Data Sheet

Qualcomm QCC711 Module Product Portfolio

January 2024

Table of Contents

1 Product Overview

Powered by Qualcomm QCC711, EQM100-1 modules are purposely-designed LGA form factor BLE modules that combine multi-core processing capabilities, high-security as well as BLE long-range to cater to the demands of diverse IoT applications. Their compact size and on-chip memory of SRAM and RRAM (NVM) contribute to reduced costs and enhanced performance, making them an attractive choice for space-constrained IoT edge devices.

Unlike many other BLE modules on the market, EQM100-1 modules have integrated three processors – 64MHz Arm Cortex-M processor for application and 32MHz Arm Conrtex-M0 processor for BLE with shared on-chip memory of 128KB SRAM and 512KB RRAM. Additional Root-of-Trust 32MHz RISC-V processor with its own secure SRAM and ROM is dedicated to security subsystem to ensure the highest level of security for IoT applications with critical security needs. They have built-in resistive RAM (RRAM), the industry latest Non-volatile Memory (NVM) technology, eliminating need for externally attached NOR flash as well as resulting in more streamlined and cost-effective system. They also feature 3-wire and 4-wire SPI display control, making them capable of driving external LCD/TFT screens commonly found on a dedicated MCU. Furthermore, EQM100-1 modules can be powered directly by a battery, making it suitable for portable and battery-operated devices.

EQM100-1 can operate in hostless mode, capable of running both the Bluetooth stack and applications internally without requiring an external MCU. Moreover, they support hostless mode (HCI) through a UART interface, functioning as a Bluetooth transceiver to offload the Bluetooth stack. This enables the external MCU to focus on handling applications rather than managing the Bluetooth stack.

EQM100-1 modules have undergone rigorous regulatory compliance testing and are certified with FCC, CE, IC, UKCA, RCM, MIC, KC, SRRC and environmentally compliant with RoHS and WEEE directives. They also Bluetooth SIG 5.4 certified, ensuring seamless interoperability with other Bluetooth devices.

EQM100-1 modules include the following configurations:

Module	Form Factor	Antenna
EQM100-1P	12.277 x 14.817 x 2.2 mm, 1.27 mm pitch, 40-pin, LGA	Pin Antenna
EQM100-1B	12.277 x 18.817 x 2.2 mm, 1.27 mm pitch, 40-pin, LGA	PCB Antenna
EQM100-1U	12.277 x 18.817 x 2.2 mm, 1.27 mm pitch, 40-pin, LGA	U.FL Antenna

EQM100-1 module portfolio is graphically illustrated below:

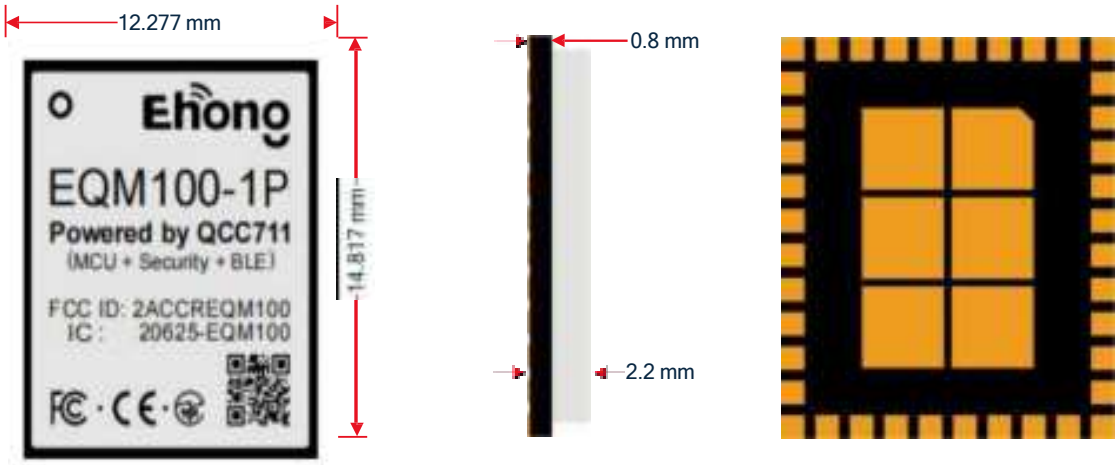


Figure 1: EQM100-1P Module View

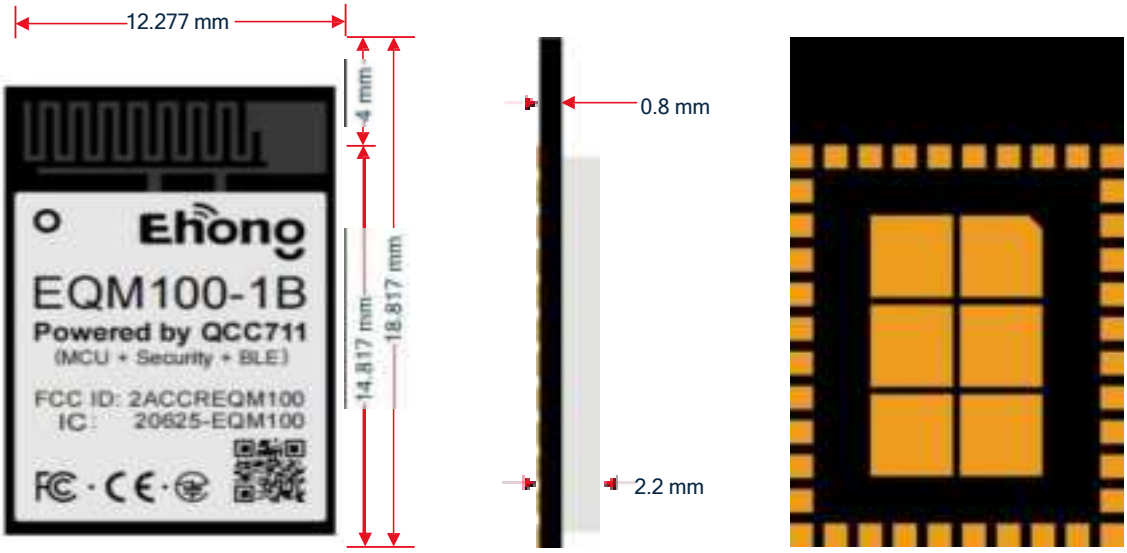


Figure 2: EQM100-1B Module View

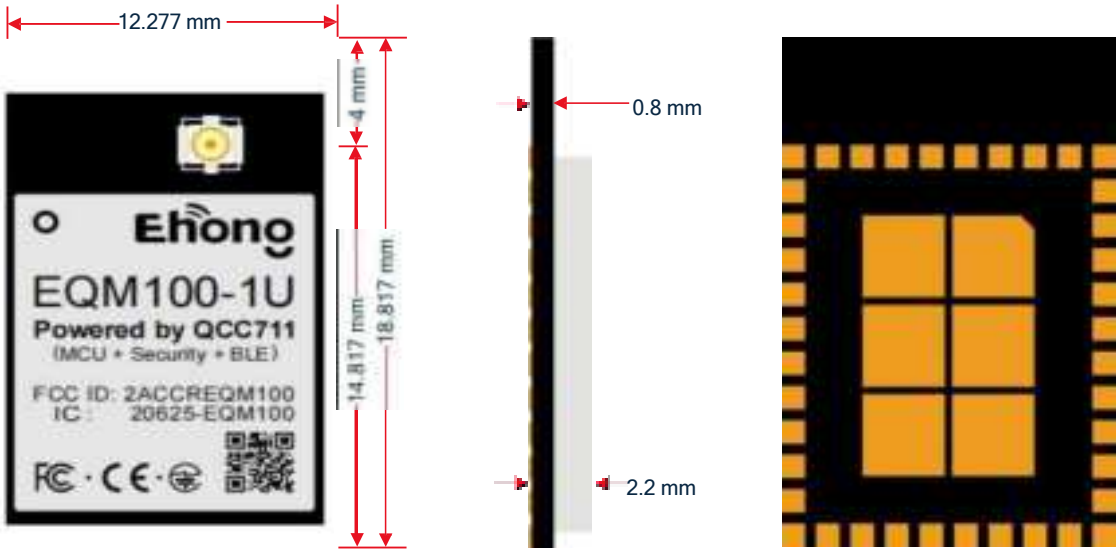


Figure 3: EQM100-1U Module View

The module specific development kit is also provided to facilitate application software development as shown below:

