	ZLG	10.1 寸，1280*800，capacitive touch，800nits
4	DVI connection cable	TLA00111001, LINE, DVI24+1 compati- ble with 24+5 M-M DVI cable, L= 1500mm	ZLG	Dual-channel DVI cable.
5	SSD	M.2 2280	/	PCIe3.0 x1

9. Container Loading List

Table 35 EM-1000E Packing List

No.	Name	Model	Quantity	Remarks
1	ARM IPC	EM-1000E	1	
2	Terminal blocks	3.81-03P	1	Power supply with fixed screw
3	Terminal blocks	3.81-03P	1	RS232 terminal blocks
4	Terminal blocks	3.81-06P	5	RS485 terminal blocks
5	Terminal blocks	3.81-08P	2	DO terminal blocks
6	Terminal blocks	3.81-10P	2	DI and CANFD terminal blocks
7	Hardware bracket	DIN rail bracket, 50*40mm, aluminum	1	Guide rail installation accessories
8	Metric screw	M4*8mm, round head, nickel-plated	4	Product installation fixed to wall or cabinet.
9	Metric screw	M3 * 8, countersunk head	4	DIN rail bracket fixing screws
10	Combination screw	PM4 * 8 triple combination flat washer	1	Side grounding screw installed on the housing
11	Metric screw	PM3*5,D=5.5,round head	1	M.2 module fixing screws
12	Certificate of conformity	Certificate of conformity	1	Certificate of conformity

10. Disclaimers

Based on the principle of providing better service to users,Guangzhou ZHIYUAN Electronics Co., Ltd. (hereinafter referred to as "ZHIYUAN Electronics") will present detailed and accurate product information to users as much as possible in this manual. However,due to the timeliness of the content in this manual,ZHIYUAN Electronics cannot fully guarantee the timeliness and applicability of this document at any time.ZHIYUAN Electronics reserves the right to update the content of this manual without prior notice.In order to obtain the latest version of information,please visit the official website of ZHIYUAN Electronics regularly or contact the staff of ZHIYUAN Electronics.Thank you for your tolerance and support!

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