

INDUSTRIAL PRODUCT DATASHEET

Realtek AMB82-Mini IoT AI Camera Arduino Dev. board - Wi-Fi & Bluetooth, H264/H265 Video, 1080p sensor, multiple IO, Tensorflow-Lite AI

Realtek AMB82-Mini: Ultra-low-power AI camera dev board with 2K video, multi-stream H.265/H.264/JPEG encoding, and Arduino IDE for battery-powered AI, security, smart home, and industrial applications.

SKU

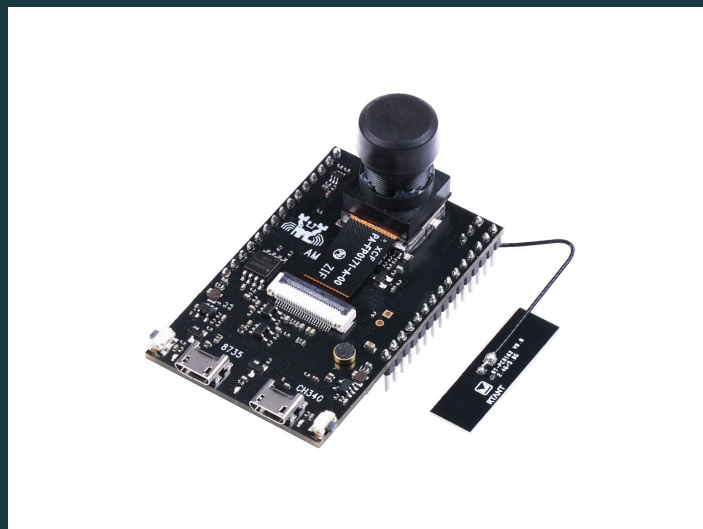
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UPDATED

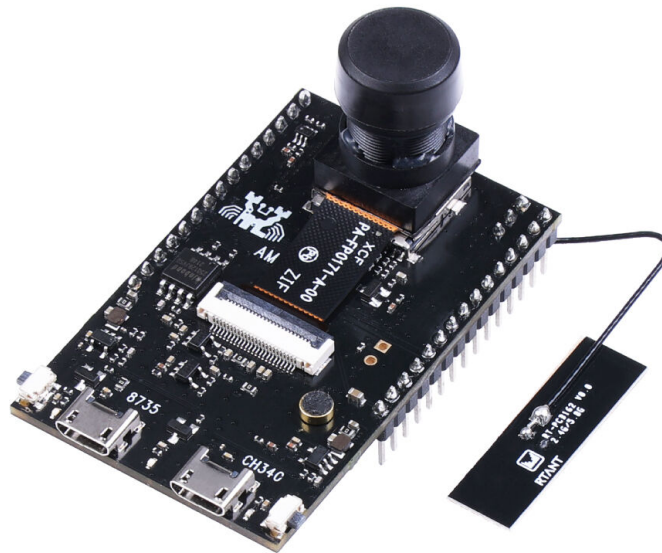
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PRICE

\$24.99(Excl. VAT)



Overview

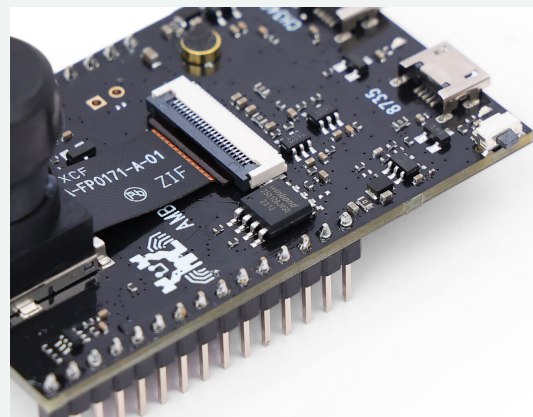
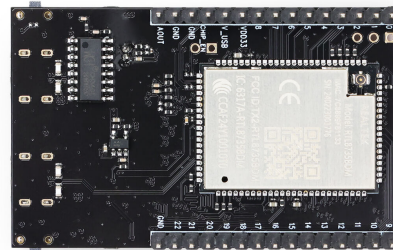
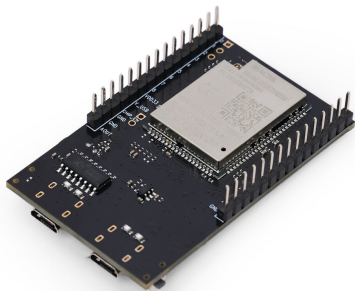
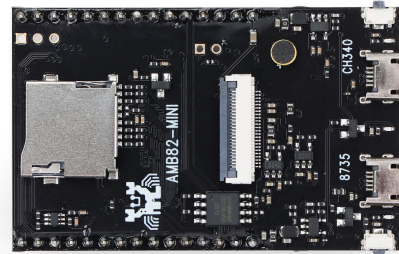


