

# Press



## RELEASES

PR-No. 12 – 08. September 2022

### Launching ESP-RTC: A Real-Time Audio-and-Video Communication Solution

*ESP-RTC achieves stable, smooth, ultra-low-latency voice-and-video transmission in real time, providing an ideal solution for users who want to build low-cost and low-power audio-and-video products.*

*Shanghai, China, Aug 5, 2022*

Espressif Systems (SSE: 688018.SH) is pleased to announce the release of ESP-RTC (ESP Real-Time Communication), an audio-and-video communication solution, which achieves stable, smooth and ultra-low latency voice-and-video transmissions in real time.

ESP-RTC is built around Espressif's ESP32-S3-Korvo-2 multimedia development board. ESP32-S3-Korvo-2 is equipped with the ESP32-S3 AI SoC, along with a dual microphone array for near-/far-field voice wake-up and speech recognition. It also integrates cameras, Micro SD cards, LCDs and other peripherals, and supports processing based on MJPEG video streams, thus providing an ideal development board for users who wish to build low-cost and low-power audio-and-video products.

The ESP-RTC solution materializes real-time audio-and-video transmission based on Espressif's self-developed SIP (Session Initialization Protocol) stack, which includes a transport layer, a transaction layer and a session layer. The signaling interaction module of ESP-RTC supports UDP, TCP and TLS, while its media transmission module supports RTP (UDP), RTCP, SRTP, TURN and other NAT transmission protocols. It is worth mentioning that the transmission module of the ESP-RTC solution also includes counter-measure algorithms, such as a Jitter Buffer and PLC, which effectively solve

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packet loss, jitter, congestion, and delays in weak networks, fully ensuring smooth audio-and-video communication in real time.

The ESP-RTC solution also supports the RTSP (Real Time Streaming Protocol) stack, whose media transmission module supports both RTP/UDP and RTP over TCP. The ESP-RTC solution can be used as an RTSP server supporting the on-demand use of such players as VLC/FFMPEG/PotPlayer/KmPlayer, or as an RTSP client supporting EasyDarwin, an easy-to-use, open-source, streaming platform framework.

Based on Espressif's self-developed algorithms, i.e., acoustic echo cancellation (AEC), background noise suppression (BNS), automatic gain control (AGC), ESP-RTC reduces sound interference in audio calls, ensuring high quality and stability in voice communication. ESP-RTC also utilizes Espressif's chip-level codec algorithm to provide users with a clear picture in their video calls. Furthermore, ESP-RTC takes advantage of the excellent AI computing power of Espressif's ESP32-S3 SoC, to achieve high-performance voice wake-up, voice recognition, and image recognition. Thus, ESP-RTC is suitable for the development of smart speakers, door video-intercom systems, smart-home control panels, pet monitors, car monitors, children's toys and other application scenarios.

The ESP-RTC solution supports open-source servers, such as FreeSWITCH and FreePBX, and can also access mature SFU Cloud servers to materialize group conference calls. Additionally, developers can quickly build audio and video communication-related applications with the help of Espressif's open-source ESP-IDF (IoT Development Framework) and ESP-ADF (Audio Development Framework).

### Availability and Pricing

If you want to know more about ESP-RTC, Espressif's real-time, audio-and-video communication solution, please contact our customer support team: Email: [sales.europe@macnica.com](mailto:sales.europe@macnica.com). You can also go to Espressif's official Taobao store to buy the ESP32-S3-Korvo-2 development board and build your own audio-and-video-call gadget.

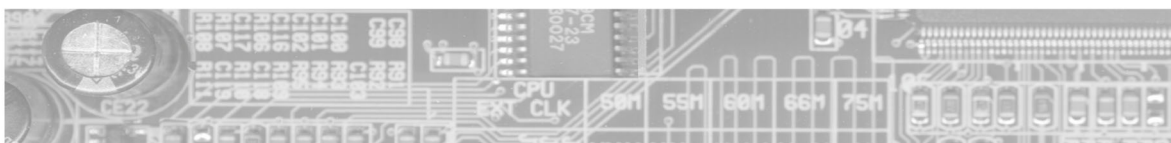
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### About Espressif Systems

Espressif Systems (Shanghai) Pte. Ltd. is a fabless semiconductor company, with headquarters in Shanghai Zhangjiang High-Tech Park, providing low power Wi-Fi and Bluetooth SoCs and wireless solutions for the Internet of Things (IoT). The company build the widely popular ESP8266 and ESP32 chips with an innovative team of chip-design specialists, software and firmware developers and marketers. Espressif is committed to providing the best IoT devices and software platforms in industry.

The company also helps their customers build their own solutions and connect with other partners in the IoT ecosystem. Their passion lies in creating state-of-the-art chip-sets and enabling partners to deliver great products. Espressif's products are widely deployed in the tablet, OTT boxes, cameras, and Internet of Things markets.

For more information, please visit <http://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

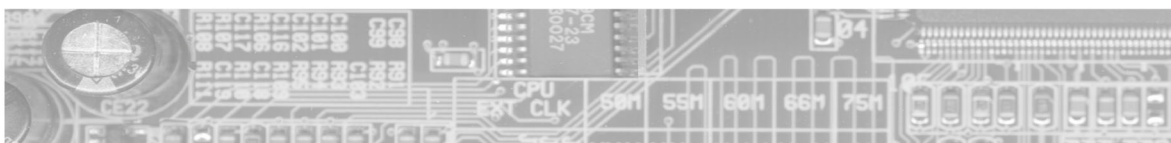
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portfolio includes: image sensors (CCD, CMOS, InGaAs, Thermal etc.), optics, interface circuits, FPGA & IPs, imaging processors, cables and OLED microdisplays.

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 3,500 and its consolidated revenue for fiscal 2020 was approximately US\$ 5.5 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.

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