




Espressif

Product Ordering Information



Version 2.1
Espressif Systems
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About This Guide

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.

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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: ± 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
ESP32 Series of SoCs												
ESP32-D0WD Datasheet	-	-	SMD IC ESP32-D0WD, dual-core MCU, Wi-Fi & Bluetooth combo, QFN 48-pin, 5*5 mm	-	-	-	-40 °C ~ +125 °C	5x5	5,000	5,000	MP	-
ESP32-D0WDQ6 Datasheet	-	-	SMD IC ESP32-D0WDQ6, dual-core MCU, Wi-Fi & Bluetooth combo, QFN 48-pin, 6*6 mm	-	-	-	-40 °C ~ +125 °C	6x6	3,000	3,000	MP	-
ESP32-D2WD Datasheet	-	-	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	5,000	MP	-
ESP32-S0WD Datasheet	-	-	SMD IC ESP32-S0WD, single-core MCU, Wi-Fi & Bluetooth combo, QFN 48-pin, 5*5 mm	-	-	-	-40 °C ~ +125 °C	5x5	5,000	5,000	MP	-



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
ESP32 Series of Modules												
ESP32-WROOM-32D Datasheet (*Recommend)	ESP32-WROOM-32D (*Default)	-	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 Datasheet ESP32-DevKitC-32D Getting Started Guide
	ESP32-WROOM-32D (8 MB)	-	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)	-	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(M113DH3200PS3 Q0)	-	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-WROOM-32U Datasheet (*Recommend) (Continued on the next page...)	ESP32-WROOM-32U (*Default)	-	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 Datasheet ESP32-DevKitC-32U Getting Started Guide
	ESP32-WROOM-32U (8 MB)	-	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)	-	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 Datasheet (*Recommend)	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 Datasheet
ESP32-WROOM-32 Datasheet	-	-	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	550	550	MP	ESP32-D0WDQ6 Datasheet
ESP32-SOLO-1 Datasheet	-	-	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 Datasheet ESP32-DevKitC-S1 Getting Started Guide
ESP32-WROVER-B Datasheet (*Recommend) (Continued on the next page...)	ESP32-WROVER-B (*Default)	ESP32-WROVER-B(M213DH3264PC3Q0)	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 Datasheet
	ESP32-WROVER-B (8 MB flash)	ESP32-WROVER-B(M213DH6464PC3Q0)	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	ESP32-DevKitC-VB Getting Started Guide ESP-WROVER-



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 Datasheet (*Recommend)	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	KIT-VB Getting Started Guide
	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 Datasheet ESP32-DevKitC-VIB Getting Started Guide
	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	
ESP32-WROVER Datasheet (Continued on the next page...)	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	



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
ESP32-WROVER Datasheet	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 Datasheet
ESP32-PICO-D4 Datasheet	-	-	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	2,000	MP	ESP32-PICO-KIT Getting Started Guide
ESP32 Series of Development Boards												
ESP32-DevKitC Getting Started Guide (Continued on the next page...)	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 Datasheet
	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 Datasheet



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
ESP32-DevKitC Getting Started Guide	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 Datasheet
	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 Datasheet
	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) Datasheet
ESP-WROVER-KIT Getting Started Guide	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 Datasheet



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
ESP32-PICO-KIT Getting Started Guide	-	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 Datasheet
ESP32-LyraT User Guide	-	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 Datasheet ESP32-WROVER-B Datasheet
ESP32-LyraTD-MSD User Guide	-	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 Datasheet



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
ESP-Prog Getting Started	-	ESP-Prog	Development and debugging tool with functions including automatic firmware downloading, serial communication, and JTAG online debugging	-	-	-	-20 °C ~ +65 °C	73.4×25.1	1	-	MP	ESP32-Sense Kit User Guide ESP32-MeshKit-Sense Hardware Design Guidelines
ESP32-MeshKit-Sense Hardware Design Guidelines	-	ESP32-MeshKit-Sense	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	75.0×41.0	1	-	MP	ESP32-WROOM-32D Datasheet ESP-Prog Getting Started ESP32-MeshKit-Light User Guide
ESP32-MeshKit-Light User Guide	-	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 Hardware Design Guidelines
ESP32 Series of Development Kits												



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
ESP32-Sense Kit User Guide	-	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 Datasheet ESP32-WROOM-32D Datasheet ESP-Prog Getting Started
ESP32-MeshKit	-	-	Smart-light development kit, containing 1×ESP32-MeshKit-Sense, 5×ESP32-MeshKit-Light, 1×ESP-Prog	-	-	-	-	-	1	-	MP	ESP32-MeshKit-Sense Hardware Design Guidelines ESP32-MeshKit-Light User Guide ESP-Prog Getting Started



