

INDUSTRIAL PRODUCT DATASHEET

reTerminal D1001 8" LCD Touch Display | HMI Device | Resolution 1280×800 | ESP32- P4 and ESP32-C6 | Wi-Fi 6 and BLE5 | Camera and Dual Microphone | 2500mAh Battery

reTerminal D1001: an 8-inch HMI touch display with ESP32-P4 processing, Wi-Fi 6, camera, and audio for smart home, intercom, and industrial applications.

SKU

100058144

UPDATED

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PRICE

\$84.90(Excl. VAT)



Overview

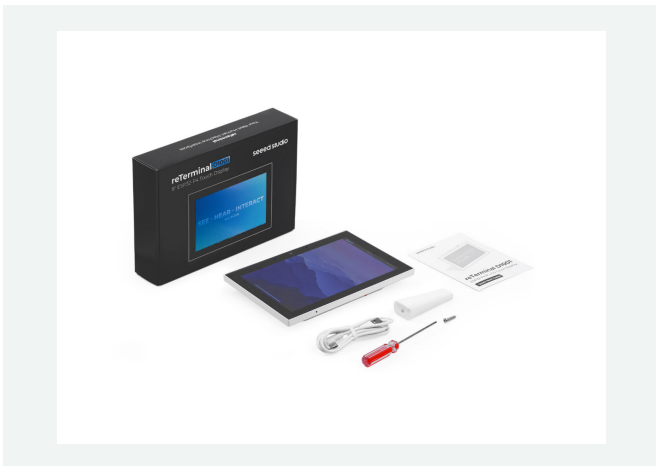
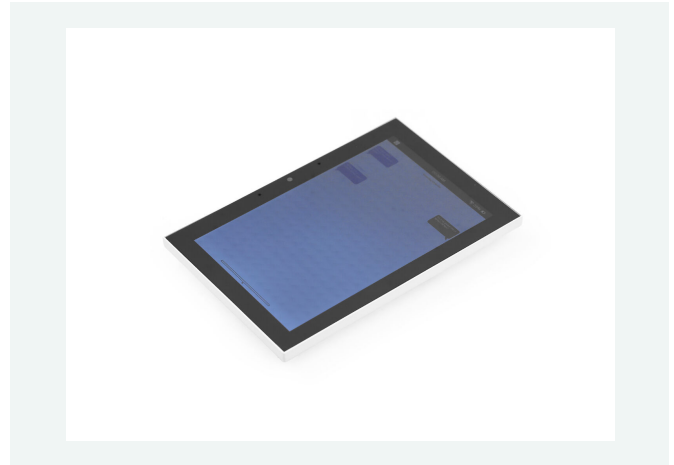
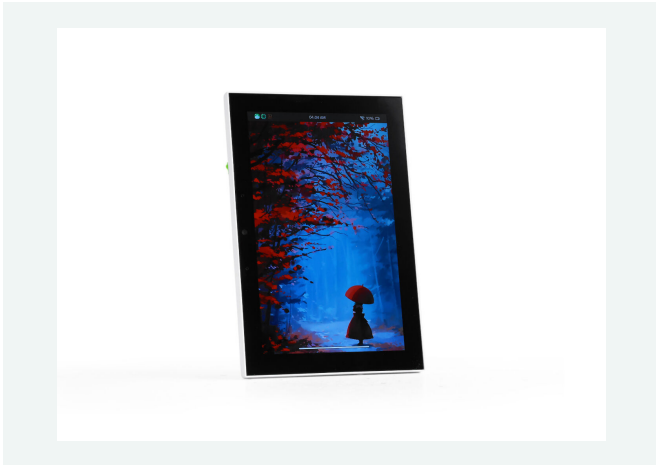


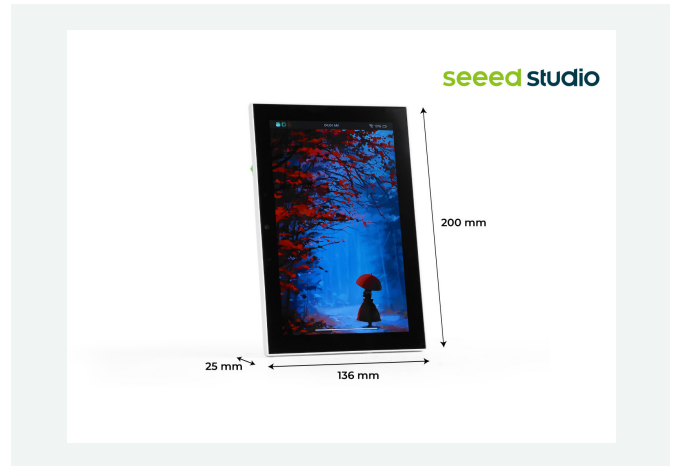
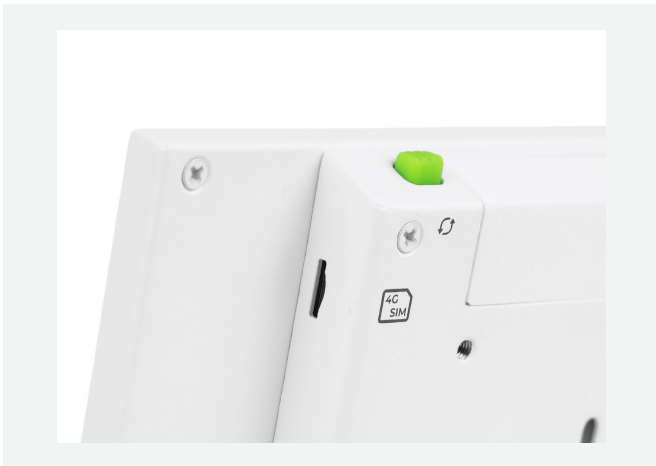
The reTerminal D1001 is an 8-inch LCD touch display HMI device with 1280×800 resolution, powered by an ESP32-P4 dual-core RISC-V processor and ESP32-C6 for Wi-Fi 6, Bluetooth 5 (LE), and 802.15.4 connectivity. It includes a MIPI-CSI camera, dual microphones with echo cancellation, a speaker, a 2500mAh battery, and an mPCIe slot for 4G LTE expansion, supporting applications such as smart home central hubs, video intercom systems, interactive AI assistants, industrial data dashboards, and edge vision terminals.

