

SenseCAP Indicator D1, 4-Inch Touch Screen IoT development platform





PRODUCT DESCRIPTION

SenseCAP Indicator is a 4-inch touch screen driven by ESP32 and RP2040 dual-MCU and supports Wi-Fi/BLE/LoRa® communication. It is a fully open-source powerful IoT development platform for developers.

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The board comes with Type-C and Grove interfaces, supports ADC and IIC transmission protocols, and can easily connect to other peripherals with rich GPIOs.

SenseCAP Indicator is a fully open-source powerful IoT development platform for developers. One-stop ODM Fusion service is also available for customization and quick

FEATURES

- Dual MCUs and Rich GPIOs: Equipped with powerful ESP32S3 and RP2040 dual MCUs and over 400 Grove-compatible GPIOs for flexible expansion options.
- Real-time Air Quality Monitoring: Built-in tVOC and CO2 sensors, and an external Grove AHT20 temperature and humidity sensor for more precise
- Local LoRa® Hub for IoT Connectivity: Integrated Semtech SX1262 LoRa® chip (optional) for connecting LoRa® devices to popular IoT platforms such as Matter via Wi-Fi, without the need for additional compatible devices.
- Fully Open Source Platform: Leverage the extensive ESP32 and Raspberry Pi open-source ecosystem for infinite application possibilities.

APPLICATION

- Air Quality Monitor
- Weather Station Display
- Sensor Data Dashboard
- Smart Home Assistant
- Mini Sensor Hub
- Stock Price Indicator
- Digital Album
- Standard Operation Procedure Reminder





SPECIFICATIONS

PRODUCT MODEL

Model	SenseCAP Indicator D1
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GENERAL PARAMETER

Screen	3.95 Inch, Capacitive RGB Touch Screen	
Screen Resolution	480 x 480 pixels	
Power Supply	5V DC, 1A	
Battery	N/A	
Processor	ESP32-S3: Xtensa® dual-core 32-bit LX7 microprocessor, up to 240MHz RP2040: Dual ARM Cortex-M0+ up to 133MHz	
Flash	ESP32S3: 8MB RP2040: 2MB	
External Storage	upport up to 32GB Micro SD Card	
Wi-Fi	802.11b/g/n, 2.4GHz	
Bluetooth	Bluetooth 5.0 LE	
LoRa®(SX1262)	LoRa®WAN/(G)FSK, 21dBm Max Transmitted Power Sensitivity/-136dBm@SF12 BW=125KHz RX Sensitivity, Up to 5km (depending on gateway antenna and environments)	
Sensors	Built-in CO2 (SCD41)	Range: 0-40000ppm Accuracy: 400ppm - 5000ppm ± (50ppm+5% of reading)



GENERAL PARAMETER

	Built-in TVOC (SGP40)	Range: 1-500 VOC Index Points
	External Temperature and Humidity Sensor	Range: -40 ~ + 85 °C/± 0.3 °C; 0 ~ 100% RH/± 2% RH (25 °C)
Buzzer	MLT-8530, Resonant Frequency : 2700Hz	