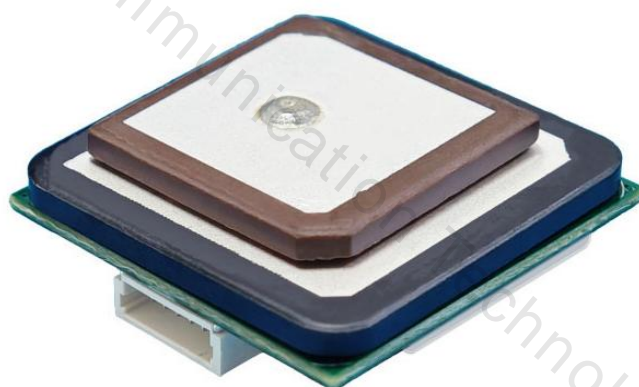


Dalang

DL25F10NQ





**Dalang Communication
Technology Co., Ltd
Product specification sheet**

Product Name:	GMOUSE
Product model:	DL25F10NQ
Version number:	V 1.0
Revision Date:	2025.03.03

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Shenzhen Dalang Communication Technology Co., Ltd

1 Product application scenarios

The DL25F10NQ module adopts advanced NEO-F10N chip, which integrates high sensitivity and strong anti-interference ability, and can achieve reliable positioning from sub meter level to high-precision meter level. Its low-power design and fast start-up characteristics ensure stable and continuous positioning information even in complex electromagnetic environments and harsh weather conditions. The module is equipped with a built-in magnetometer, which further improves the accuracy of directional data and is widely applicable to scenarios such as intelligent transportation, drone navigation, surveying and mapping that require high positioning reliability, providing customers with excellent positioning solutions. 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 DL25F10NQ, and explain in detail how it plays a key role in different applications, as follows:

- 1. Strong anti-interference:** effectively resist external electromagnetic interference and ensure signal stability.
- 2. Low power consumption:** reduces device energy consumption and extends battery life.
- 3. High sensitivity:** easily captures weak satellite signals and adapts to various scenarios.
- 4. Good compatibility:** able to integrate with multiple devices and systems, facilitating the development and use of different application scenarios.
- 5. Fast response:** The time from startup to obtaining location information is short, and location data can be provided to users in a timely manner.
- 6. Good stability:** It can work continuously and reliably under different climatic and geographical conditions, reducing positioning interruptions or errors.
- 7. Built in magnetometer:** QMC5883L, More precise positioning.

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.

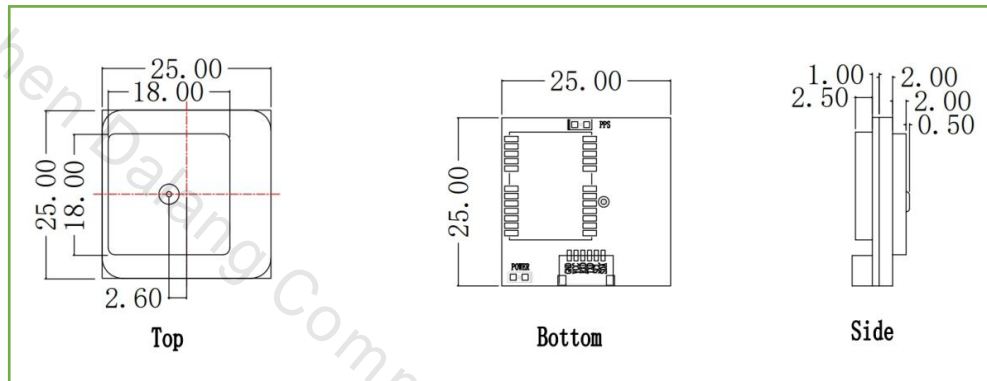


Figure 2 Dimensional drawing (unit: mm)

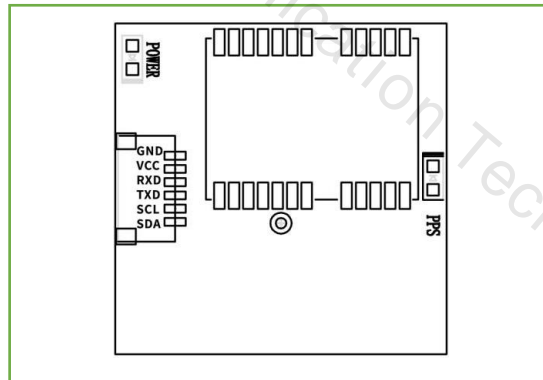


Table 1 Interface Definition

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

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	UBX-NEO-F10N
	2	Channel	92
	3	scope of work	GPS: L1 C/A: 1575.42MHz L5: 1176.45MHz GLONASS: L1: 1602 MHz±5MHz L2: 1246 MHz±5MHz Galileo: E1: 1575.42MHz E5b: 1207.14MHz BDS: B1: 1561.098MHz B2: 1207.14MHz QZSS: L1 C/A: 1575.42MHz L5: 1176.45MHz
	4	Time pulse signal accuracy	RMS: 30ns 99% : 60ns
	5	Horizontal position accuracy	Single frequency (L1): 2.5-meter CEP (circular probability error) Dual band (L1+L5):< 1-meter CEP (using SBAS or calibration data)