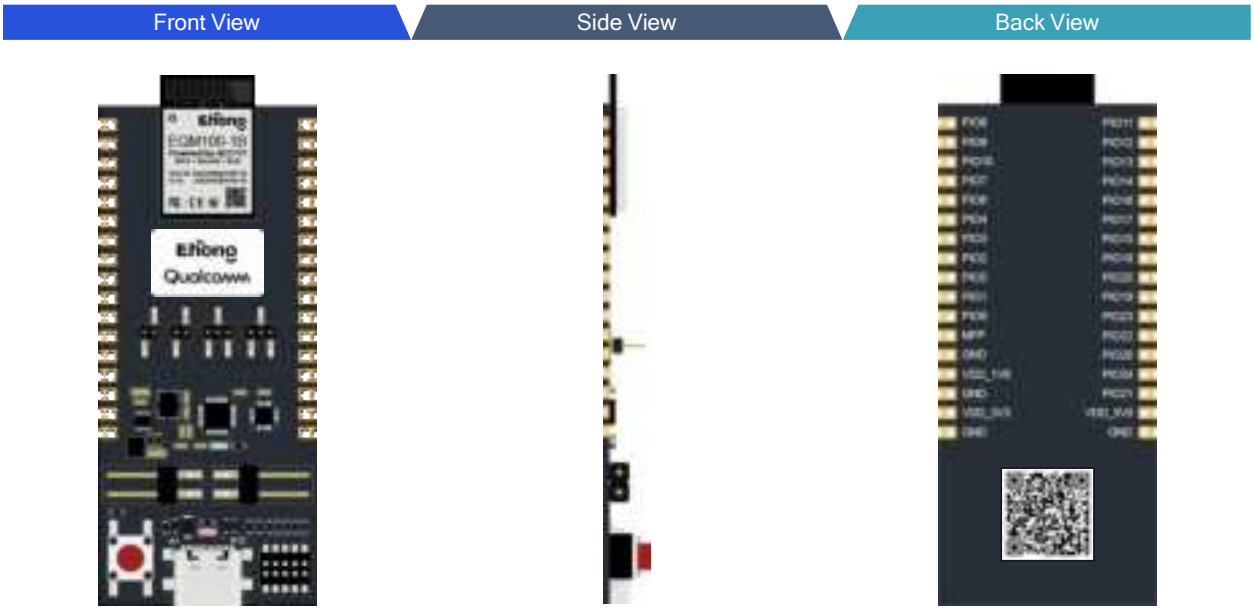


Figure 4: EQM100-1 Module Development Kit

2 Hardware Specification

This section provides detailed hardware design and specification of EQM100-1 modules. EQM100-1 hardware design has been optimized for small footprint and reduced RBOM cost.

2.1 Block Diagram

EQM100-1 integrates 2/4/8MB 2x3 8-USON NOR flash and 32.768kHz RTC crystal as stuffing options. The design also supports PCB antenna (EQM100-1B) or simply provides antenna pin (EQM100-1U) to allow customized antenna implementation on motherboard. The block diagram is shown below.

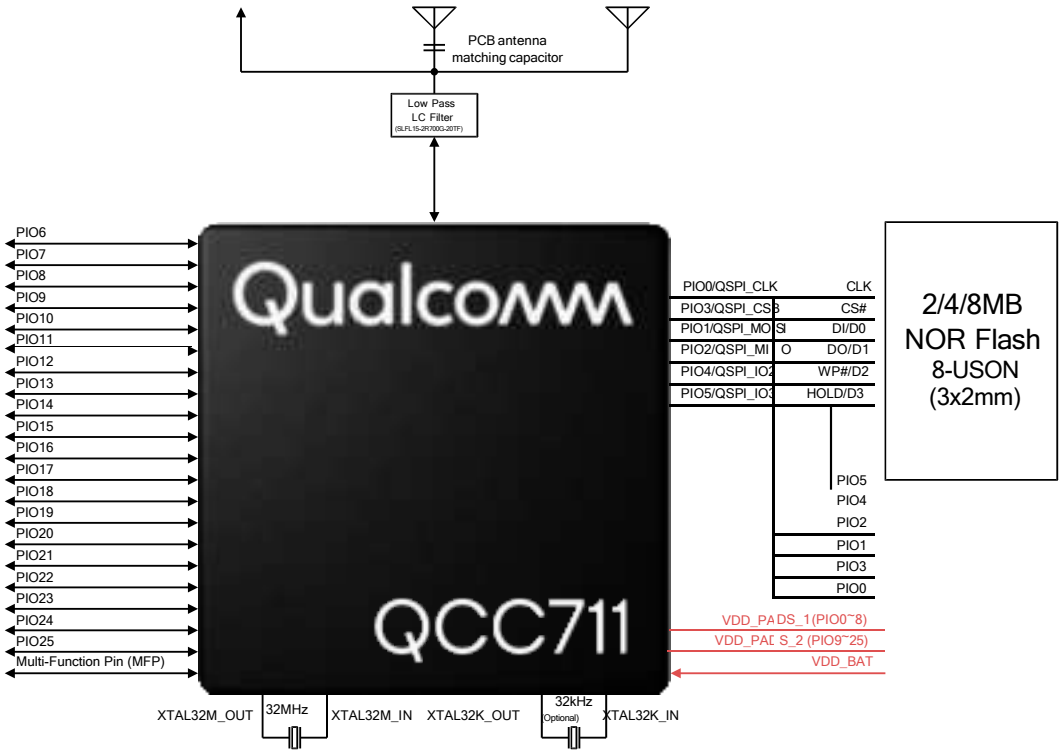
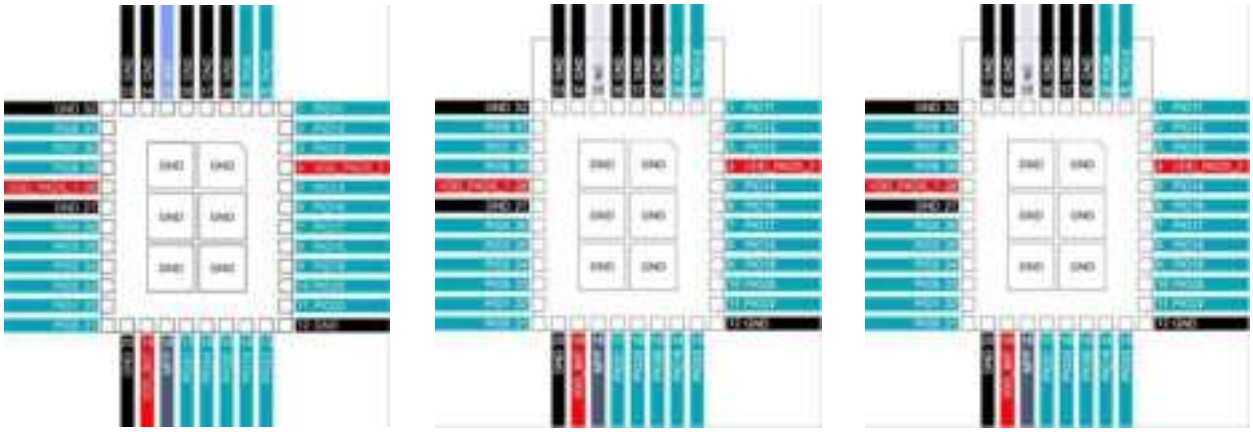


Figure 5: EQM100-1 Module Block Diagram

2.2 Pinout Description

2.2.1 Pin Map

In order to maintain pin compatible to allow easy drop replacement, All EQM100-1 shares the same pin map as illustrated below:



