Press

RELEASES

PR-No. 17 – 16. January 2024

ESP32-C61: Delivering Affordable Wi-Fi 6 Connectivity

ESP32-C61 marks a significant demand for Wi-Fi 6 technology, boasting optimized peripherals, improved connectivity, as well as expanded memory options.

Shanghai, China, Jan 8, 2024

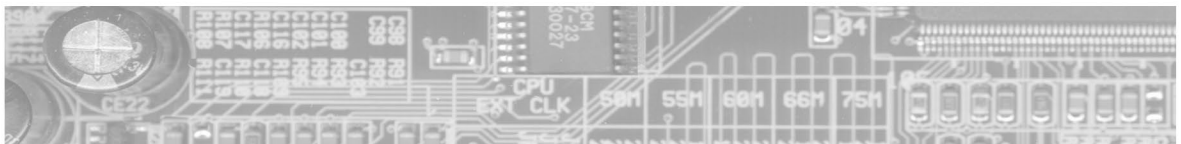
Espressif Systems (688018.SH), proudly announces the upcoming release of ESP32-C61, a next-generation Wi-Fi 6 + Bluetooth 5 (LE) System-on-Chip (SoC). Following the success of the ESP32-C2 and ESP32-C3, this new SoC marks a significant demand for Wi-Fi 6 technology, boasting optimized peripherals, improved connectivity, as well as expanded memory options.

Wireless Connectivity

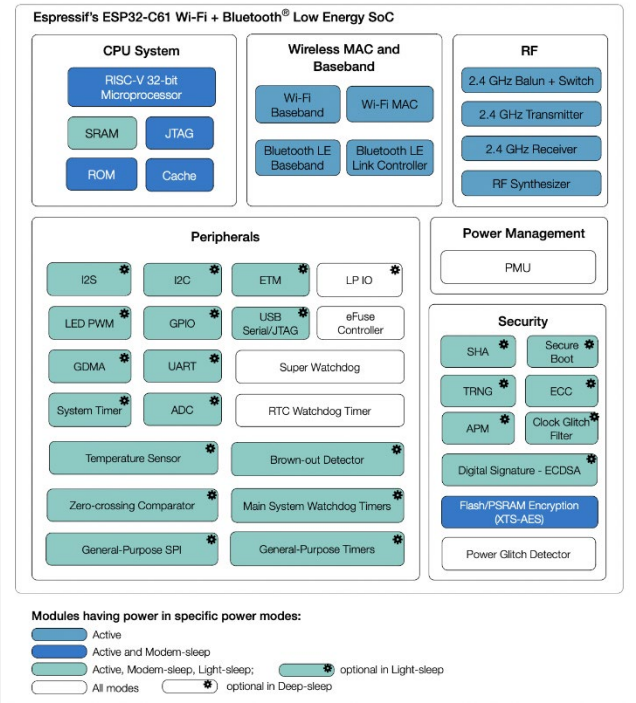
This Wi-Fi 6 support is optimized for IoT devices, and the SoC supports a 20MHz bandwidth for 802.11ax mode, and a 20/40MHz bandwidth for 802.11b/g/n mode. The 802.11ax mode supports features like OFDMA, MU-MIMO which help to provide reliable and low latency connection, Target Wake Time function which can enable ultra-low power applications. Additionally, Bluetooth 5 (LE) radio supports long-range operation through advertisement extension and coded PHY. It also supports 2 Mbps of high throughput PHY. The SoC shall also support the BLE-Mesh 1.1 protocol.

System and Memory

In terms of CPU, ESP32-C61 has a single-core, 32-bit RISC-V microcontroller that can be clocked up to 160 MHz It has a 320KB on-chip SRAM, a 256KB ROM, and works with Quad SPI flash. Notably, the SoC introduces support for PSRAM with Quad SPI of up to 120MHz, offering developers to focus on application development



without worrying about memory optimizations. The larger memory availability also provides better future proofing for upgrades.



Security

In continuation of Espressif's philosophy, ESP32-C61 places a strong emphasis on affordable security, incorporating features such as secure boot, flash and PSRAM encryption, and cryptographic accelerators. It also has ECDSA based Digital Signature Peripheral in hardware, safeguarding private keys from software access. The addition of Trusted Execution Environment (TEE) using Access Permission Management (APM) hardware block and Physical Memory Protection (PMP) provides flexibility in application security management.

Optimized Peripherals

ESP32-C61 encompasses standard microcontroller peripherals like I2C, I2S, SPI, UART, LED-PWM, ADC, Timers, and DMA. Specialized peripherals include the Event Task Matrix for automation-triggered tasks and the Zero-crossing comparator for easy zero-crossing detection.

