




# Espressif

## Product Ordering Information



Version 3.2  
Espressif Systems  
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# About This Guide

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This guide provides the ordering information of Espressif products.

## Release Notes

For any changes to this document over time, please refer to the last page.

## Documentation Change Notification

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## 1. Notes to This Guide

- MP denotes mass production.
- SPQ: Standard Pack Quantity; MOQ: Minimum Order Quantity.
- For high temperature range option, please contact our [salesperson](#).
- Unless otherwise specified, all the modules have the same dimensional tolerance:  $\pm 0.10$  mm for length, width and thickness.
- Release notes for this document are listed on the last page.
- Label **\*New** indicates that this is an new product, label **\*Recommend** indicates that this product is recommended by Espressif, and label **\*Default** indicates the default specification of a product.



## 2. ESP32 Series

Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
<b>ESP32 Series of SoCs</b>												
ESP32 <a href="#">Datasheet</a>	ESP32-D0WD-V3 <b>(*New)</b> <b>(*Recommend)</b>	-	SMD IC ESP32-D0WD-V3, dual-core MCU, Wi-Fi & Bluetooth combo, QFN 48-pin, 5*5 mm.	-	-	-	-40 °C ~ +125 °C	5x5	5,000 & 1,000	1,000	MP	-
	ESP32-D0WDQ6-V3 <b>(*New)</b> <b>(*Recommend)</b>	-	SMD IC ESP32-D0WDQ6-V3, dual-core MCU, Wi-Fi & Bluetooth combo, QFN 48-pin, 6*6 mm	-	-	-	-40 °C ~ +125 °C	6x6	3,000 & 1,000	1,000	MP	-
	ESP32-D0WD	-	SMD IC ESP32-D0WD, dual-core MCU, Wi-Fi & Bluetooth combo, QFN 48-pin, 5*5 mm	-	-	-	-40 °C ~ +125 °C	5x5	5,000 & 1,000	1,000	MP	-
	ESP32-D0WDQ6	-	SMD IC ESP32-D0WDQ6, dual-core MCU, Wi-Fi & Bluetooth combo, QFN 48-pin, 6*6 mm	-	-	-	-40 °C ~ +125 °C	6x6	3,000 & 1,000	1,000	MP	-



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
ESP32 <a href="#">Datasheet</a>	ESP32-D2WD	-	SMD IC ESP32-D2WD, dual-core MCU, Wi-Fi & Bluetooth combo, 2 MB flash inside, QFN 48-pin, 5*5 mm	2 MB	-	-	-40 °C ~ +105 °C	5x5	5,000 & 1,000	1,000	MP	-
	ESP32-S0WD	-	SMD IC ESP32-S0WD, single-core MCU, Wi-Fi & Bluetooth combo, QFN 48-pin, 5*5 mm	-	-	-	-40 °C ~ +125 °C	5x5	5,000 & 1,000	1,000	MP	-
	ESP32-U4WDH <b>(*New)</b>	-	SMD IC ESP32-U4WDH, ESP32 ECO V3, single-core MCU, Wi-Fi & Bluetooth combo, QFN 48-pin, 5*5 mm	4 MB	-	-	-40 °C ~ +105 °C	5x5	5,000 & 1,000	1,000	Sample	-
<b>ESP32 Series of Modules</b>												
ESP32-WROOM-32E <b>(*New)</b> <b>(*Recommend)</b>	ESP32-WROOM-32E (*Default)	ESP32-WROOM-32E(M113EH3200PH3Q0)	SMD module, ESP32-D0WD-V3, ESP32 ECO V3, 4 MB SPI flash, PCB antenna	4 MB	-	Internal PCB on-board antenna	-40 °C ~ +85 °C	18.00x25.50x3.10	650	650	Sample	ESP32-D0WD-V3 <a href="#">Datasheet</a>



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
ESP32-WROOM-32D <a href="#">Datasheet</a>	ESP32-WROOM-32D <b>(*Default)</b>	ESP32-WROOM-32D(M113DH3200PH3Q0)	SMD module, ESP32-D0WD, 4 MB SPI flash, PCB antenna	4 MB	-	Internal PCB on-board antenna	-40 °C ~ +85 °C	18.00×25.50×3.10	650	650	MP	ESP32-D0WD <a href="#">Datasheet</a>
	ESP32-WROOM-32D (8 MB)	ESP32-WROOM-32D(M113DH6400PH3Q0)	SMD module, ESP32-D0WD, 8 MB SPI flash, PCB antenna	8 MB	-	Internal PCB on-board antenna	-40 °C ~ +85 °C	18.00×25.50×3.10	650	650	MP	
	ESP32-WROOM-32D (16 MB)	ESP32-WROOM-32D(M113DH2800PH3Q0)	SMD module, ESP32-D0WD, 16 MB SPI flash, PCB antenna	16 MB	-	Internal PCB on-board antenna	-40 °C ~ +85 °C	18.00×25.50×3.10	650	650	MP	
	ESP32-WROOM-32D (High Temp. 105°C)	ESP32-WROOM-32D(M113DH3200PS3Q0)	SMD module, ESP32-D0WD, 4 MB SPI flash, PCB antenna, -40 °C ~ +105 °C	4 MB	-	Internal PCB on-board antenna	-40 °C ~ +105 °C	18.00×25.50×3.10	650	650	MP	ESP32-D0WD <a href="#">Datasheet</a>
ESP32-WROOM-32U <a href="#">Datasheet</a>	ESP32-WROOM-32U <b>(*Default)</b>	ESP32-WROOM-32U(M113DH3200UH3Q0)	SMD module, ESP32-D0WD, 4 MB SPI flash, IPEX antenna connector	4 MB	-	External IPEX antenna	-40 °C ~ +85 °C	18.00×19.20×3.20	650	650	MP	ESP32-D0WD <a href="#">Datasheet</a>
	ESP32-WROOM-32U (8 MB)	ESP32-WROOM-32U(M113DH6400UH3Q0)	SMD module, ESP32-D0WD, 8 MB SPI flash, IPEX antenna connector	8 MB	-	External IPEX antenna	-40 °C ~ +85 °C	18.00×19.20×3.20	650	650	MP	
	ESP32-WROOM-32U (16 MB)	ESP32-WROOM-32U(M113DH2800UH3Q0)	SMD module, ESP32-D0WD, 16 MB SPI flash, IPEX antenna connector	16 MB	-	External IPEX antenna	-40 °C ~ +85 °C	18.00×19.20×3.20	650	650	MP	



