

seed studio

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

The reTerminal D1001 combines an 8-inch touch display, ESP32-P4 processing, wireless connectivity, and audio/vision capabilities for smart HMI and edge applications.

SKU

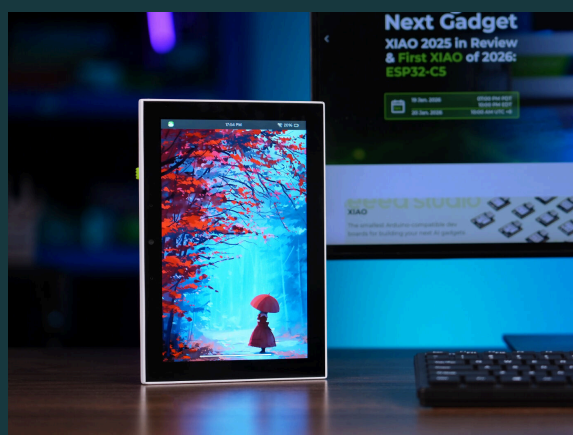
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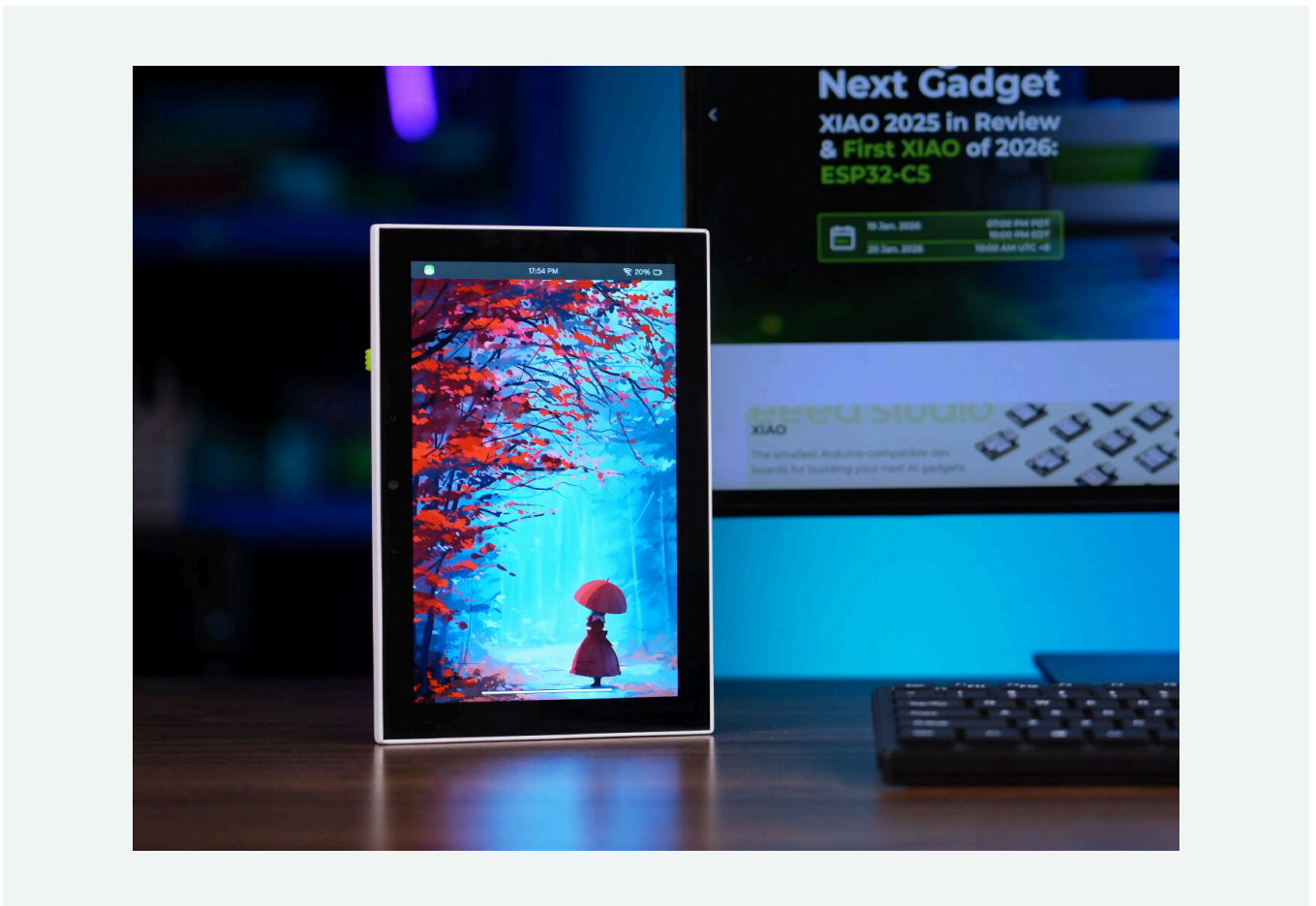
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PRICE

