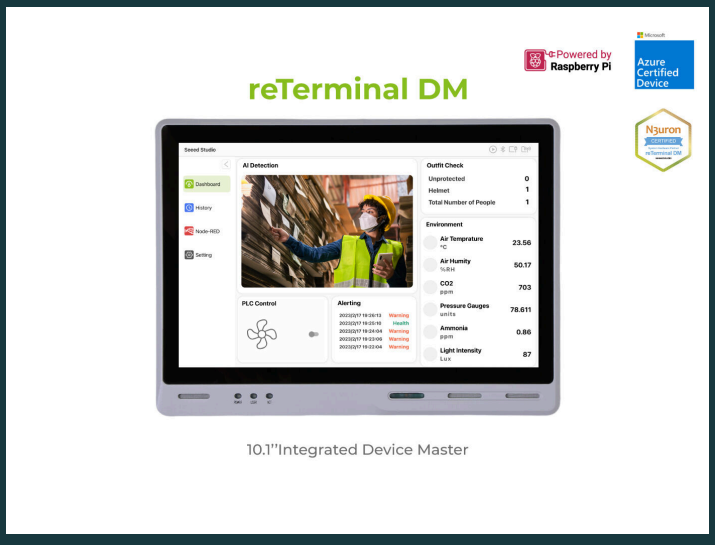
seeed studio

INDUSTRIAL PRODUCT DATASHEET

reTerminal DM - 10.1'' HMI| CM4108032 | Raspberry Pi Rugged Panel PC | Panel Controller | with Camera & PoE

reTerminal DM - 10.1'' HMI| CM4108032 | Raspberry Pi Rugged Panel PC | Panel Controller | with Camera & PoE is a rugged Raspberry Pi CM4-based all-in-one HMI/PLC/Panel PC/gateway with IP65 front panel, integrated camera and PoE,...

SKU	UPDATED	PRICE
114070221	2026-10-23 02:44:41	$603.90(Excl. VAT)



10.1''Integrated Device Master

Overview



10.1''Integrated Device Master

The reTerminal DM - 10.1'' HMI| CM4108032 | Raspberry Pi Rugged Panel PC | Panel Controller | with Camera & PoE is a rugged, open-source panel PC powered by Raspberry Pi CM4, featuring an IP65 front panel, -10~50°C operating temperature, integrated camera and PoE, PCIe extensions, and hybrid connectivity (4G LTE, LoRaWAN®, Wi-Fi, BLE, RS485/RS232, CAN bus, 1000M Ethernet, USB, HDMI). It combines HMI, PLC, Panel PC, and gateway functions in one cost-effective Device Master with native Node-RED low-code programming, a two-year warranty, and product lifetime at least until 2034, suitable for energy management, building management, MedTech, construction, transportation, agriculture, retail, logistics, and water management applications.

Key Features

- Rugged design for harsh working environment: IP65 front panel, -10~50°C operating temperature
- Open-source design in software and hardware: Powered by Raspberry Pi CM4, easy for customization or derivatives with the PCIe extensions design, integrated a camera and a PoE module
- Cost-effective Device Master: HMI, PLC, Panel PC and gateway all-in-one. Perfect for the distributed hub devices
- Low code programming for event-driven applications: Natively integrated Node-RED for flow-based editing and one-click deployment, compatible with all software runs on Raspberry Pi
- Hybrid connectivity: Support 4G LTE, LoRaWAN®, Wi-Fi, BLE, RS485/RS232, CAN bus, 1000M Ethernet, USB, HDMI
- Product Warranty: Two-year warranty

Note: Product Lifetime:at least until 2034 (Based on Raspberry Pi)

