iWave
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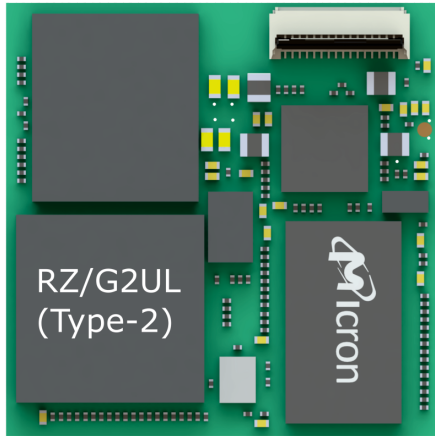
RZ G2UL or G2LC SoC OSM LGA Module

The data provided is Preliminary and Subject to Change

The Renesas G2UL or G2LC 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 two Renesas SoCs – G2UL or G2LC SoCs.

As M-Cortex support is available these modules can be used for RTOS based applications. Additionally, the support of display and camera along with GPU helps in using the module in a wide variety of HMI applications

iW-RainboW-G53M HIGHLIGHTS

G2UL or G2LC SoC with ARM v8.2-A Architecture

Upto 4GB DDR4 Memory (based on chip availability)

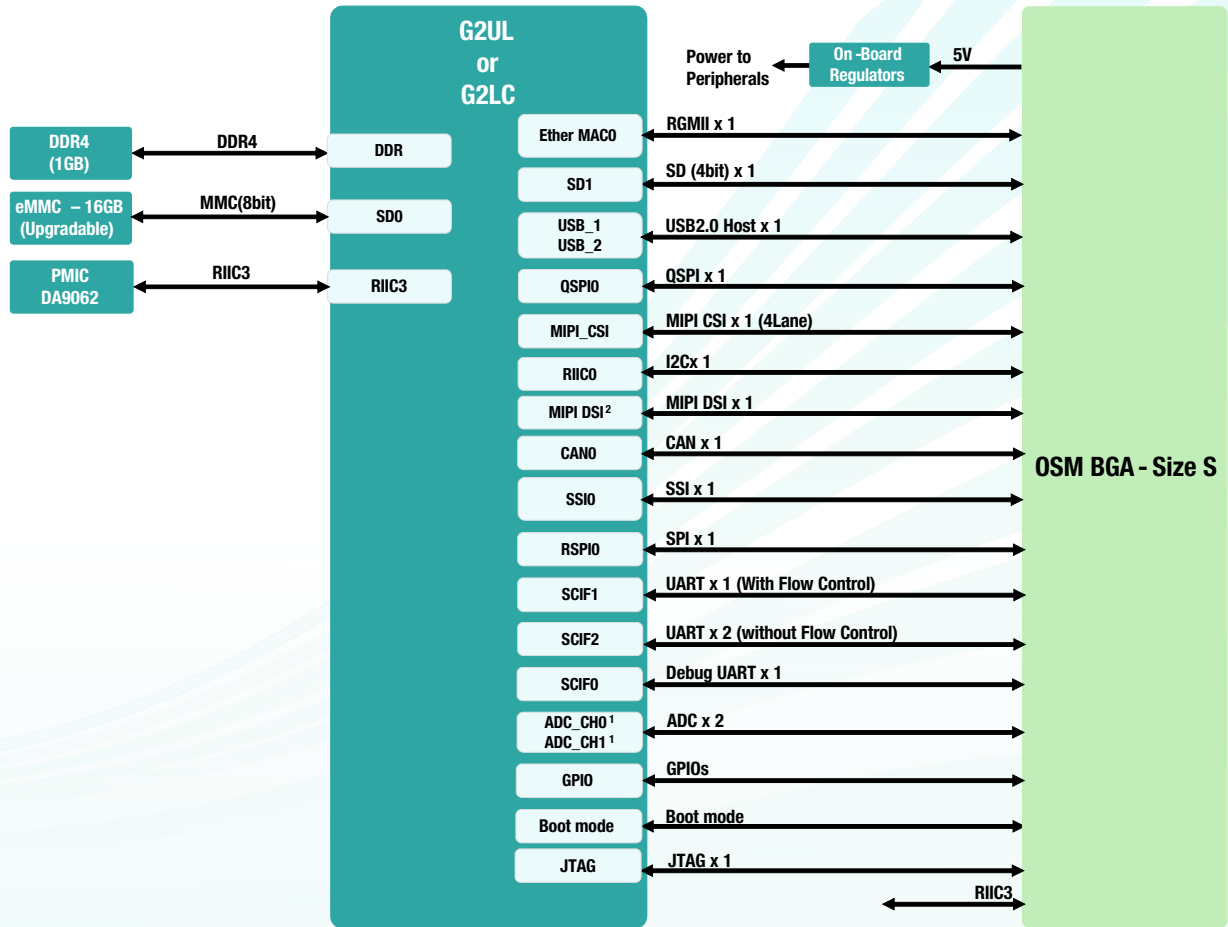Industrial grade operating temperature support

