



WIRELESS-TAG

A Leading Provider of IoT Communication Products and
Overall Solutions

Wireless Communication • HMI • AI • Industrial Control

2023.Q4

About us

Who We Are

Wireless-Tag Technology Co.Ltd. is a high-tech enterprise specializing in design, R&D, production and sales of IoT and AI hardware products. The company currently has 150+ employees, of which 70% have a bachelor degree or above, and more than 60% are R&D technicians. In 2022, the company's sales performance reached 250 million yuan.

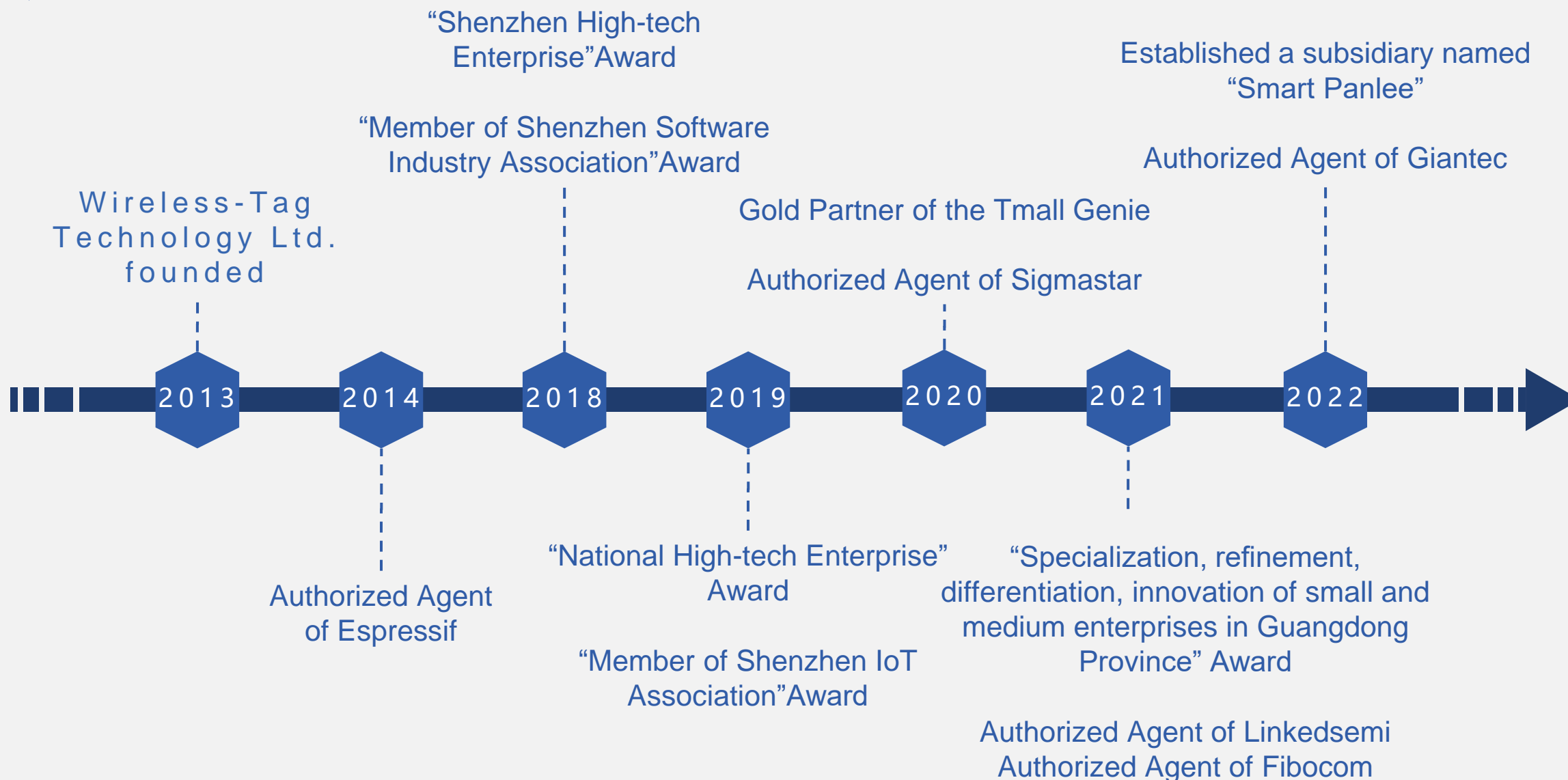
What We Are doing

Wireless-Tag's products cover IoT wireless communication modules, HMI design solutions, AI core boards and AI face recognition solutions. The company provides customers with perfect ODM/OEM services, with products covering smart homes, smart lighting, smart home appliances, smart access control, financial self-service terminals, rail transit, HMI display and AI recognition, etc.

Our Commitments

We focus on the R&D of smart products, and continue to provide customers with high-value solutions. Wireless-tag is committed to the development and design of smart products in terms of embedded software, IoT communication modules, touch panel HMI, and AI devices. We derive to provide customers with higher performance, lower development costs, and shorten mass production time.

Milestones





Organization



• • • • • Wireless-tag's Subsidiaries • • • • •

Industio Technology Co., Ltd.

Shenzhen QM Smart Panlee Technology Co., Ltd.

Wireless-tag Products



Wi-Fi

Bluetooth

WiFi &
Bluetooth

Embedded
board &
Control
board

Development
board

Features

- Small size
- Ultra-low power consumption
- Excellent RF performance (Strong Anti-interference)
- Industrial modules
- CE-RED/FCC/ROHS
- Default AT commands, suited for development



Part number	WT018684-S1	WT018684-S2	WT018684-S5
Core	ESP8684	ESP8684	ESP8684
Flash(MB)	1,2,4	1,2,4	1,2,4
PSRAM(MB)	N/A	N/A	N/A
Antenna	PCB/ IPEX	PCB	PCB/ IPEX
Dimensions(mm)	18.6×15×3.1	17.3×15×2.8	24×16×3

Features

- Small size
- Ultra-low power consumption
- Excellent RF performance (Strong Anti-interference)
- Industrial modules
- CE-RED/FCC/ROHS
- Default AT commands, suited for development



Part number	WT32C3-S1	WT32C3-01N	WT32C3-S5
Core	ESP32-C3	ESP32-C3	ESP32-C3
Flash(MB)	4	4	4
PSRAM(MB)	N/A	N/A	N/A
Antenna	PCB/ IPEX	PCB	PCB
Dimensions(mm)	18.6×15×3.1	17.3×15×2.8	24×16×3

