efus™G1C

Computer On Module with Renesas RZ/G1C Processor

Characteristics

- Renesas RZ/ G1C Dual ARM® Cortex®-A7 with up to 1GHz
- up to 64MB QSPI NOR Flash, 32GB eMMC, 2GB RAM
- RGB (18/ 24 Bit), LVDS (24 Bit)
- Ethernet 10/ 100/ 1000MBit
- 1x USB2.0 Device/ Host, 1x USB2.0 Host
- 1x CAN2.0, 2x I²C, 2x SPI, 4x UART
- 2x SD-Card
- 1x I2S Audio
- Analog Video Out
- Analog Camera In
- WLAN/ BT4.1
- Linux
- 5V Design

Description

efus™G1C is another compact and inexpensive module in efus™ form factor and it is perfectly suited for applications in the medical and industrial sector.

Along with its easy base board (EasyLayout), the efus™G1C (47 x 62mm) even fits in compact housings. The Renesas ARM® Cortex®-A7 CPU comes with good performance power (3800 DMIPS), low power consumption, as well as good multimedia features (3D graphics, 1080p decoder, H.264).

Another highlight is the long-term availability of up to 10 years. The module comes with the following interfaces: CAN, UART, SPI, I²C, Audio, Touch Panel, Camera and Video Out.

RGB and LVDS are available for display connection.

The RZ/G Linux uses the Super Long Term Linux Kernel, supported by Linux Foundation's CIP (Civil Infrastructure Platform).

Renesas delivers the basis software (3D Graphics, H.264 Video, Security, GUI and driver software), supported by the CIP Linux kernel. Renesas also offers a line-up of proven middleware for the RZ/G Linux package. The functionality of the middleware was checked by CIP, as well as by Renesas, and can be used as an easy addition to your Linux.

Block Diagram
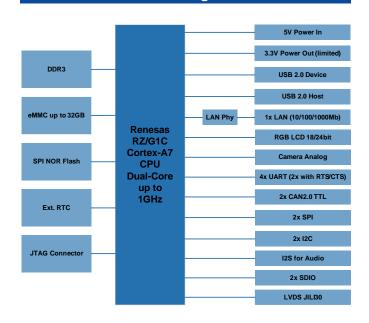

On-Board Operating System

Renesas works with the mainline kernel. This enables an always up-to-date Linux for this CPU/ efus™.

Every two years the current kernel is set and will be maintained for many more years.

The F&S Linux BSP (4.4.x, uboot, Yocto) contains the customized kernel with all interface drivers, incl. source.

A cross compiler toolchain and a device tree for the creation of own bootloaders, kernel and other software is available as well.

Starterkit

The efus™G1C starterkit consists of a base board with standard connectors and pin headers for the offered interfaces.

It also includes a cable kit and access data to our download area, documentations, current software, drivers and example applications.

The starterkit also comes with a display and touch panel. The customer can also book a four-hour workshop.

The goal of the workshop is to learn how to handle the efus™G1C starterkit and the development environment. You will be able to start your own development with a running system (efus™G1C, display and touch panel).

The F&S support forum has more than 3000 registered customers and is always online for support.

· **efus™ stands for 20 years of experience in the RISC boards sector.**

easy
starterkits
customized operating systems
(Linux, Android, WEC 7, WEC 2013)
F&S Support, free of charge

functional
many interfaces
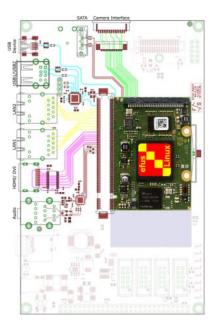expandable with wireless modules (ReDesign)
easy base board
based on "EasyLayout" standard

universal
visualization
communication
control

small
47 x 62mm only
5V supply

Accessories

Workshop
SKU: NDCU-WS1
Workshops for F&S Boards with Linux

MXM-2 Connector
SKU: B.MST.2R230PL.1
For connecting efus™ modules via goldfinger contacts

efus™ Latch
SKU: B.MST.VR.5
Allows to mount efus™ modules on the base board

Displaykit RGB 2
SKU: aSt-RGBKIT
7" WVGA Display with RGB interface and touch panel, connection cable (40pol film cable), display adapter and touch cable

Technical Data

Power Supply:	+5V_{DC}/ ±5%
Power Consumption:	3W typ.
Interfaces:	1x Ethernet 10/ 100/ 1000MBit
	4x Serial
	1x USB2.0 Host
	1x USB2.0 Device/ Host
	1x CAN2.0
	2x I^{2}C
	2x SPI
	1x I2S Audio
	Analog Camera Interface
	Analog Video Out
	RTC (optional)
	WLAN IEEE802.11b/g/n (optional)
	with BT4.1LE
TFT LCD-Interface:	18/ 24 Bit RGB up to SVGA
	24bit LVDS up to WXGA
RAM:	up to 2GB RAM
Program Memory:	up to 64 MB QSPI NOR Flash
	and up to 32GB eMMC
Processor:	ARM Cortex®™-A7 Dual Core- 1GHz
Temperature Range:	0°C - +70°C ,
	(-20°C - +85°C optional)
Size:	47mm x 62.1mm x 11mm (l x b x h)
Weight:	15g

Standard Versions/ Order Notations

efusG1C-V2-LIN
Dual-Core CortexA7-1GHz, 1 MB QSPI Flash, 4GB eMMC, 1GB RAM, Ethernet, LVDS, WLAN/BT, Linux

Minimum Order Quantity for Custom Versions:
Customer-specific Software: **500 pieces**
Assembly Versions: **1000 pieces**

Standard Versions/ Order Notations

efusG1C-SKIT-LIN

efusG1C-V2-LIN, base board, cable kit, display kit (10.1" display with PCAP touch panel and cables) and access to the documentation and software

efusG1C-SKIT2-LIN

efusG1C-V2-LIN, base board, cable kit and access to the documentation and software