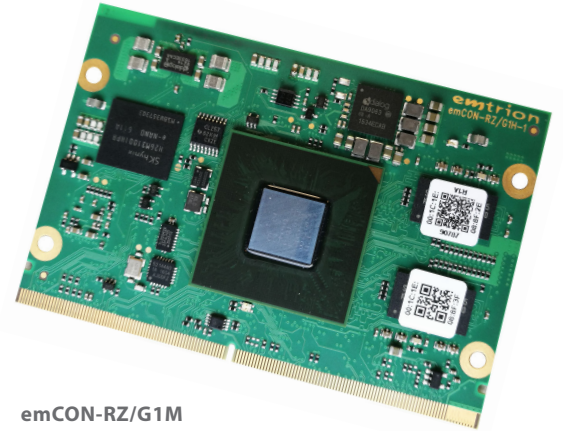
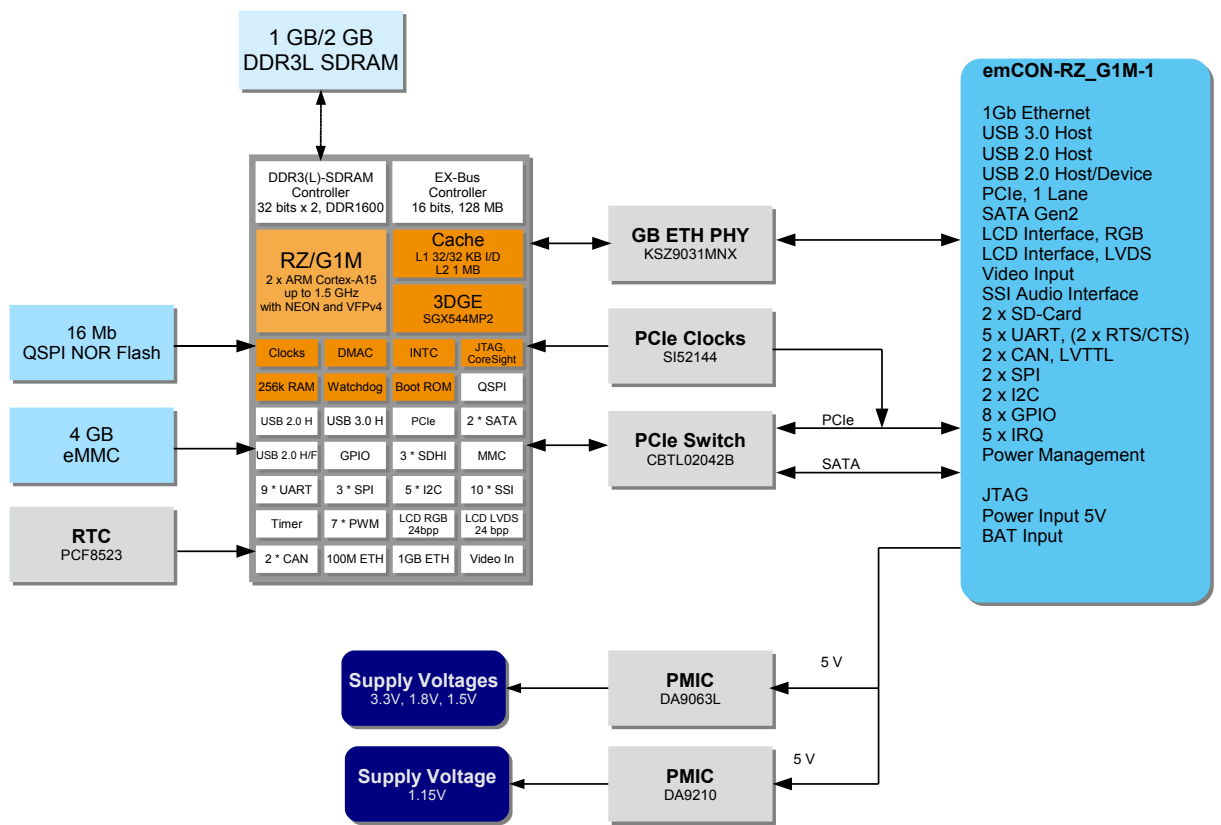