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
	ESP32-WROOM-32U (High Temp. 105°C)	ESP32-WROOM-32U(M113DH3200US3Q0)	SMD module, ESP32-D0WD, 4 MB SPI flash, IPEX antenna connector, -40 °C ~ +105 °C	4 MB	-	External IPEX antenna	-40 °C ~ +105 °C	18.00×19.20×3.20	650	650	MP	ESP32-D0WD <a href="#">Datasheet</a>
ESP32-WROOM-32 <a href="#">Datasheet</a>	-	-	SMD module, ESP32-D0WDQ6, 4 MB SPI flash, PCB antenna	4 MB	-	Internal PCB on-board antenna	-40 °C ~ +85 °C	18.00×25.50×3.10	550	550	MP	ESP32-D0WDQ6 <a href="#">Datasheet</a>
ESP32-WROOM-32SE <a href="#">Datasheet</a>	ESP32-WROOM-32SE	ESP32-WROOM-32SE(M123DH3200PH3Q0)	SMD module , ESP32-D0WD, 32Mbits SPI Flash, ATECC608A chip, PCB antenna	4 MB	-	Internal PCB on-board antenna	-40 °C ~ +85 °C	18.00×25.50×3.10	650	650	MP	ESP32-D0WD <a href="#">Datasheet</a>
ESP32-SOLO-1 <a href="#">Datasheet</a>	ESP32-SOLO-1 (*Default)	ESP32-SOLO-1(M113SH3200PH3Q0)	SMD module, ESP32-S0WD, single core, 4 MB SPI flash, PCB antenna	4 MB	-	Internal PCB on-board antenna	-40 °C ~ +85 °C	18.00×25.50×3.10	650	650	MP	ESP32-S0WD <a href="#">Datasheet</a>
	ESP32-SOLO-1 (High Temp. 105°C) (*New)	ESP32-SOLO-1(M113SH3200PS3Q0)	SMD module, ESP32-S0WD, single core, 4 MB SPI flash, PCB antenna , -40 °C ~ +105 °C	4 MB	-	Internal PCB on-board antenna	-40 °C ~ +105 °C	18.00×25.50×3.10	650	650	MP	ESP32-DevKitC-S1 <a href="#">Getting Started Guide</a>
	ESP32-WROVER-E (*Default) (*New) (*Recommend)	ESP32-WROVER-E(M213EH3264PC3Q0)	SMD module, ESP32-D0WD-V3, ESP32 ECO V3, 3.3 V, 8 MB PSRAM, 4 MB SPI flash, PCB antenna	4 MB	8 MB	Internal PCB on-board antenna	-40 °C ~ +65 °C	18.00×31.40×3.30	650	650	Sample	



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
ESP32-WROVER-E	ESP32-WROVER-E (8 MB flash)	ESP32-WROVER-E(M213EH6464P C3Q0)	SMD module, ESP32-D0WD-V3, ESP32 ECO V3, 3.3 V, 8 MB PSRAM, 8 MB SPI flash, PCB antenna	8 MB	8 MB	Internal PCB on-board antenna	-40 °C ~ +65 °C	18.00×31.40×3.30	650	650	Sample	ESP32-D0WD-V3 <a href="#">Datasheet</a>
	ESP32-WROVER-E (16 MB flash)	ESP32-WROVER-E(M213EH2864P C3Q0)	SMD module, ESP32-D0WD-V3, ESP32 ECO V3, 3.3 V, 8 MB PSRAM, 16 MB SPI flash, PCB antenna	16 MB	8 MB	Internal PCB on-board antenna	-40 °C ~ +65 °C	18.00×31.40×3.30	650	650	Sample	
ESP32-WROVER-IE	ESP32-WROVER-IE (*Default) <b>(*New)</b> <b>(*Recommend)</b>	ESP32-WROVER-IE(M213EH3264 UC3Q0)	SMD module, ESP32-D0WD-V3, ESP32 ECO V3, 3.3 V, 8 MB PSRAM, 4 MB SPI flash, IPEX antenna connector	4 MB	8 MB	External IPEX antenna	-40 °C ~ +65 °C	18.00×31.40×3.30	650	650	Sample	
	ESP32-WROVER-IE (8 MB flash)	ESP32-WROVER-IE(M213EH6464 UC3Q0)	SMD module, ESP32-D0WD-V3, ESP32 ECO V3, 3.3 V, 8 MB PSRAM, 8 MB SPI flash, IPEX antenna connector	8 MB	8 MB	External IPEX antenna	-40 °C ~ +65 °C	18.00×31.40×3.30	650	650	Sample	ESP32-D0WD-V3 <a href="#">Datasheet</a>
	ESP32-WROVER-IE (16 MB flash)	ESP32-WROVER-IE(M213EH2864 UC3Q0)	SMD module, ESP32-D0WD-V3, ESP32 ECO V3, 3.3 V, 8 MB PSRAM, 16 MB SPI flash, IPEX antenna connector	16 MB	8 MB	External IPEX antenna	-40 °C ~ +65 °C	18.00×31.40×3.30	650	650	Sample	





Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
ESP32-WROVER-B <a href="#">Datasheet</a>	ESP32-WROVER-B <b>(*Default)</b>	ESP32-WROVER-B(M213DH3264 PC3Q0)	SMD module, ESP32-D0WD, 3.3 V, 8 MB PSRAM, 4 MB SPI flash, PCB antenna	4 MB	8 MB	Internal PCB on-board antenna	-40 °C ~ +65 °C	18.00×31.40×3.30	650	650	MP	ESP32-D0WD <a href="#">Datasheet</a> ESP32-DevKitC-VB <a href="#">Getting Started Guide</a>
	ESP32-WROVER-B (8 MB flash)	ESP32-WROVER-B(M213DH6464 PC3Q0)	SMD module, ESP32-D0WD, 3.3 V, 8 MB PSRAM, 8 MB SPI flash, PCB antenna	8 MB	8 MB	Internal PCB on-board antenna	-40 °C ~ +65 °C	18.00×31.40×3.30	650	650	MP	ESP-WROVER-KIT-VB <a href="#">Getting Started Guide</a>
	ESP32-WROVER-B (16 MB flash)	ESP32-WROVER-B(M213DH2864 PC3Q0)	SMD module, ESP32-D0WD, 3.3 V, 8 MB PSRAM, 16 MB SPI flash, PCB antenna	16 MB	8 MB	Internal PCB on-board antenna	-40 °C ~ +65 °C	18.00×31.40×3.30	650	650	MP	
	ESP32-WROVER-IB (4 MB flash)	ESP32-WROVER-IB(M213DH3264 UC3Q0)	SMD module, ESP32-D0WD, 3.3 V, 8 MB PSRAM, 4 MB SPI flash, IPEX antenna connector	4 MB	8 MB	External IPEX antenna	-40 °C ~ +65 °C	18.00×31.40×3.30	650	650	MP	ESP32-D0WD <a href="#">Datasheet</a> ESP32-DevKitC-VIB <a href="#">Getting Started Guide</a>
	ESP32-WROVER-IB (8 MB flash)	ESP32-WROVER-IB(M213DH6464 UC3Q0)	SMD module, ESP32-D0WD, 3.3 V, 8 MB PSRAM, 8 MB SPI flash, IPEX antenna connector	8 MB	8 MB	External IPEX antenna	-40 °C ~ +65 °C	18.00×31.40×3.30	650	650	MP	
	ESP32-WROVER-IB (16 MB flash)	ESP32-WROVER-IB(M213DH2864 UC3Q0)	SMD module, ESP32-D0WD, 3.3 V, 8 MB PSRAM, 16 MB SPI flash, IPEX antenna connector	16 MB	8 MB	External IPEX antenna	-40 °C ~ +65 °C	18.00×31.40×3.30	650	650	MP	



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
ESP32-WROVER <a href="#">Datasheet</a>	ESP32-WROVER (PCB)	-	SMD module, ESP32-D0WDQ6, 1.8 V, 8 MB PSRAM, 4 MB SPI flash, PCB antenna	4 MB	8 MB	Internal PCB on-board antenna	-40 °C ~ +85 °C	18.00×31.40×3.30	650	650	MP	ESP32-D0WDQ6 <a href="#">Datasheet</a>
	ESP32-WROVER (IPEX)	-	SMD module, ESP32-D0WDQ6, 1.8 V, 8 MB PSRAM, 4 MB SPI flash, IPEX antenna connector	4 MB	8 MB	External IPEX antenna	-40 °C ~ +85 °C	18.00×31.40×3.30	650	650	MP	ESP32-D0WDQ6 <a href="#">Datasheet</a>
ESP32-PICO-V3 <b>(*New)</b>	ESP32-PICO-V3	-	ESP32 ECO V3 SiP with 4 MB flash, dual-core MCU, Wi-Fi & Bluetooth combo, LGA 48-pin, 7*7 mm	4 MB	-	-	-40 °C ~ +85 °C	7*7	2,000 & 1,000	1,000	MP	-
ESP32-PICO-D4 <a href="#">Datasheet</a>	-	-	SiP module with 4 MB flash, dual-core MCU, Wi-Fi & Bluetooth combo, LGA 48-pin, 7*7 mm	4 MB	-	-	-40 °C ~ +85 °C	7×7	2,000 & 1,000	1,000	MP	ESP32-PICO-KIT <a href="#">Getting Started Guide</a>
<b>ESP32 Series of Development Boards</b>												
	ESP32-DevKitC-32D	ESP32-DevKitC-32D	ESP32 general-purpose development board, embeds ESP32-WROOM-32D, 4 MB flash, with pin header	4 MB	-	Internal PCB on-board antenna	-40 °C ~ +85 °C	54.4×27.9	1	-	MP	ESP32-WROOM-32D <a href="#">Datasheet</a>