Product Gallery





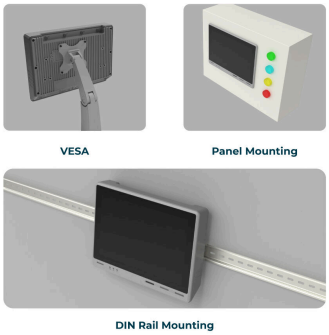


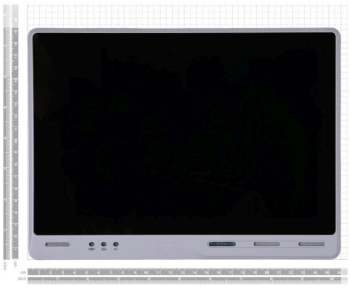














Specification

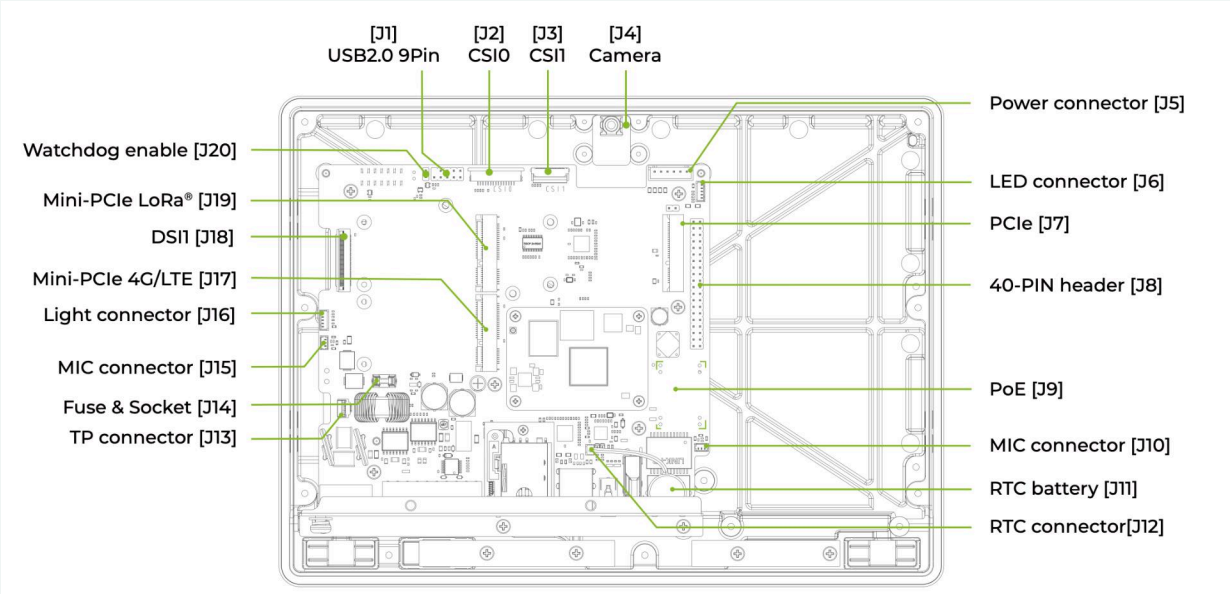
Basic	
CPU	CM4 Quad-core Cortex-A72@ 1.5GHz
Memory	8GB
Storage	32GB eMMC M.2 NVMe SSD Slot 2280-M Key (optional) *This optional feature requires the additional purchase of an 512GB NVMe M.2 PCIe Gen3x4 2280 Internal SSD - Seeed Studio and a Dual LAN & SSD PCIe Extension Board (SKU 114993112)
OS Support	Raspbian SenseCraft Edge OS
Display	
Size	10.1''
Max. Resolution	1280 x 800
Max. Colors	16.7M (8-bit)
Luminance (nit)	400
Viewing Angle (H/V°)	170/170
Backlight Life (hrs)	30000
Touch Type	10-point Capacitive
Pencil Hardness	7H
Video&Audio	
Video	HDMI2.0

