# HYSPERO

Renesas RZ/G3S-based SoM

SO-DIMM solution for headless applications comes complete with:

- Linux-based connectivity with GHz class CPU performance
- Separate power domains enable µW operation for IoT edge
- Power savings when needed; powerful computing when needed

Hyspero is prepared for deployment. It can also have customized SoM hardware, firmware and software configurations.

Embedded Planet

Renesas Preferred Partner
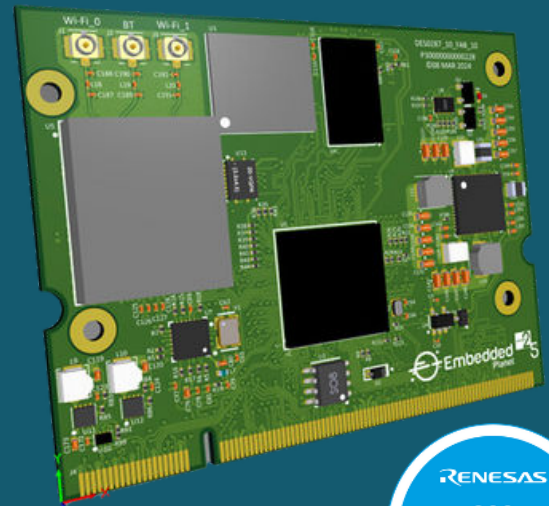
KEY SPECIFICATIONS

CPU	Renesas RZ/G3S 1x Cortex-A55 1.1GHz and 2x Cortex-M33 250MHz
Memory & Storage	DDR4, eMMC, QPSI
Interfaces	2x Gbit Ethernet MAC, USB 2.0 OTG, USB 2.0 Host, SHDI, 2x CAN-FD, UART, I2C, I3C, SPI, SSIF, 8x ADC inputs, GPIO
Connectivity	2x2 Wi-Fi 6 (802.11ax)
Additional Features	Renesas security engine "SHIP", ARM TrustZone, Tamper detection
Formfactor	SODIMM 200
Temp Range	-40°C to +85°C
Size	67.6mm x 51.7mm
Power	Single 3.3V power supply
Solution Code	Unique code for internal use

FEATURES
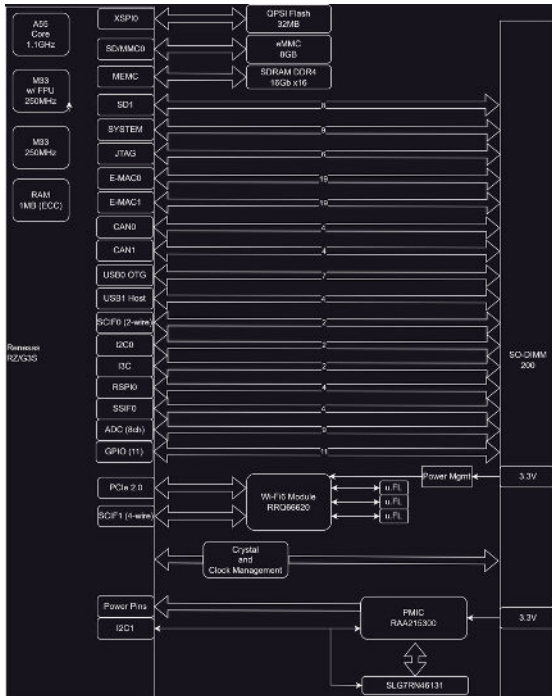
- Renesas RZ/G3S MPU
  - A55 application core
  - M33 real-time core with FPU
  - M33 real-time, always on core
- Up to 4GB DDR4-1600
  - On-the-fly decryption/encryption
- Up to 32GB eMMC
- Support for uSD card
- Up to 64MB serial NOR flash
- Optional Wi-Fi / BT module
  - Wi-Fi 6
  - Dual band: 2.4GHz, 5GHz
  - 802.11a/b/g/n/ac/ax

- Dual 1GbE Ethernet MACs
- Dual CAN-FD ISO 11898-1 interfaces
- USB 2.0 OTG
- USB 2.0 Host
- Serial interfaces – UART, I2C, I3C, SPI
- ADC inputs
- PMIC allows operation from single 3.3V supply
- SO-DIMM 200 connector

SUPPORT

- Renesas Linux BSP v1.0.0
- Yocto recipes included
- Linux kernel 5.10-CIP
- Linux drivers
- EP can support your development efforts
- Hardware, Firmware and Software

CUSTOMIZATION

Reach out to EPI to discuss customizing:

- SoM hardware
- SoM firmware and software
- Custom carrier boards for the SoM
  - Hardware, Firmware and Software

DEV KIT

The product development kit for Hyspero includes:

- Hyspero SoM
- EP carrier board
- Power supply
- Wi-Fi and BT antennae