EQM100-1P EQM100-1B EQM100-1U

Figure 6: EQM100-1 Module Pin Map

2.2.2 Pin Definition

Pin	Pin Name	Type	Power Domain	Description
44,45	VDD_VBAT	PWR	-	Power input (1.71~3.6V)
66	VDD_PADS_1	PWR	-	Host I/O voltage input (≤ VDD_VBAT)
9	VDD_PADS_2	PWR	-	Host I/O voltage input (≤ VDD_VBAT)
11,47,68	GND	GND	GND	Ground
35	ANT	AI/AO	-	Pin antenna
50	MFP	DI	VDD_VBATT	SW configurable as a reset input
54	PIO0	DI/DO	VDD_PADS_1	Generic PIO
52	PIO1	DI/DO	VDD_PADS_1	Generic PIO
64	PIO2	DI/DO	VDD_PADS_1	Generic PIO
56	PIO3	DI/DO	VDD_PADS_1	Generic PIO
60	PIO4	DI/DO	VDD_PADS_1	Generic PIO
56	PIO5	DI/DO	VDD_PADS_1	Generic PIO
62	PIO6	DI/DO	VDD_PADS_1	Generic PIO
70	PIO7	DI/DO	VDD_PADS_1	Generic PIO
72	PIO8	DI/DO	VDD_PADS_1	Generic PIO
42	PIO9	DI/DO	VDD_PADS_2	Generic PIO
40	PIO10	DI/DO	VDD_PADS_2	Generic PIO
38	PIO11	DI/DO	VDD_PADS_2	Generic PIO
5	PIO12	DI/DO	VDD_PADS_2	Generic PIO
7	PIO13	DI/DO	VDD_PADS_2	Generic PIO
13	PIO14	DI/DO	VDD_PADS_2	Generic PIO

17	PIO15	DI/DO	VDD_PADS_2	Generic PIO
15	PIO16	DI/DO	VDD_PADS_2	Generic PIO
19	PIO17	DI/DO	VDD_PADS_2	Generic PIO
21	PIO18	DI/DO	VDD_PADS_2	Generic PIO
23	PIO19	DI/DO	VDD_PADS_2	Generic PIO
25	PIO20	DI/DO	VDD_PADS_2	Generic PIO
36	PIO21	DI/DO	VDD_PADS_2	Generic PIO
32	PIO22	DI/DO	VDD_PADS_2	Generic PIO, analog in configurable
30	PIO23	DI/DO	VDD_PADS_2	Generic PIO, analog in configurable
34	PIO24	DI/DO	VDD_PADS_2	Generic PIO, analog in configurable
27	PIO25	DI/DO	VDD_PADS_2	Generic PIO, analog in configurable

2.2.3 I/O Pin Mux Table

GPIO	QSPI	I2C	FTC	LED	Analog	CoEx	Debug	SE0	SE1	SE2	SE3
PIO0	QSPI_CLK	SDA	ftc0_out	BLUE				Port 0	Port 0	Port 0	Port 0
PIO1	QSPI_MOSI	SCL	ftc0_out	RED				Port 1	Port 1	Port 1	Port 1
PIO2	QSPI_MISO	SDA	ftc0_out	GREEN				Port 2	Port 2	Port 2	Port 2
PIO3	QSPI_CSB	SCL	ftc1_out	WHITE				Port 3	Port 3	Port 3	Port 3
PIO4	QSPI_IO2	SDA	ftc1_out	WHITE				Port 0	Port 4	Port 4	Port 4
PIO5	QSPI_IO3	SCL	ftc1_out	BLUE				Port 1	Port 0	Port 0	Port 0
PIO6		SDA	ftc_in	RED				Port 2	Port 1	Port 1	Port 1
PIO7		SCL		GREEN				Port 3	Port 2	Port 2	Port 2
PIO8								Port 4	Port 3	Port 3	Port 3
PIO9							TCK/SWD_CLK		Port 4	Port 4	Port 4
PIO10							TMS/SWD_DIO		Port 0	Port 0	Port 0
PIO11	QSPI_CLK	SDA	ftc_in				TDI/test_hf	Port 0	Port 1	Port 1	Port 1
PIO12	QSPI_MOSI	SCL					TDO/SWO	Port 1	Port 2	Port 2	Port 2
PIO13	QSPI_MISO	SDA	ftc2_out				Test_lf	Port 2	Port 3	Port 3	Port 3
PIO14	QSPI_CSB	SCL	ftc2_out					Port 3	Port 4	Port 4	Port 4
PIO15	QSPI_IO2	SDA	ftc2_out	BLUE/WHITE			trace_ctrl	Port 4		Port 3	Port 3
PIO16	QSPI_IO3	SCL	ftc_in	RED/WHITE			trace_clk	Port 0	Port 0	Port 1	Port 1
PIO17		SDA	ftc3_out	GREEN/WHITE			trace_data_0	Port 1	Port 1	Port 2	Port 2
PIO18		SCL	ftc3_out	WHITE			trace_data_1	Port 2	Port 2	Port 3	Port 3
PIO19		SDA	ftc3_out	WHITE			trace_data_2	Port 3	Port 3	Port 4	Port 4
PIO20		SCL		WHITE		slv_pta_coex_active	trace_data_3	Port 4	Port 4		
PIO21		SDA	ftc_in	WHITE		slv_pta_coex_status		Port 0	Port 0	Port 0	Port 0
PIO22		SCL		BLUE	ADC	slv_pta_coex_confx		Port 1	Port 1	Port 1	Port 1
PIO23		SDA		RED	ADC	mstr_pta_coex_active		Port 2	Port 2	Port 2	Port 2
PIO24		SCL		GREEN	ADC	mstr_pta_coex_status		Port 3	Port 3	Port 3	Port 3
PIO25				WHITE	ADC	mstr_pta_coex_confx		Port 4	Port 4	Port 4	Port 4

2.2.4 Programmable Series Engine

Serial Engines (SE) and supported interfaces

SE	3-wire or 4-wire SPI Display Controller	True 4-wire SPI Controller/Peripheral	I2C Controller	8-bit UART	9-bit UART
SE0	Yes	Yes	Yes	Yes	Yes
SE1	Yes	Yes	Yes	Yes	Yes
SE2	-	-	Yes	Yes	-
SE3	-	-	Yes	Yes	-

Serial engines default port mappings

SE	3-wire Display	4-wire Display	I2C	UART	SE0 true 4-wire SPI
Port 0	CS1	CS1	SDA	CTS	MISO
Port 1	SDIN	SDIN	SCL	RTS	MOSI
Port 2	CLK	CLS	-	TXD	CLS
Port 3	CS	CS	-	RXD	CS
Port 4		D/C	-	-	CS1

2.3 Computing Subsystem

2.3.1 Microcontroller

EQM100-1 modules have Qualcomm QCC711 at his core which integrates three microcontrollers – Arm Cortex-M3 processor, Arm Cortex-M0 processor, and RISC-V:

Arm Cortex-M3 processor – Running at 32MHz, dedicated to higher layer protocol and user applications. It conducts inter-processor communication with Arm Cortec-M0 processor for BLE services and with RISC-V processor for security services.

Arm Cortex-M0 processor – Running at 32MHz, dedicated to BLE radio and lower protocol layer (MAC) processing.

RISC-V processor – Running at 32MHz, dedicated to security services. it can function as a Root-of-Trust (RoT) processor to execute highly secure bootup code under Trusted Execution Environment (TEE) that validate the user application image before handing over the control to Arm Cortex-M3 processor. RISC-V has its own 32KB SRAM, 192KB ROM and protected OTP area and will be NOT visible to user applications, making it highly reliable and secure.

The computing subsystem software architecture consists of three parts as illustrated below. Computing Subsystem (APSS) will be open-sourced on GitHub and CodeLinaro while Bluetooth Subsystem (BTSS) and Security Subsystem will be offered in binary format inside software SDK package.

