seeed studio

INDUSTRIAL PRODUCT DATASHEET

SenseCAP Indicator D1L, 4-Inch Touch Screen IoT development platform powered by ESP32S3 & RP2040

Sense CAP Indicator is a 4-inch touch screen driven by ESP 32 and RP 2040 dual-MCU and supports Wi-Fi/BLE/Lo Ra® communication. It is a fully open-source powerful Io T development platform for developers. One-stop ODM Fusion service is also available for customization and quick scale-up.

SKU	UPDATED
114993070	2026-04-15 10:33:48



Overview



Figure 1. Indicator 1

Sense CAP Indicator is a 4-inch touch screen driven by ESP 32 and RP 2040 dual-MCU and supports Wi-Fi/BLE/Lo Ra® communication. It is a fully open-source powerful Io T development platform for developers. One-stop ODM Fusion service is also available for customization and quick scale-up.

Key Features

01

Dual MCUs and Rich GPIOs

Equipped with powerful ESP32S3 and RP2040 dual MCUs and over 400 Grove-compatible GPIOs for flexible expansion options.

02

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.

03

Fully Open Source Platform

Leverage the extensive ESP32 and Raspberry Pi open-source ecosystem for infinite application possibilities.

04

Fusion ODM Service Available

Seeed Studio also provides one-stop ODM service for quick customization and scale-up to meet various needs.

Product Gallery



Figure 1. Indicator 1



Figure 2. Indicator 1



Figure 3. Indicator 1



Figure 4. Indicator 1



Figure 5. Hqdefault 20 8

Specification

Screen: 3.95 Inch, Capacitive RGB Touch Screen

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 240MHzRP2040: Dual ARM Cortex-M0+ up to 133MHz
Flash	ESP32S3: 8MBRP2040: 2MB
External Storage	Support up to 32GB Micro SD Card (not included)
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)
Buzzer	MLT-8530, Resonant Frequency：2700Hz

Hardware Overview



Figure 1. Indicator5

Applications

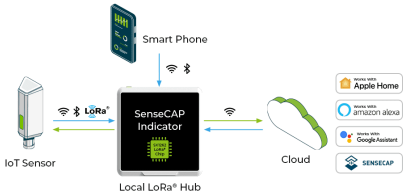


Figure 1. MTY4ODg1NDUzODQzODY1Mw 545002 QAZx9bZ1A4WXkvxr 1682325463

SenseCAP Indicator native firmware enables you to use it as a desktop air quality detector or you could customize one of your own styles. There are built-in tVOCs and CO2 sensors, and a Grove TH sensor is provided to connect externally to reduce heat interference to get more accurate temperature and humidity results. The embedded SX1262 LoRa® module enables you to build the LoRa® application and connect your local LoRa® sensors to the Cloud via Wi-Fi. For example, you could build a LoRa® hub device to connect your LoRa® sensors to your smart home ecosystem to implement Matter over Wi-Fi. In this way, the LoRa® devices could be connected to the Matter ecosystem via Wi-Fi, without the need to buy a new Matter-compatible device. The software of SenseCAP Indicator is completely open-source. Developers could create various IoT applications such as:

Sensor Data Dashboard

Air Quality Monitor

Weather Station Display

Stock

Smart Home Assistant

Digital Album

Mini Sensor Hub

Standard Operation Procedure Reminder

SenseCAP Indicator X ChatGPT X DALL·E Demo



Figure 10. Wiki 03 1

...

It can also be used to develop various exciting applications integrating with third-party platforms, such as AWS / ChatGPT / Matter / NodeRED / IoTex ...



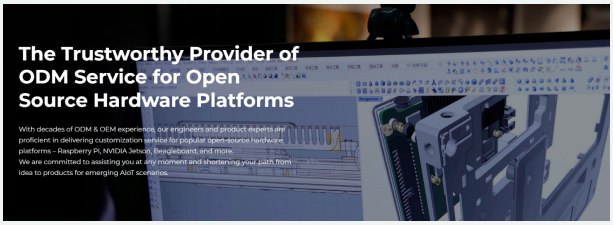
Figure 12. MTY4ODg1NDUzODQzODY1Mw 660186 rdmnimN4k2kNVwsa 1681959495

SenseCAP indicator x Home Assistant Demo

SenseCAP Indicator is an interactive display and control terminal for various IoT applications. It provides developers with a powerful and interface-rich development platform powered by ESP32-S3 and RP2040 dual-MCU. Don't wait anymore, start your wonderful development journey with SenseCAP Indicator now!



Figure 1. Indicator1



Seeed Co-Create

Figure 5. MTY4ODg1NzkxODI3ODMwNA 196068 bFA80kceqzPopOXn 1681719429



Figure 6. MTY4ODg1NzkxODI3ODMwNA 280940 2lMcwvwhpSfmmmaO 1681717848

Part List

SenseCAP Indicator	x1
USB Type-C Cable (1m)	x1
Grove AHT20 TH Sensor (For D1S and D1Pro version)	x1

Compliance & Logistics

HSCODE	8517180050
USHSCODE	8531200020
UPC	
EUHSCODE	8543709099
COO	CHINA

CertificationInfo	links
CE	CE_link
EUDOC	EUDOC_link
FCC	FCC_link
REACH	REACH_link
ROHS	ROHS_link
TELEC	TELEC_link
UKDOC	UKDOC_link

Logistics	Value
ECCN	EAR99
HSCODE	8517180050
USHSCODE	8531200020
EUHSCODE	8543709099
COO	CHINA

Resource Links

- https://www.seeedstudio.com/SenseCAP-Indicator-D1L-p-5646.html

Seeed Technology Co.,Ltd.
9F, Building G3, International E City,
Zhongshanyuan Road, Nanshan, Shenzhen, China

Tel: +86 0755-80695676
Web: www.seeed.cc
Shop: www.seeedstudio.com