	6	Start Time	Cold start:< 26s
			Hot start:< 1s
			Re capture:< 1s
	7	sensitivity	Tracking:-167 dBm
			Re capture:-160 dBm
			Cold start:-148 dBm
			Hot start:-159 dBm
	8	speed accuracy	0.05m/s
	9	update frequency	0.25Hz-10Hz (default 1Hz)
	10	Baud rate	38400bps (default) [Optional: 4800-921600]
	12	Output Protocol	NMEA-0183
	13	Output level	TTL
	14	Extreme working state	Gravity acceleration limit: 4g
			Height limit: 80,000m
Speed limit: 500m/s			
Antenna characteristics	1	Antenna specifications	25*25*2/18*18*2
	2	Maximum gain	2.5dBi
	3	Polarization mode	RHCP
	4	figure	≤0.8dB
	5	LNA gain	L1: 20±2dB
Working characteristics	1	working voltage	3V-5.5V DC (typical value: 5.0V)
	2	power consumption	<100mW @5V
	3	size	25*25*8mm
	4	weight	12g
	5	joint	SH1.0mm 6pin
	6	operation temperature	-35°C-75°C
	7	storage temperature	-40°C-85°C
Magnetometer	1	magnetometer	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 product.

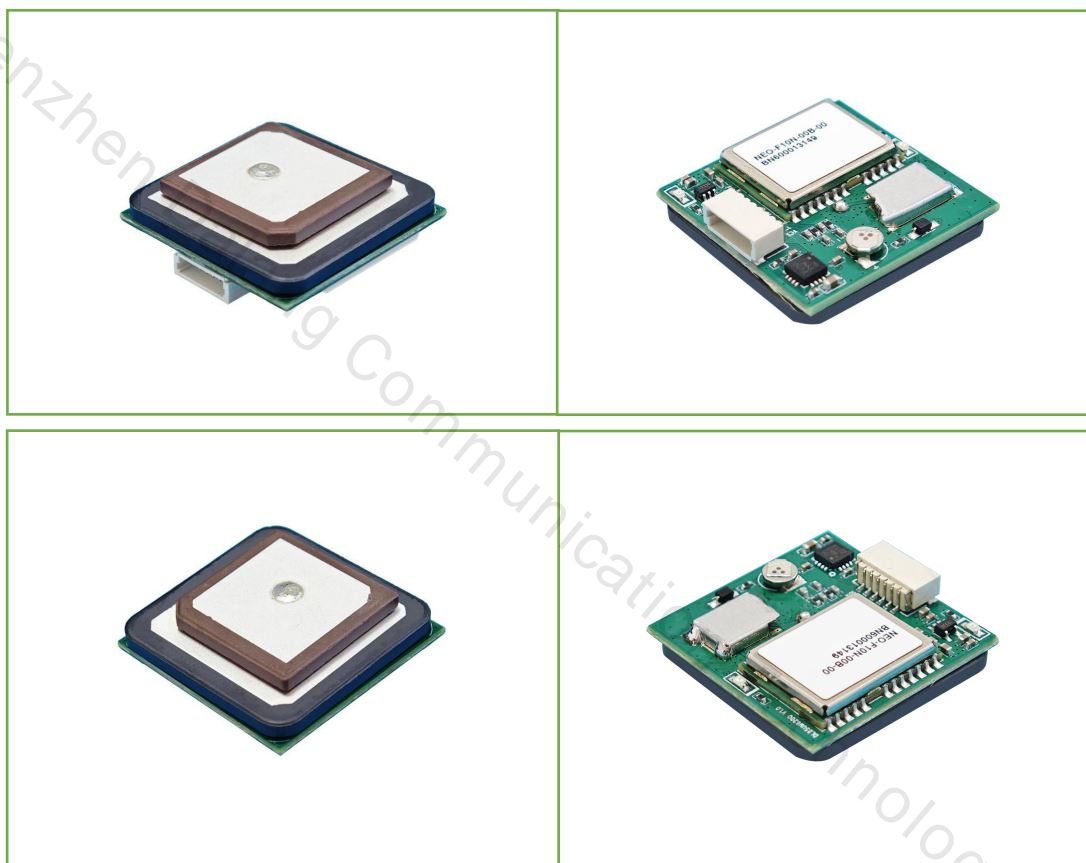


图 3 产品实物图