3. ESP8266 Series

Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
ESP8266 Series of SoCs												
ESP8266EX Datasheet	-	-	SMD IC ESP8266EX, QFN32-pin, 5*5 mm	NA	-	NA	-40 °C ~ +125 °C	5x5	5,000	5,000	MP	-
ESP8285 Datasheet	-	-	SMD IC ESP8285, QFN32-pin, 5*5 mm	1 MB	-	NA	-40 °C ~ +125 °C	5x5	5,000	5,000	MP	-
ESP8266 Series of Modules												
ESP-WROOM-02D Datasheet (*Recommend)	ESP-WROOM-02D (*Default)	-	SMD Module ESP-WROOM-02D, ESP8266EX, 2 MB SPI flash, UART Mode	2 MB	-	Internal PCB on-board antenna	-40 °C ~ +85 °C	18.00x20.00x3.20	650	650	MP	<ul style="list-style-type: none"> • ESP8266EX Datasheet • ESP8266-DevKitC Getting Started
	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	18.00x20.00x3.20	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
ESP-WROOM-02U Datasheet (*Recommend)	ESP-WROOM-02U (*Default)	-	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	ESP8266EX Datasheet
	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	ESP8266EX Datasheet
ESP-WROOM-02 Datasheet	-	-	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 Datasheet
ESP-WROOM-S2 Datasheet	-	-	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 Datasheet
ESP8266 Series of Development Boards												
ESP8266-DevKitC Getting Started (*Recommend)	ESP8266-DevKitC-02D-F	ESP8266-DevKitC-02D-F	ESP8266 General Development Kit with ESP-WROOM-02U embedded and female header connector on board	2 MB	-	Internal PCB on-board antenna	-40 °C ~ +85 °C	44.9×25.4	1	-	MP	ESP-WROOM-02D Datasheet



Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
	ESP8266-DevKitC-02U-F	ESP8266-DevKitC-02U-F	ESP8266 General Development Kit, embeds ESP-WROOM-02U and female header connector on the board	2 MB	-	External IPEX antenna	-40 °C ~ +85 °C	44.9×25.4	1	-	MP	ESP-WROOM-02U Datasheet
ESP-Launcher Hardware Design Guidelines	-	ESP-LAUNCHER	Development board for ESP8266EX, with external SMA antenna	4 MB	-	External SMA antenna	-25 °C ~ +85 °C	46×78.5	1	-	MP	ESP8266EX Datasheet



4. ESP8089 Series

Product Name	Variants	MPN	Product Description	Flash Size	PSRAM Size	Antenna Type	Operating Temperature	Dimensions (mm)	SPQ	MOQ	Production Status	Related Product
ESP8089 Series of SoCs												
ESP8089 Datasheet	-	-	SMD IC ESP8089, QFN32-pin, 5 mm*5 mm		-	-	-40 °C ~ +125 °C	5x5	5,000	5,000	MP	-



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
Production Testing Board												
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
Signal Boards												
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



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">• Added ESP32-PICO-D4;• Deleted ESP8689;• Corrected typos.
2017.09	V1.3	<ul style="list-style-type: none">• Updated SPQ and MOQ for ESP32-PICO-D4;• Updated the marketing status of ESP32-D0WD and ESP32-D2WD to MP;• Added ESP-WROOM-02D module.
2017.11	V1.4	<ul style="list-style-type: none">• Added ESP-WROOM-32D and ESP32-WROOM-32U modules;• Added ESP32-PICO-KIT;• Added ESP-WROOM-02D and ESP-WROOM-02U modules;• Updated SPQ and MOQ for several modules.
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">• Updated the marketing status of ESP32-S0WD, ESP32-WROOM-32D, ESP32-WROOM-32U, ESP-WROOM-02D, and ESP-WROOM-02U to MP;• Updated the module information of ESP32-DevKitC;• Updated the information of PSRAM integrated on ESP32-WROVER and ESP32-WROVER-I;• Added ESP32-SOLO-1, ESP32-LyraT, ESP32-LyraTD-MSC, ESP32-Sense Kit, and ESP-Prog.
2018.06	V1.8	<ul style="list-style-type: none">• Added the link to ESP32-SOLO-1 Datasheet;• Added ESP32-WROVER-B and ESP32-WROVER-IB.



Date	Version	Release notes
2018.07	V1.9	<ul style="list-style-type: none">• 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;• Added ESP32-MeshKit-Sense and ESP32-MeshKit-Light.• Added the column “Custom flash size” for modules available for customized order.
2018.09	V2.0	<ul style="list-style-type: none">• Added labels *New, *Recommend and *Default;• Updated document cover;• Updated information of modules' dimensions;• Updated the description of a number of products.
2018.11	V2.1	<ul style="list-style-type: none">• Added variants of ESP32-WROOM-32D and ESP32-WROOM-32U with high temperature range (–40 °C ~ +105 °C);• Updated the operating temperature range of ESP32-WROVER from –40 °C ~ 65 °C to –40 °C ~ 85 °C;• Removed all ESP32-DevKitC variants with female headers;• Updated the description of ESP32-MeshKit.



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