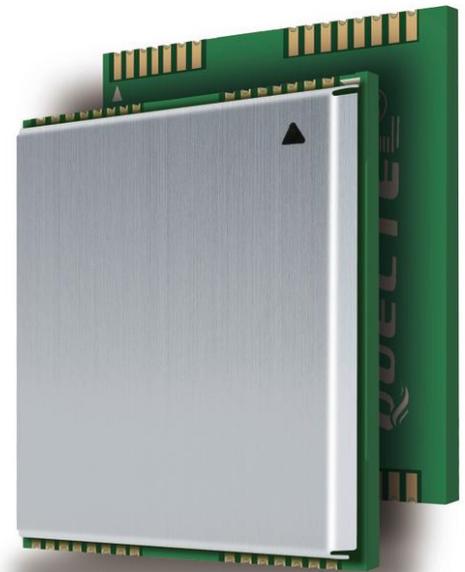




M72

Quectel Cellular Engine

**Hardware Upgrade
Specification**



M72, based on MTK's new platform, (hereinafter referred as M72 R2.0) is launched officially. The new platform called MT6252D possesses higher frequency, abundant interfaces and functionalities. M72 R2.0 is not only compatible with M72 R1.0 in hardware, but also it has a great improvement in performance. Hence, M72 R2.0 can totally replace M72 R1.0.

1. Compatibility between M72 R2.0 and R1.0

- Size
- Pinout and electrical characteristics
- Hardware interface
- Software functionality
- Reference design for customer

2. Comparison of hardware performance

Compared with M72 R1.0, M72 R2.0 provides enhanced hardware performance, especially RF receiving sensitivity and current consumption, which can help customers improve the performance of their products.

2.1. Comparison of supply voltage range

	M72 R2.0	M72 R1.0
Supply voltage range	3.3V~4.6V	3.4V~4.5V

2.2. Comparison of RF receiving sensitivity

Frequency	RF receiving sensitivity	
	M72 R2.0	M72 R1.0
EGSM900	< -109dBm	< -108.5dBm
DCS1800	< -108.5dBm	< -108dBm

2.3. Comparison of current consumption

Mode		M72 R2.0	M72 R1.0
Power down		30uA	65uA
Sleep mode	DRX=5	0.9mA	1.1mA
GPRS data transfer			
DATA mode, GPRS (3 Rx,2Tx)			
Frequency	Power class	M72 R2.0	M72 R1.0
EGSM 900	PCL 5	352	390
DCS1800	PCL 0	263	320
DATA mode, GPRS(2 Rx,3Tx)			

Frequency	Power class	M72 R2.0	M72 R1.0
EGSM 900	PCL 5	485	500
DCS1800	PCL 0	358	400
DATA mode, GPRS (4 Rx,1Tx)			
Frequency	Power class	M72 R2.0	M72 R1.0
EGSM 900	PCL 5	214	260
DCS1800	PCL 0	177	220
DATA mode, GPRS (1Rx,4Tx)			
Frequency	Power class	M72 R2.0	M72 R1.0
EGSM 900	PCL 5	494	500
DCS1800	PCL 0	447	400

2.4. Comparison of ESD performance

Test point	M72 R2.0		M72 R1.0	
	Contact discharge	Air discharge	Contact discharge	Air discharge
VBAT,GND	±5KV	±10KV	±5KV	±10KV
RF_ANT	±5KV	±10KV	±5KV	±10KV
TXD, RXD	±4KV	±8KV		
Others	±0.5KV	±1KV		

3. Difference between M72 R2.0 and R1.0

3.1. Label

Customers can distinguish M72 R2.0 from M72 R1.0 based on the module's label. The difference is given in detail below:

M72 R2.0	M72 R1.0
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> Customer purchase order code of M72 R2.0 M72E-02-NCH-STD </div> 	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> Customer purchase order code of M72 R1.0 M72-04-NCH-STD </div> 
<p><i>Note:</i></p> <ol style="list-style-type: none"> <i>M72 R2.0 adopts 2-D code label, while M72 R1.0 adopts barcode label.</i> <i>According to different customer purchase order code, customers can also distinguish M72 R2.0 from R1.0.</i> 	

3.2. Version

ITEM	M72 R2.0	M72 R1.0
Document version	V3.0 and later versions	Earlier versions than V3.0

3.3. Customer purchase order code:

ITEM	M72 R2.0	M72 R1.0
Customer purchase order code	M72E-02-NCH-STD	M72-04-NCH-STD

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