Features

- Small size
- Ultra-low power consumption
- Excellent RF performance (Strong Anti-interference)
- Industrial modules
- CE-RED/FCC/ROHS
- Default AT commands, suited for development



Part number	WT32-S1	WT32-S2-WROVER	WT32-S3-WROVER
Core	ESP32	ESP32-S2	ESP32-S3
Flash(MB)	4	4	4,8,16
PSRAM(MB)	N/A	8	0,2,8
Antenna	PCB	PCB/ IPEX	PCB/ IPEX
Dimensions(mm)	22.5×16×3.5	29.5×16×3.3	29.5×16×3.3

Features

- Support standard Bluetooth 4.2
- Low power transparent transmission
- Communication distance:
30m(Condition:Open area /1M speed)
- Excellent RF performance (Strong
Anti-interference)
- 2.4G built-in antenna
- CE-RED/FCC/ROHS
- Default AT commands, suited for
development

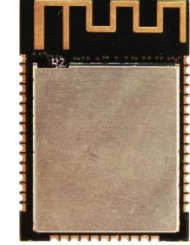
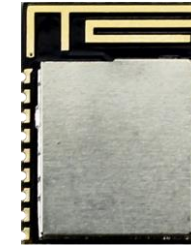


Part number	WT51822-S2	WT51822-S4AT
Core	nRF51822(Nordic)	nRF51822(Nordic)
Flash	256KB	256KB
PSRAM(MB)	N/A	N/A
Dimensions (mm)	16.5×28.8×2.5	18.5×9.1×2

Features

- 32-bit ARM Cortex-M4F processor
- Bluetooth Low Energy 5.0 Module
- Support Android and IOS system
- Support serial AT commands.

Users can modify the module
serial baud rate (default 115200bps),
name, MAC address and other basic
parameters
Built-in PCB antenna or external
antenna(optional)



Part number	WT52832-S2	WT52810-S1	WT52840-S1
Core	nRF52832-QFAA	nRF52810-QFAA	nRF52840-QIAA
Flash	512KB	192KB	1MB
PSRAM(MB)	N/A	N/A	N/A
Dimensions (mm)	18.7×11.1×2	15.8×11.9×2	27.3×18.7×2.3

Features

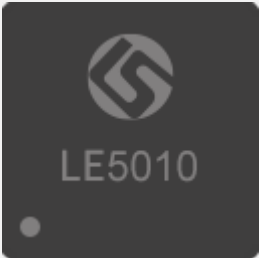
- 32-bit CPU, up to 64MHz frequency
- Bluetooth Low Energy 5.0 / 5.1
- Support SIG Mesh or Proprietary Mesh
- Tx power: +13 dBm
- Rx sensitivity: -105 dBm
- Low Power

Active-Mode Rx: 4.5mA @3.3V

Active-Mode Tx: 4.3mA @3.3V 0dBm

Standby: 1.1µA

Shutdown: 700nA



Part number	LE5010	LE5110	LE5030
Core	32 bit CPU	32 bit CPU	32 bit CPU
Flash	512,1024 KB	512 KB	512 KB
RAM	64 KB	64 KB	64 KB
Frequency up to	64 MHz	64 MHz	64 MHz

Features

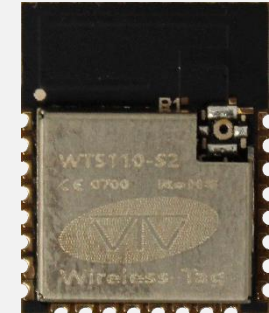
- 32-bit CPU, up to 64MHz frequency
- Bluetooth Low Energy 5.0 / 5.1
- Support SIG Mesh or Proprietary Mesh
- Tx power: +13 dBm
- Rx sensitivity: -105 dBm
- Low Power

Active-Mode Rx: 4.5mA @3.3V

Active-Mode Tx: 4.3mA @3.3V 0dBm

Standby: 1.1µA

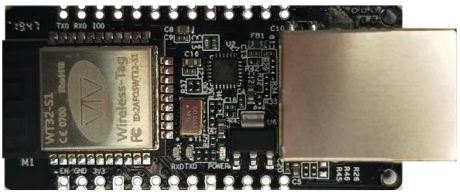
Shutdown: 700nA



Part number	WT5010-S2	WT5110-S1	WT5110-S2
Core	LE5010	LE5110	LE5110
Flash	512,1024 KB	512 KB	512 KB
RAM	64 KB	64 KB	64 KB
Dimensions (mm)	16.5 × 13	16 × 10.5	16.5 × 13

Features

- Bluetooth v4.2 BR/EDR and BLE
- Built-in PCB antenna
- Dual-Core Xtensa® 32-bit LX6 MCU
- NZIF receiver with -97 dBm sensitivity
- CE/FCC/ROHS
- 802.11 b/g/n/e/i,
802.11n, up to 150 Mbps



Part number	WT32-ETH01
Core	ESP32
Flash(MB)	4
PSRAM(MB)	N/A
Dimensions (mm)	60 x26 x17

Features

- Supports Wi-Fi/BLE/LoRa
- 32-bit RISC-V single-core processor
- Supports IEEE 802.11 b/g/n protocols
- Supports BLE 5.0
- Supports LoRa frequencies:
433/868/915 MHz (optional)



Part number	WTLRC262-SG
Core	ESP8684
ROM	576 KB
SRAM	272 KB
Dimensions	20 × 26 × 2.8 MM

Smart Panlee Products



**WiFi &
Bluetooth**

**Smart
Display**

**Serial Port
Screen**

**Voice
Recognition**

**8ms GUI
Platform**

01 Color Display HMI



WT32-SC01 is an ESP32-based development board with a visual touch screen. **SC01 PLUS** is an updated board of SC01.

The board is equipped with self-developed GUI platform firmware which supports graphical drag-and-drop programming and help users develop a customized control platform. Developers can also develop and debug functions such as buttons, voice, and camera through the expansion interfaces on both sides of the development board, which greatly shortens the user’s development cycle. The solution is often used in 86 box thermostat, gateway with screen, water heater, and oven other smart home appliances.

