DL25UM620Q

Dalang Communication Technology Co., Ltd Product specification sheet

Product Name:	GMOUSE
Product model:	DL25UM620Q
Version number:	V 1.0
Revision Date:	2024.08.15

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Catalogue

1 Product application scenarios

DL25UM620Q is a GNSS dual frequency navigation module designed for in car navigation applications. The module is designed based on the UC6580I, a high-performance SoC chip with completely independent intellectual property rights, which supports multi system dual frequency positioning, multi system single frequency positioning, or single system independent positioning. Especially in complex scenarios such as multipath, it can still ensure good positioning accuracy. This module is particularly suitable for in car navigation, robots, and handheld devices. Refer to Figure 1 for details.

Figure 1 Product Application Scenarios

2 function

In this chapter, we will delve into and elaborate on the functions and working principles of DL25UM620Q, and explain in detail how it plays a key role in different applications, as follows:

1. Industrial grade dual frequency navigation and positioning module

2. Anti interference design, the module can be used for stable operation in complex electromagnetic environments

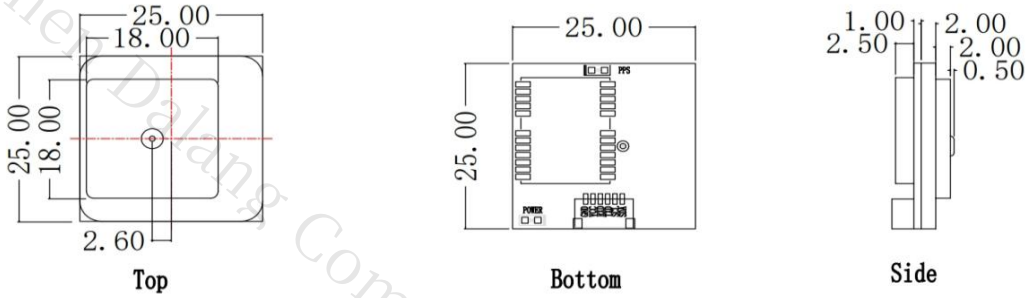
3. Support multi system dual frequency positioning, multi system single frequency positioning, or single system independent positioning

4. Algorithm adaptation to low dynamic motion scenes

5. Equipped with electronic compass QMC5883L

3 Structural characteristics

In this chapter, we will delve into the design details of the product and present its appearance characteristics and precise interface definitions through detailed structural diagrams. This perspective aims to provide a comprehensive framework to deepen the understanding and cognition of product structure. Refer to Figure 2 and Table 1 for details.



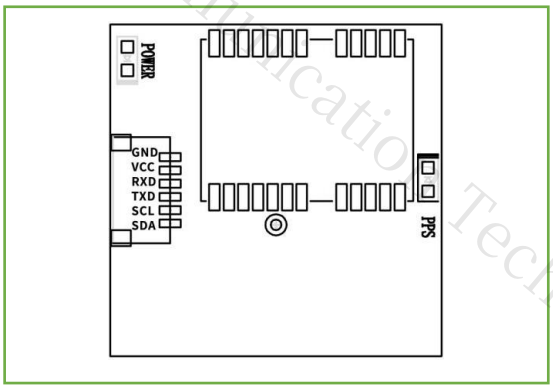


Table 1 Interface Definition

PIN name	Description
VCC	The main power supply of the system has a supply voltage of 3.3V-5V and a current of approximately 45mA during operation
GND	Grounding
RXD	TTL interface data input
TXD	TTL interface data output
SDA	Serial Data - I2C Master/Slave Data
SCL	Serial clock - I2C master/slave clock

4 Specification parameters

In this chapter, we will provide a detailed list and explanation of the product chip characteristics, sensitivity, accuracy, working principle, and other technical details, as shown in Table 2.