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
ESP32-DevKitC <a href="#">Getting Started Guide</a>	ESP32-DevKitC-32U	ESP32-DevKitC-32U	ESP32 general-purpose development board, embeds ESP32-WROOM-32U, 4 MB flash, with pin header	4 MB	-	External IPEX antenna	-40 °C ~ +85 °C	54.4×27.9	1	-	MP	ESP32-WROOM-32U <a href="#">Datasheet</a>
	ESP32-DevKitC-S1	ESP32-DevKitC-S1	ESP32 general-purpose development board, embeds ESP32-SOLO-1, 4 MB flash, with pin header	4 MB	-	Internal PCB on-board antenna	-40 °C ~ +85 °C	54.4×27.9	1	-	MP	ESP32-SOLO-1 <a href="#">Datasheet</a>
	ESP32-DevKitC-VB	ESP32-DevKitC-VB	ESP32 general-purpose development board, embeds ESP32-WROVER-B, 4 MB flash, 8 MB PSRAM, with pin header	4 MB	8 MB	Internal PCB on-board antenna	-40 °C ~ +65 °C	54.4×27.9	1	-	MP	ESP32-WROVER-B <a href="#">Datasheet</a>
	ESP32-DevKitC-VIB	ESP32-DevKitC-VIB	ESP32 general-purpose development board, embeds ESP32-WROVER-B (IPEX), 4 MB flash, 8 MB PSRAM, with pin header	4 MB	8 MB	External IPEX antenna	-40 °C ~ +65 °C	54.4×27.9	1	-	MP	ESP32-WROVER-B (IPEX) <a href="#">Datasheet</a>



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
ESP-WROVER-KIT <a href="#">Getting Started Guide</a>	ESP-WROVER-KIT-VB	ESP-WROVER-KIT-VB	ESP32 development board, JTAG function, TFT display and camera supported, ESP32-WROVER-B on the board	4 MB	8 MB	Internal PCB on-board antenna	-40 °C ~ +65 °C	85.1×84.3	1	-	MP	ESP32-WROVER-B <a href="#">Datasheet</a>
ESP32-PICO-KIT <a href="#">Getting Started Guide</a>	-	ESP32-PICO-KIT	ESP32-PICO-D4 development board	4 MB	-	Internal 3D antenna	-40 °C ~ +85 °C	52.0×20.3	1	-	MP	ESP32-PICO-D4 <a href="#">Datasheet</a>
ESP32-LyraT <a href="#">User Guide</a>	-	ESP32-LyraT	ESP32 audio development board, integrates ESP32-WROVER/ESP32-WROVER-B, peripherals like touch buttons, mic, speaker supported	4 MB	8 MB	Internal PCB on-board antenna	-40 °C ~ +65 °C	95.5×80.6	1	-	MP	ESP32-WROVER <a href="#">Datasheet</a> ESP32-WROVER-B <a href="#">Datasheet</a>
ESP32-LyraTD-DSPG <a href="#">User Guide</a> <b>(*New)</b> <b>(*Recommend)</b>	-	ESP32-LyraTD-DSPG	An Espressif Audio Development Board, based on ESP32-WROVER-B, a BT/WIFI combo module, and DBMP5P DSP that features a three-microphone array for noise reduction, echo cancellation, beamforming and wake-word detection.	16 MB	8 MB	Internal PCB on-board antenna	-20 °C ~ +65 °C	Main board: 85 mm X 65 mm Sun board: diameter 90 mm	1	-	MP	ESP32-WROVER-B <a href="#">Datasheet</a>



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
ESP32-LyraTD-SYNA <a href="#">User Guide</a> <b>(*New)</b> <b>(*Recommend)</b>	-	ESP32-LyraTD-SYNA	ESP32-LyraTD-SYNA is one of Espressif's Audio Development Board based on ESP32 MCU and Synaptics DSP. It is an Acoustic Echo Cancellation (AEC) solution, supporting voice recognition and voice wake-up. It also supports connection to Amazon's AVS (Alexa Voice Service), Google's Dialogflow and Google's GVA (Google Voice Assistant).	16 MB	8 MB	Internal PCB on-board antenna	-20 °C ~ +65 °C	91×69	1	-	MP	ESP32-WROVER-E
ESP32-LyraTD-MSD <a href="#">User Guide</a>	-	ESP32-LyraTD-MSD	ESP32 audio development board, integrates ESP32-WROVER-B and DSP, noise reduction, echo cancellation, voice recognition, near-field and far-field voice wake-up supported	4 MB	8 MB	Internal PCB on-board antenna	-40 °C ~ +65 °C	90×90	1	-	MP	ESP32-WROVER-B <a href="#">Datasheet</a>



