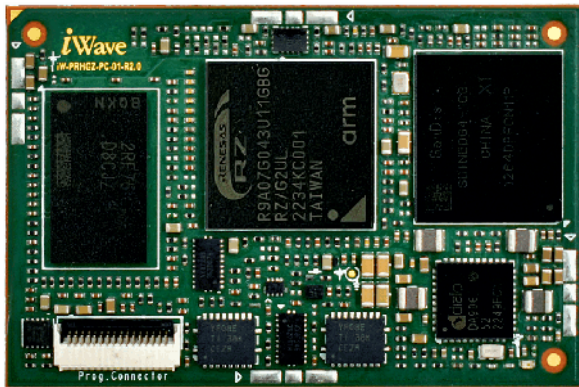




System on Module iW-RainboW-G53M Renesas RZ/G2UL or RZ/A3UL or RZ/Five SoC based OSM LGA Module



The Renesas RZ/G2UL or RZ/A3UL or RZ/FIVE SoC based LGA modules are designed as per the Open Standard Module™(OSM) Size-M Specification. This module can be integrated with any one of the three Renesas SoCs – Renesas RZ/G2UL or RZ/A3UL or RZ/FIVE. The RZ/FIVE SoC is based on RISC architecture (1 x RISC-V AX45MP) while the other two are ARM (1 x Arm® Cortex®-A55) based SoCs.

The Module can be either ARM or RISC based, based on the SoC selected. Also, M-Cortex support is available when RZ/G2UL SoC is selected. This module is aimed to offer application portability based on the SoC selected, thus offering a wide variety and range of applications.

iW-RainboW-G53M HIGHLIGHTS

- RZ/G2UL or RZ/A3UL SoC with ARM v8.2-A Architecture
- RZ/FIVE SoC with AndeStar™ V5 Instruction Set Architecture
- Upto 2GB DDR4 Memory (based on chip availability)
- Industrial grade operating temperature support
- OSM v1.1 Size-MF LGA Module with 30mm x 45mm form factor
- 10+ years of Product Longevity Program

SPECIFICATIONS

SoC	CAN x 2 ³
RZ/G2UL : 1 x Arm® Cortex®-A55 (1.0GHz) 1 x Arm® Cortex®-M33 (200MHz)	I2C x 2
RZ/A3UL : 1 x Arm® Cortex®-A55 (1.0GHz)	MIPI CSI x 1 ²
RZ/FIVE : 1 x RISC-V (AX45MP Single) (1.0GHz)	RGB x 1 ²
PMIC	Debug UART x 1
All Power required for the Module generated using DA9062 PMIC	UART x 4 ³
Memory & Storage	PWM x 2 ³
DDR4 – 2GB (Expandable) ¹	OS Support
eMMC Flash – 16GB (Expandable) ¹	Linux 5.10.158
OSM LGA Features	General Features
RGMII x 2	Power Input:
USB2.0 x 2	5V, 2.5A through OSM LGA
SDIO x 1	Form Factor:
QSPI x 1	30mm x 45mm
SPI x 1	Operating Temperature:
	-40°C to +85°C (Industrial)
	Environment Specification:
	REACH & RoHS3 Compliant