\$84.90(Excl. VAT)



# Overview



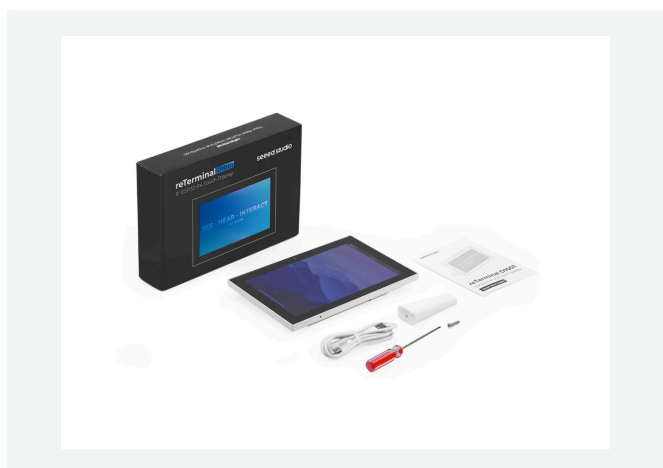
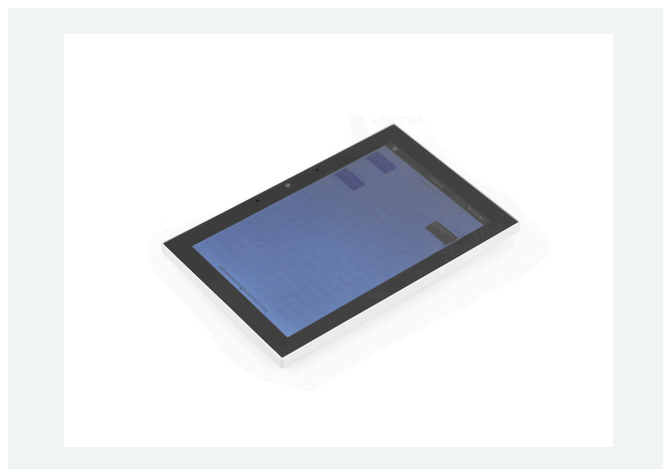
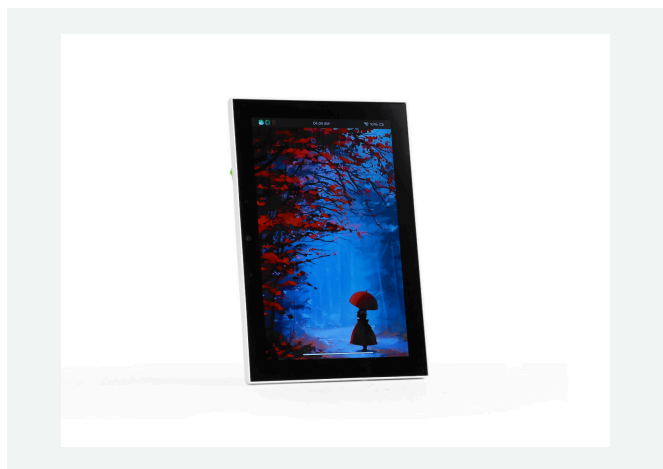
The reTerminal D1001 is an 8-inch 1280×800 LCD touch display HMI device powered by ESP32-P4 and ESP32-C6, featuring Wi-Fi 6, BLE5, a camera, dual microphones, speaker, and a 2500mAh battery. It is designed for smart home central hubs, video intercom systems, interactive AI assistants, industrial data dashboards, and edge vision terminals.