**emCON-RZ/G1M  
Processor module**



**emCON-RZ/G1M**  
Dimensions: 82 x 55 mm




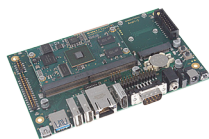
**Getting started with your embedded development!**

**Reduce your time to market with emtrion Developer Kits!**

With an emtrion developer kit you can easily start your application development and reduce your time to market.

Emtrion’s engineers are unique experts in hardware and software development. The embedded solutions are all from one source.

## emCON-RZ/G1M as CPU-Module or Single Board Computer

|                            | emCON-RZ/G1M  | SBC   |
|----------------------------|---|---|
|                            |  |  |
| Product                    | emCON-RZ/G1M  | emCON-RZ/G1M-SBC  |
| Windows                    | WEC on request  |   |
| Linux                      | Linux   |   |
| QNX                        | QNX on request  |   |
| Android                    | Android® on request   |   |
| CPU manufacturer           | Renesas RZ/G1M  |   |
| CPU architecture           | Dual ARM Cortex™ A15  |   |
| CPU performance            | 2x 1.5 GHz  |   |
| Co-processor               | 2x ARM NEON™/VFPv4  |   |
| 2D (hardware accelerated)  | Video image processing function (image extraction, rotation, filtering)           |   |
| 3D Graphics Controller     | PowerVR SGX544MP2, max. 520 MHz, USSE2  |   |
| RAM                        | 1/2 GB DDR3L-SDRAM, DDR1600   |   |
| Flash                      | 16 Mb QSPI NOR Flash up to 32 GB eMMC   |   |
| Ethernet                   | 10/100/1000Base-T   |   |
|                            | 100Base-T/10Base-T  | -   |
| UART                       | 5   | 1x RS232, 4x LVTTTL   |
| USB 2.0                    | 1x Host, 1x Device  | 3x 2.0 High speed via USB Hub,<br>1x 2.0 High Speed Device                          |
| USB 3.0                    | Host  |   |
| SATA                       | SATA II (3 Gbps)  |   |
| PCIe                       | 1 Lane  | 1x miniPCI Express interface  |
| Digital Audio              | 1x SSI interface  | 1x Stereo out   |
| LCD Interface              | 2 Interfaces, up to 1080p60<br>(1x RGB, 1x LVDS)                                  | 2 Interfaces, up to Full-HD<br>(1x RGB, 1x LVDS)                                    |
| Video In/Camera            | 8, 10, 12-bit YCbCr422<br>Video Processing Unit, H.264/AVC, MPEG-4, VC-1          | 1x 8-bit YCbCr422 for CMOS camera   |
| CAN                        | 2x 2.0 A/B  | 2x 2.0 A/B (LVTTTL)   |
| I2C                        | 2   | 1   |
| SPI                        | 2   |   |
| Digital GPIO               | min. 8  |   |
| MMC/SDC                    | 2x SDC, up to SDR104  | 1x micro SD   |
| PWM                        | 3   |   |
| ADC                        | 0   |   |
| RTC (battery buffered)     | yes   | 1x battery holder with CR1632   |
| JTAG                       | yes, core sight   | yes   |
| Size in mm                 | 82 x 55 x 10  | 150 x 100 x 18  |
| max. power consumption     | 5V @ 2.5A max.  | 5V @ 3A max.  |
| Operating temperature      | 0...+70°C, opt. -25...+85°C   |   |
| Interface to carrier board | emCON connector (314 pos.)  |   |
| Carrier boards available   | yes   | -   |
| Developer kits available   | yes   | yes   |
| Custom specific solutions  | yes   | yes   |

 Subject to change without notice.  
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