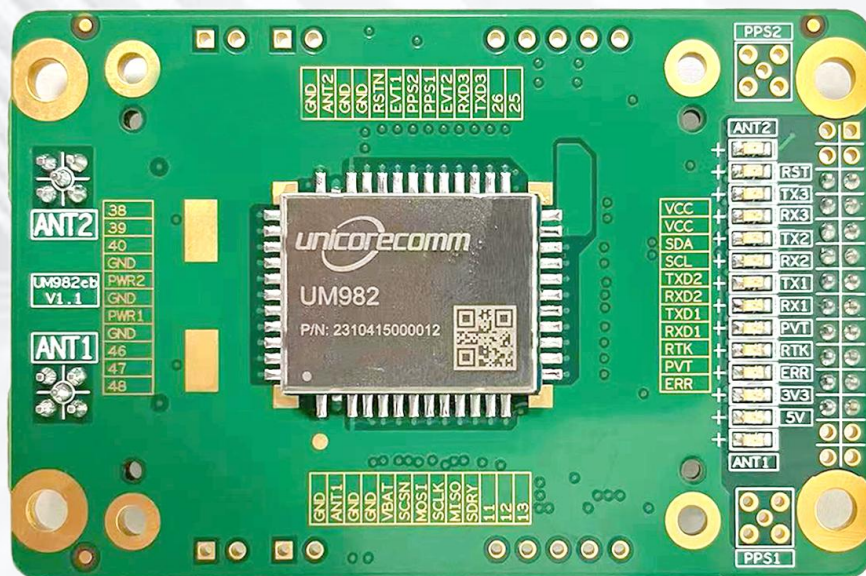


Compact dual antenna RTK

## RTK differential positioning directional board ( UM982EVB V1.0 )

- High precision positioning
- Dual antenna detection
- Positioning and directional simultaneous output

**Superior design • Aesthetic appearance • Wide compatibility**



**Perfect hardware compatibility:**

**Novatel : OEM729,719,718d**

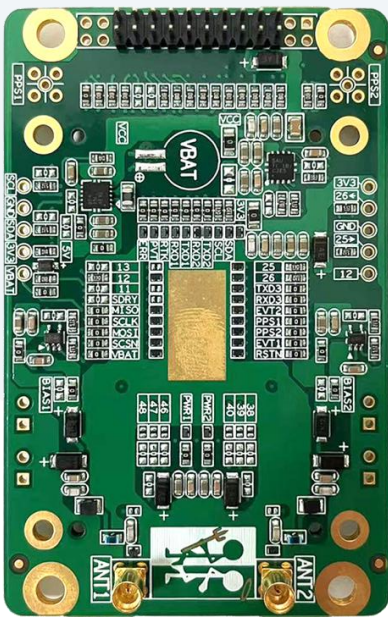
**Tianbao : MB2, BD982, BD990, BD992, BD940**

**and other well-known GNSS brand boards.**

# Product Introduction

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RTK differential positioning directional board LXT-UM982EVB, BDS, GPS, GLONASS, Galileo, QZSS compact dual antenna full system full frequency high-precision positioning directional board. Optional access to RM3100 military grade geomagnetism (no correction required).



## Product Features

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The whole system full frequency high-precision positioning module can be used as a mobile station or base station. Simultaneous output of positioning and orientation, with a data output rate above 20Hz.



Supports BDS: B1I, B2I, B3I, B1C, B2a, B2b+GPS: L1C/A, L1C, L2P (Y), L2C, L5+GLONASS: L1, L2+Galileo: E1, E5a, E5b, E6+QZSS: L1, L2, L5, L6.



When used as a mobile station, the differential input RTCM format is adaptively recognized, without the need to specify the type of differential data input for onboard MEMS integrated navigation. Support U-Fusion tight combination navigation technology.



Support dual antenna detection; RTK recapture speed within 1 second, supporting hot start; Support odometer input and external high-performance inertial device input.

# performance index

performance index	
Passageway	1408 channels, based on NebulasIVTM
Frequency point	BDS: B1I、 B2I、 B3I、 B1C、 B2a、 B2b GPS: L1C/A、 L1C、 L2P ( Y )、 L2C、 L5 GLONASS: L1、 L2 Galileo: E1、 E5a、 E5b、 E6 QZSS: L1、 L2、 L5、 L6
Single point positioning (RMS)	Plane : 1.5m Elevation : 2.5m
DGPS(RMS)	Plane : 0.4m Elevation : 0.8m
RTK(RMS)	Plane : 0.8cm+1ppm Elevation : 1.5cm+1ppm
Directional accuracy	0.2 degree/1m baseline
Size	71mm x 45.7mm x 1.6mm
Weight	14g
Cold boot	<40 seconds
Initialization time	<5 seconds (typical value)
Initialize reliability	> 99.9%
Differential data	R TCM 3.3/3.2/3.1/3.0
Data format	NMEA-0183, Unicore*

Data update	20Hz
Time accuracy (RMS)	20ns
Speed accuracy (RMS)	0.03m/s

## Electrical characteristics

Supply voltage (VCC)	Minimum : 3.3V Maximum : 5.5V
Current (3V3)	Minimum : 150mA Maximum : 250mA
VCC maximum ripple	Minimum : 0mA Maximum : 170mA
Maximum allowable ESD stress level	±6000V

