

ESP32-P4



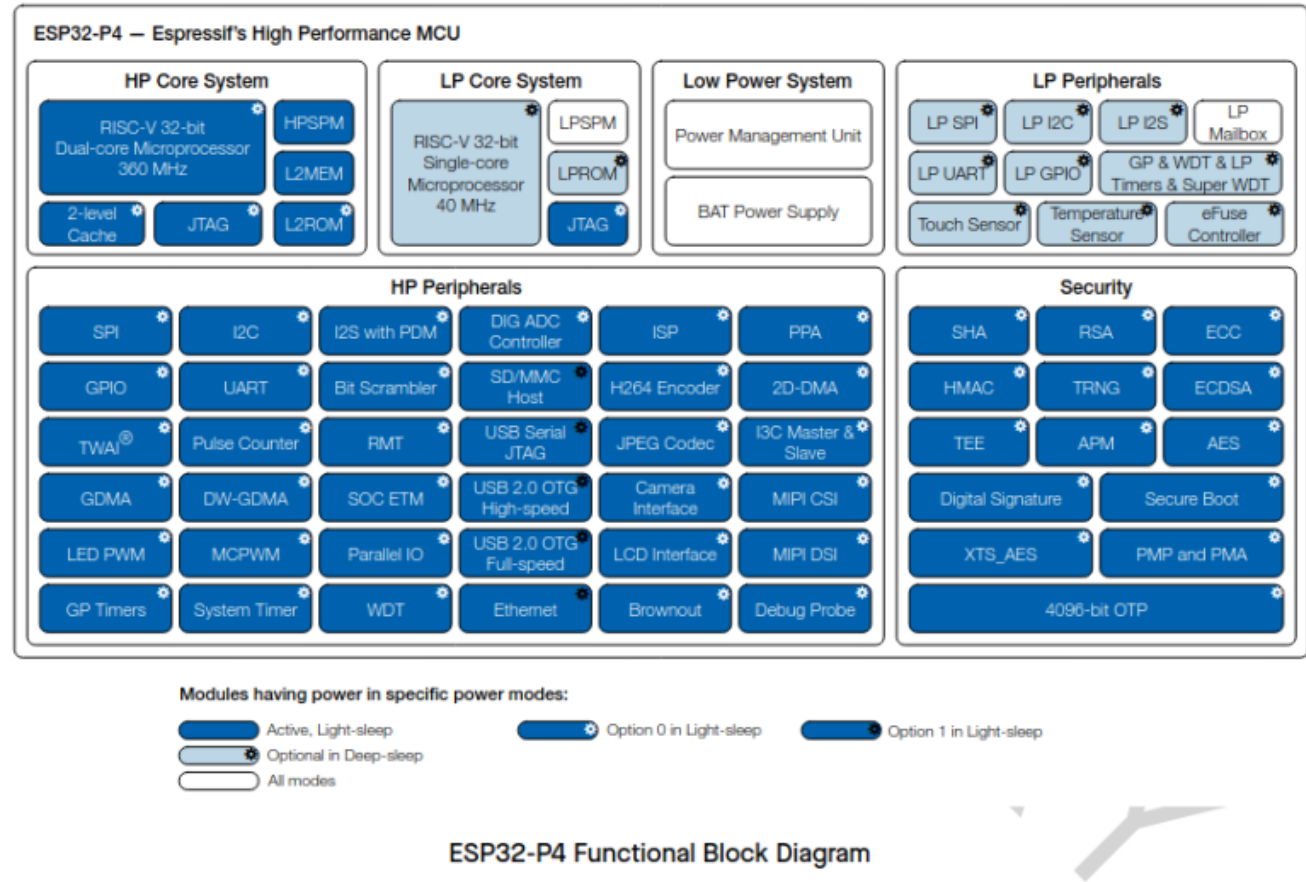
Caractéristiques

Microcontrôleur RISC-V 32 bits

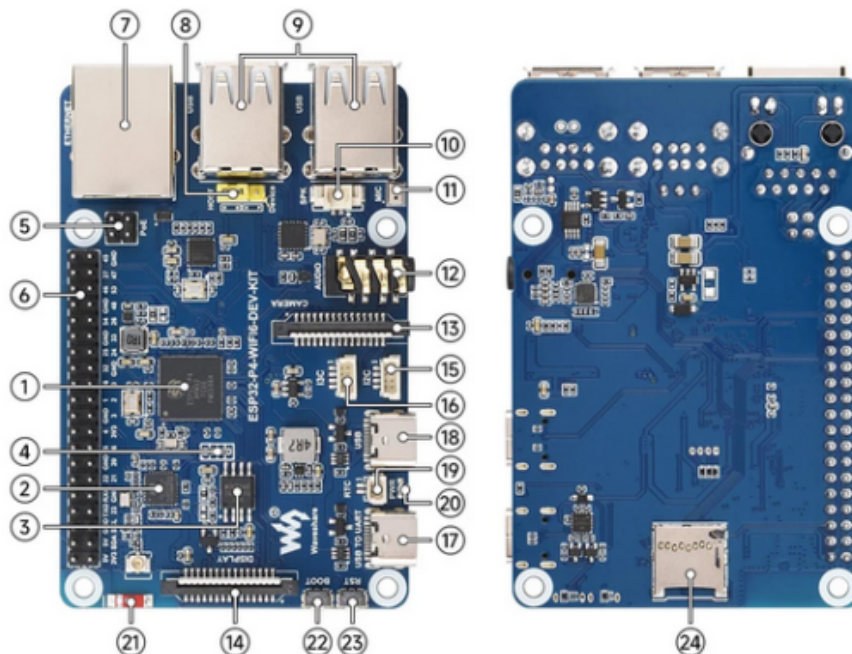
1. Microcontrôleur hautes performances avec microprocesseurs RISC-V double cœur et simple cœur
2. 128 Ko de ROM HP, 16 Ko de ROM LP, 768 Ko de mémoire HP L2MEM, 32 Ko de SRAM LP, 8 Ko de SPM
3. Capacité puissante de traitement d'image et de voix
4. 16 Mo ou 32 Mo de PSRAM dans le boîtier de la puce
5. Les périphériques incluent 55 GPIO programmables, MIPI-CSI, MIPI-DSI, USB 2.0 OTG, Ethernet, SDIO 3.0, I3C, SPI, I2S, I2C, LED PWM, MCPWM, RMT, ADC, UART et TWAI™
6. Fonctionnalités de sécurité : démarrage sécurisé, chiffrement Flash, accélérateurs cryptographiques et TRNG. De plus, des mécanismes de protection d'accès matériel permettent la gestion des autorisations d'accès et la séparation des privilèges.

Datasheet

[esp32-p4_datasheet_en.pdf](#)



Resource Overview



1.ESP32-P4NRW32

ESP32-P4 comes with 32MB PSRAM.

2. ESP32-C6

SDIO interface protocol, expands ESP32-P4 Wi-Fi 6 and Bluetooth 5 (LE)

3. 16MB Nor Flash

4. ESP32-C6 UART board

5. PoE module interface

Can be connected with an external PoE module for PoE power supply

6. 40-pin terminals

7. Gigabit RJ45 network port

8. USB OTG Function Switching Pin