Key Features

- **Powerful Processing for Rich Interfaces:** Powered by ESP32-P4, a 32-bit RISC-V dual-core processor with 32 MB PSRAM, this device delivers the performance needed for graphics-rich interfaces, smooth real-time interaction, and more edge applications.
- **Integrated Wireless Connectivity:** Wireless communication is enabled by an onboard ESP32-C6 supporting Wi-Fi 6, Bluetooth 5 (LE), and 802.115.4(Zigbee/Thread/Matter). The main processor communicates with the connectivity subsystem via an SDIO interface, enabling reliable wireless networking for connected devices and IoT applications.
- **Field-Ready Cellular Expansion:** Equipped with a built-in mPCIe slot supporting USB 2.0 signals, the device enables seamless 4G LTE connectivity for reliable networking in remote environments. It's ideal for field deployments, remote monitoring, and always-connected edge applications where stable wireless communication is essential.
- **8-Inch Touch Display with Rich HMI Support:** The 8-inch 800 × 1280 capacitive LCD display, driven over MIPI-DSI and supporting both portrait and landscape modes, gives you the space to build polished dashboards, smart control panels, and other UI-focused embedded devices.
- **Camera Interface for Vision Development:** With a MIPI-CSI camera based on the SC2356 sensor and support for up to 1600 × 1200 at 30 fps, the platform is ready for image capture, live preview, and embedded vision development right out of the box.
- **Voice and Audio Capabilities:** Dual microphones and a built-in speaker enable voice input, sound capture, and playback. With echo cancellation supported by the ES7210 audio ADC, the system helps deliver clearer voice capture for AI assistants and voice-enabled applications.

