

CrowPanel-CM4 Display Pi Terminal

User Manual (V1.0)

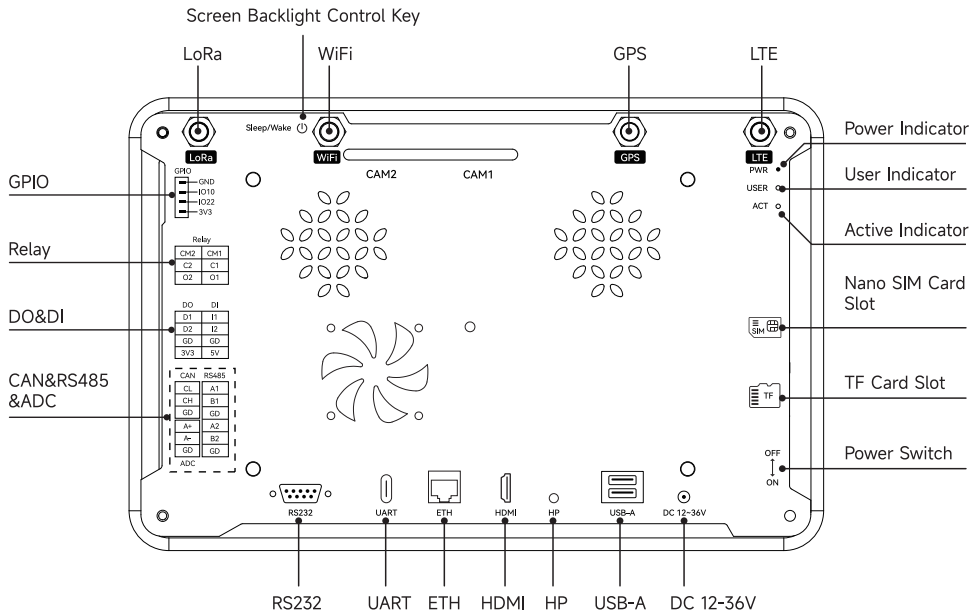
Overview

CM4 Display is a multi-functional embedded industrial control device designed based on the Raspberry Pi platform. Equipped with a 7-inch capacitive screen, it has multiple industrial interfaces and supports multiple wireless communication protocols. By using the CM4 as the main controller, it quickly handles real-time control tasks and monitors ongoing operations. Its industrial design allows it to withstand harsh environments.

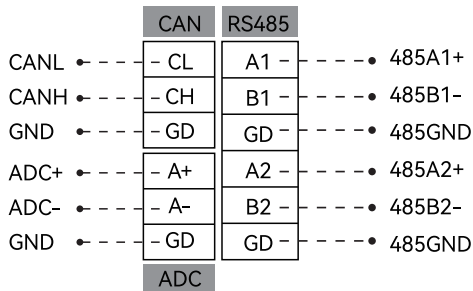
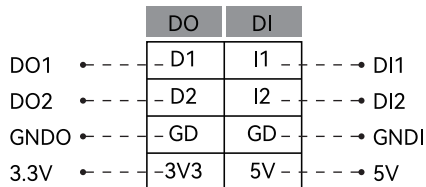
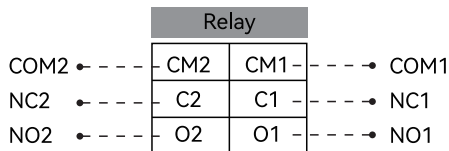
The CM4 Display integrates with Node-RED, which is compatible with the software running on the Raspberry Pi and pre-installed Rasbian system. Using an all-in-one design, it boasts a robust open-source ecosystem tailored for various industry applications.

Interface

⚠ Note: The acrylic case needs to be purchased separately



Pin and Indicator Definition



PWR ● CM4 Power Indicator

USER ○ User-defined Function Indicator

ACT ○ CM4 Status Indicator

Specification-1

CM4 Processor

CPU	Broadcom BCM2711, quad core Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz
Flash	4GB
Storage	64GB TF Card or SSD (Optional)
System	Raspbian (Compatible with Node-RED)

Display

Size	7"
Resolution	1024*600
Luminance	450 cd/m ²
Touch Type	5-point capacitive touch

Wireless Communication

WiFi	2.4/5.0 GHz on CM4
Bluetooth	BLE 5.0 on CM4
LoRa	Mini-PCle socket (Optional)
LTE	Mini-PCle socket (Optional)

Specification-2

Edge Interfaces

2*20Pin Header	Before referencing CM4 resources, please confirm whether the resources have been reused
CAM*2	MIPI CSI camera interface, compatible with all camera specifications of Raspberry Pi
GPIO	GND/GPIO10/GPIO22/3.3V, extend custom functions and connect to the button board to use custom functions
Relay	2*3Pin, control the relay switch through high and low voltage levels
DO&DI	2*4Pin, support two digital input and two digital output channels
CAN&RS485&ADC	2*6Pin, RS485 occupies six pins, CAN occupies three pins, and ADC occupies three pins
RS232	DB9 interface, reserve external industrial non-isolated serial port
UART (Type-C)	USB2.0. USB to UART. Connect to USB device
ETH	RJ45 interface. 10/100/1000Mbps. Used for connecting to Ethernet or other local area networks

Specification-3

Edge Interfaces

HDMI	HDMI2.0. Used for video output. Support video output up to 4K @ 60 fps
HP	3.5mm audio jack. Used for connecting headphone or microphone
USB-A*2	USB-A 2.0. Used for connecting USB devices
DC 12-36V	Used for powering the device
TF Card Slot	64GB TF card. Press the card to insert or eject it from the slot
Nano SIM Card Slot	Insert a Nano SIM card and pair it with a 4G module to provide 4G cellular data communication for the device
2*4Pin Header	Used for expanding the USB interface