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
ESP32-LyraT-Mini <a href="#">Getting Started</a>	-	ESP32-LyraT-Mini	ESP32-LyraT-Mini is a lightweight audio development board based on ESP32-WROVER-B, which implements AEC, AGC, NS WWE (wake word engine) and other audio signal processing technologies.	8 MB	8 MB	Internal PCB on-board antenna	-20 °C ~ +65 °C	77x72	1	-	MP	ESP32-WROVER-B <a href="#">Datasheet</a>
ESP-Prog <a href="#">Getting Started</a>	-	ESP-Prog	Development and debugging tool with functions including automatic firmware downloading, serial communication, and JTAG online debugging	-	-	-	-20 °C ~ +65 °C	73.4x25.1	1	-	MP	ESP32-Sense Kit <a href="#">User Guide</a> ESP32-MeshKit-Sense <a href="#">Hardware Design Guidelines</a>
ESP32-MeshKit-Sense <a href="#">Hardware Design Guidelines</a>	-	ESP32-MeshKit-Sense	A development board that embeds ESP32-WROOM-32D, peripherals such as temperature and humidity sensor, ambient light sensor, LCD screen connector, Micro USB port and ESP-Prog connector	4 MB	-	Internal PCB on-board antenna	-40 °C ~ +65 °C	75.0x41.0	1	-	MP	ESP32-WROOM-32D <a href="#">Datasheet</a> ESP-Prog <a href="#">Getting Started</a> ESP32-MeshKit-Light <a href="#">User Guide</a>



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
ESP32-MeshKit-Light <a href="#">User Guide</a>	-	ESP32-MeshKit-Light	Smart lights based on ESP-Mesh networking technology	4 MB	-	-	-20 °C ~ +40 °C	60×60×118	1	-	MP	ESP32-MeshKit-Sense <a href="#">Hardware Design Guidelines</a>
ESP-EYE <a href="#">Getting Started</a> <b>(*Recommend)</b>	-	ESP-EYE	A development board for image recognition and audio processing in AIoT applications	4 MB	8 MB	3D Antenna	0°C - 50°C	41.00 x 21.00 x 6.50	1	10	MP	ESP32-D0WD <a href="#">Datasheet</a>
ESP32-LCDKit <a href="#">Hardware Design Guidelines</a> <b>(*New)</b>	-	ESP32-LCDKit	An HMI development board based on ESP32-DevKitC (need to purchase if you didn't have one), integrated with such peripherals as SD-Card, DAC-Audio, can be connected to an external display.	-	-	-	-40 °C ~ +85 °C	73.4×25.1	1	-	MP	ESP32-DevKitC <a href="#">Getting Started Guide</a>



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
<b>ESP32 Series of Development Kits</b>												
ESP32-Sense Kit <a href="#">User Guide</a> <b>(*New)</b>	-	ESP32-Sense Kit	Touch sensor development kit, with ESP-Prog by default	4 MB	-	Internal PCB on-board antenna	-40 °C ~ +85 °C	-	1	-	MP	ESP32-WROOM-32 <a href="#">Datasheet</a> ESP32-WROOM-32D <a href="#">Datasheet</a> ESP-Prog <a href="#">Getting Started</a>
ESP32-MeshKit	-	-	Smart-light development kit, containing 1×ESP32-MeshKit-Sense, 5×ESP32-MeshKit-Light, 1×ESP-Prog	-	-	-	-	-	1	-	MP	ESP32-MeshKit-Sense <a href="#">Hardware Design Guidelines</a> ESP32-MeshKit-Light <a href="#">User Guide</a> ESP-Prog <a href="#">Getting Started</a>





### 3. ESP32-S2 Series

Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
<b>ESP32-S2 Series of SoCs</b>												
<a href="#">ESP32-S2 Datasheet</a> <b>(*New)</b>	ESP32-S2	-	SMD Wi-Fi IC, ESP32-S2, single-core MCU, QFN 56-pin, 7*7 mm	-	-	-	-40 °C ~ +125 °C	7x7	2,000 & 1,000	1,000	MP	-
<b>ESP32-S2 Series of Modules</b>												
<a href="#">ESP32-S2-WROOM</a> <b>(*New)</b>	ESP32-S2-WROOM (*Default)	ESP32-S2-WROOM(M22S2H3200PH3Q0)	SMD module, ESP32-S2, 4MB SPI flash, PCB antenna	4 MB	-	Internal PCB on-board antenna	-40 °C ~ +85 °C	18.00x31.00x3.30	650	650	Sample	ESP32-S2 <a href="#">Datasheet</a> ESP32-S2-Saola
<a href="#">ESP32-S2-WROOM-I</a> <b>(*New)</b>	ESP32-S2-WROOM-I	ESP32-S2-WROOM-I(M22S2H3200UH3Q0)	SMD module , ESP32-S2, 4MB SPI flash, IPEX antenna connector	4 MB	-	External IPEX antenna	-40 °C ~ +85 °C	18.00x31.00x3.30	650	650	Sample	ESP32-S2 <a href="#">Datasheet</a> ESP32-S2-Saola
<a href="#">ESP32-S2-WROVER</a> <b>(*New)</b>	ESP32-S2-WROVER (*Default)	ESP32-S2-WROVER(M22S2H3216PH3Q0)	SMD module, ESP32-S2, 3.3V, 2MB PSRAM, 4MB SPI flash, PCB Antenna	4 MB	2 MB	Internal PCB on-board antenna	-40 °C ~ +85 °C	18.00x31.00x3.30	650	650	Sample	ESP32-S2 <a href="#">Datasheet</a> ESP32-S2-Saola
<a href="#">ESP32-S2-WROVER-I</a> <b>(*New)</b>	ESP32-S2-WROVER-I	ESP32-S2-WROVER-I(M22S2H3216UH3Q0)	SMD module, ESP32-S2, 3.3V, 2MB PSRAM, 4MB SPI flash, IPEX antenna connector	4 MB	2 MB	External IPEX antenna	-40 °C ~ +85 °C	18.00x31.00x3.30	650	650	Sample	ESP32-S2 <a href="#">Datasheet</a> ESP32-S2-Saola



