Development platform iW-RainboW-G22D-SODIMM
RZ/G1E SODIMM platform

iWave's RZ/G1E SODIMM development kit incorporates RZ/G1E SODIMM SOM which is based on Renesas power efficient Dual core ARM Cortex A7 CPU cores operating @1GHz speed. The development board can be used for quick prototyping of various applications targeted by the RZ/G1E processor. With the 100mm x 72 mm Pico ITX size, the kit is highly packed with all the necessary on-board connectors to validate the RZ/G1E CPU features.

APPLICATIONS: HMI & Access Control, Digital Signage, Industrial Control, IOT gateway, Healthcare devices, Point of sale, Network & high vision camera, Home & Office automation and White goods & appliances.

iW-RainboW-G22D-SODIMM HIGHLIGHTS

Dual Core ARM Cortex-A7 @ 1GHz

Hardware HD encode & decode

Built in SGX540 3D Graphic acceleration

4.3" display kit with resistive touch screen

Ultra-compact form size 100mm x 72mm

SPECIFICATIONS

RZ/G1E SODIMM SOM:	
Renesas's RZ/G1E CPU @ 1GHz	
SGX540 Graphics core @ 260MHz	
512 MB DDR3	
4GB eMMC Flash	
100/1000 Ethernet PHY	
10/100 Ethernet PHY [1]	
Micro SD Slot	
SODIMM Carrier board:	
Gigabit Ethernet - 1 Port	
USB 2.0 host - 2 Ports	
USB2.0 device - 1 Port	
SD Slot - 1 Port	
8-bit CSI Camera - 1 Port[1]	
Audio Codec, In/Out Jack	
RGB display - 1 Port	
Resistive touch controller	

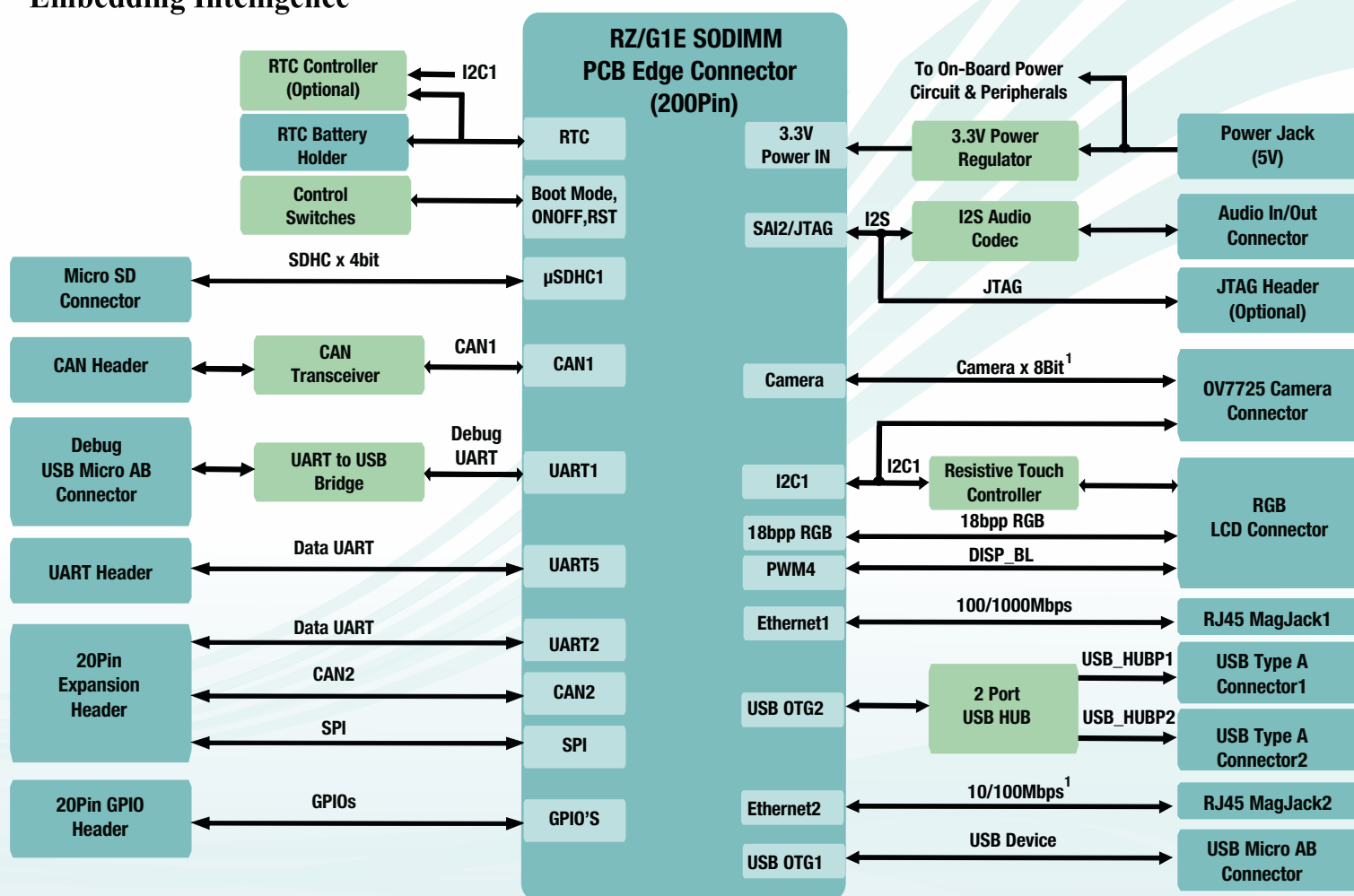|	
Data UART - 1 Port	
CAN PHY - 1 Port	
Serial console on USB Port	
IO expansion headers	
JTAG header	
Power Supply:	
5V@2A DC Input	
Operating Temperature:	
$0^{\circ}C$ to $60^{\circ}C$	
OS Support:	
Linux 4.4.6	
Form Factor: 100mm x 72mm	
HDMI Daughter Board:	
ADV7511 HDMI Transmitter	
HDMI Output - 1 Port	
CAN PHY - 2nd Port	
RS232 - 3 Ports	

