ESP32-S3 Nano

Produktkode: 945aa
Tilgjengelighet: 2

Pris: kr. 230,00

Short Description
Type C ESP32-S3 Nano WiFi Bluetooth-compatible Development Board IoT Development Board Based on ESP32-S3R8 240MHz For Arduino

Beskrivelse

DESCRIPTION

Features:
1. Using ESP32-S3R8 as the main chip, equipped with high-performance Xtensa ® 32-bit LX7 dual core processor with a clock speed of up to 240MHz
2. Integrated 512kB RAM, 384kB ROM, 8MB PSRAM, 16MB Flash memory
3. Integrated 2.4GHz Wi Fi and Bluetooth LE dual-mode wireless communication, with superior RF performance
4. Support seamless switching between Ard and MicroPython programming for more flexible use
5. Compatible with Ard IoT Cloud, use IoT cloud applications to monitor and control user projects from anywhere
6. Supports HID and simulates human-machine interface devices (such as keyboards or mice) through USB, making interaction with computers more convenient

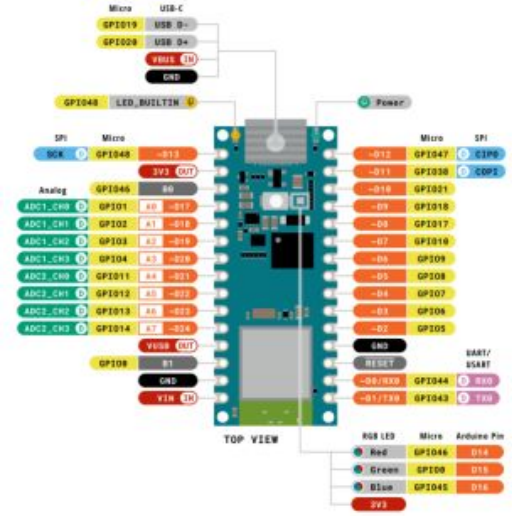
Product Introduction:
ESP32-S3-Nano uses ESP32-S3R8 as the main chip, compatible with Ard Nano ESP32, suitable for applications such as the Internet of Things or MicroPython, with a compact appearance and powerful performance, suitable for embedding into independent projects.

Parameter:
Model: ESP32-S3 Nano

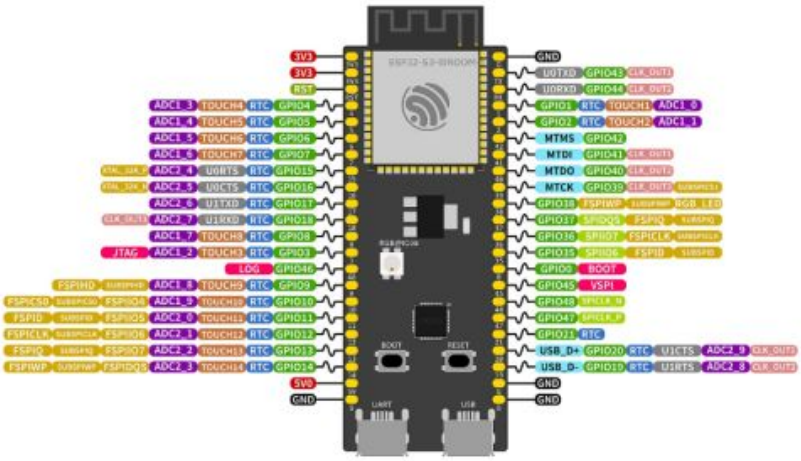
Microcontroller: ESP32-S3R8 (32-bit Xtensa LX7 dual core)
Clock speed: ESP32-S3R8: 240MHz
Storage: ESP32-S3R8: 384kB ROM, 512kB RAM, 16MB Flash, 8MB PSRAM
Wireless communication: 2.4GHz WiFi+Bluetooth LE
Working voltage: 3.3V
External power supply voltage: 6-21V
Reset button: upright type
IO pin output current: 40mA
Digital pin: 14
Analog pins: 8
PWM?5
UART?2
I2C?1
SPI?1
5V power output: 1000mA Max
Insert universal board: Supports
Size: 43.18 * 17.78mm

Package include:
1X development board
1X Pin Headers (non welded needle arrangement/welded needle arrangement can be selected)

