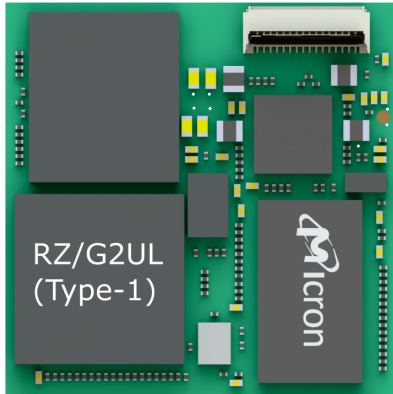


The data provided is Preliminary and Subject to Change



The Renesas G2UL or A3UL or FIVE SoC based LGA modules are designed as per the Open Standard Module™ Size-S Specification (OSM). This module can be integrated with any one of the three Renesas SoCs – G2UI, R3UL or FIVE SoCs. The 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.

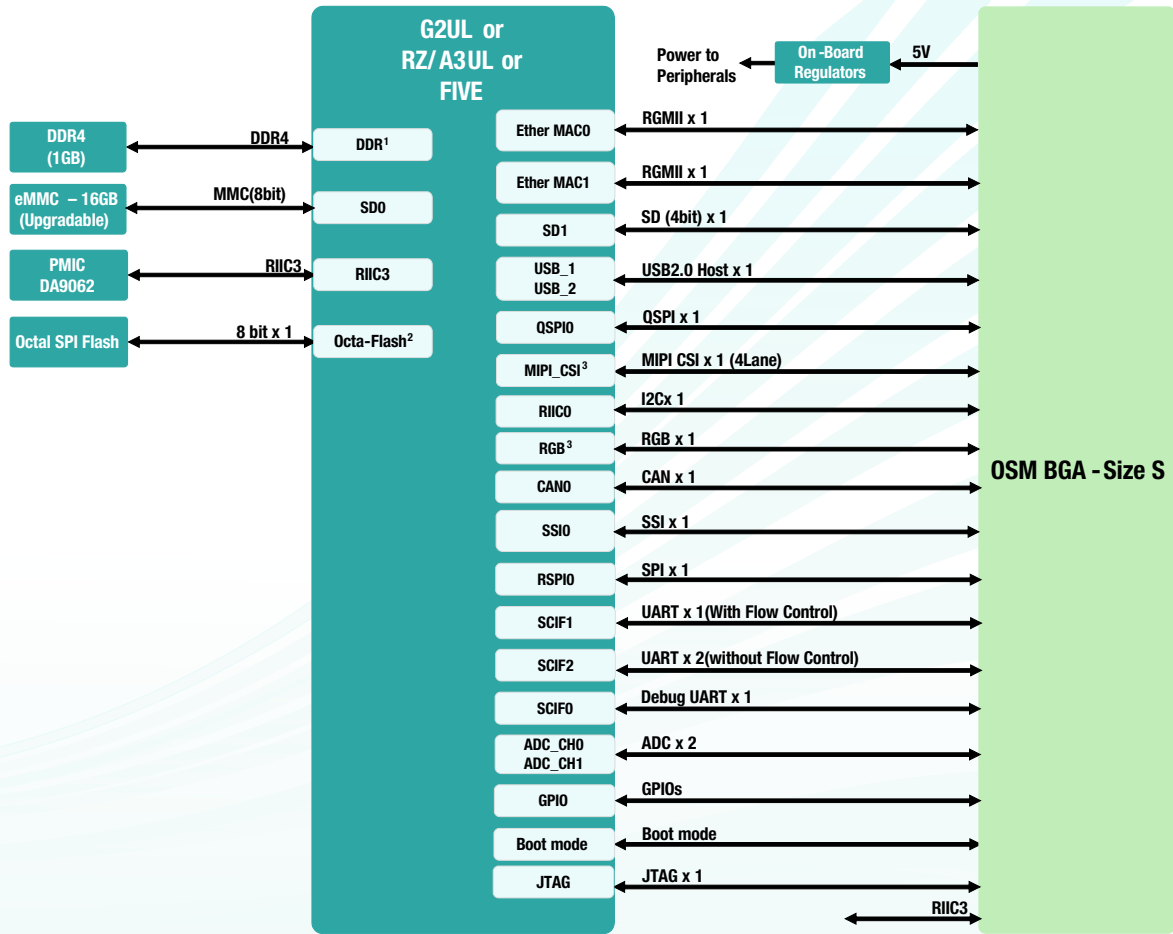
iW-RainboW-G53M HIGHLIGHTS

- G2UL or A3UL SoC with ARM v8.2-A Architecture
- FIVE SoC with AndeStar™ V5 Instruction Set Architecture
- Upto 4GB DDR4 Memory (based on chip availability)
- Industrial grade operating temperature support
- OSM v1.1 Size-SE LGA Module with 30mm x 30mm form factor
- 10+ years of Product Longevity Program

SPECIFICATIONS

SoC	CAN x 1
FIVE : 1 x RISC-V (AX45MP Single) (1.0GHz)	I2C x 2
G2UL : 1 x Arm® Cortex®-A55 (1.0GHz) 1 x Arm® Cortex®-M33 (200MHz)	MIPI CSI x 1 (Not available in FIVE SoC)
A3UL : 1 x Arm® Cortex®-A55 (1.0GHz)	RGB x 1 (Not available in FIVE SoC)
PMIC	I2S x 1
All Power required for the Module generated using DA9062 PMIC	UART x 3
Memory & Storage	PWM x 1
DDR4 – 1GB (Expandable)	OS Support
eMMC Flash – 16GB (Expandable)	Linux
OSM LGA Features	General Features
RGMI x 2	Power Input:
USB2.0 x 2	5V, 2.5A through OSM LGA
SDIO x 1	Form Factor:
QSPI x 1	30mm x 30mm
SPI x 1	Operating Temperature:
	-40°C to +85°C (Industrial)
	Environment Specification:
	REACH & RoHS3 Compliant

RZ G2UL or A3UL or FIVE based OSM Block Diagram



Notes:
¹ A3UL SoC available both with and without DDR controller
² Available only in A3UL SoC
³ Not available in FIVE SoC

OS SUPPORT

Linux

DELIVERABLES

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

OPTIONAL KITS/Modules

RZ G2UL/A3UL/FIVE SoC OSM SBC
 Heat Sink
 Camera Module

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.

iWave Systems also provides comprehensive Engineering design services involving Embedded Hardware, FPGA and Software development. iWave offers carrier board and custom hardware development with manufacturing and certification services. iWave's Hardware expertise spans complex board design up to 30 layers; Analog, Digital & RF Designs; FPGA Development up to 3+ million gates and VHDL / Verilog RTL Development & Verification. Our Software expertise ranges from OS Porting, Firmware & Device Drivers Development and Wireless & Protocol Stacks.

Note: iWave reserves the right to change these specifications without notice as part of iWave's continuous effort to meet the best in breed specification. The registered trademarks are proprietary of their respective owners.

RZ G2UL or A3UL or FIVE 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/>

iW-GS3M-BR-R1.0

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