GitHub Download Link: *https://github.com/quic/qccsdk-qcc711/*

CodeLinaro Download Link: TBD

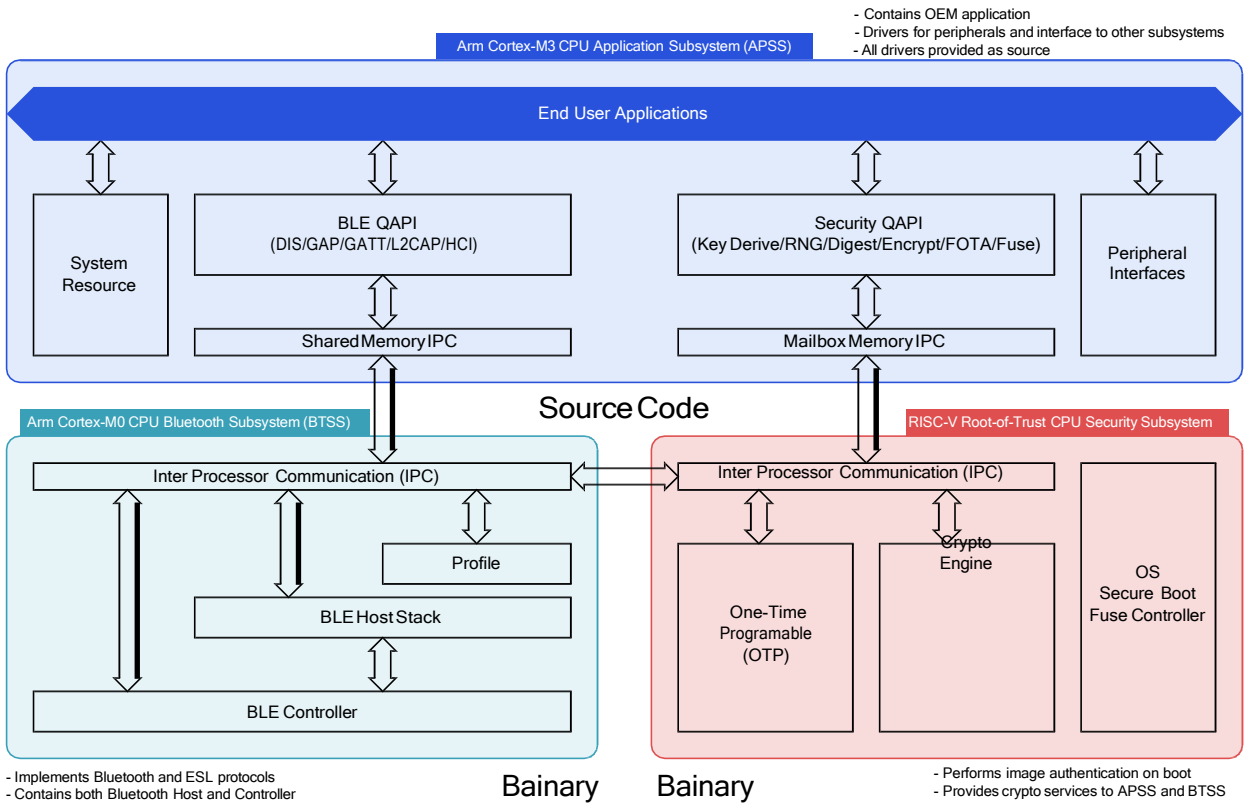


Figure 7: Computing Subsystem Software Architecture

2.4 Memory

There are 512KB on-chip RRAM, 128KB on-chip SRAM and 2KB OTP/MTP shared among three processors. Built-in Non-volatile memory RRAM hosting execution code will eliminate needs of an external NOR flash to reduce system cost. 416KB out of 512KB RRAM can be used for user applications. 128KB SRAM can be used for runtime data. 64KB out of 128KB SRAM can be used for user applications.

Additional NOR flash can be added through QSPI interface for additional data storage.

2.5 Peripheral Interfaces

EQM100-1 modules supports the following peripheral interfaces through 26x configurable PIO:

- 2x SPI master or slave, support 3-wire/4-wire SPI for display and true 4-wire SPI with DMA
- 2x I2C master and 1x I2C slave, supporting 100kbps, 400kbps, and 1000kbps data rate
- 2x 9-bit UART with hardware flow control, supporting maximum 2M baud rate
- 1x 8-bit UART with hardware flow control, supporting maximum 2M baud rate
- 4x 10-bit ADC
- 4x FTC (PWM)
- 4x LED driver
- 3-wire PTA coexistence master or slave
- SWD with 4-bit trace

3 Electrical Characteristics

3.1 Absolute Maximum Ratings

The absolute maximum ratings provided in this section reflect the stress levels that, if exceeded, may cause permanent damage to the device. No functionality is guaranteed outside the operating specifications. Functionality and reliability are only guaranteed within the operating.

Pin	Parameter	Min	Max	Unit
VDD_VBATT	Power input voltage	VDD_PADS_2	3.63	V
VDD_PADS_1	I/O port 1 voltage	VSS - 0.3	3.63	V
VDD_PADS_2	I/O port 2 voltage	VSS - 0.3	3.63	V
Digital I/O	PIO25:PIO9	VSS - 0.3	VDD_PADS_2 + 0.3	V
	PIO8:PIO0	VSS - 0.3	VDD_PADS_1 + 0.3	V
	MFP	VSS - 0.3	VDD_VBAT + 0.3	V
All ground / VSS pads		0	0	V
Storage temperature		-40	85	°C

3.2 Recommended Operating Conditions

Pin	Parameter	Min	Max	Unit
VDD_VBATT	Power input voltage	1.71	3.6	V
VDD_PADS_1	I/O port 1 voltage	0	3.6	V
VDD_PADS_2	I/O port 2 voltage	0	3.6	V
Digital I/O	PIO25:PIO9	VSS	VDD_PADS_2	V
	PIO8:PIO0	VSS	VDD_PADS_1	V
	MFP	VSS	VDD_VBAT	V
All ground / VSS pads		0	0	V
Storage temperature		-40	85	°C

4 Radio Performance

Channel Bandwidth	Modulation	Parameter	Data Rate	Typical	Unit
2MHz	GFSK	Tx Power	2Mbps	+6	dBm
			1Mbps	+6	dBm
			500kbps	+6	dBm
			125kbps	+6	dBm
		Rx Sensitivity @ 30.8% PER (Boost Mode)	2Mbps	-93	dBm
			1Mbps	-96	dBm
			500kbps	-98	dBm
			125kbps	-103	dBm
		Rx Sensitivity @ 30.8% PER (Normal Mode)	2Mbps	TBD	dBm
			1Mbps	TBD	dBm
			500kbps	TBD	dBm
			125kbps	TBD	dBm
Note: VDD_VBAT = 3.3V					

5 Power Consumption

EMQ100-1 modules can operate in four power states as shown below to maximize power saving:

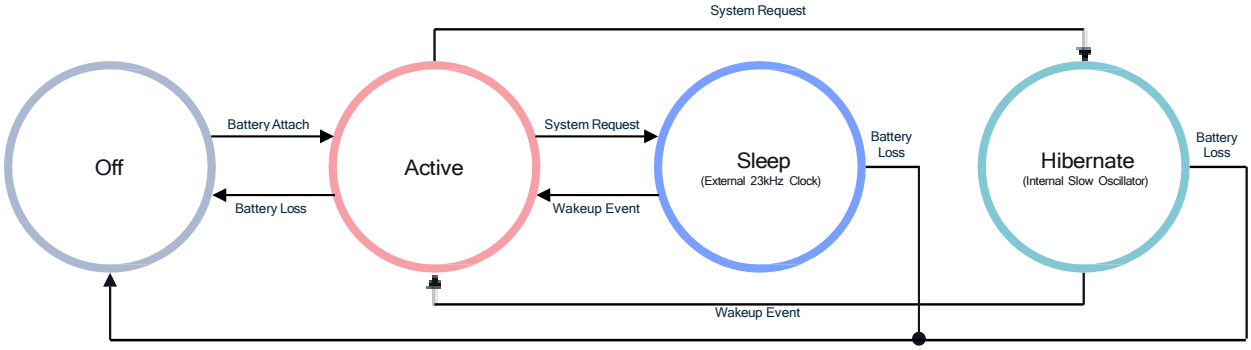


Figure 8: Power State Diagram

5.1 Active Power

Channel Bandwidth	Modulation	Parameter	dBm	Average Current	Unit
2MHz	GFSK	Tx Power	0	10.5	mA
			+4	14.6	mA
			+6	16.6	mA
		Rx Power Normal	TBD	TBD	mA
		Rx Power Boost	-95	5.3	mA

5.2 Sleep Power

Test Mode	MCU State	Average Current	Unit
• Software controlled • 16KB SRAM retained • 32kHz crystal running • Measured from the SDK - once connected to an AP	Sleep	4	µA
• Software controlled • No SRAM retained • Internal LFLPO running • Measured from the SDK - not connected to an AP	Hibernate	16	µA