Features	SC01	SC01 PLUS
Display screen	3.5 inches LCD	3.5 inches LCD
Resolution	320 * 480	480 * 320
Touch screen	Capacitive	Capacitive
Multi-touch	2-point touch	2-point touch
MCU	ESP32 with Dual-core Xtensa® 32-bit LX6 CPU	ESP32-S3 with Dual-core Xtensa® 32-bit LX7 CPU
WIFI	2.4GHz 802.11b/g/n	2.4GHz 802.11b/g/n
Bluetooth	Bluetooth v4.2 BR/EDR and BLE 4.2	BLE 5.0
Power supply	DC 5V /2A	DC 5V /2A
Operating temperature	-20 ~ 85 °C	-20 ~ 85 °C

02 Integrated Knob Screen



The integrated knob screen is an ESP32-S3-based development board for visual screen. The board is equipped with self-developed GUI platform firmware and supports graphical drag-and-drop programming to help users develop a custom control platform. The solution is often applied to **knob screen control of car player, thermostat, washing machine, microwave oven**, etc.

Features	
Display screen	2.1 inches LCD
Resolution	480 * 480
Button	A mechanical button
MCU	ESP32-S3 with Dual-core Xtensa® 32-bit LX7 CPU
WIFI	2.4GHz 802.11b/g/n
Bluetooth	BLE 5.0
Power supply	DC 5V /2A
Operating temperature	-20 ~ 85 °C

03 Serial Interface Display



This display is an ESP32-S3-based development board for visual screen. The board is equipped with self-developed GUI platform firmware and supports graphical drag-and-drop programming to help users develop a custom control platform. It is often applied to **smart appliances**, **smart meter**, etc.

Features	
Display screen	4.3 inch LCD
Resolution	480 * 272
MCU	ESP32-S3 with Dual-core Xtensa® 32-bit LX7 CPU
WIFI	2.4GHz 802.11b/g/n
Bluetooth	BLE 5.0
Interface	TTL/ Wi-Fi/ Bluetooth/ USB/ RS232/ RS485/ CAN
Power supply	DC 5V /2A
Dimensions	121.92 * 73.15 * 14.43 mm
Operating temperature	-20 ~ 85 °C

04 Serial Interface Display



This display is an ESP32-S3-based development board for visual touch screen. The board is equipped with self-developed GUI platform firmware and supports graphical drag-and-drop programming to help users develop a custom control platform. It is often applied to **Instrument**, **Blender Integrated Stove**, **Industrial Control**, etc.

Features	
Display screen	7 inch LCD
Resolution	800 * 480
MCU	ESP32-S3 with Dual-core Xtensa® 32-bit LX7 CPU
WIFI	2.4GHz 802.11b/g/n
Bluetooth	BLE 5.0
Interface	TTL/ Wi-Fi/ Bluetooth/ Audio
Power supply	DC 5V /2A
Operating temperature	-20 ~ 85 °C

Industio Products



**Embedded
Core Board**

**Embedded
Development
Board**

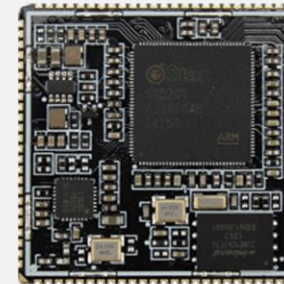
**Industrial
Control
Board**

**Linux Android
Openharmony
OS solution**

**Edge Computing
Artificial Intelligence
Industrial HMI
Industrial Gateway**

Features

- ARM® Cortex-A7 dual-core processor
- Ultra small size
- Support Linux system
- Super fast booting within 1 second
- Integrated 1-channel 10/100M PHY
- 96Pin 1.1mm pin pitch, expanding all pin resources of SSD201



Part number	IDO-SOM2D01/2D02
SoC	SigmaStar SSD201/202
Processor	ARM® Cortex-A7 dual-core processor
DDR	DDR2 64MB/DDR3 128MB
Dimensions(mm)	29.5 x 29.5

Features

- Arm Cortex-A7 processor, up to 900 MHz, 128 KB L2 cache
- Parallel 24bit RGB LCD interface, can support 1366x768 resolution
- 2 * 10/100Mbps Ethernet ports complying with IEEE802.3 standards
- 2 * USB 2.0 OTG, HS/FS, Device or Host with PHY
- 2 * 12-bit ADC, support up to 10 input channels and resistance touch screen



Part number	IDO-SOM6Y08
SoC	NXP i.MX6ULL SoC
Processor	ARM Cortex A7 processor
DDR	DDR3 256MB/512MB(Optional)
Dimensions(mm)	38 x 38

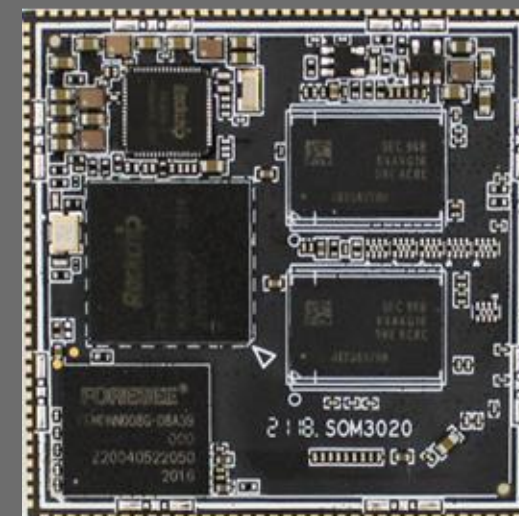
IDO-SOM3020

Features

Rockchip PX30 (ARM Coretex-A35); Quad-core 64-bit CPU; Main Frequency up to 1.5 GHz; Android/Linux OS

It adopts Mali-G31 MP2 GPU and supports VC-1, H265/H264, MPEG 1/2/4, VP8 and other multi-format 1080P 60fps video decoding. Users only need to expand the functional base plate to quickly achieve the research and production of the project.

Applications: Industrial host, IoT device, medical and healthcare equipment, advertising integrated machine, interactive self-service terminal, education platform, display control, vehicle security, etc.