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
<b>ESP32-S2 Series of Development Boards</b>												
ESP32-S2-Saola <b>(*New)</b>	ESP32-S2-Saola-R	ESP32-S2-Saola-R	ESP32-S2 general-purpose development board, embeds ESP32-S2-WROVER, 4 MB flash, with pin header	4 MB	2 MB	Internal PCB on-board antenna	-40 °C ~ +85 °C	53.9x27.9	1	-	Sample	ESP32-S2-WROVER
	ESP32-S2-Saola-RI	ESP32-S2-Saola-RI	ESP32-S2 general-purpose development board, embeds ESP32-S2-WROVER-I, 4 MB flash, with pin header	4 MB	2 MB	External IPEX antenna	-40 °C ~ +85 °C	53.9x27.9	1	-	Sample	ESP32-S2-WROVER-I
	ESP32-S2-Saola-M	ESP32-S2-Saola-M	ESP32-S2 general-purpose development board, embeds ESP32-S2-WROOM, 4 MB flash, with pin header	4 MB	-	Internal PCB on-board antenna	-40 °C ~ +85 °C	53.9x27.9	1	-	Sample	ESP32-S2-WROOM
	ESP32-S2-Saola-MI	ESP32-S2-Saola-MI	ESP32-S2 general-purpose development board, embeds ESP32-S2-WROOM-I, 4 MB flash, with pin header	4 MB	-	External IPEX antenna	-40 °C ~ +85 °C	53.9x27.9	1	-	Sample	ESP32-S2-WROOM-I



## 4. ESP8266 Series

Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
<b>ESP8266 Series of SoCs</b>												
ESP8266EX <a href="#">Datasheet</a>	-	-	SMD IC ESP8266EX, QFN32-pin, 5*5 mm	NA	-	NA	-40 °C ~ +125 °C	5x5	5,000 & 1,000	1,000	MP	-
ESP8285 <a href="#">Datasheet</a>	ESP8285N08	ESP8285N08	SMD IC ESP8285N08, QFN32-pin, 5*5 mm, 1 MB flash inside, -40 °C ~ +85 °C	1 MB	-	NA	-40 °C ~ +85 °C	5x5	5,000 & 1,000	1,000	MP	-
	ESP8285H08	ESP8285H08	SMD IC ESP8285H08, QFN32-pin, 5*5 mm, 1 MB flash inside, -40 °C ~ +105 °C	1 MB	-	NA	-40 °C ~ +105 °C	5x5	5,000 & 1,000	5,000	MP	-
	ESP8285H16	ESP8285H16	SMD IC ESP8285H16, QFN32-pin, 5*5 mm, 2 MB flash inside, -40 °C ~ +105 °C	2 MB	-	NA	-40 °C ~ +105 °C	5x5	5,000 & 1,000	5,000	Sample	-



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
<b>ESP8266 Series of Modules</b>												
ESP-WROOM-02D <a href="#">Datasheet</a> <b>(*Recommend)</b>	ESP-WROOM-02D <b>(*Default)</b>	-	SMD Module ESP-WROOM-02D, ESP8266EX, 2 MB SPI flash, UART Mode	2 MB	-	Internal PCB on-board antenna	-40 °C ~ +85 °C	18.00×20.00×3.20	650	650	MP	<ul style="list-style-type: none"> <li>ESP8266EX <a href="#">Datasheet</a></li> <li>ESP8266-DevKitC <a href="#">Getting Started</a></li> </ul>
	ESP-WROOM-02D (4 MB)	-	SMD Module ESP-WROOM-02D, ESP8266EX, 4 MB SPI flash, UART Mode	4 MB	-	Internal PCB on-board antenna	-40 °C ~ +85 °C	18.00×20.00×3.20	650	650	MP	<ul style="list-style-type: none"> <li>ESP8266-DevKitC <a href="#">Getting Started</a></li> </ul>
	ESP-WROOM-02D (High Temperature) <b>(*New)</b>	ESP-WROOM-02D(M1102H1600PS3Q0)	SMD Module ESP-WROOM-02D, ESP8266EX, 2 MB SPI flash, UART Mode, -40 °C ~ +105 °C	2 MB	-	Internal PCB on-board antenna	-40 °C ~ +105 °C	18.00×20.00×3.20	650	650	MP	<ul style="list-style-type: none"> <li>ESP8266EX <a href="#">Datasheet</a></li> </ul>
ESP-WROOM-02U <a href="#">Datasheet</a> <b>(*Recommend)</b>	ESP-WROOM-02U <b>(*Default)</b>	-	SMD Module ESP-WROOM-02U, ESP8266EX, 2 MB SPI flash, UART Mode, external IPEX antenna connector	2 MB	-	External IPEX antenna	-40 °C ~ +85 °C	18.00×14.30×3.20	650	650	MP	<ul style="list-style-type: none"> <li>ESP8266EX <a href="#">Datasheet</a></li> <li>ESP8266-DevKitC <a href="#">Getting Started</a></li> </ul>
	ESP-WROOM-02U (4 MB)	-	SMD Module ESP-WROOM-02U, ESP8266EX, 4 MB SPI flash, UART Mode, external IPEX antenna connector	4 MB	-	External IPEX antenna	-40 °C ~ +85 °C	18.00×14.30×3.20	650	650	MP	<ul style="list-style-type: none"> <li>ESP8266-DevKitC <a href="#">Getting Started</a></li> </ul>



