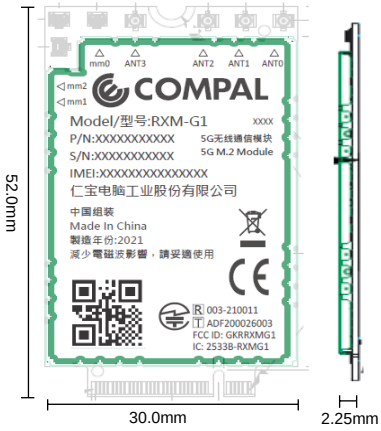
Compal Electronics RXM-G1 Series 5G Embedded Modules

Advanced 5G LTE Data Module

Enabling a new generation of 5G state of the art data cards featuring both mmWave and sub-6 with LTE, WCDMA and GNSS support for the following applications: High Power Fixed Wireless Access, enterprise routers and gateways, indoor/outdoor CPE, video broadcasting and surveillance.



Compact, Powerful, and Highly integrated Proof 5G Modules

Compal RXM-G1 is a series of 5G communication modules for Worldwide EU/US/Asia broadband Market, which support both 5G SA and NSA network architectures with faster transmission speed, better carrying capacity, and lower network latency.

The Module supports 5G sub6 and mmWave band, and is compatible with LTE and WCDMA standards, eliminating customers' investment concerns in the initial stage of 5G construction and responding to the commercial demand of rapid landing.

A rich set of Internet protocols, industry-standard interfaces (USB 2.0/3.0/3.1, PCIe 3.0, RGMII, I2C, I2S, SPI, UART, EBI2, etc.) provide much flexibility and ease of integration for customer application. The abundant functionalities (USB drivers for Windows 7/8/8.1/10, Linux and Android) extend the applicability of the module to a wide range of IoT and M2M applications such as business router, home gateway, STB, pocket router, dongle, industrial laptop, consumer laptop, industrial PDA, rugged tablet PC and video surveillance.

Key Benefits

- ARM Cortex-A7 up to 1.5 GHz Application Processor
- Support WiFi 6 with QCA6391 (2x2 MIMO)
- 5G Sub-6 FDD and TDD and SA & NSA operations
- LTE R15
  - DL Cat.20, up to 7CC
  - UL Cat.13, up to 2CC
  - DL/UL 256QAM
- NR R15
  - FR1 SA DL 2CC 4x4 (4.46Gbps)
  - FR1 SA UL 1CC 2x2 (0.97Gbps)
  - FR1 NSA DL 2CC 2x2 (4.46Gbps)
  - FR1 NSA UL 1CC SISO (0.48Gbps)
  - FR2 NSA DL 8CC 2x2 (6.4Gbps)
  - FR2 NSA UL 2CC 2x2 (1.6Gbps)
- NAT, Firewall, VPN, Security, WPS, Device management
- Driver support for Linux, Windows, Android
- Regulatory : GCF, PTCRB, FCC, CE, IC, NCC, 3C, JATE, TELEC

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RML 5G SERIES EMBEDDED MODULES

	RXM-G1
FORM FACTOR	M.2 (PCIe M.2 Key B)
FREQUENCY BANDS	
LTE	B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B46, B48, B66, B71
5G Sub6	n1, n2, n3, n5, n7, n8, n12, n20, n28, n41, n66, n71 New Sub6: n77, n78, n79
5G NR mmWave	n257, n258, n260, n261
WCDMA	B1, B2, B3/9, B4, B5/6/19, B8
Simultaneous GPS	L1, GLONASS(GLO), Galileo(GAL) and BeiDou(BDS)
INTERFACE	
Antenna Port	X 4 Support 4x4 MIMO mmWave Antenna x 3 (Option)
Tunable antenna	MIPI x 1
USB	USB 2.0 HS/3.0/3.1 SS Gen2
PCIE	PCIe Gen3 1-lane x1 Support PCIE early initial (Option)
RGMII	NA
SPI	NA
GPIO	NA (No idle pin)
I2S (or PCM)	X 1 (optional)
I2C	NA
SIM interface 1.8V/3V	USIM1 x 1 And Support E-SIM on board
SDIO	NA
Display	NA
PWM for BL Controller	NA
LED Control Pin	LED control pin x 1
Key or Others	Power On (Support 1.8V & 3.3V I/O), Reset, W_DISABLE1#: Control Airplane Mode (3.3V I/O) W_DISABLE2#: Control GNSS Disable (3.3V & 1.8V IO) Body Sar (DRP pin, support 3.3V & 1.8V I/O) WOWWAN# (Wake up the Host, 1.8V I/O)
UART	Only test point on board for debug.
Protocol Stack	IPV4/IPV6
Firmware update	FOTA
DRIVERS	Windows 19H1 and later, Linux kernel v4.4 [3]
AT commands	3GPP TS 27.007 and 27.005
Dimensions	30.0mm x 52.0mm x 2.25 mm
Temperature	
Operating temperature	-30°C ~+75°C
Extended temperature	-45°C ~+85°C
Power Supply Voltage	3.135V～3.465V,Typical 3.3V
APPROVALS	
RoHS Compliant	