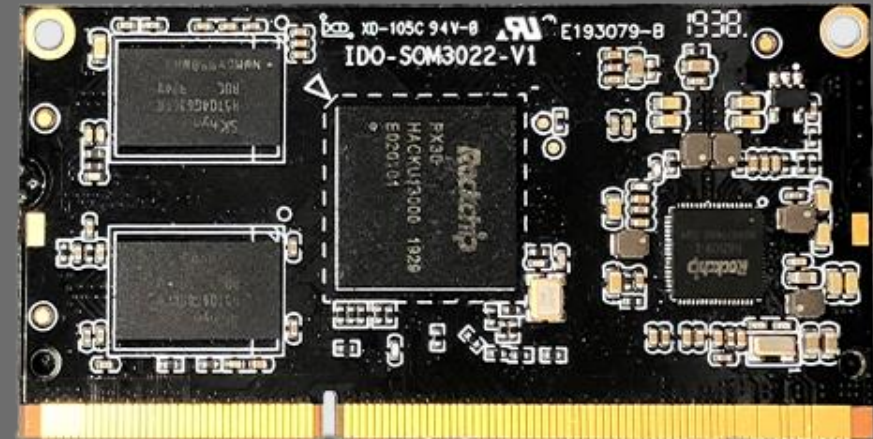
IDO-SOM3022

Features

Rockchip PX30 (ARM Coretex-A35); Quad-core 64-bit CPU; Main Frequency up to 1.5 GHz; Android/Linux OS

It adopts Mali-G31 MP2 GPU and supports VC-1, H265/H264, MPEG 1/2/4, VP8 and other multi-format 1080P 60fps video decoding. Users only need to expand the functional base plate to quickly achieve the research and production of the project.

Applications: Industrial host, IoT device, medical and healthcare equipment, advertising integrated machine, interactive self-service terminal, education platform, display control, vehicle security, etc.



Sigamaster SSD20X

Features

The Sigamaster SSD20X development board (IDO-SMLCD71-V1-2EC & IDO-SMLCD72-V1-2EC), based on the Sigamaster SSD201/ SSD202 SoC, is equipped with a 7-inch IPS capacitive touch screen (resolution 1024*600); After booting up, the screen will quickly display the logo within one or two seconds. The development board runs OpenWrt system (also supports LINUX system). Users can use the LVGL library suitable for the 8ms platform (esp32.8ms.xyz) to perform a drag-and-drop GUI development. It supports serial port screen development. The display content currently supports images and GIF, and video is being adapted.

The development board integrates with WIFI, Bluetooth module (optional), supporting TF card, one network port, one USB port, two microphone inputs, two audio outputs, RTC circuit, two serial ports, each one can be configured as 485; TYPE -C power supply.

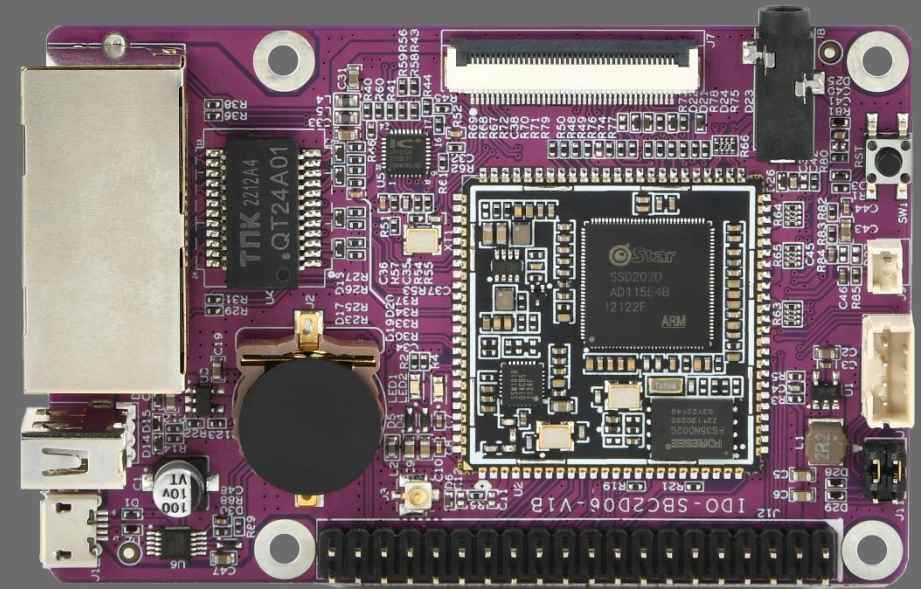


Purple Pi R1

Features

Purple Pi R1 Evaluation Board is a board based on SigmaStar SSD201 SoC (ARM Cortex A7 core) compatible with Raspberry Pi, with a main frequency of up to 1.2GHz, 256KB L2- cache, built-in dual MAC, a PHY, and supports dual 100M Ethernet interfaces. Memory management supports DMA engine. Integrated H.264/AVC and H.265/HEVC decoder, supports maximum resolution FHD (1920x1080)/60 frame decoding.

Purple Pi R1 Evaluation Board supports TF card holder, dual 10/100Mbps Ethernet, audio interface, USB2.0, MIPI-DSI screen interface and single-band WIFI. Mainly used in smart building indoor unit, smart home central control, 86-box home central control, elevator floor display, IP network broadcast equipment and voice recognition equipment.

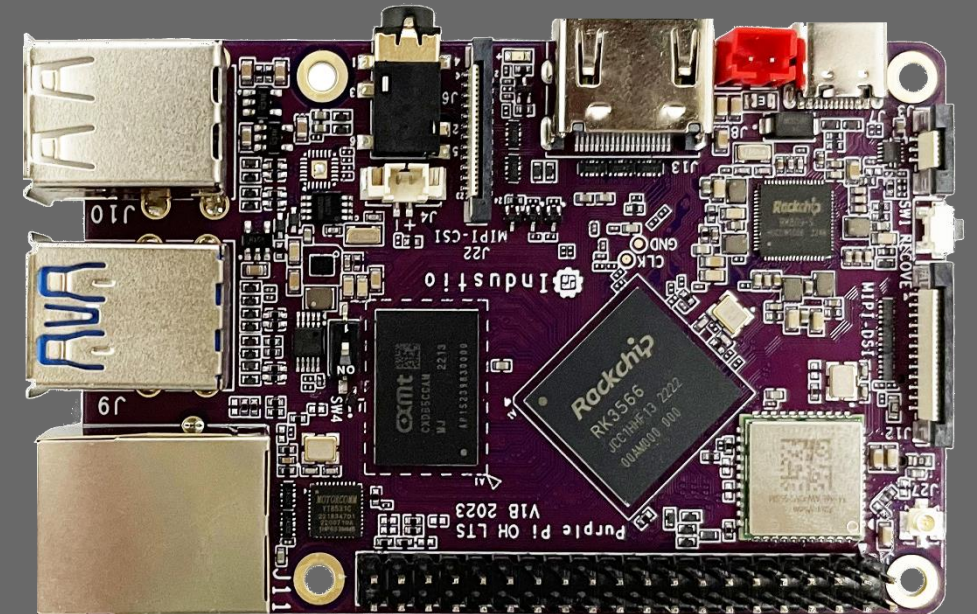


Purple Pi OH

Features

The Purple Pi OH smart motherboard is equipped with a Rockchip RK3566 quad-core Cortex-A55 processor, with a maximum frequency of 1.8GHz, LPDDR4/LPDDR4X default 2GB, and a maximum of 8GB memory support. The new generation Mali-G52 2EE GPU embedded in the chip supports high-resolution display, with powerful multi-threading computing capabilities, graphics processing capabilities, and hardware decoding capabilities. It supports Linux buildroot+QT5/Debian10/Ubuntu/Android11 systems.