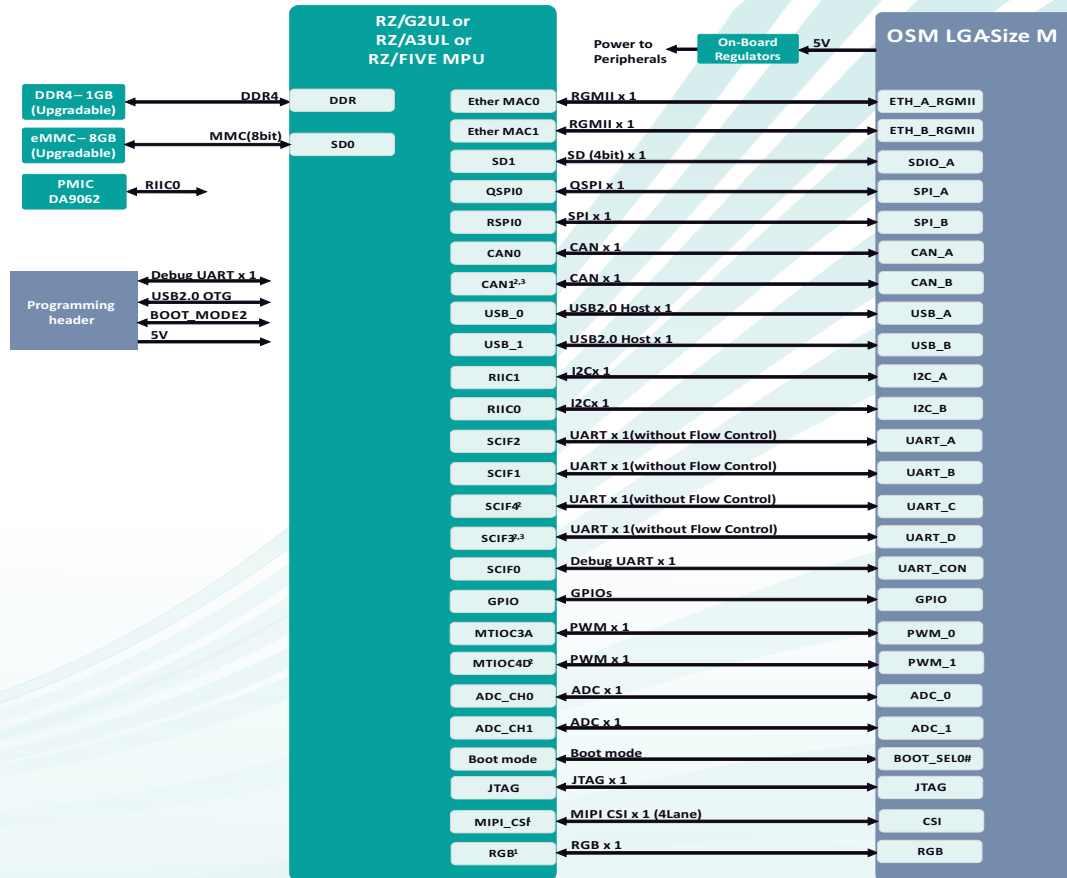
Notes:

¹RZ/Five default configuration: DDR4-1GB & eMMC NAND Flash-8GB

²Not available in RZ/FIVE MPU based OSM.

³These features count supported are subject to configuration & MPU used.

Renesas RZ/G2UL or RZ/A3UL or RZ/FIVE based OSM Block Diagram



Notes:

- ¹Not available when using RZ/FIVE MPU.
- ²Available only when using RZ/FIVE MPU.
- ³Either SCIF3 or CAN1 can be supported as they are supported through same pins. By default, SCIF3 is supported.

OS SUPPORT

Linux 5.10.158

DELIVERABLES

Renesas RZ/G2UL or RZ/A3UL or RZ/FIVE based SoC OSM LGA Module
Board Support Package
User Manual
Quick Start Guide

OPTIONAL KITS/Modules

Renesas RZ/G2UL or RZ/A3UL or RZ/FIVE SoC OSM SBC
Heat Sink

CUSTOM DEVELOPMENT

BSP Development/OS Porting
Custom SOM/Carrier Development
Custom Application/GUI Development
Design Review and Support

iWave Systems Technologies is an ISO 9001:2015 certified company, head quartered in Bangalore India established in the year 1999. The company focuses on providing embedded solution and services for Industrial, Medical, Automotive and various other Embedded Computing applications. iWave Systems offers wide range of System On Modules and Single Board Computers built using wide range of CPU and FPGA SoC platforms with different form factors such as Qseven, SMARC, SODIMM and HPC by closely working with Tier-1 silicon companies such as NXP, Xilinx, Intel etc.

iWave Systems offers various state of art ready ODM solutions such as Connected Telematic Control Unit / OBD II devices for the automotive edge analytics, Comprehensive ARINC818 solutions for the low latency Aerospace applications and Rugged IP rated performance scalable HMI solutions for Industrial applications.

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Renesas RZ/G2UL or RZ/A3UL or RZ/FIVE based SoC OSM LGA Module

The device can be ordered online from the iWave Website

<https://www.iwavesystems.com/product/renesas-g2ul-or-a3ul-or-five-based-osm-se-lga-module/>

Or from our Local Partners in your region

<http://www.iwavesystems.com/>

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