Audio	2 x Microphone Buzzer 3.5mm Audio Jack
Camera	Connector: CSI Chip type: Sony IMX219 Resolution for image: 3280x2464 Resolution for video: 1080p30, 720p60 and 640x480p90 Size: 25mm x 23mm x 9mm
Interfaces	
Ethernet	1 x 10/100/1000 Mbps 2 x 10/100/1000 Mbps (optional) *This optional feature requires the additional purchase of a Dual LAN & SSD PCIe Extension Board (SKU 114993112)
USB	2 x USB-A 2.0 Host
RS485	1 x RS485 > Terminal Block 1 xRS485 > DB9 (optional) *This optional feature requires the additional purchase of a Dual DB9 PCIe Extension Board (SKU 114993111)
RS232	1 x RS-232 > Terminal Block 1 xRS-232 > DB9 (optional) *This optional feature requires the additional purchase of a Dual DB9 PCIe Extension Board (SKU 114993111)
CAN	1 x CAN-BUS > Terminal Block
DI	4x DI > Terminal Block
DO	4x DO > Terminal Block
40pin GPIO	Inside
Wireless Communication	
Wi-Fi	On-chip Wi-Fi *This optional feature requires the additional purchase of a Raspberry Pi Compute Module 4 Antenna Kit - Seeed Studio
BLE	On-chip BLE
LoRa®	Mini-PCIe for LoRaWAN® (optional) *This optional feature requires the additional purchase of a LoRa Antenna Kit for reTerminal DM - 868-915 MHz - Seeed Studio and a region-optional LoRaWAN Gateway Module (SPI) (SKU 114992967), WM1302 LoRaWAN Gateway Module (SPI) - EU868, based on SX1302 - Seeed Studio)
Cellular	Mini-PCIe for 4G (optional) *This optional feature requires the additional purchase of a 4G Antenna Kit for reTerminal DM - Seeed Studioand LTECat4EC25-AFXGA-mini-PCIe - 2G/3G/4G communication, built-in multiple GNSS - Seeed Studio, LTECat4EC25-AFXGA-mini-PCIe - 2G/3G/4G communication, built-in multiple GNSS - Seeed Studio)
Power	
Input	2-pin Terminal Block
PoE	12.95W PoE
Power Range	12~24V DC *There is no adapter in the standard product. Please purchase the correct PowerAdapter, 12V/2A/24W, American Standard Plug, DC Output - Seeed Studio, PowerAdapter, 12V/2A/24W, European Standard Plug, DC Output - Seeed Studio version separately if required.
Power Consumption	6W Typ. 9W Max.
Power Switch	NO
Reboot Switch	YES
Environment	
Ingress Protection	IP65 Front Panel
Operating Temperature	-10~50 °C
Storage Temperature	-20~70 °C
Humidity (Operating)	10~95% RH
Mechanical	
Dimension (W x H x D)	259.4 x 191 x 42.2 mm
Enclosure	Die-cast Aluminum Alloy

Mounting	Panel, VESA, DIN-rail *There is no mounting accessories in the standard product. If PanelmountKitforreTerminalDM-Seeed Studio or Sliding Block for Linear Guideway Rail(screws included) - Seeed Studio accessories are required, please purchase them separately.
Weight (Net)	1.8Kg
Vibration Resistance	5 Grms random vibration (5 ~ 500Hz) during operation, IEC60068-2-64
Shock Resistance	Operating 50 G peak(11ms duration), IEC 60068-2-27
Certification	
CE, FCC, UCKA, RoHS, TELEC, REACH	
EMC	
ESD	EN61000-4-2, Level 3
EFT	EN61000-4-4, Level 2
Surge	EN61000-4-5, Level 2
Others	
RTC	High Accuracy RTC (with a CR2032 battery)
Hardware WatchDog	1~255s
Security	ATECC608A
Warranty	2 Years
Heat Dissipation	Fanless

Hardware Overview





Applications

- **Energy Management:** Monitor grids, monitor and maintain solar panels.
- **Building Management:** Central control panel for BAS, individual room control panels.
- **MedTech:** Medical device control panel, patient monitoring station.
- **Construction:** BIM, Monitor sites, control heavy machinery.
- **Transportation:** Monitor vehicle health, control ticketing systems (buses, trains).
- **Agriculture:** Control irrigation systems, monitor greenhouse conditions.
- **Retail:** Display digital signage, control self-checkout kiosks.
- **Logistics:** Track inventory movement, manage warehouse operations.
- **Water Management:** Monitor water treatment plants, control water distribution.

Part List

reTerminal DM (Camera & PoE)	x 1
20-pin Terminal Block Connector(Male)	x 1
2-pin Power Female Jack to Screw Terminal Adapter	x 1
Screw Pack	x 1
Fuse	x 1
User Guide	x 1
Wi-Fi/BLE feeder cable(installed)	x 1
Wi-Fi/BLE Antenna	x 1

Compliance & Logistics



HSCODE	8471419000
USHSCODE	8517180050
UPC	
EUHSCODE	8471707000
COO	CHINA

FCC Requirement

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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 undesired operation.

15.21

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy.

If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Resource Links

- https://www.seeedstudio.com/reTerminal-DM-With-Camera-p-5648.html
- reTerminal DM Datasheet
- reTerminal DM User Manual
- reTerminal DM Azure IoT Edge
- PoE Datasheet
- Seeed's Raspberry Pi-based Success Cases
- reTerminal DM EMC Test Report
- reterminal DM Vibration and Shock Test Report
- reTerminal DM CE Certificate
- reTerminal DM FCC Certificate
- reTerminal DM Structural Design File.stp
- reTerminal DM Schematic Design & PCB Design & Gerber Files
- SeeedRasperryPiFlyer

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