Purple Pi OH is a development board compatible with Raspberry Pi. RK3566 is a high performance, low-power quad core application processor chip, Designed for personal Mobile Internet device and AIOT devices, it can be widely used in Android/Linux applications such as tablets, educational tablets, speakers with screens, dictionary pens, cloud terminals, video conferencing systems, and other consumer with screens, or lightweight AI application scenarios.

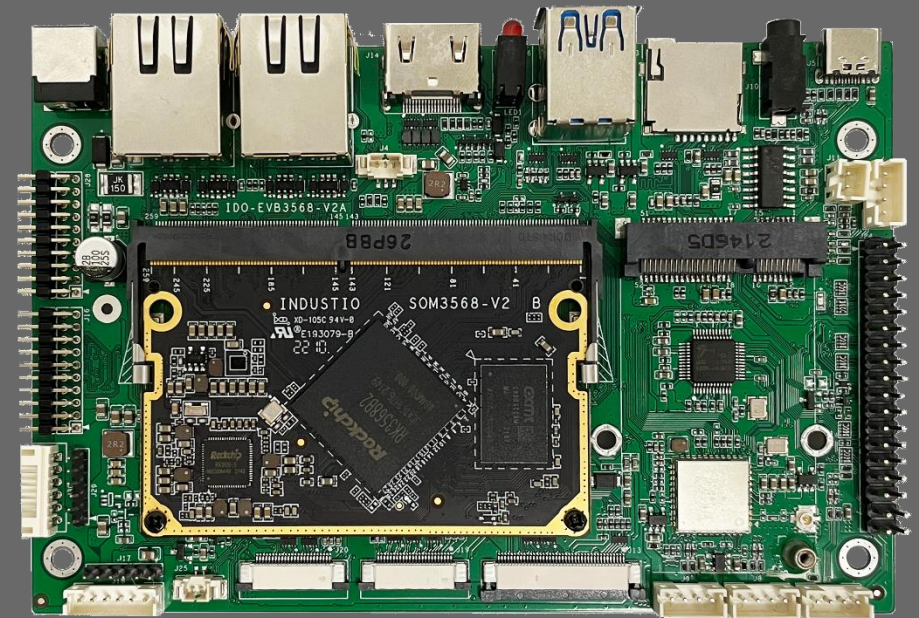


IDO-EVB3568-V2

Features

IDO-EVB3568-V2 is an industrial control evaluation board and development board based on RK3568. RK3568 is manufactured by 22nm advanced technology, quad-core A55 CPU, frequency up to 2.0GHz, support up to 8GB high-speed LPDDR4, 1T computing power NPU, 4K H.265/H264 hard decoding. It has rich video output interface (HDMI2.0/eDP1.3/MIPI/LVDS), high-speed communication interface (Gigabit network /PCIE/SATA/USB3.0), industrial interconnection interface (CAN/ serial port).

Applications: edge computing, artificial intelligence, industrial HMI, industrial gateway, smart medical, self-service terminal, intelligent retail, energy and power industries.

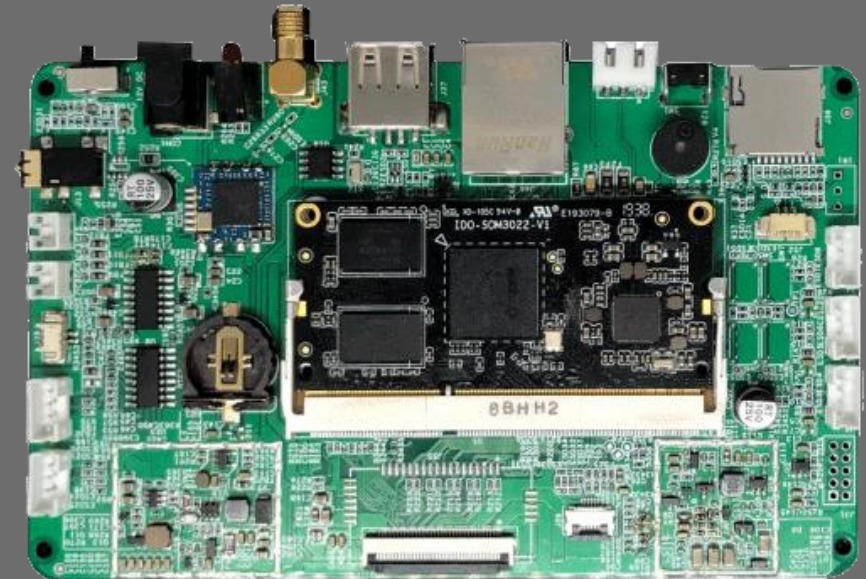


IDO-EVB3022

Features

IDO-EVB3022 is a supporting functional board based on Rockchip PX30 core board, which adopts the DDR3 connecting finger 204p socket as the installation interface of the core board. On its periphery it has network port, USB serial port, LVDS and other interfaces. With perfect software support, it is suitable for enterprises to carry out secondary development. It can effectively reduce the threshold of enterprise research and development and shorten the cycle of product development.

Applications: Industrial host, IoT device, medical and healthcare equipment, advertising integrated machine, interactive self-service terminal, education platform, display control, vehicle security, etc.



IDO-EVB3022 Embedded Desktop Interactive Display Terminal



IDO-EVB3022 is an embedded desktop interactive display terminal solution based on Rockchip's PX30 core board. The motherboard takes DDR3 memory gold finger 204P socket as the core board installation interface, and on its periphery it has network port, serial port, USB port, LVDS port and etc. Equipped with 7-inch / 10 inch HD screen, it can be applied to industrial host, IoT device, medical and health equipment, advertising integrated machine, interactive self-service terminal, bank calling machine, evaluating device, security, etc.

