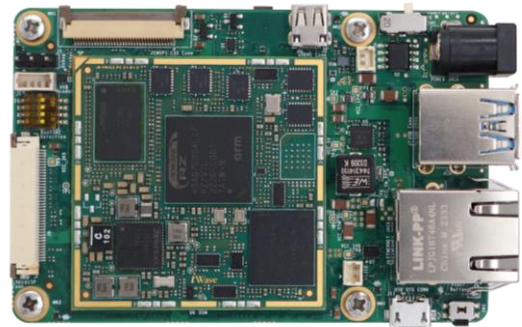


iW-RainboW-G56S

RZ/V2L & RZ/G2L

Single Board Computer

The Renesas RZ/V2L & RZ/G2L SBC definition targeting application that require low power, low costs, and high performance. The SBCs are used as building blocks for portable and stationary embedded systems. The core CPU and support circuits, including DRAM, boot flash, power sequencing, CPU power supplies and GbE are concentrated on the SBC.



The RZ/V2L & RZ/G2L SBC is rich with Renesas RZ/V2L & RZ/G2L SoC's features along with eMMC, Gigabit Ethernet PHY, MIPI Camera, RGB Display and comes in compact 85mm x 56mm form factor.

Highlights

- ❖ Renesas RZ/V2L & RZ/G2L MPU with 64-bit ARM®v8.2A, ARM®v8-M & 3D-Graphics Engine with Arm®Mali™ Architecture
- ❖ Supports Dual Cortex-A55 & Single Cortex-M33
- ❖ Up to 2GB DDR4 Memory
- ❖ Supports 1 × 1Gb Ethernet
- ❖ Compact Form Factor of 85mm x 56mm

