LPM2100_mg

Multi-Band NB-IoT Module

Module introduction:

LPM2100 mg is a multi-band NB-IoT wireless communication module that supports ultra-low power consumption and supports multi-mode IoT. It supports bands B1, B3, B5, B8, B20 and B28. It can be divided into mc (B5/B8/B20/B28) standard voltage module, mg (B1/B3/B5/B8/B20/B28) standard voltage module and mg_u (B1/B3/B5/B8/B20/B28) low-voltage module according to the user's flexible configuration. Providing a wealth of external interfaces and protocol stacks, allowing customers to quickly and accurately design and upgrade products, providing great convenience for customers' applications. The LPM2100 mg module is designed with energy-saving technology for ultra-low power consumption in sleep mode and less than 5uA in deep sleep.

Application scenario:

- Car networking
- Smart home
- Smart city (smart parking, water/gas meter, street light, smoke alarm, trash can, etc.)
- Consumption and medical (wearing devices, VIP tracking, life support, remote clinical tracking, etc.)
- Industrial and agricultural intelligent monitoring (machine alarm, gas detection, irrigation, soil pH, etc.)
- Logistics support (industrial assets, container tracking, location and status updates, etc.)
- Other wireless terminals

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Main characteristics

Package：LCC		
Band	LPM2100 mc	B5/B8/B20/B28
	LPM2100 mg	B1/B3B5/B8/B20/B28
	LPM2100 mg_u	B1/B3B5/B8/B20/B28
Voltage	LPM2100 mc	3.1-4.2V typical 3.7V
	LPM2100mg	3.1-4.2V typical 3.7V
	LPM2100 mg_u	2.45-4.2V typical 3.6V
Weight: about 1.5g		
Size：15.8×17.7×2.2mm		
Low power consumption		Idle mode ≤ 1mA
		PSM mode ≤ 5uA
Range of working temperature：-40 ～+85 ℃		

Software features

Non-IP	
Built-in TCP/UDP protocol	
FTP/HTTP/HTTPS	
CoAP	BLE4.2
LwM2M	PPP
SSL	DTLS
IPv4/IPV6	MQTT

Data transfer rate

Single-tone: 25.5kbps(DL),16.7kbps(UP)
Multi-tone: 25.5kbps(DL),62.5kbps(UP)

Electrical characteristics

Sensitivity：-128dBm	
Maximum output power：23dBm±2dB	
Current consumption (numerical value)	≤1mA @Idle mode
	≤5uA @Power saving mode
LTE Cat NB1 Network connection status：	
232mA@RF emission status,23dBm	
83mA@RF emission status,12dBm	
60mA@RF emission status,0dBm	

Interface

44 SMT pads LCC Package	
SIM card interface (3V/1.8V supports hot swap) x1	
Reset interface x1	PSM_EINT interface x1
Serial interface x3	ADC interface x1
SPI interface x1	NB-IoT antenna interface x1
I2C interface x1	Network indicator interface x1
Multiple GPIO interfaces (configurable)	
Support RTC and other control interfaces	

Certification

CCC SRRC

Compatibility

3GPP TS 27.007 V14.3.0 (2017-03)
3GPP Rel-13 and enhanced AT commands