Features	
CPU	Rockchip PX30, ARM Coretex-A35 Quad-Core 64-bit CPU, 1.5 GHz Frequency
DDR3 (Core board)	DDR3 1600MHz 1G (2G optional)
EMMC	EMMC 5.1 8GB (16GB~32GB optional)
LAN port	1 X 10M/100Mbps Adaptive
USB port	1 USB 2.0 OTG (for system burning), 3 expansion USB, used for other USB devices
RS485	1 RS485 interface, compatible with cash drawer interface, default RS485
RS232	2 RS232 interfaces, compatible with UART interface, default RS232
TF card	Micro SD card
Power input	5~18V DC @1A power supply; default 12V/1A input

Espressif Products



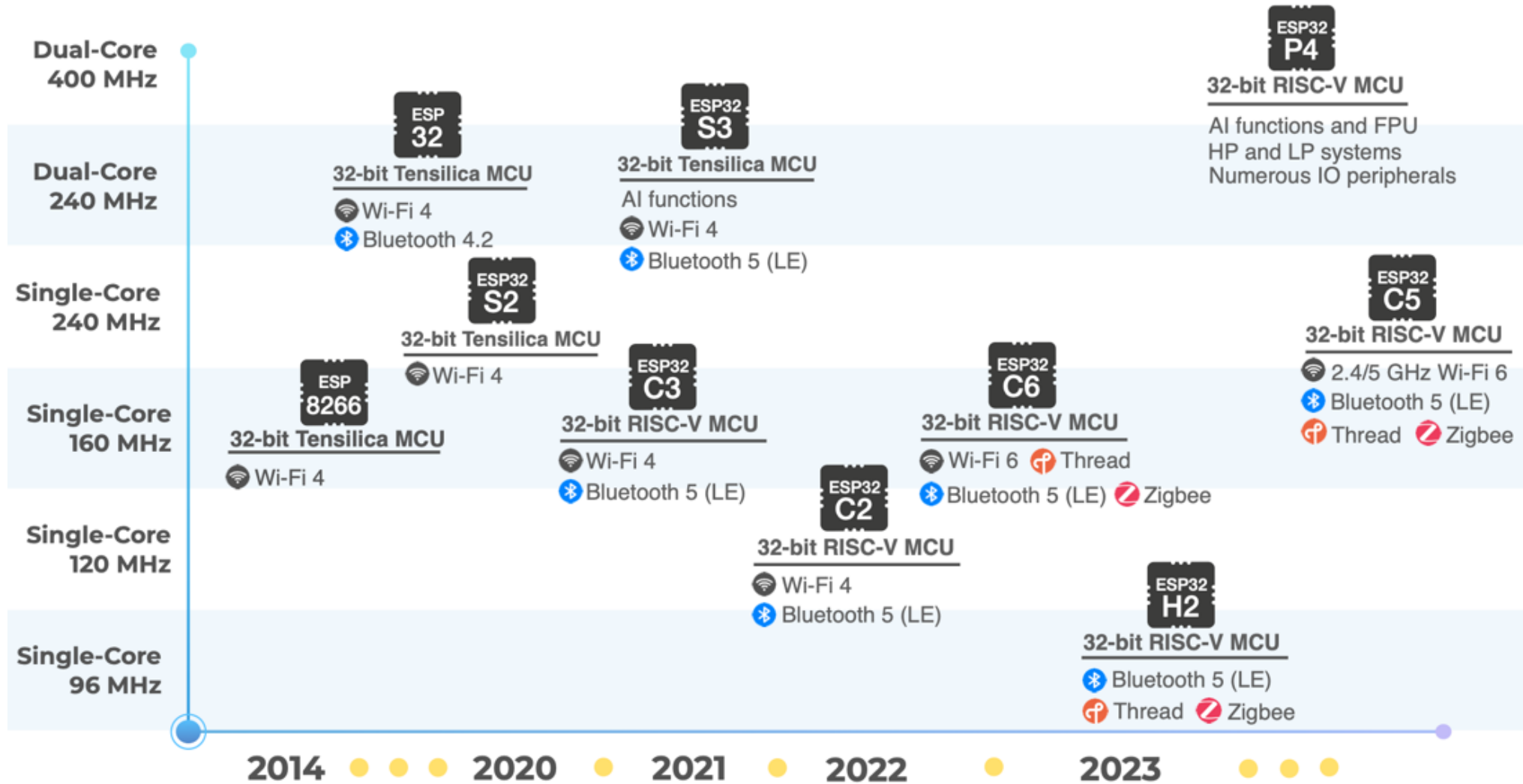
Wi-Fi
SoCs

Wi-Fi &
Bluetooth
SoCs

Modules

Development
boards

Espressif Product Map



Features

- RISC-V 32 bit Single Core
- Frequency up to 120 MHz
- 272 KB SRAM, 576 KB ROM
- 2.4GHz Wi-Fi + BLE 5.0
- PCB antenna
- Powerful and versatile
- Highly integrated
- Industrial modules
- Low power consumption



Part number	ESP8684-MINI-1	ESP8684-WROOM-02C	ESP8684-WROOM-03
Core	ESP8684H2 ESP8684H4	ESP8684H2 ESP8684H4	ESP8684H2 ESP8684H4
Flash(MB)	2,4	2,4	2,4
PSRAM(MB)	N/A	N/A	N/A
Dimensions(mm)	13.2×16.6×2.4	18×20×3.2	15×17.3×2.8

Features

- RISC-V 32 bit Single Core
- Frequency up to 160 MHz
- 400 KB SRAM, 384 KB ROM
- 2.4GHz Wi-Fi + BLE 5.0
- PCB antenna
- Powerful and versatile
- Highly integrated
- Industrial modules
- Low power consumption



Part number	ESP32-C3-MINI-1	ESP32-C3-WROOM-02	ESP32-C3-WROOM-03
Core	ESP32-C3FN4 ESP32-C3FH4	ESP32-C3	ESP8685H2 ESP8685H4
Flash(MB)	4	4	2,4
PSRAM(MB)	N/A	N/A	N/A
Dimensions(mm)	13.2×16.6×2.4	18×20×3.2	15×17.3×2.8

Features

- Xtensa® 32 bit LX7 Dual Core
- Frequency up to 240 MHz
- 512 KB SRAM, 384 KB ROM
- 2.4GHz Wi-Fi + BLE 5.0
- PCB antenna
- Powerful and versatile
- Highly integrated
- Industrial modules
- Low power consumption