Press RELEASES

ESP32-C61 will be supported through Espressif's mature IoT Development Framework (ESP-IDF), so that our customers can benefit from their familiarity with our field-proven platform that already powers millions of connected devices. The ESP-Matter-SDK will also include the support for ESP32-C61 for creating Matter enabled products. With the availability of PSRAM, the ease of development as well as the applications which can be supported on this unique product is unparallel. For the customers who would like to use ESP32-C61 as a communication's co-processor with an external host, ESP-Hosted and ESP-AT firmware will also be available.

Availability and Pricing

Information availability and pricing please visit email: sales.europe@macnica.com.

Contact:

Press
Macnica ATD Europe GmbH
Josef Sigl
Tel. +49-89-899143-11
Email: sales.europe@macnica.com

Sales
Macnica ATD Europe GmbH

Tel. +49-84188198-121
Email: sales.europe@macnica.com

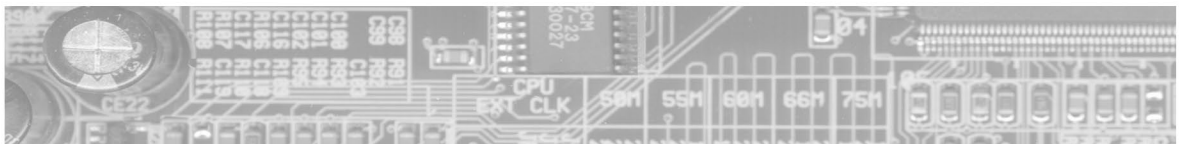
About Espressif Systems

Espressif Systems (688018.SH) is a public multinational, fabless semiconductor company established in 2008, with offices in China, the Czech Republic, India, Singapore and Brazil. We have a passionate team of engineers and scientists from all over the world, focused on developing cutting-edge wireless communication, low-power, AIoT solutions.

We have created the popular ESP8266, ESP32, ESP32-S, ESP32-C and ESP32-H series of chips, modules and development boards. By leveraging wireless computing, we provide green, versatile and cost-effective chipsets. We are committed to offering solutions that are secure, robust and power-efficient. At the same time, by open-sourcing our technology and solutions, we aim to enable developers to use Espressif's solutions globally and build their own smart-connected devices.

In July 2019, Espressif made its Initial Public Offering on the Sci-Tech Innovation Board (STAR) of the Shanghai Stock Exchange (SSE).

For more information, please visit https://www.espressif.com.



About Macnica ATD Europe GmbH, (former Macnica GmbH)
Macnica's ATD Europe GmbH, (former Macnica GmbH), was originally established in the UK in 2006, and moved to Germany in July 2008, to increase efficacy of its service for European customers.

By it's acquisition of the Munich based company Scantec Mikroelektronik in 2014 Macnica Europe formed a powerful semiconductor distribution with headquarter in Ingolstadt and offices in Munich, Regensburg, Milton Keynes (UK) and Warsaw offering an attractive and competitive portfolio of highly sophisticated devices.

Macnica provides end to end support from design-in to production through its global service network to its customers, regardless of the final destination of the product shipment to customers' manufacturing locations.

About Macnica ATD Europe S.A.S.
Founded in 1990 as ATD Electronique, Macnica ATD Europe headquarter offers innovative components dedicated to imaging applications for the European market. Its product portfolio includes: image sensors (CCD, CMOS, InGaAs, Thermal etc.), optics, interface circuits, FPGA & IPs, imaging processors, cables and OLED microdisplays.

It also covers development tools and design services enabling fast and efficient realization of new high-performance camera systems for markets such as machine vision, medical, life sciences, surveillance, automotive and others. After the acquisition of the company by Macnica Inc. as of October 1, 2020 the company operates under the name Macnica ATD Europe.

About Macnica, Inc.
Macnica was established in 1972 as a semiconductor distribution company headquartered in Yokohama, Japan, and has over 85 sales offices worldwide in eastern Asia, Europe and the USA. Total number of employees is over 3,900 and its consolidated revenue for fiscal 2021 was approximately US$ 7.6 B.

Macnica is famous for having an excellent engineering team of more than 900 application support engineers, IC designers and software developers with strong focus on providing technical support for its customers including custom design services. Macnica is continuing to extend its presence globally by having successful partners in strategic areas in the electronics market.

More information about Macnica: https://www.macnica.com/global/en/home.html.