Can switch between HOST mode to expand USB ports

9. USB-A interface

The USB OTG 2.0 high-speed interface, which can switch functions through a jumper cap.

10. Speaker interface

MX1.25 2P connector, supporting 8Ω 2W speaker

11. Surface mount microphone

12. 3.5mm headphone jack

Can be used to connect headphones for sound playback

13. Camera interface

MIPI-CSI (2-lane), which can connect to cameras such as OV5647.

14. Display interface

MIPI-DSI (2-lane), capable of connecting to 5/7/8/10.1-inch DSI screens

15. 12C interface

16. 13C interface

17. Type-C UART interface

Can be used for power supply and program burning, as well as debugging

18. Type-C USB interface

Can be used for power supply and program burning

19. RTC chair

Connects to rechargeable RTC battery (only supports rechargeable RTC batteries)

20. PWR power indicator light

21. ESP32-C6 surface mount antenna

22. BOOT button

Press when powering on or resetting to enter download mode

23. RST button

Reset button

24. SD card slot

SDIO 3.0 interface protocol

Doc ESP32 P4

[Guide esp32-P4](#)

From:

<https://chanterie37.fr/fablab37110/> - **Castel'Lab le Fablab MJC de Château-Renault**

Permanent link:

<https://chanterie37.fr/fablab37110/doku.php?id=start:arduino:esp32:p4>

Last update: **2025/08/12 15:33**