Part number	ESP32-S3-MINI-1	ESP32-S3-WROOM-1	ESP32-S3-WROOM-2
Core	ESP32-S3FN8	ESP32-S3/ S3R2/ S3R8	ESP32-S3R8V
Flash(MB)	8	4,8,16	16,32
PSRAM(MB)	N/A	N/A,2,8	8
Dimensions(mm)	15.4×20.5×2.4	18×25.5×3.1	18×25.5×3.1

Features

- RISC-V 32 bit Single Core
- Frequency up to 160 MHz
- 512 KB SRAM, 320 KB ROM
- 2.4GHz **Wi-Fi 6+** BLE 5.0
- IEEE 802.15.4
- Thread 1.3
- ZigBee 3.0
- Highly integrated
- Low power consumption



Part number	ESP32-C6-MINI-1	ESP32-C6-WROOM-1
Core	ESP32-C6FH4	ESP32-C6FH4
Flash(MB)	4	4,8,16
PSRAM(MB)	N/A	N/A
Dimensions(mm)	13.2×16.6×2.4	18×25.5×3.2

Features

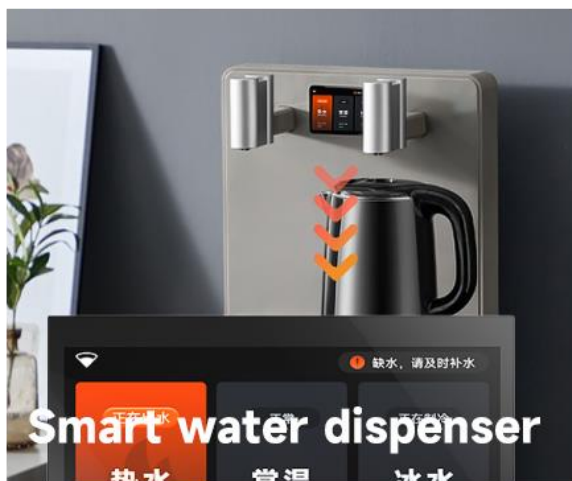
- 32 bit RISC-V single core
- Frequency up to 96 MHz
- 320 KB SRAM, 128 KB ROM
- BLE 5.0
- Thread 1.3
- ZigBee 3.0
- Highly integrated
- Low power consumption

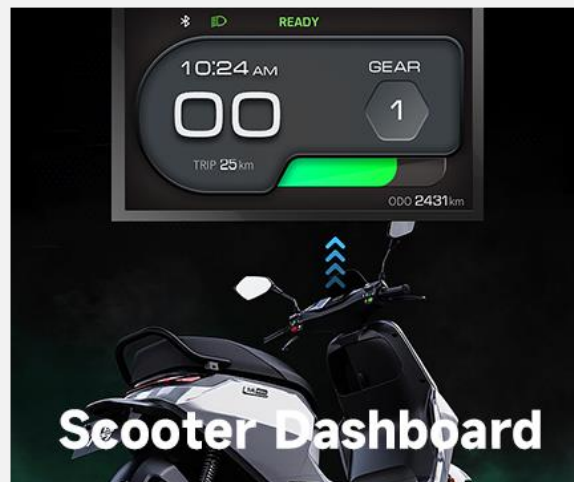
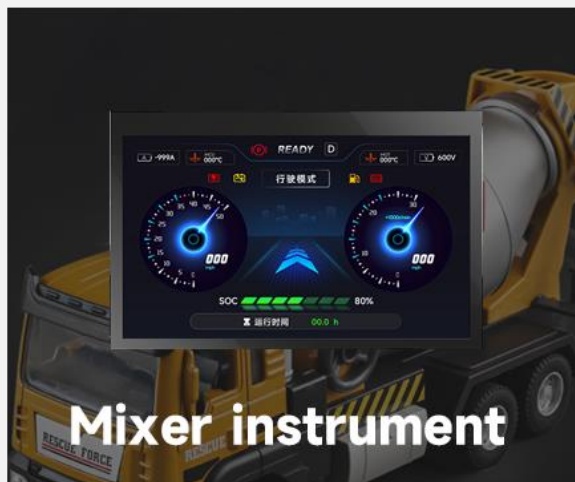
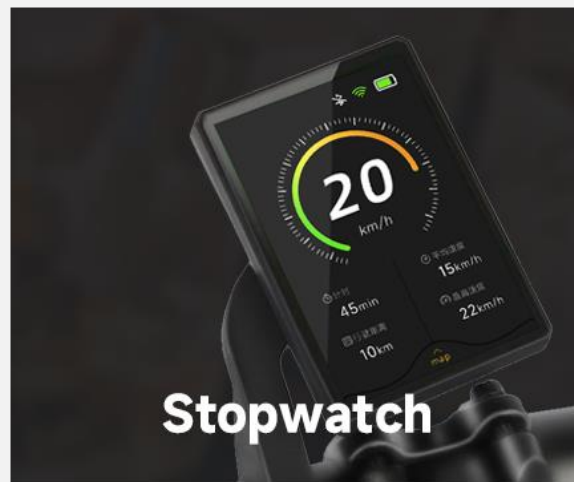


Part number	ESP32-H2-MINI-1	ESP32-H2-MINI-1U	ESP32-H2-WROOM-03
Core	ESP32-H2FH2 ESP32-H2FH4	ESP32-H2FH2 ESP32-H2FH4	ESP32-H2FH2 ESP32-H2FH4
Flash(MB)	1,2,4	2,4	2,4
PSRAM(MB)	N/A	N/A	N/A
Dimensions(mm)	13.2×16.6×2.4	13.2×12.5×2.4	15×17.3×2.8