Pinout



Arduino Nano ESP32



ESP32-S3-DevKitC-1

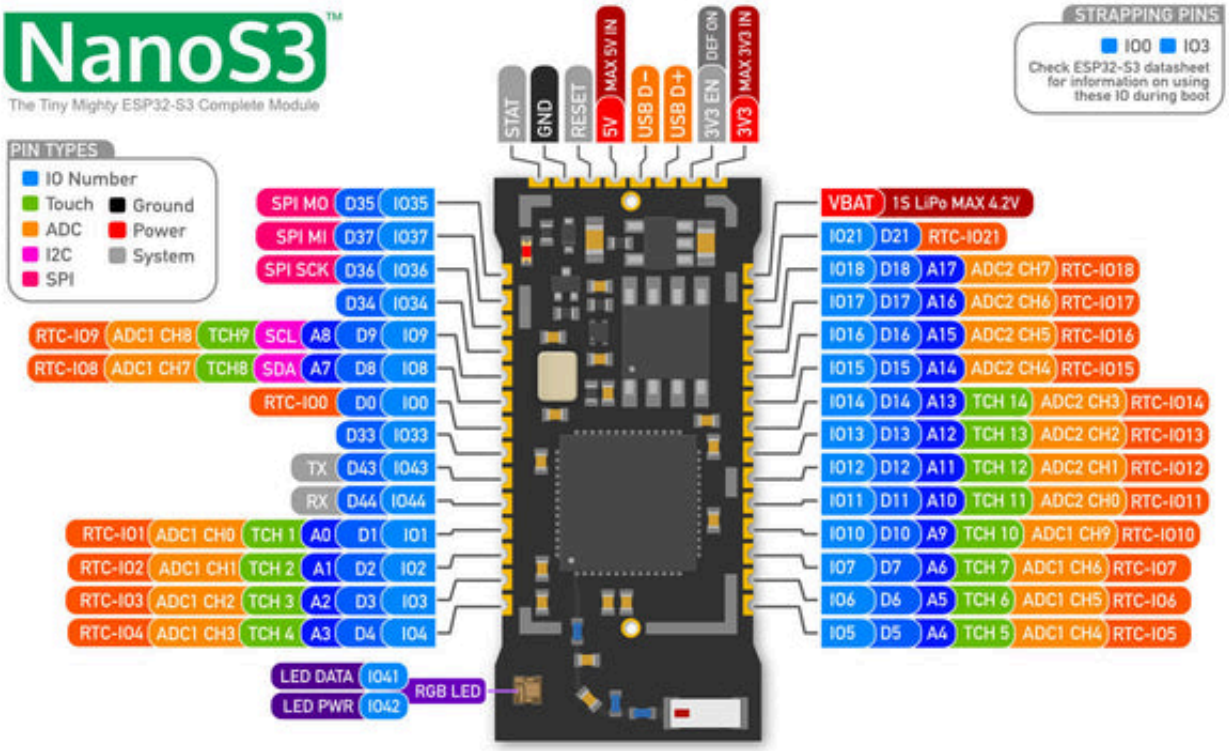
Info
NanoS3 is the world’s smallest, fully-featured ESP32-S3 module!

It's packed with amazing features and peripherals, wireless connectivity and stacks of Flash and PSRAM, all in the same tiny package size as the original TinyPICO Nano, and it's drop in compatible too!

Note that **this module is designed for embedded use** - for a standalone board with USB-C check out TinyS3 or the mighty ProS3!

Features

- Dual 32bit Xtensa LX7 cores @ up to 240Mhz
- RISC-V Ultra Low Power Co-processor
- 2.4GHz Wifi - 802.11b/g/n
- BLE 5.0 + Mesh
- 8MB QSPI Flash
- 8MB of extra QSPI PSRAM
- 700mA 3.3V LDO Regulator
- **ULTRA LOW Deep Sleep Current**
- Low power RGB LED
- Native USB + USB Serial JTAG
- D+/D- pins for external USB connector
- LiPo Battery Charging
- 3D High Gain Antenna
- 27 GPIO
- Only 28 x 11mm in size
- Compatible with TinyPICO Nano



Board Dimensions: 28mm x 11mm

Max Thickness: 2.4mm

Board Comparison Matrix

	NanoS3	**TinyPICO Nano**
MCU	ESP32-S3FN8	ESP32-PICO-D4
Cores	2x Xtensa LX7	2x Xtensa LX6
Speed	Up to 240Mhz	Up to 240Mhz
ULP CoProc	1x RISC-V, 1x FSM	1x FSM
SRAM	512K	520K
FLASH	8MB	4MB
PSRAM	8MB	4MB
GPIO	27	14
Native USB	CDC, OTG & USB Serial JTag	-
WiFi	2.4Ghz b/g/n	2.4Ghz b/g/n
Bluetooth	BLE 5 & Mesh	BT Classic & BLE 4.2
DAC	-	2x 8bit
ADC	2x 12-bit SAR /20 chan	1x 12-bit SAR /18 chan
UARTs	3	3

ETH MAC	-	Yes
DMA Controller	5x TX chan, 5x RX chan	-
SDIO	Yes	Yes
RGB LED	1515 Neopixel	
Antenna	Onboard or External u.FL	Onboard
Release Date	July 2023	May 2020

Platforms

- CircuitPython
- MicroPython
- ESP-IDF
- Arduino

Please check out the new PLATFORMS area of the Getting Started guide to find out all about developing for your new board in a range of different languages!

Downloads

This is where you can find download links for NanoS3 specific things like the Schematic, 3D model, KiCAD footprint and more!

- NanoS3 schematic
- Unexpected Maker ESP32-S3 Github repo

The Github repo contains:

- 3D STEP file for the NanoS3
- KiCAD 7 symbol file for the NanoS3 that you can use when integrating one of them into your PCB designs
- KiCAD 7 footprint file for the NanoS3
- KiCAD 7 NanoS3 carrier PCB reference design
- PDF Schematic for the NanoS3
- Hi-res pinout reference card for the NanoS3
- Helper libraries for Arduino, CircuitPython and MicroPython (*soon*)

If you need more detailed information about the ESP32-S3, including full IO capabilities and other functionality, please refer to the ESP32-S3 Datasheet from Espressif.

Product Gallery