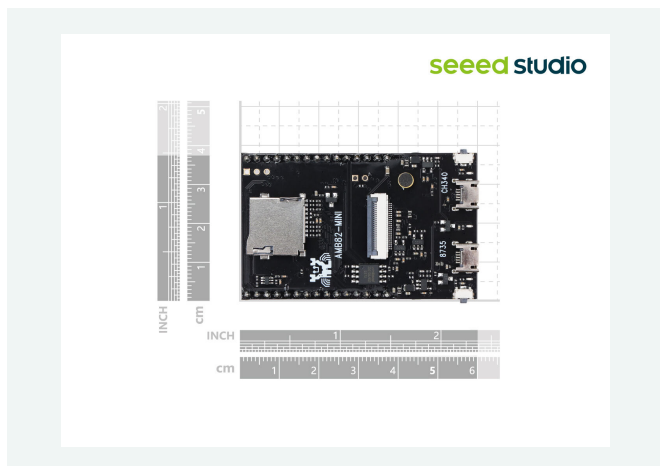
The Realtek AMB82-Mini IoT AI Camera Arduino Dev. board is an ultra-low-power AI Wi-Fi IP camera development platform featuring an 8-in-1 SoC with embedded AI and NPU, 2K high-resolution video, fast boot-up in milliseconds, and microampere-level power consumption for battery-powered operation. It supports multiple real-time H.265/H.264/JPEG streams and is compatible with free RTOS, IAR, GCC, and Arduino IDE SDKs for AIoT, smart home, security, and industrial applications.

Key Features

- **Worldwide leading Ultra-Low-Power AI Wi-Fi IP Camera SoC** : 8-in-1 SoC featuring embedded AI & NPU, High resolution up to 2K
- **Fast boot-up in milliseconds; ultra-low power in microampere**
- **Supporting battery-powered, AI & IoT Ecosystems**
- **Multiple streams real-time H.265/H.264/JPEG encoding**
- **SDK supports free RTOS, IAR, GCC, Arduino IDE**

Product Gallery





Specification

Parameter	Detail
MCU	ARMv8M up to 500MHz
NPU	Intelligent Engine @ 0.4 TOPS
Memory	internal DDR2 128MB on SoC and 16MB external SPI Nor flash on Dev. Board
Wi-Fi	802.11 a/b/g/n 1x1, Dualband 2.4GHz/5GHz Wi-Fi Wi-Fi simple config
Bluetooth	BLE 5.1
Security	Hardware cryptographic engine Secure boot (optional) Trust-Zone (optional) Wi-Fi WEP, WPA, WPA2, WPA3, WPS
Audio Codec	ADC/DAC/I2S
ISP/Video	HDR / 3DNR / WDR ; H264/H265/JPEG video encoder 1080p@30fps +720p@30fps
Camera module	JXF37 1920x1080 full HD CMOS image sensor with wide view angel FOV 130° optical lens
Interface	1 Microphone on Dev Board, 2 Micro USB_B, 1 MicroSD card slot, 2 tact switch button 3 UART 2 SPI 1 I2C 8 PWM 2 GDMA Max. 23 GPIOs
Certification	CE

Applications

- AIoT
- AI camera
- Battery camera
- Security camera
- Smart home
- Industrial applications

Part List

Realtek AMB82-MINI Dev. Board	x 1
Dualband Wi-Fi (2.4GHz/5GHz) ipex antenna	x 1
Taiyee camera module(F37)	x 1

Compliance & Logistics

HSCODE	8517180050
USHSCODE	8517180050
UPC	
EUHSCODE	8543709099
COO	CHINA

Resource Links

- <https://www.seeedstudio.com/AMB82-MINI-RTL8735B-IoT-AI-Camera-Dev-Board-p-5584.html>
- [User Manual](#)

Seeed Technology Co.,Ltd.
9F, Building G3, International E City,
Zhongshanyuan Road, Nanshan, Shenzhen, China

Tel: +86 0755-80695676
Web: www.seeed.cc
Shop: www.seeedstudio.com