6 Mechanical Specification

6.1 Pin Antenna

6.1.1 Dimension

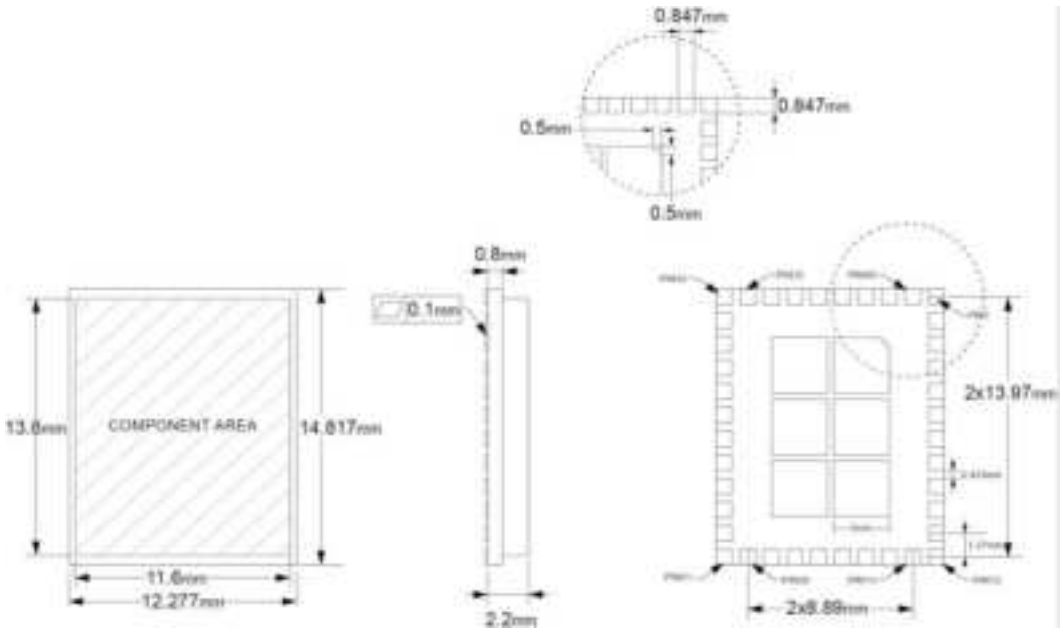


Figure 9: EMQ100-1P Module Dimension

6.1.2 Recommended PCB Landing Pattern

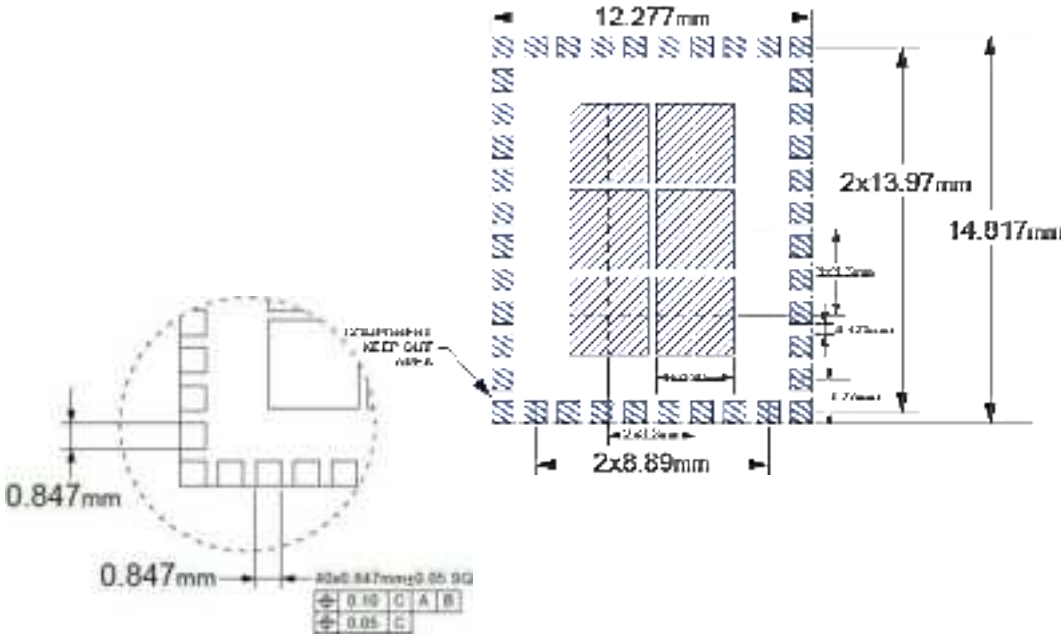


Figure 10: EMQ100-1P Module PCB Landing Pattern

6.2 PCB Antenna

6.2.1 Dimension

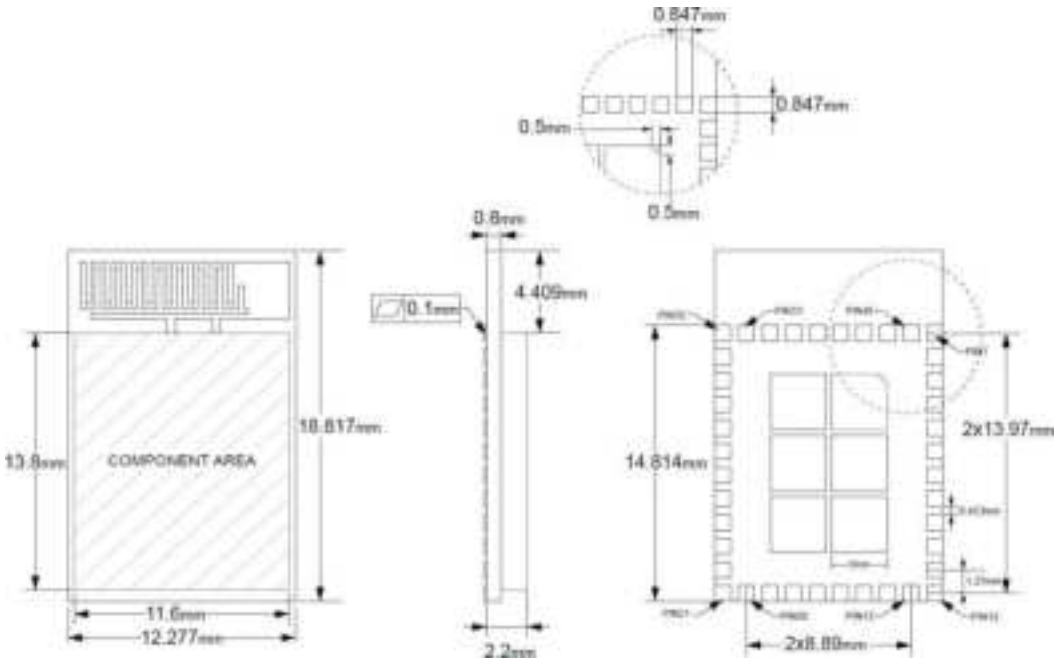


Figure 11: EMQ100-1B Module Dimension

6.2.2 Recommended PCB Landing Pattern

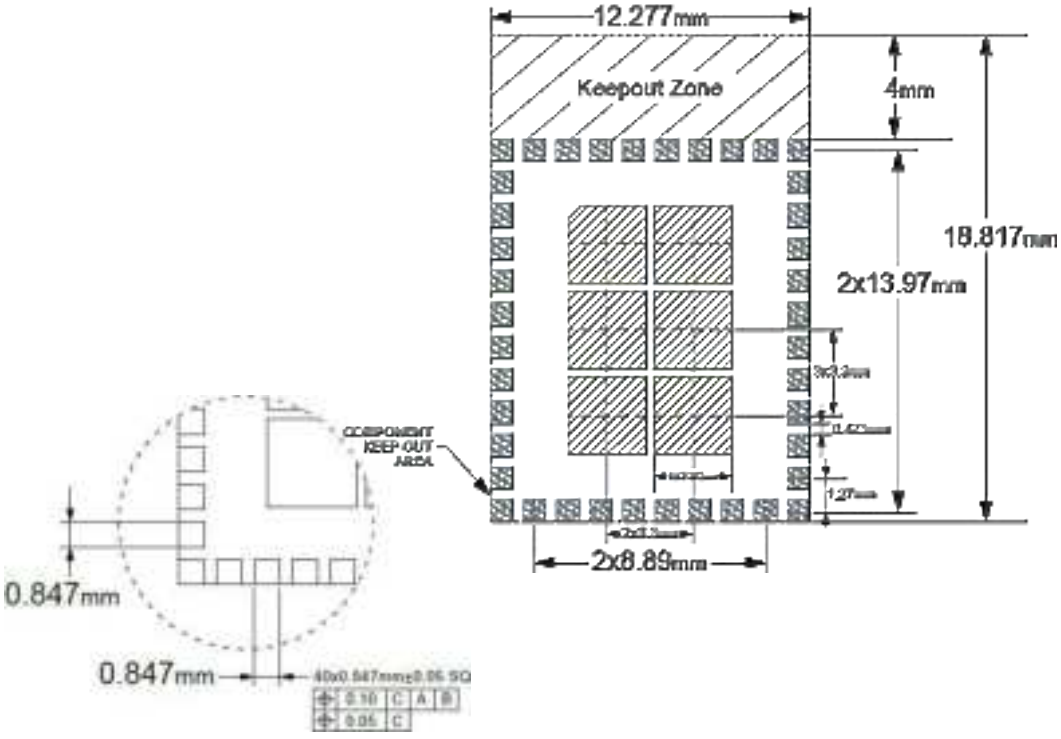


Figure 12: EMQ100-1B Module PCB Landing Pattern

6.3 U.FL Antenna

6.3.1 Dimension

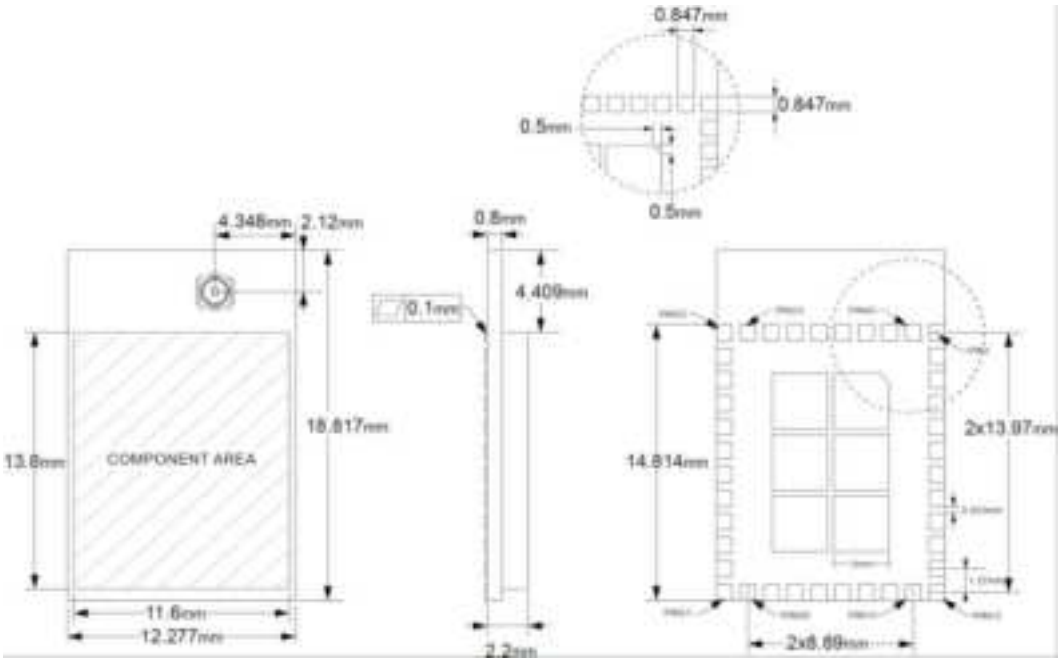


Figure 13: EMQ100-1U Module Dimension

6.3.2 Recommended PCB Landing Pattern

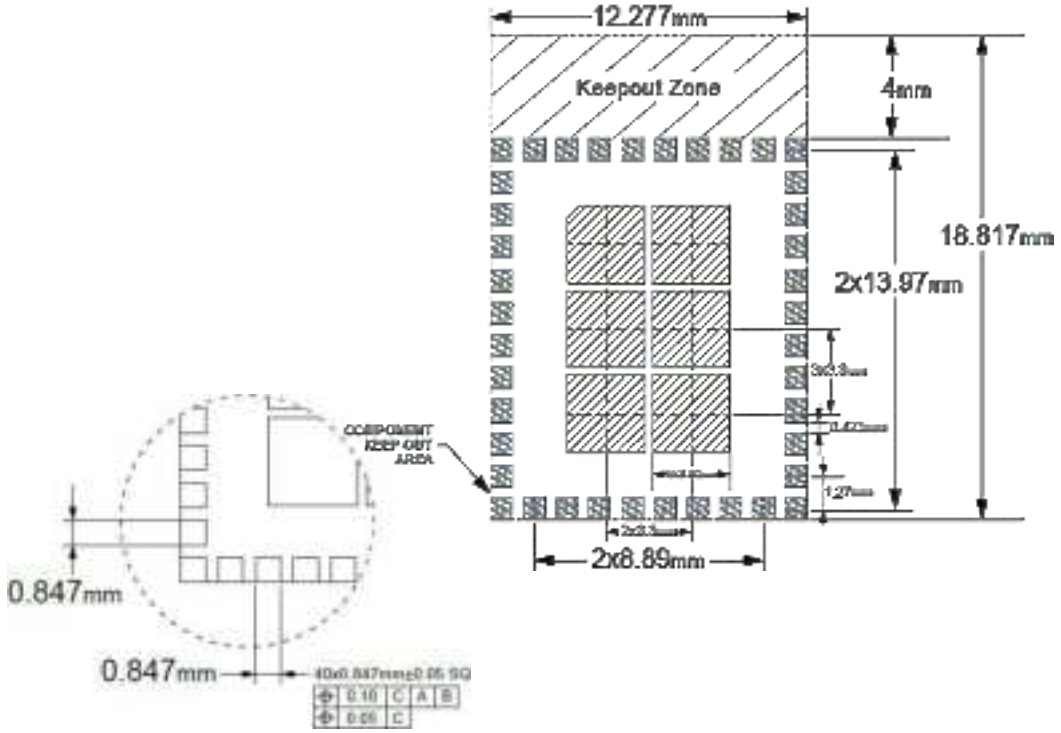


Figure 14: EMQ100-1U Module PCB Landing Pattern

7 Manufacturing Recommendation

7.1 Power Layout Guideline

