An Integrated Device Master to Unify Data Flow and Manage Onsite Device

HMI, PLC, Panel PC and Gateway in one
Perfect for distributed hub device

Low code programming for event-driven applications
Natively integrated Node-RED for flow-based editing and one-click deploy, compatible with all software runs on Raspberry Pi

Rugged design for harsh working environment
IP65 front panel, -10~50°C operating temperature

Hybrid connectivity
Support 5G, 4G LTE, LoRaWAN®, Wi-Fi, BLE, RS485/232, CANBus, 1000M Ethernet, USB, HDMI

Open-source design in software and hardware
Raspberry Pi CM4 8GB RAM 32GB eMMC core, welcome customization or derivatives

Product warranty
Two-year warranty

Application

- Water Treatment
- Energy Management
- Production Automation
- Automative & Marine HMI
## reTerminal DM Specification

### Basic

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CPU</strong></td>
<td>CM4</td>
</tr>
<tr>
<td></td>
<td>Quad-core Cortex-A72@ 1.5GHz</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>8GB RAM</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>32GB eMMC</td>
</tr>
<tr>
<td></td>
<td>M.2 NVMe SSD Slot 2280-M Key*(optional)</td>
</tr>
<tr>
<td><strong>OS Support</strong></td>
<td>Raspbian</td>
</tr>
<tr>
<td></td>
<td>SenseCraft Edge OS</td>
</tr>
</tbody>
</table>

### Power

- **Input**: 2-pin Terminal Block
- **PoE**: IEEE 802.3af Standard *(optional)*
- **Power Range**: 12-24V DC *(Note: No adapter in the standard product.)*
- **Power Consumption**: 6W Typ; 9W Max
- **Power Switch**: NO
- **Reboot Switch**: YES

### 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**: HDMI 2.0
- **Audio**: Microphone x 2
- **3.5mm Audio Jack**: Buzzer
- **Camera**: CSI *(optional)*

### Interfaces

- **Ethernet**: 1 x 10/100/1000 Mbps
- **USB**: 2 x USB-A 2.0 Host
- **RS485**: 1 x RS-485 > Terminal Block
- **RS232**: 1 x RS-232 > Terminal Block
- **CAN**: 1 x CAN-BUS > Terminal Block
- **DI**: 4 x DI > Terminal Block
- **DO**: 4 x DO > Terminal Block
- **40 Pin GPIO**: Inside
- **Wi-Fi**: On-chip Wi-Fi*
- **BLE**: On-chip BLE
- **LoRa®**: Mini-PCIe for LoRaWAN*(optional)*
- **Cellular**: Mini-PCIe for 4G *(optional)*

### 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 42.2mm
- **Enclosure**: Die-cast Aluminum Alloy
- **Mounting**: Panel*^3, VESA, Din-Rail*^4 *(Note: No mounting accessories in the standard product)*
- **Weight (Net)**: 1.8 Kg
- **Vibration Resistance**: 5 Grms random vibration (5 ~ 500 Hz) during operation, IEC60068-2-64
- **Shock Resistance**: Operating 50 G peak (11ms duration), IEC 60068-2-27

### Certification

- **CE, FCC, RoHS, UKCA, Telec, REACH**
- **EMC**: EN61000-4-2, Level 3
- **EFT**: EN61000-4-4, Level 2
- **Surge**: EN61000-4-5, Level 2

### Others

- **RTC**: High Accuracy RTC
- **Hardware WatchDog**: 1~255s
- **Security**: ATECC608A
- **Warranty**: 2 Years
- **Heat Dissipation**: Fanless

*Options marked with an asterisk [*] require additional purchase of corresponding accessory with the corresponding part number in the accessories list.
*The LoRa® Mark is a trademark of Semtech Corporation or its subsidiaries.
<table>
<thead>
<tr>
<th>No.</th>
<th>Product Name</th>
<th>SKU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SSD</td>
<td>112990267</td>
</tr>
<tr>
<td>2</td>
<td>Dual LAN &amp; SSD Extension Board</td>
<td>114993112</td>
</tr>
<tr>
<td>3</td>
<td>reTerminal DM device with Camera &amp; PoE version</td>
<td>114070221</td>
</tr>
<tr>
<td>4</td>
<td>Dual USB3 Extension Board</td>
<td>114993113</td>
</tr>
<tr>
<td>5</td>
<td>Dual DB9 Extension Board</td>
<td>114993111</td>
</tr>
<tr>
<td>6</td>
<td>CM4 WiFi/BLE Antenna Kit</td>
<td>114992364</td>
</tr>
<tr>
<td>7</td>
<td>LoRa Antenna Kit</td>
<td>110061501</td>
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<tr>
<td>8</td>
<td>Region optional LoRaWAN® Gateway Module (SPI)</td>
<td>US915 114992967 EU868 114992549</td>
</tr>
<tr>
<td>9</td>
<td>4G Antenna Kit</td>
<td>110061502</td>
</tr>
<tr>
<td>10</td>
<td>Region optional LTE Cat 4 Module</td>
<td>North American 113991134 EMEA and Thai 113991135</td>
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<tr>
<td>11</td>
<td>PoE Module Kit</td>
<td>110991925</td>
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<tr>
<td>12</td>
<td>Power Adapter</td>
<td>US 110061505 EU 110061506</td>
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<tr>
<td>13</td>
<td>Panel mount Kit</td>
<td>110061503</td>
</tr>
<tr>
<td>14</td>
<td>Din-Rail mount Kit</td>
<td>114070181</td>
</tr>
<tr>
<td>15</td>
<td>GPS Antenna Kit for reTerminal DM 4G Module</td>
<td>110061521</td>
</tr>
</tbody>
</table>
Customization Service

Custom Design reTerminal DM, Powered by Raspberry Pi CM4

Hardware Overview

1. Microphone
2. LED Indicator
3. IR Light Sensor
4. Buzzer
5. Microphone
6. Power In
7. RS485/232/DIO/CAN
8. Boot Switch
9. SIM Slot
10. USB Device
11. Reset Hole
12. USB Host
13. Audio Out
14. HDMI
15. 1000M Ethernet
16. SSD Slot
17. PCIe Flexible Extension Slot for Customizations
18. 4 Reserved Antennas Ports for Wireless Possibilities

Discuss your customization inquiry based on reTerminal DM with us at https://www.seeedstudio.com/odm-service.html?schema=Raspberry%20Pi%20Device%20Customization or contact us at odm@seeed.cc