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
	ESP-WROOM-02U (High Temperature) <b>(*New)</b>	ESP-WROOM-02U(M1 102H1600US3Q0)	SMD Module ESP-WROOM-02U, ESP8266EX, 2 MB SPI flash, UART Mode, external IPEX antenna connector, -40 °C ~ +105 °C	2 MB	-	External IPEX antenna	-40 °C ~ +105 °C	18.00×14.30×3.20	650	650	MP	ESP8266EX <a href="#">Datasheet</a>
ESP-WROOM-02 <a href="#">Datasheet</a>	-	-	SMD Module, ESP8266EX, 2 MB SPI flash, UART Mode	2 MB	-	Internal PCB on-board antenna	-40 °C ~ +85 °C	18.00×20.00×2.80	650	650	MP	ESP8266EX <a href="#">Datasheet</a>
ESP-WROOM-S2 <a href="#">Datasheet</a>	-	-	SMD Module, ESP8266EX, 2 MB SPI flash, SPI Mode	2 MB	-	Internal PCB on-board antenna	-40 °C ~ +85 °C	16.00×23.00×2.80	650	650	MP	ESP8266EX <a href="#">Datasheet</a>
<b>ESP8266 Series of Development Boards</b>												
ESP8266-DevKitC <a href="#">Getting Started</a> <b>(*Recommend)</b>	ESP8266-DevKitC-02D-F	ESP8266-DevKitC-02D-F	ESP8266 General Development Kit with ESP-WROOM-02D embedded and <b>female header</b> connector on board	2 MB	-	Internal PCB on-board antenna	-40 °C ~ +85 °C	44.9×25.4	1	-	MP	ESP-WROOM-02D <a href="#">Datasheet</a>
	ESP8266-DevKitC-02U-F	ESP8266-DevKitC-02U-F	ESP8266 General Development Kit, embeds ESP-WROOM-02U and <b>female header</b> connector on the board	2 MB	-	External IPEX antenna	-40 °C ~ +85 °C	44.9×25.4	1	-	MP	ESP-WROOM-02U <a href="#">Datasheet</a>



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
ESP-Launcher <a href="#">Hardware Design Guidelines</a>	-	ESP-LAUNCHER	Development board for ESP8266EX, with external SMA antenna	4 MB	-	External SMA antenna	-25 °C ~ +85 °C	46x78.5	1	-	MP	ESP8266EX <a href="#">Datasheet</a>



## 5. Production Testing Equipment

Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
<b>Production Testing Board</b>												
ESP-FactoryTB1	-	ESP-FactoryTB1	Production testing board with two high-speed serial ports	-	-	-	-40 °C ~ +65 °C	66.5×46.0	1	-	MP	All Espressif products
<b>Signal Boards</b>												
ESP-BAT32		ESP-BAT32	RF testing board for ESP32 products	4 MB	-	External SMA antenna	-25 °C ~ +75 °C	100×60×25	1	-	MP	ESP32 products
ESP-BAT8	-	ESP-BAT8	RF testing board for ESP8266 products	4 MB	-	External SMA antenna	-25 °C ~ +75 °C	100×60×25	1	-	MP	ESP8266 products
<b>Flashing Boards</b>												
ESP32-DevKitS <b>(*New)</b>	ESP32-DevKitS	ESP32-DevKitS	ESP32-DevKitS is a flashing board used to flash official ESP32 WROOM and SOLO modules.	-	-	-	-20 °C ~ +65 °C	48.3×28.9	1	-	MP	ESP32 WROOM and SOLO modules



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
ESP32-DevKitS <b>(*New)</b>	ESP32-DevKitS-R	ESP32-DevKitS-R	ESP32-DevKitS-R is a flashing board used to flash official ESP32 WROVER modules.	-	-	-	-20 °C ~ +65 °C	48.3x28.9	1	-	MP	ESP32 WROVER modules
ESP8266-DevKitS <b>(*New)</b>	ESP8266-DevKitS	ESP8266-DevKitS	ESP8266-DevKitS is a flashing board used to flash official ESP8266 WROOM modules.	-	-	-	-20 °C ~ +65 °C	38.9x28.9	1	-	MP	ESP8266 WROOM modules





## Release Notes

Date	Version	Release notes
2017.06	V1.0	First release.
2017.08	V1.1	Updated version.
2017.08	V1.2	<ul style="list-style-type: none"><li>• Added ESP32-PICO-D4;</li><li>• Deleted ESP8689;</li><li>• Corrected typos.</li></ul>
2017.09	V1.3	<ul style="list-style-type: none"><li>• Updated SPQ and MOQ for ESP32-PICO-D4;</li><li>• Updated the marketing status of ESP32-D0WD and ESP32-D2WD to MP;</li><li>• Added ESP-WROOM-02D module.</li></ul>
2017.11	V1.4	<ul style="list-style-type: none"><li>• Added ESP-WROOM-32D and ESP32-WROOM-32U modules;</li><li>• Added ESP32-PICO-KIT;</li><li>• Added ESP-WROOM-02D and ESP-WROOM-02U modules;</li><li>• Updated SPQ and MOQ for several modules.</li></ul>
2017.12	V1.5	Corrected some typos.
2018.03	V1.6	Updated the product names of ESP-WROOM-32 and ESP-WROOM-32D.
2018.06	V1.7	<ul style="list-style-type: none"><li>• Updated the marketing status of ESP32-S0WD, ESP32-WROOM-32D, ESP32-WROOM-32U, ESP-WROOM-02D, and ESP-WROOM-02U to MP;</li><li>• Updated the module information of ESP32-DevKitC;</li><li>• Updated the information of PSRAM integrated on ESP32-WROVER and ESP32-WROVER-I;</li><li>• Added ESP32-SOLO-1, ESP32-LyraT, ESP32-LyraTD-MSC, ESP32-Sense Kit, and ESP-Prog.</li></ul>
2018.06	V1.8	<ul style="list-style-type: none"><li>• Added the link to ESP32-SOLO-1 Datasheet;</li><li>• Added ESP32-WROVER-B and ESP32-WROVER-IB.</li></ul>