Note1: 2nd Ethernet and 8-bit camera interface is multiplexed in the RZ/G1E CPU. At a time anyone can be used.
By default 8-bit camera interface is supported in the development kit.

iWave
Embedding Intelligence

RENESAS

RZ/G1E SODIMM Carrier Board - BLOCK DIAGRAM

RTC Controller (Optional) — I2C1

RTC Battery Holder

Control Switches

RZ/G1E SODIMM PCB Edge Connector (200Pin)

RTC

Boot Mode, ONOFF,RST

Micro SD Connector — SDHC x 4bit — µSDHC1

CAN Header — CAN Transceiver — CAN1 — CAN1

Debug USB Micro AB Connector — UART to USB Bridge — Debug UART — UART1

UART Header — Data UART — UART5

20Pin Expansion Header — Data UART — UART2, CAN2 — CAN2, SPI — SPI

20Pin GPIO Header — GPIOs — GPIO'S

To On-Board Power Circuit & Peripherals

3.3V Power IN — 3.3V Power Regulator — Power Jack (5V)

SAI2/JTAG — I2S — I2S Audio Codec — Audio In/Out Connector

JTAG — JTAG Header (Optional)

Camera — Camera x 8Bit[1] — OV7725 Camera Connector

I2C1 — I2C1 — Resistive Touch Controller

18bpp RGB — 18bpp RGB

PWM4 — DISP_BL — RGB LCD Connector

Ethernet1 — 100/1000Mbps — RJ45 MagJack1

USB OTG2 — 2 Port USB HUB — USB_HUBP1 — USB Type A Connector1

USB_HUBP2 — USB Type A Connector2

Ethernet2 — 10/100Mbps[1] — RJ45 MagJack2

USB OTG1 — USB Device — USB Micro AB Connector

Note1: 2nd Ethernet and 8-bit camera interface is multiplexed in the RZ/G1E CPU. At a time anyone can be used. By default 8-bit camera interface is supported in the development kit.

OS SUPPORT

Linux 4.4.6

DELIVERABLES

RZ/G1E SODIMM Development kit
Board Support Package
User Manual

OPTIONAL KITS/Modules

4.3" RGB display Kit
Camera Module
HDMI Daughter Board

CUSTOM DEVELOPMENT

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

iWave Systems Technologies, established in 1999, focuses on Product Engineering Services involving Embedded Hardware, Software & FPGA. The company designs and develops cutting edge products and solutions. iWave has been an innovator in the development of highly integrated, high performance, low power and low cost System On Modules and Development Platforms. iWave's expertise has brought out multiple SOMs based on ARM NXP, Intel Atom, Marvell and TI Processors.

iWave System has won the confidence of its customers over the years by being a reliable partner in developing innovative products. Our engineers combine outstanding System design experience to deliver Quality Solutions. iWave specializes across Industrial, Automotive and Medical domains. We support our customers by being time efficient, which in turn helps our customers accelerate time to market their products. iWave is a Windows embedded Silver partner and a winner of the Partner Excellence Award.

Optional items not included in the standard deliverables.

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.

Ordering the RZ/G1E SODIMM Development Kit

The Development Kit can be ordered online from the iWave Website
http://www.iwavesystems.com/webforms

IW-G22D-SODIMM-BR-R1.1

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