OSM v1.1 Size-SE LGA Module with 30mm x 30mm form factor

10+ years of Product Longevity Program

SPECIFICATIONS

SoC	
G2UL : 1 x Arm® Cortex®-A55 (1.0GHz)	
G2LC : 2 x Arm® Cortex®-A55 (1.0GHz) 1 x Arm® Cortex®-M33 (200MHz)	
PMIC	
All Power required for the Module generated using DA9062 PMIC	
Memory & Storage	
DDR4 – 1GB (Expandable)	
eMMC Flash – 16GB (Expandable)	
OSM LGA Features	
RGMII x 1	
USB2.0 x 2	
SDIO x 1	
QSPI x 1	
SPI x 1	

CAN x 1	
I2C x 2	
MIPI CSI x 1	
MIPI DSI x 1 (Available only in G2LC SoC)	
I2S x 1	
UART x 3	
PWM x 1	
OS Support	
Linux	
General Features	
Power Input:	
5V, 2.5A through OSM LGA	
Form Factor:	
30mm x 30mm	
Operating Temperature:	
-40°C to +85°C (Industrial)	
Environment Specification: REACH & RoHS3 Compliant	

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RZ G2UL or G2LC SoC OSM LGA Module Block Diagram

G2UL or G2LC

- DDR4 (1GB) — DDR4 — DDR
- eMMC – 16GB (Upgradable) — MMC(8bit) — SD0
- PMIC DA9062 — RIIC3 — RIIC3

- 5V — On-Board Regulators — Power to Peripherals
- Ether MAC0 — RGMII x 1
- SD1 — SD (4bit) x 1
- USB_1 USB_2 — USB2.0 Host x 1
- QSPI0 — QSPI x 1
- MIPI_CSI — MIPI CSI x 1 (4Lane)
- RIIC0 — I2Cx 1
- MIPI DSI[2] — MIPI DSI x 1
- CAN0 — CAN x 1
- SSI0 — SSI x 1
- RSPI0 — SPI x 1
- SCIF1 — UART x 1 (With Flow Control)
- SCIF2 — UART x 2 (without Flow Control)
- SCIF0 — Debug UART x 1
- ADC_CH0[1] ADC_CH1[1] — ADC x 2
- GPIO — GPIOs
- Boot mode — Boot mode
- JTAG — JTAG x 1
- RIIC3

OSM BGA - Size S

Notes:
[1] Available only with G2UL SoC
[2] Available only in G2LC SoC

OS SUPPORT
Linux

DELIVERABLES
RZ G2UL/G2LC OSM LGA Module
Board Support Package
User Manual
Quick Start Guide

OPTIONAL KITS/Modules
RZ G2UL/G2LC 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.

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RZ G2UL or G2LC OSM LGA Module
The device can be ordered online from the iWave Website
https://www.iwavesystems.com/product/renesas-g2ul-or-g2lc-based-osm-se-lga-module/
Or from our Local Partners in your region
http://www.iwavesystems.https://www.iwavesystems.com/

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