EQM100-1 modules are powered by either 3V battery or DC 3.3V. Power pin connection capacitor is as close as possible to chip and pin. Decoupling the power supply from the chip using a capacitor. Use capacitors to prevent noise from coupling back to the power plane.

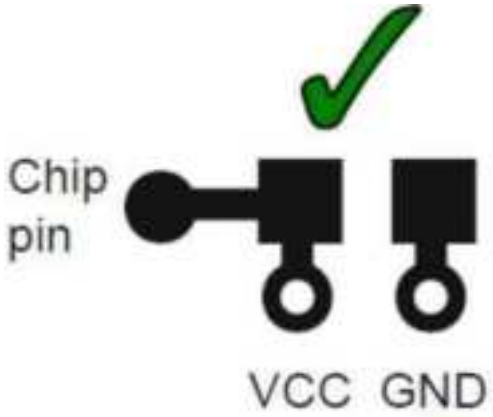


Figure 15: Power Layout Guideline

7.2 RF Layout Guideline

To optimize antenna performance, place the module in the corner of the PCB as shown below. Do not cover copper and trace the antenna clearance area. Keep the antenna area as far away as possible from the power supply and metal components. Connect all GND pins directly to a solid GND plane. Place GND vias as close as possible to the GND pin. Use a good layout method to avoid excessive noise coupling with signal lines or supply voltage lines.