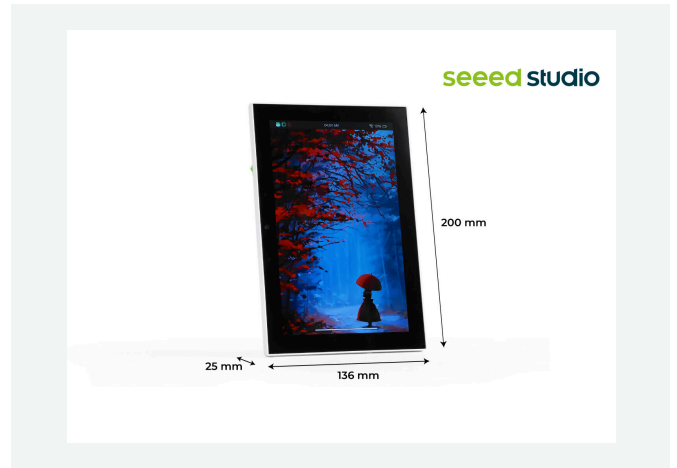
# Key Features

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- **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

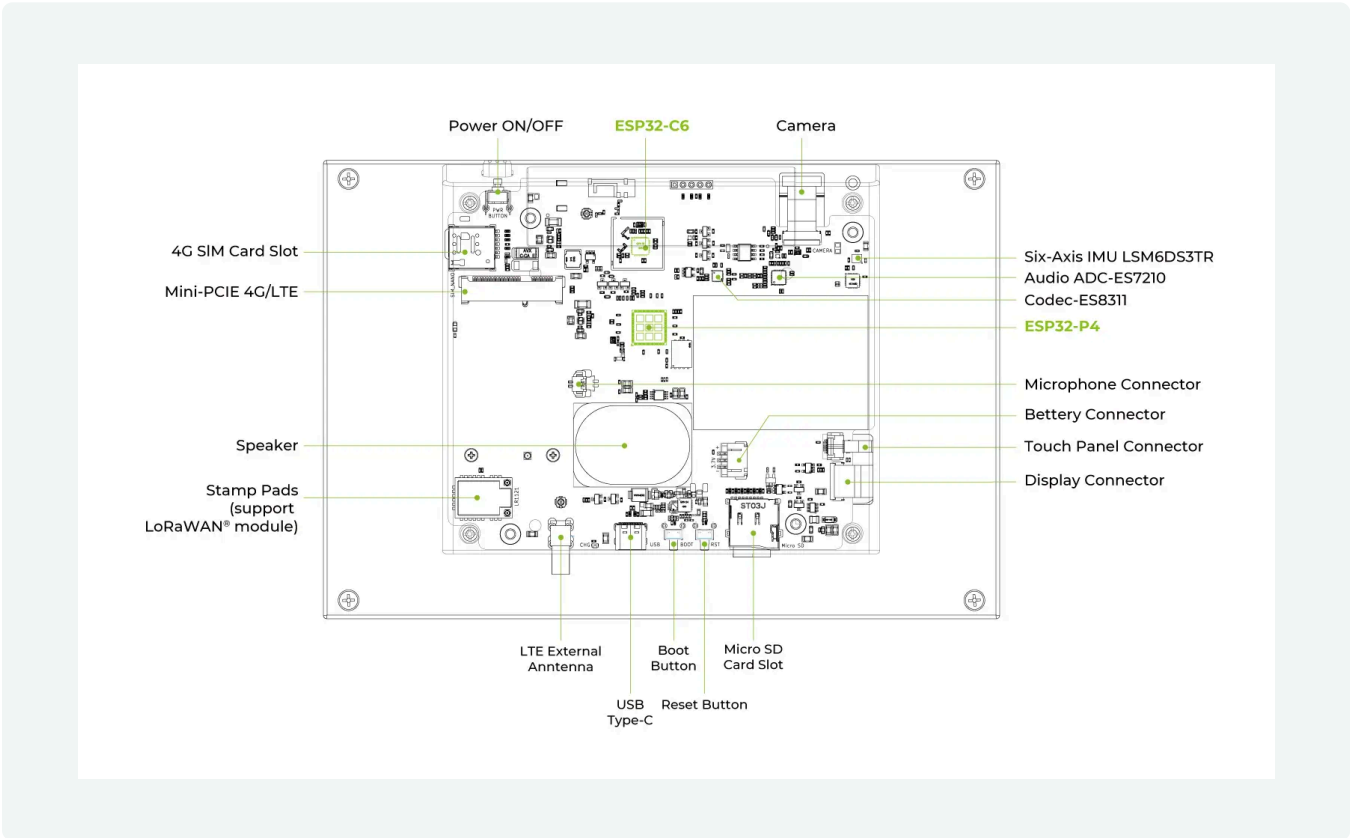
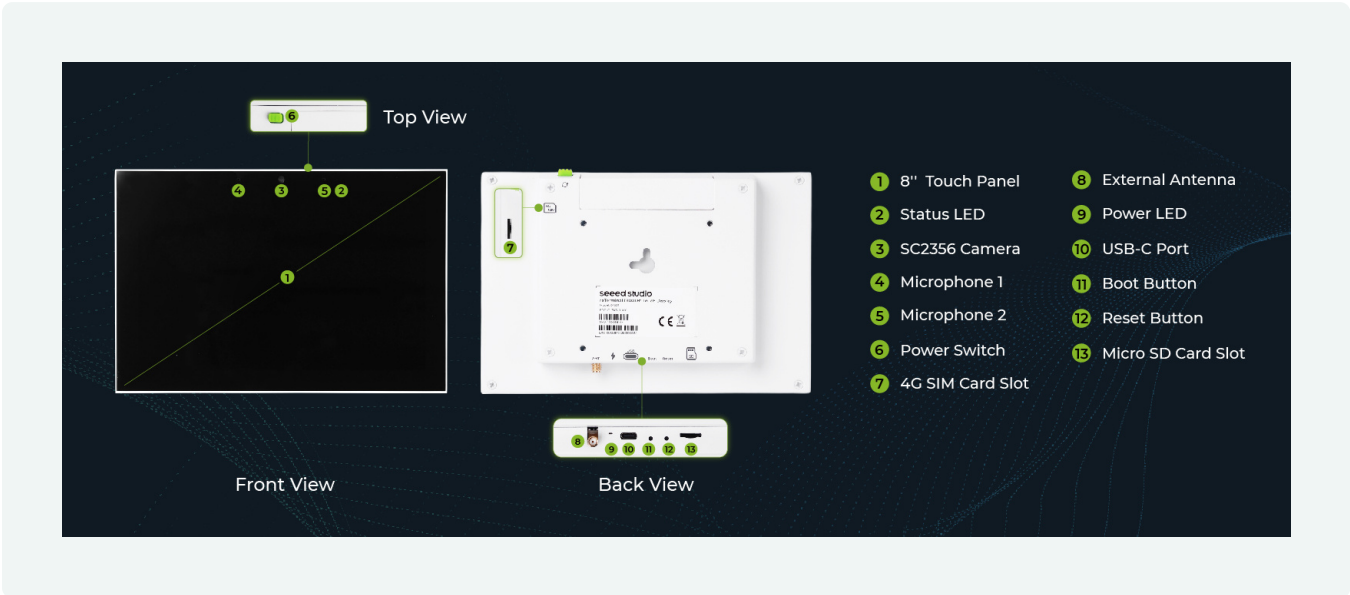




## Specification

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 <sup>2</sup> )	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



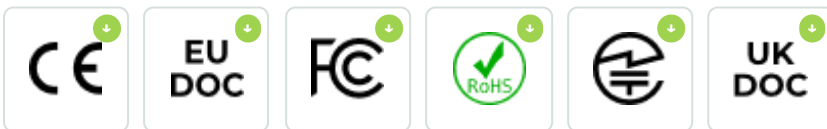
# Applications

- **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	x1
USB Type-C Cable	x1
Display Stand with Screw	x1
Screw Driver	x1

## Compliance & Logistics



HSCODE	8543709990
USHSCODE	8517180050
UPC	
EUHSCODE	8543709099
COO	CHINA

## Resource Links

- <https://www.seeedstudio.com/reTerminal-D1001-p-6729.html>
- [Wiki-reTerminal D1001 Resources](#)

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