Date	Version	Release notes
2018.07	V1.9	<ul style="list-style-type: none"><li>• Updated the marketing status of ESP32-PICO-D4, ESP32-LyraT, ESP32-LyraTD-MSK, ESP32-Sense Kit, ESP-Prog, ESP32-WROVER-B, and ESP32-WROVER-IB to MP;</li><li>• Added ESP32-MeshKit-Sense and ESP32-MeshKit-Light.</li><li>• Added the column “Custom flash size” for modules available for customized order.</li></ul>
2018.09	V2.0	<ul style="list-style-type: none"><li>• Added labels <b>*New</b>, <b>*Recommend</b> and <b>*Default</b>;</li><li>• Updated document cover;</li><li>• Updated information of modules' dimensions;</li><li>• Updated the description of a number of products.</li></ul>
2018.11	V2.1	<ul style="list-style-type: none"><li>• Added variants of ESP32-WROOM-32D and ESP32-WROOM-32U with high temperature range (–40 °C ~ +105 °C);</li><li>• Updated the operating temperature range of ESP32-WROVER from –40 °C ~ 65 °C to –40 °C ~ 85 °C;</li><li>• Removed all ESP32-DevKitC variants with female headers;</li><li>• Updated the description of ESP32-MeshKit.</li></ul>
2018.12	V2.2	<ul style="list-style-type: none"><li>• Removed information about ESP8089;</li><li>• Added new products and variants:<ul style="list-style-type: none"><li>- ESP-WROOM-02DC</li><li>- ESP-WROOM-02UC</li><li>- ESP-WROOM-02D (High Temperature)</li><li>- ESP-WROOM-02U (High Temperature)</li></ul></li></ul>
2019.01	V2.3	Added the development board for image recognition and audio processing ESP-EYE.
2019.02	V2.4	Removed information about ESP-WROOM-02DC and ESP-WROOM-02UC.
2019.05	V2.5	Added a new product ESP32-LCDKit
2019.07	V2.6	<ul style="list-style-type: none"><li>• Corrected a typo in the product description of ESP32-WROOM-32;</li><li>• Added a new variant for ESP32-SOLO-1;</li><li>• Updated the description of ESP32-SOLO-1.</li></ul>



Date	Version	Release notes
2019.08	V2.7	<ul style="list-style-type: none"><li>• Added a new product ESP32-LyraTD-DSPG;</li><li>• Updated SPQ and MOQ information of the following products:<ul style="list-style-type: none"><li>- ESP32-D0WD</li><li>- ESP32-D0WDQ6</li><li>- ESP32-D2WD</li><li>- ESP32-S0WD</li><li>- ESP32-PICO-D4</li><li>- ESP8266EX</li></ul></li><li>• Updated information of ESP8285.</li></ul>
2019.08	V2.8	<ul style="list-style-type: none"><li>• Updated information of ESP32 series of chips;</li><li>• Added MPNs for ESP32-WROOM-32D and ESP32-WROOM-32U;</li><li>• Move the location of ESP32-LyraTD-DSPG in the table, so it is closer to other ESP32-LyraT boards.</li></ul>
2019.09	V2.9	Added a new product ESP32-LyraT-Mini.
2019.11	V3.0	Added a new product ESP32-LyraTD-SYNA.
2020.01	V3.1	<ul style="list-style-type: none"><li>• Added new product variants ESP32-D0WD-V3 and ESP32-D0WDQ6-V3.</li><li>• Added Submit Documentation Feedback link in the footer.</li></ul>



Date	Version	Release notes
2020.01	V3.2	<ul style="list-style-type: none"><li>• Added the following products:<ul style="list-style-type: none"><li>- ESP32-U4WDH</li><li>- ESP32-WROOM-32E (*Default)</li><li>- ESP32-WROVER-E series</li><li>- ESP32-WROVER-IE series</li><li>- ESP32-PICO-V3</li><li>- ESP32-S2</li><li>- ESP32-S2-WROOM</li><li>- ESP32-S2-WROOM-I</li><li>- ESP32-S2-WROVER</li><li>- ESP32-S2-WROVER-I</li><li>- ESP32-S2-Saola series</li><li>- ESP32-DevKitS series</li><li>- ESP8266-DevKitS</li><li>- ESP32-WROOM-32SE</li></ul></li><li>• Modified the information for the following production:<ul style="list-style-type: none"><li>- “Related Product” and tags for ESP32-LyraTD-SYNA</li><li>- Tags for ESP32-WROOM-32D, ESP32-WROOM-32U and ESP32-WROVER-B</li></ul></li></ul>



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