Product Gallery



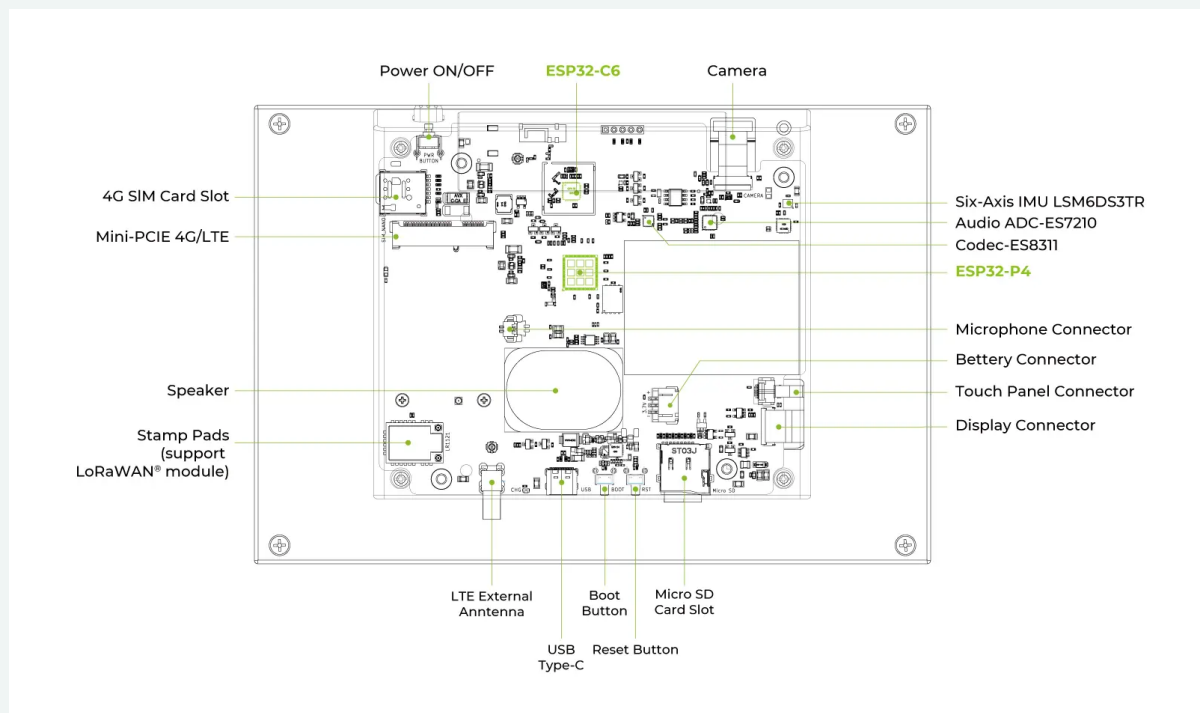
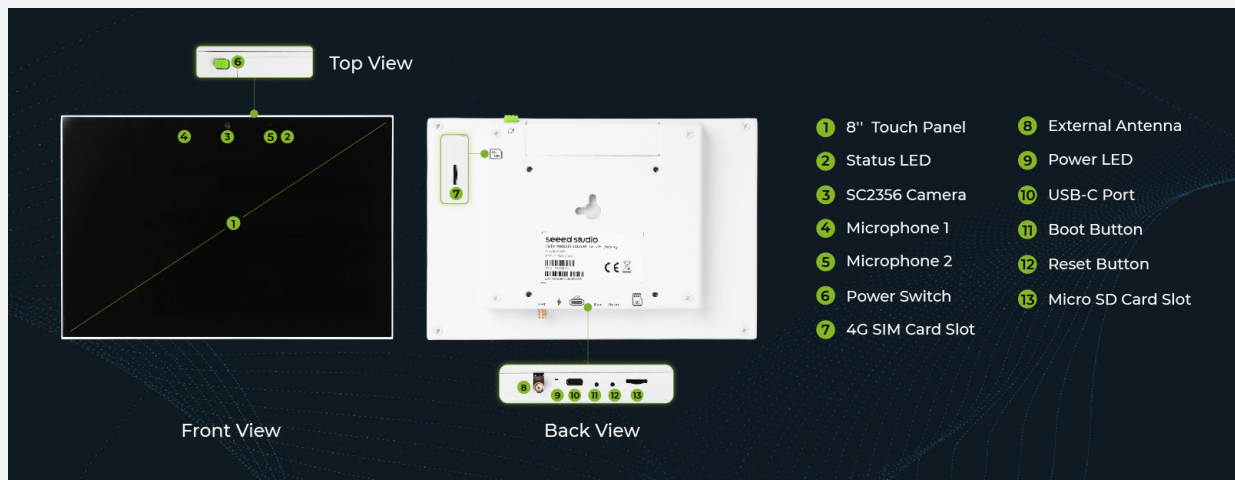


Specification

Parameter	Description
Basic	
Processor	ESP32-P4NRW32 with 32MB PSRAM
Wireless SoC	ESP32-C6
Storage	32MB QSPI Flash, support Micro SD card
Display	
Size	8"
Resolution	800×1280
Luminance (cd/m ²)	250
Optimum Viewing Angle (O'Clock)	ALL
Interface	MIPI-DSI
Driver IC	9365DA-H3
Touch Type	Capacitive touch
Touch IC	GSL3670
Orientation	Portrait/Landscape rotation supported
Camera	
Sensor	SC2356
Active Array Size	1608×1208
Max Frame Rate	(1600*1200)30fps 10bit
Interface	MIPI-CSI
Audio	
Microphone	Dual microphone
Speaker	2W@8Ω NS4150B
Audio IC	Codec: ES8311 Audio ADC: ES7210
Wireless Communication	
Wi-Fi	Wi-Fi 6 (2.4GHz)
BLE	Bluetooth 5 (LE)
Cellular	Mini-PCIe for 4G (optional)
Antenna	On-board antenna and external Antenna
Power	

Battery	2500mAh
Power Input	USB Type-C 5V
Other	
RTC	PCF8563T(supports timed interrupt wake-up)
Motion Sensor	LSM6DS3TR Six-Axis

Hardware Overview



Applications

- **Smart Home Central Hub:** An all-in-one HMI device for managing lighting, security, and home automation systems.
- **Video Intercom Systems:** Real-time visual communication for smart entry, doorbells, and security access.
- **Interactive AI Assistants:** Voice-enabled smart displays providing intuitive visual feedback and responsive control.
- **Industrial Data Dashboards:** Professional monitoring terminals for real-time equipment tracking and commercial data visualization.
- **Edge Vision Terminals:** Compact solutions for image capture, scanning, and interactive retail kiosks.

Part List

reTerminal D1001 LCD Display	×1
USB Type-C Cable	×1
Display Stand with Screw	×1
Screw Driver	×1

Compliance & Logistics



HSCODE	8543709990
USHSCODE	8517180050
UPC	
EUHSCODE	8543709099
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-D1001-p-6729.html>
- [Wiki-reTerminal D1001 Resources](#)

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