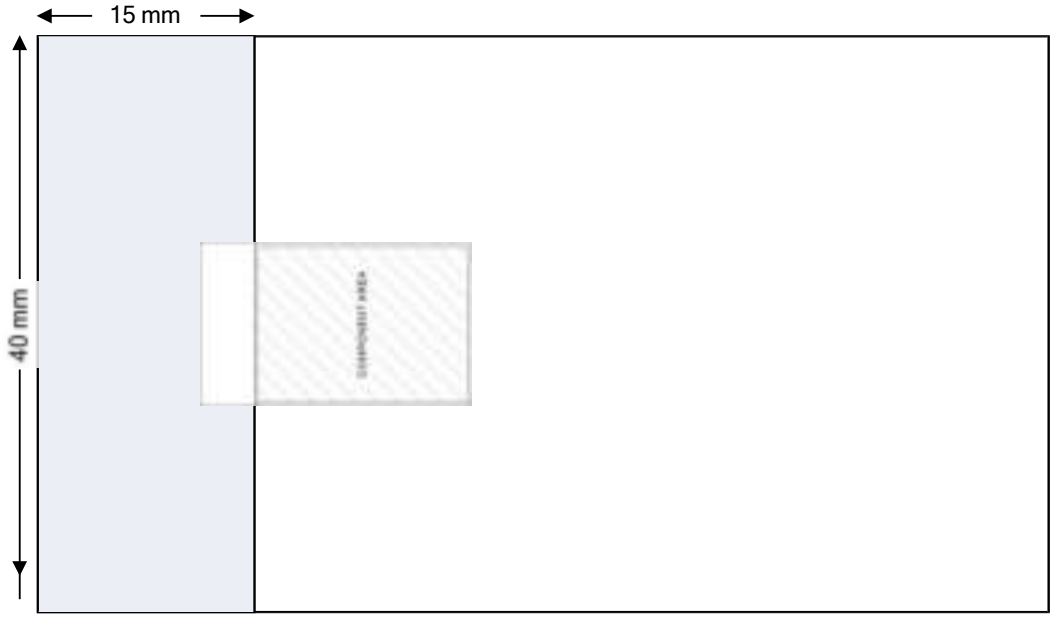


Figure 16: RF Layout Guideline

7.3 Soldering Recommendations

EQM100-1 modules can be SMT on the board following the temperature curve graph:

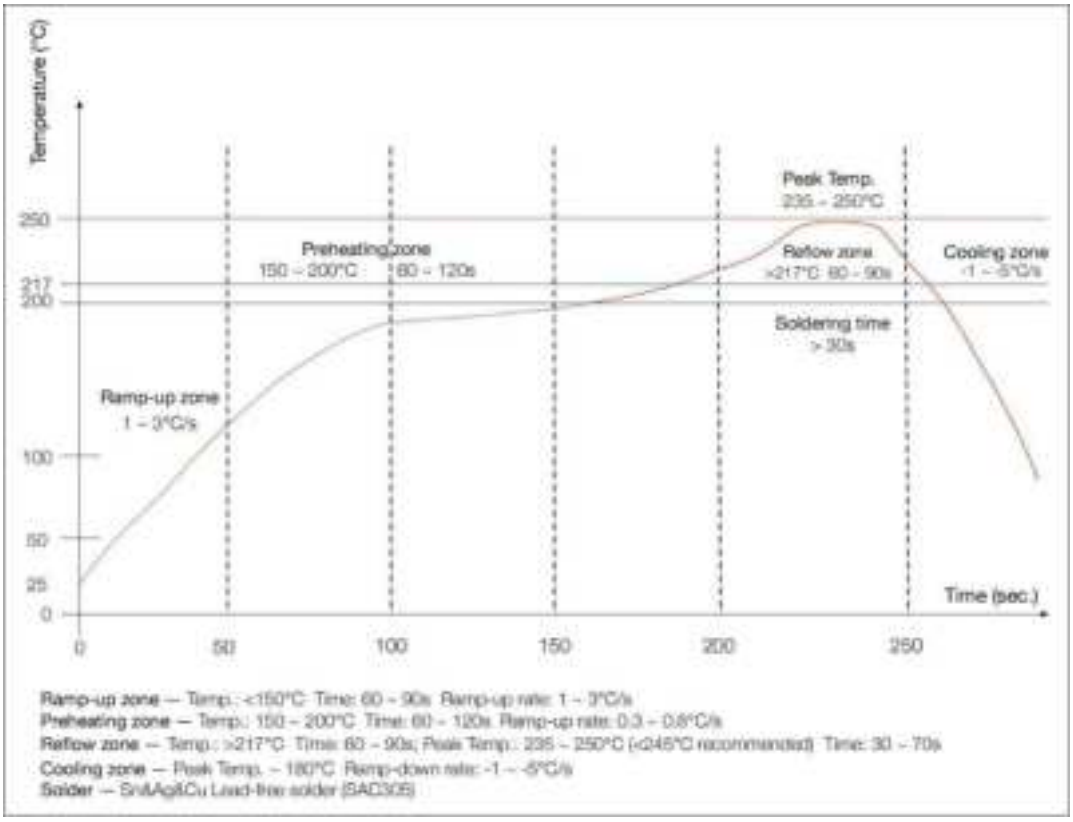


Figure 17: Soldering Guideline

8 Packaging

EQM100-1 modules are packaged on reels loaded with 1000 modules. Each reel is placed in an antistatic bag with a desiccant pack and a humidity card and placed in an 36x25x12cm box. Anti-static warnings and labels adhere to the outside of the bag.

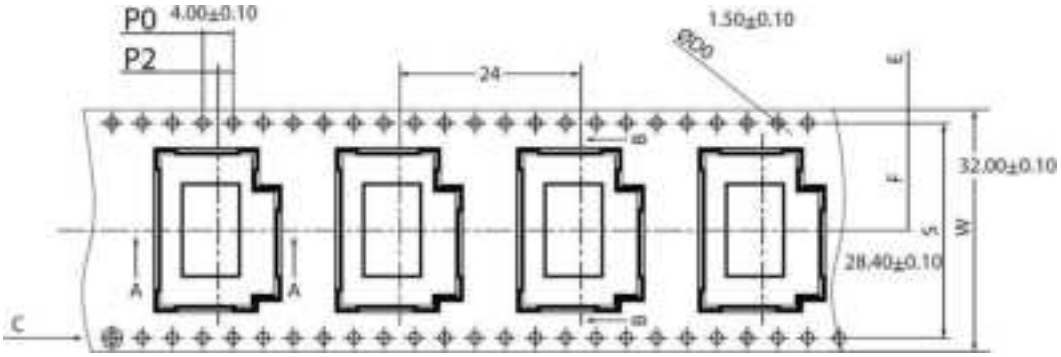


Figure 18: Module Packaging

Warning

The MeshConnect Modules contain highly sensitive electronic circuitry. Handling without proper ESD protection may destroy or damage the module permanently.

Warning

The MeshConnect Modules are moisture-sensitive devices. Appropriate handling instructions and precautions are summarized in J-STD-033. Read carefully to prevent permanent damage due to moisture intake.

Moisture Sensitivity Level (MSL)

EQM100-1 is qualified to moisture sensitivity (MSL3) in accordance with JEDEC J-STD-020

Storage

Storage/shelf life in sealed bags is 12 months at <40°C and <90% relative humidity.12.2 Packing Label

9 Regulatory Compliance

Country	Certification	No
USA	FCC 15C	2ACCREQM100
Europe Union	CE	20625-EQM100
Canada	IC	20625-EQM100
Japan	MIC	214-230249
Korea	KC	Coming soon
Australia	RCM	Coming soon
United Kingdom	UKCA	Coming soon
China	SRRC	Coming soon

10 Order Information

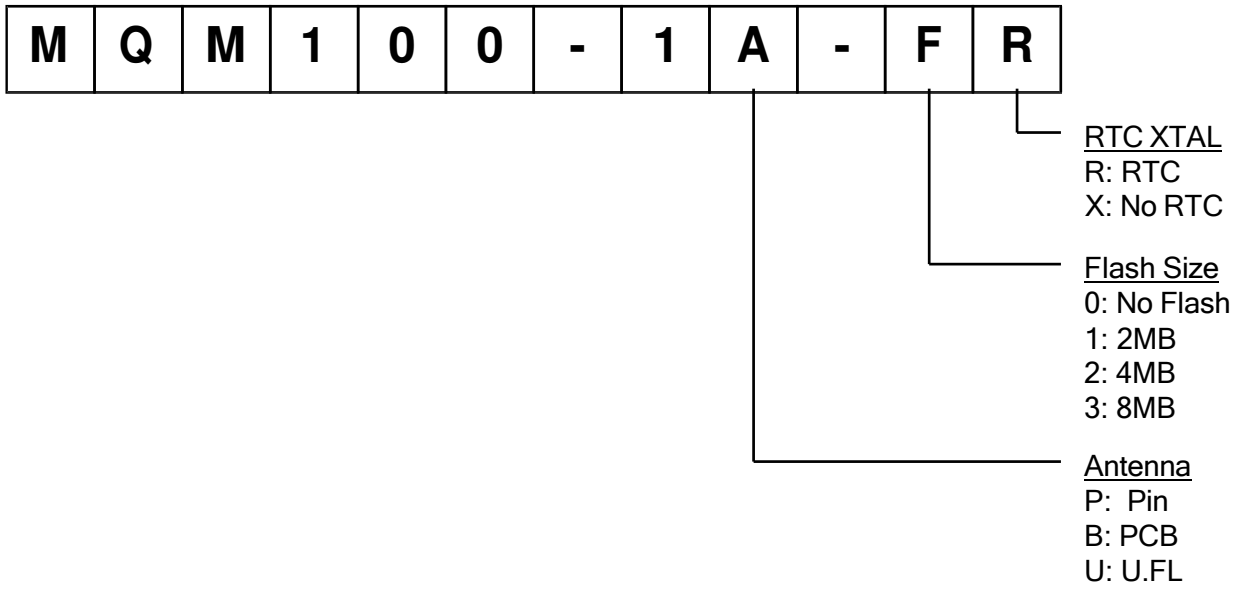


Figure 18: Ordering Part Number

Revision History

Revision	Description	Date
0.1	Initial draft	December 14, 2023
0.2	Updated module labeling	January 5, 2024
1.0	The first public release	TBD