Table 2 Product Specification Parameters

Specification parameters			
Chip characteristics	1	chip	UM620
	2	Signal channel	96 channels
	3	working frequency	BDS B1I, B1C*, B2a GPS L1C/A, L5 GLONASS G1 Galileo E1, E5a QZSS L1, L5 SBAS L1C/A
	4	Positioning mode	Single system independent positioning Multi system joint positioning
	5	Horizontal positioning accuracy	1.5m CEP (dual band four system, open sky)
	6	Start time	Cold start<26 seconds Hot start<2 seconds Re capture<2 seconds
	7	sensitivity	Tracking -162 dBm Cold start -148 dBm Hot start -158 dBm Re capture -160 dBm
	8	Speed accuracy	0.05m/s
	9	Data update rate	1Hz-10Hz (default 1Hz)
	10	1PPS accuracy (RMS)	20ns

	11	Baud rate	Default 115200bps
	12	Output Protocol	NMEA 0183、RTCM 3.2、Unicore Protocol
	13	Output level	TTL
Antenna characteristics	1	Antenna specifications	25*25*2/18*18*2
	2	Maximum gain of antenna	2.5dBi
	3	Polarization mode	RHCP
	4	Noise coefficient	≤0.8dB
	5	LNA gain	L1：20±2dB
Working characteristics	1	working voltage	3.0V-5.5V DC (typical value: 5.0V)
	2	power waste	<100mW @5V
	3	size	25*25*8mm
	4	weight	11.6g
	5	Connector	SH1.0 6pin
	6	working temperature	-40℃-85℃
	7	Storage temperature	-40℃-85℃
Compass	1	compass	QMC5883L

5 Product physical picture

In this chapter, we will present real-life photos of the product, as shown in Figure 3. Through these pictures, you can see our products from different angles and details. We believe that through authentic display, we can better convey the value and philosophy of the product, thereby enhancing your trust and satisfaction with the pro duct.

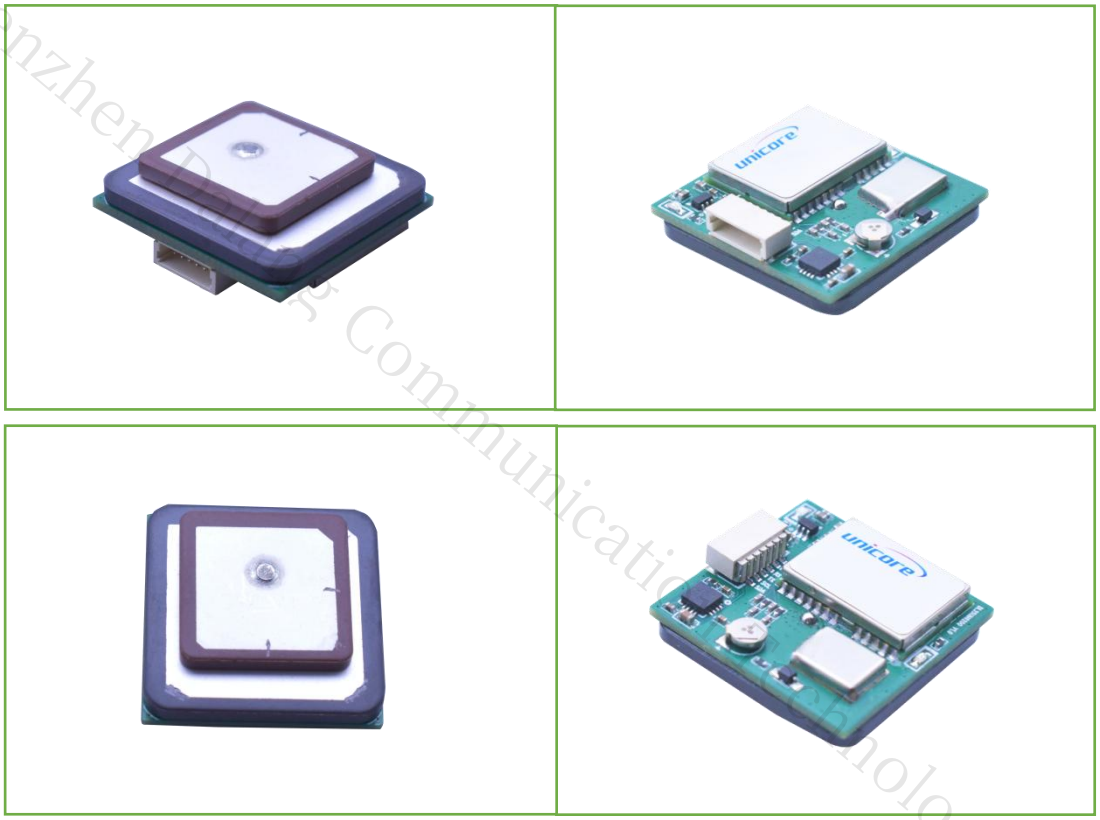


图 3 产品实物图