Other Interfaces

PoE	Power CM4
Fan	Connect the fan to dissipate heat
SPK*2	Connect the speakers for sound output

Specification-4

Environmental Spec

Front Panel IP Rating	IP65
Operating Temperature	-10~60°C
Storage Temperature	-20~70°C
Relative Humidity	10~90%

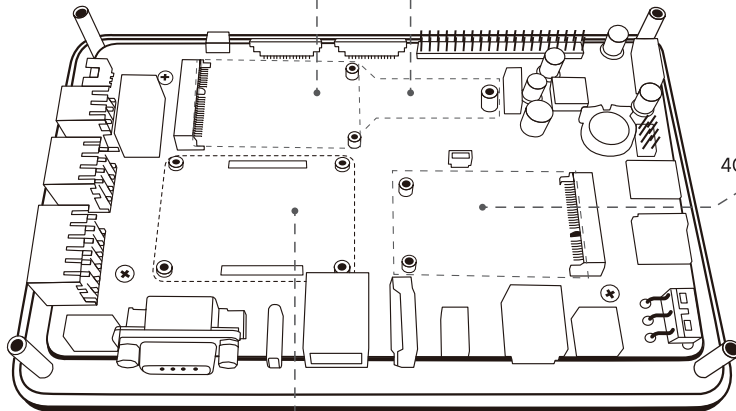
Parameters

Front Glass Thickness	1.8mm
With acrylic case	
Dimesion	192*125*46mm
Net Weight	676g
Without acrylic case	
Dimesion	182*115*29mm
Net Weight	389g

Installation-1

LoRaWAN Gateway Module

SSD

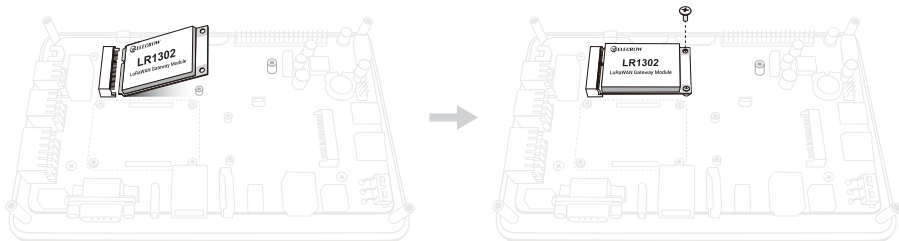


4G Module

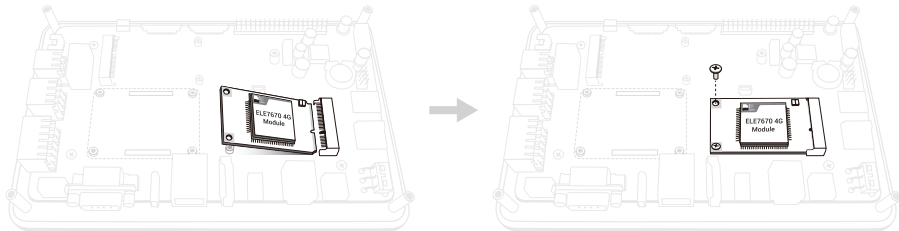
Raspberry Pi CM4

Installation-2

- Installation of LoRaWAN Gateway Module



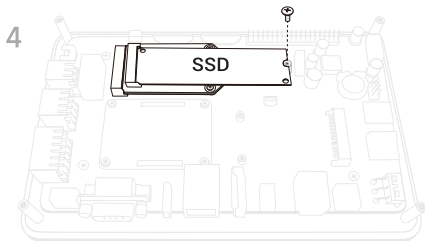
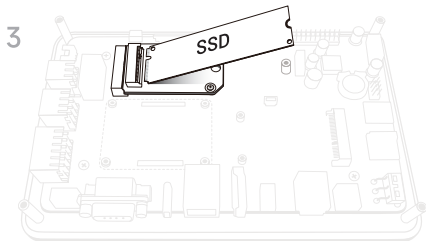
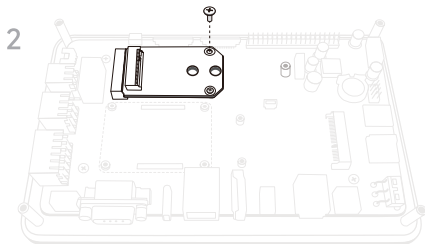
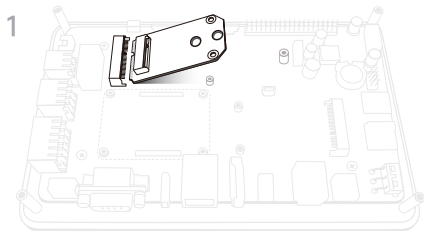
- Installation of 4G Module



Please insert the module at a 45° angle and then tighten the screws to lock it in place.

Installation-3

- Installation of SSD



Please insert the module at a 45° angle and tighten the screws to secure it.

Package List *Without Acrylic Case

- CrowPanel-CM4 Display*1 (Optional Acrylic Case)
- Inserted 64GB TF Card*1 (Image File Loaded)
- IPEX to SMA Female Adapter Cable*1
- 2*3Pin Phoenix Type Connector*1
- 2*4Pin Phoenix Type Connector*1
- 2*6Pin Phoenix Type Connector*1
- WiFi External Antenna*1
- 12V-2A Adapter*1
- User Manual*1

Customer Support

If you have any questions, customer support is always standing by.

 info@elecrow.com

 techsupport@elecrow.com

For more technical details, please visit the relevant webpage.