Application Cases

viv wireless-tag







IQ Comprehensive Tester



CMW500 Comprehensive Tester



Spectrum Analyzer



**High-precision
Current Voltage Source**



Signal Generator

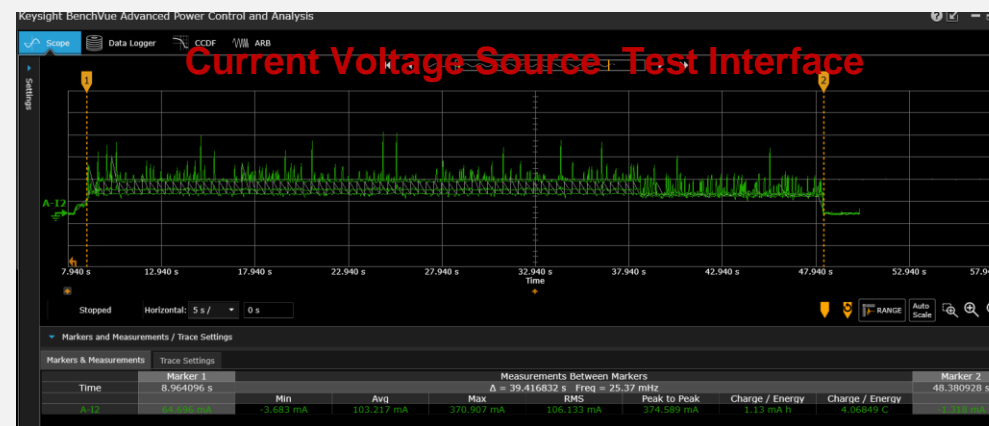
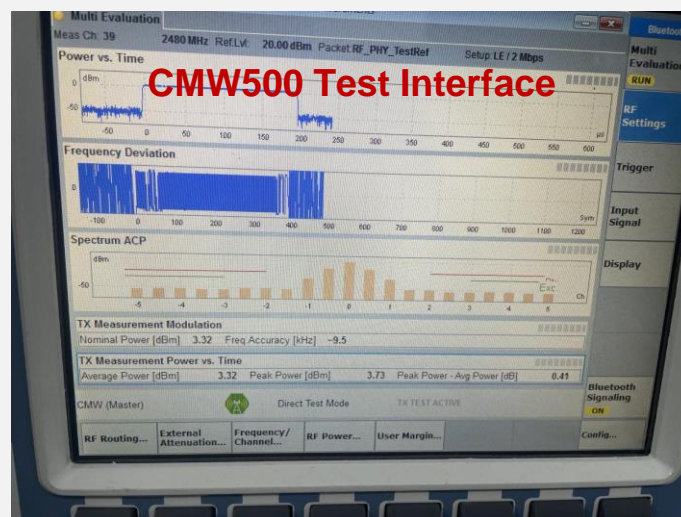
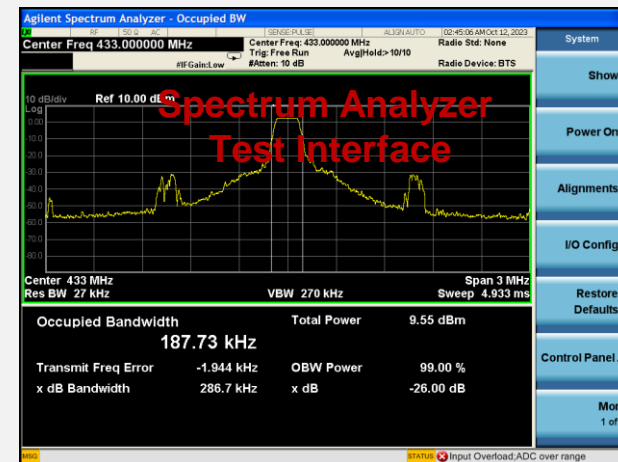
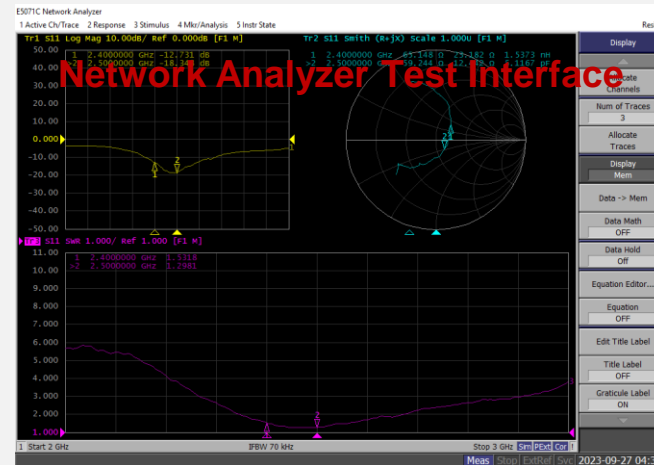
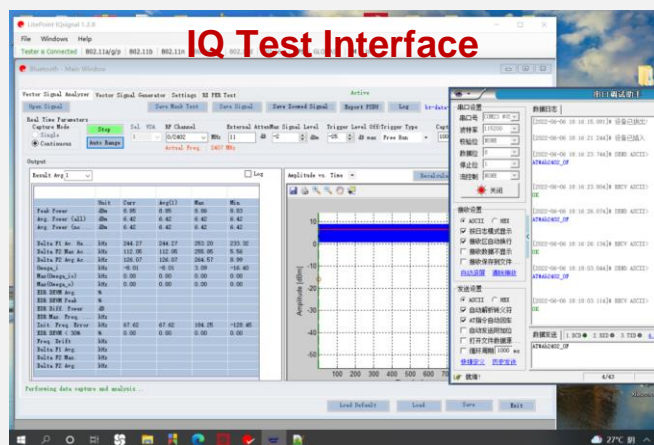


High-precision Oscilloscope



Network Analyzer

Test Interface



Host software for production test

Functional testing can be conducted on the modules during production, including: the firmware version number, communication protocol, transmission power, frequency deviation of the module signal, checking for false(soldering) connections on the module's IO pins, broadcast packet verification, Bluetooth device scanning, license read/write verification, MAC address read/write verification, voltage and current testing, etc.



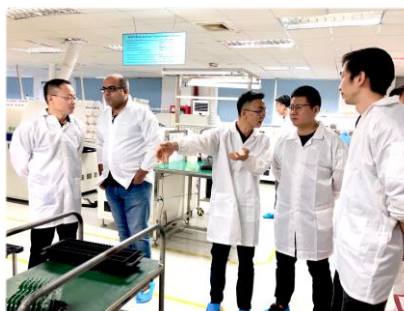
ODM

Wireless-tag provides customers with one-stop service of wireless communication solutions. From design to production, we strictly control the whole process for your products.



OEM

Wireless-tag provides customers with production services, including material supply, mass production, tooling and fixtures.





Thanks

Tel: +86-755-22677752

Website: <http://www.wireless-tag.com>

Address: Room 801-803, 8th Floor, Block A, Building 6,
International Innovation Valley, Nanshan District, Shenzhen