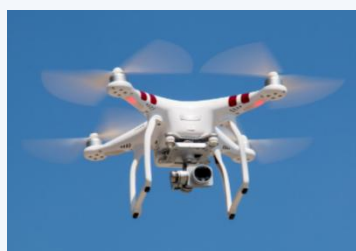
## physical characteristics

PCB size	71mm x 45.7mm x 1.6mm
Working temperature	-40°C ~ +85°C
Storage temperature	-55°C ~ +95°C
humidity	95% non condensing
Vibration	GJB150.16-2009 , MIL-STD-8
shock	GJB150.18-2009 , MIL-S

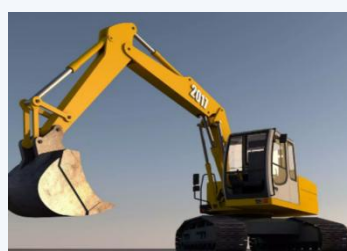
## Product application field



Robot



Unmanned aerial vehicle

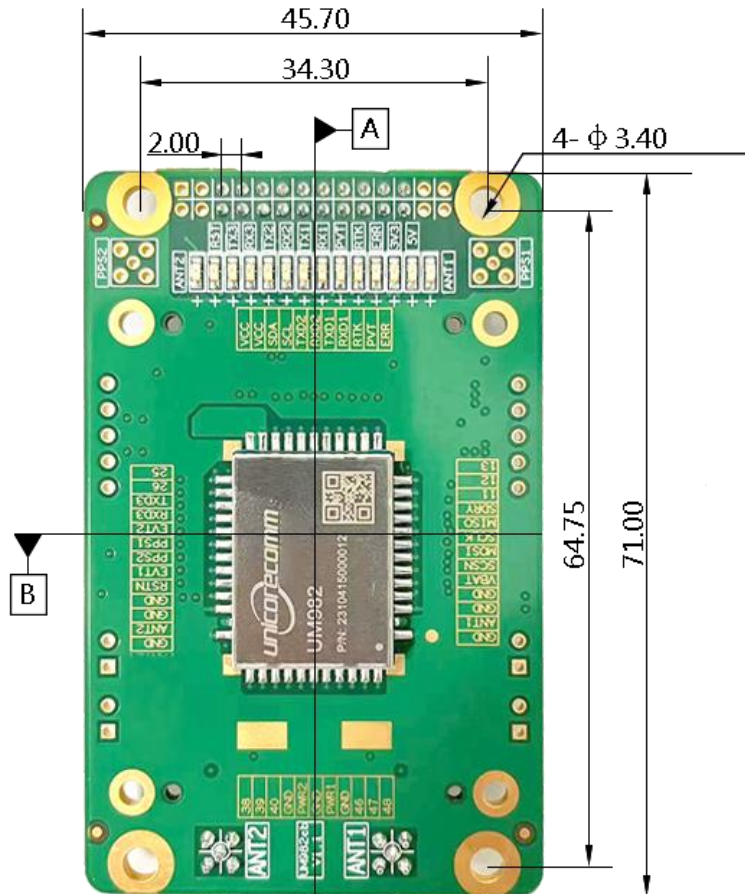


Mechanical automation



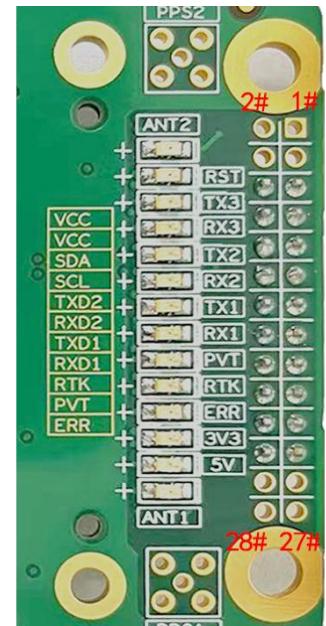
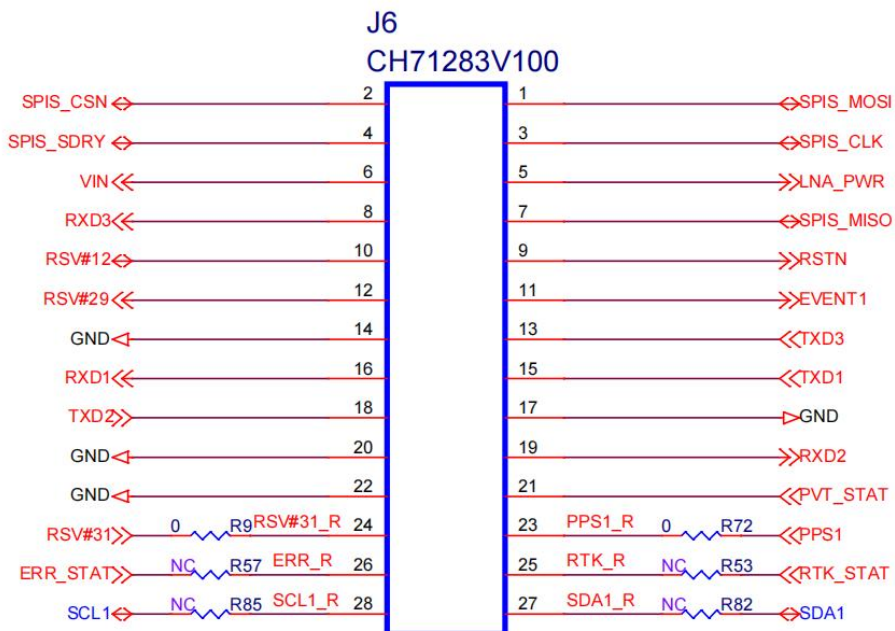
Navigation autonomous driving

# Mechanical dimensions



## PIN function - schematic diagram

## PIN-Location Diagram



## Interface