Ordering Information

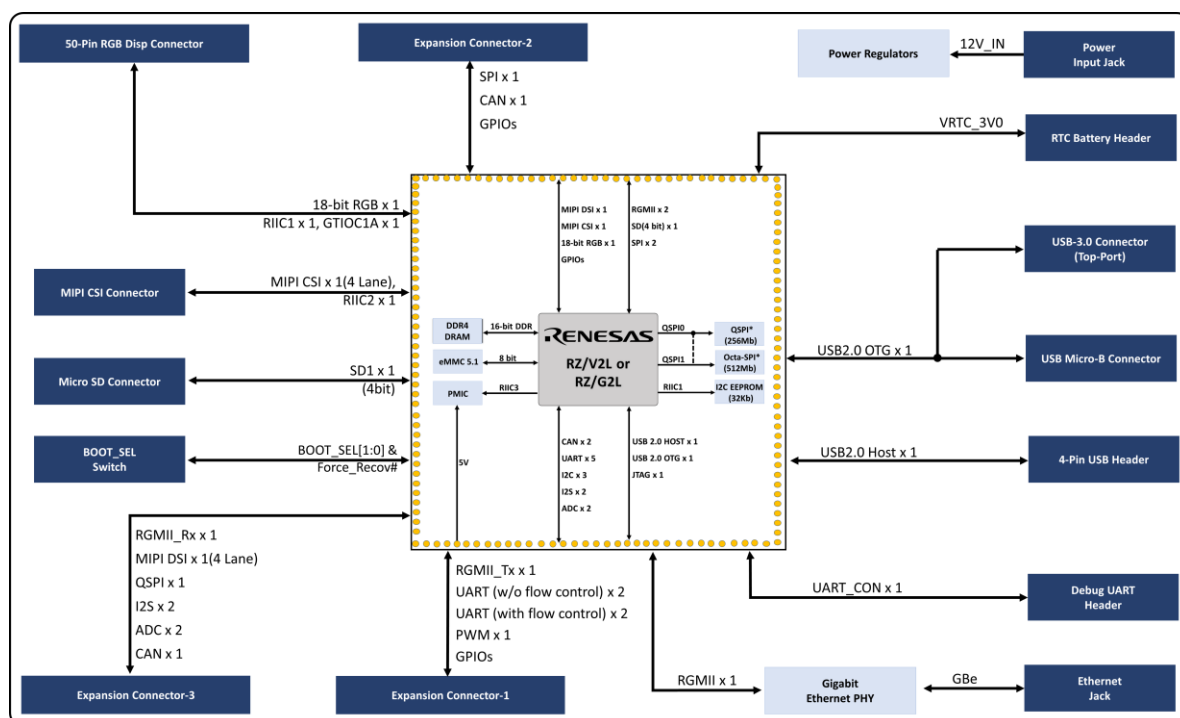
iW-G56S-OLVL-4D002G-E016G-BIA

RZ/V2L SBC with 2GB DDR4, 16GB eMMC

iW-G56S-OLGL-4D002G-E016G-BIA

RZ/G2L SBC with 2GB DDR4, 16GB eMMC

Block Diagram



* Optional

Technical Specifications

CPU: Renesas RZ/V2L & RZ/G2L Processors	RZ/V2L: 2 x Arm®Cortex-A55@1.2GHz, 1 x Arm®Cortex-M33@200MHz, 1 x Arm®Mali™-G31@500MHz, DRP-AI for accelerating AI processing. RZ/G2L: 2 x Arm®Cortex-A55@1.2GHz, 1 x Arm®Cortex-M33@200MHz, 1 x Arm®Mali™-G31@500MHz.
Memory	2GB DDR4 (Expandable)
Storage	16GB eMMC Flash (Expandable) 32Kb I2C EEPROM - QSPI Flash-256Mb / Octa-SPI Flash-512Mb (Optional)1 - Micro-SD Slot
Network & Communication	1 x Gigabit Ethernet PHY Transceiver with RJ45 Mag-jack Connector 1 x USB 2.0 OTG port through – Micro-AB Receptacle Connector

Network & Communication	1 x USB 2.0 Host Interface 1 x USB Host Header
Audio/Video Features	1 x MIPI CSI (4-Lane) 1 x RGB Display (18-bit)
Expansion Connector Interfaces	1 x RGMII 2 x CAN 2 x UART (with flow control) 2 x UART (without flow control) 2 x SPI 2 x PWM 2 x ADC 1 x JTAG 1 x I2C 1 x MIPI DSI (4-lane) 15 x GPIOs
Miscellaneous Interfaces	- Debug UART Header - RTC battery header
Form Factor	85mm x 56mm
Power Input	12V, 2A
Environment Spec.	REACH & RoHS3 Compliant

¹ Optional

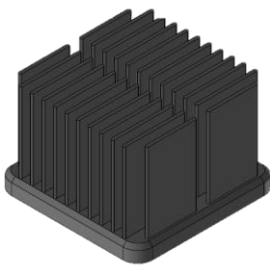
Deliverables

- RZ/V2L & RZ/G2L SBC
- Thermal solutions
- Board Support Package

Resources

- Datasheet
- Quick Start Guide
- Linux User Manual

Product accessories



Thermal Solutions

For any highly integrated boards, thermal design is very important factor. iWave Supports Heat Sink for RZ/V2L & RZ/G2L SBC.



Power Adapter

12V Power Supply Adapter



Debug cable

USB to UART Cable

Applications

■ Industrial HMI & Automation

Enables seamless interaction between humans and machines in automation and smart systems supporting management and security.

■ Smart city & Home appliance

Improves energy efficiency, security, and control in smart buildings. Facilitates secure data transmission and edge computing for management.

■ Industry

AI applications on industries helps in improving efficiency, increasing productivity & quality.

■ Camera Applications

Enhances real-time data collection and detection in security and surveillance.

A Global Leader in Embedded Systems Engineering and Solutions

Since 1999, we have pioneered leadership in embedded systems technology, establishing ourselves as a strategic embedded technology partner for advanced solutions. Our comprehensive portfolio encompasses ARM and FPGA System on Modules, COTS FPGA solutions, and ODM solutions which include Telematics, Gateways & HMI Solutions.

Beyond our robust product ecosystem, we provide comprehensive ODM support with specialized custom design and manufacturing capabilities, enabling customers to accelerate and optimize their product development roadmaps. With a strategic focus on industrial, automotive, medical, and avionics markets, we deliver innovative technology solutions to global clients.

mktg@iwave-global.com

iWave

Bangalore, India

iWave USA

Campbell, California

iWave Global

Ras Al Khaimah, UAE

iWave Global GmbH

Ratingen, Germany

iWave Europe

Rotterdam, Netherlands

iWave Japan

Yokohama, Kanagawa

iWave Korea

Gyeonggi,-do, Korea

iWave APAC

Taipei City, Taiwan

iWave
Global