Integration instructions for host product manufacturers according to KDB 996369 D03 OEM Manual v01

2.2 List of applicable FCC rules

FCC Part 15 Subpart C 15.247 & 15.207 & 15.209

2.3 Specific operational use conditions

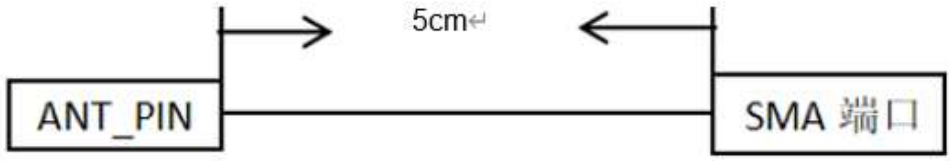
The module is a Bluetooth module with BLE function. Operation
Frequency: 2402-2480MHz
Number of Channel: 40 Modulation:
GFSK
Type: EQM100-1B (PCB Antenna)
EQM100-1U (External Antenna)
EQM100-1P (PIN Antenna)
Gain: EQM100-1B (-1.34dBi)
EQM100-1U (3.0dBi)
EQM100-1P (1.99dBi)
The module can be used for mobile or portable applications with a maximum 3dBi antenna. The host manufacturer installing this module into their product must ensure that the final composit product complies with the FCC requirements by a technical assessment or evaluation to the FCC rules, including the transmitter operation. The host manufacturer has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module. The end user manual shall include all required regulatory information/warning as show in this manual.

2.4 Limited module procedures

Not applicable. The module is a Single module and complies with the requirement of FCC Part 15.212.

2.5 Trace antenna designs

Not applicable. The module has its own antenna, and doesn't need a host's printed board microstrip trace antenna etc.
EQM100-1P (PIN Antenna) the detailed antenna design is as follows:



2.6 RF exposure considerations

The module must be installed in the host equipment such that at least 20cm is maintained between the antenna and users' body; and if RF exposure statement or module layout is changed, then the host product manufacturer required to take responsibility of the module through a change in FCC ID or new application. The FCC ID of the module cannot be used on the final product. In these circumstances, the host manufacturer will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

2.7 Antennas

Antenna Specification are as follows:
Type: EQM100-1B (PCB Antenna);
EQM100-1U (External Antenna)
EQM100-1P (PIN Antenna)
Gain: EQM100-1B (-1.34dBi)
EQM100-1U (3.0dBi)
EQM100-1P (1.99dBi)
This device is intended only for host manufacturers under the following conditions: The transmitter module may not be co-located with any other transmitter or antenna;
The module shall be only used with the internal antenna(s) that has been originally tested and certified with this module. The antenna must be either permanently attached or employ a 'unique' antenna coupler.
As long as the conditions above are met, further transmitter test will not be required. However, the host manufacturer is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.)

2.8 Label and compliance information

Host product manufacturers need to provide a physical or e-label stating "Contains FCC ID: 2ACCREQM1001" with their finished product.

2.9 Information on test modes and additional testing requirements

Operation Frequency: 2402-2480MHz
Number of Channel: 40
Modulation: GFSK
Host manufacturer must perform test of radiated & conducted emission and spurious emission, etc according to the actual test modes for a stand-alone modular transmitter in a host, as well as for multiple simultaneously transmitting modules or other transmitters in a host product.
Only when all the test results of test modes comply with FCC requirements, then the end product can be sold legally.

2.10 Additional testing, Part 15 Subpart B disclaimer

The modular transmitter is **only** FCC authorized for FCC Part 15 Subpart C 15.247 & 15.207 & 15.209 and that the host product manufacturer is responsible for compliance to any other FCC rules that apply to the host not covered by the modular transmitter grant of certification. If the grantee markets their product as being Part 15 Subpart B compliant (when it also contains unintentional-radiator digital circuity), then the grantee shall provide a notice stating that the final host product still requires Part 15 Subpart B compliance testing with the modular transmitter installed.

Federal Communication Commission Statement (FCC, U.S.)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IMPORTANT NOTES

Co-location warning:

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

OEM integration instructions:

This device is intended only for OEM integrators under the following conditions:
The transmitter module may not be co-located with any other transmitter or antenna. The module shall be only used with the external antenna(s) that has been originally tested and certified with this module.

As long as the conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).

Validity of using the module certification:

In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization for this module in combination with the host equipment is no longer considered valid and the FCC ID of the module cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End product labeling:

The final end product must be labeled in a visible area with the following: “Contains Transmitter Module FCC ID: 2ACCREQM1001”.

Information that must be placed in the end user manual:

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module. The end user manual shall include all required regulatory information/warning as show in this manual.

ISED Statement

— English: This device complies with Industry Canada license-exempt RSS standard(s).
Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) This device must accept any interference, including interference that may cause undesired operation of the devi ce. The digital apparatus complies with Canadian CAN ICES-3 (B)/NMB-3(B).

— French: Le présentappareilestconforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitationestautorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareildoit accepter tout brouillageradioélectriquesubi, mêm esi le brouillageest susceptible d'encompromettre le fonctionnement.

This radio transmitter has been approved by Industry Canada to operate with the antenna types listed with the maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Radiation Exposure Statement

This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Déclaration d'exposition aux radiations

Cet équipement est conforme Canada limites d'exposition aux radiations dans un environnement non contrôlé. Cet équipement doit être installé et utilisé à distance minimum de 20cm entre le radiateur et votre corps.

This device is intended only for OEM integrators under the following condition:
The transmitter module may not be co-located with any other transmitter or antenna.
As long as the condition above is met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.
Cet appareil est conçu uniquement pour les intégrateurs OEM dans les conditions suivantes:
Le module émetteur peut ne pas être coïmplanté avec un autre émetteur ou antenne.
Tant que les 1 condition ci-dessus sont remplies, des essais supplémentaires sur l'émetteur ne seront pas nécessaires. Toutefois, l'intégrateur OEM est toujours responsable des essais sur son produit final pour toutes exigences de conformité supplémentaires requis pour ce module installé.

Important Note:

In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the Canada authorization is no longer considered valid and the IC cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate Canada authorization.
Note Importante:
Dans le cas où ces conditions ne peuvent être satisfaites (par exemple pour certaines configurations d'ordinateur portable ou de certaines co-localisation avec un autre émetteur), l'autorisation du Canada n'est plus considéré comme valide et l' IC ne peut pas être utilisé sur le produit final. Dans ces circonstances, l'intégrateur OEM sera chargé de réévaluer le produit final (y compris l'émetteur) et l'obtention d'une autorisation distincte au Canada.
End Product Labeling
The final end product must be labeled in a visible area with the following: Contains IC: 20625-EQM1001.
Plaque signalétique du produit final
Le produit final doit être étiqueté dans un endroit visible avec l'inscription suivante: Contient des IC: 20625-EQM1001

Manual Information to the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.
The end user manual shall include all required regulatory information/warning as show in this manual.
Manuel d'information à l'utilisateur final
L'intégrateur OEM doit être conscient de ne pas fournir des informations à l'utilisateur final quant à la façon d'installer ou de supprimer ce module RF dans le manuel de l'utilisateur du produit final qui intègre ce module.
Le manuel de l'utilisateur final doit inclure toutes les informations réglementaires requises et avertissements comme indiqué dans ce manuel.

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