

UM220-IV NL

Industrial Grade Anti-jamming GNSS Module



16.0 x 12.2 x 2.4mm

Product Characteristics

- » Excellent navigation and positioning performance, supporting single-system standalone positioning and multi-system joint positioning
- » Anti-interference design, which enables the module to work stably under complex electromagnetic environments
- » Low power consumption design
- » Firmware compatible with previous generation products and mainstream GPS modules, easy to be substituted
- » Support NMEA V4.1 protocol
- » Surface Mount Technology which facilitates users to produce

Applications



Bike Sharing/
Scooters



Intelligent
Agriculture



Vehicle
Navigation

Brief Introduction

UM220-IV NL is a multi-system GNSS module based on Unicore's proprietary low power consumption high performance SoC - UFirebird. It supports GPS L1+BDS B1+GAL E1 multi-system or single system raw observation data output and supports AGNSS function, which improves the positioning speed with the help of assisted data transmitted through network. Integrating RTK algorithm and data service provided by TruePoint, the module can output high precision positioning solution off chip or on the customer's hardware platform. UM220-IV NL is of compact size and adopts SMT pad, supporting standard pick-and-place and fully automated integration of reflow soldering, particularly suitable for low cost and low power consumption applications.

Ordering Information

Supply at multiples of 500 pieces

UM220-IV NL			
13	GND		GND
14	NC		RF_IN
15	NC		GND
16	NC		VCC_RF
17	NC		NC
18	NC		RXD2
19	NC		TXD2
20	TXD1		GPIO2
21	RXD1		NC
22	V_BCKP		TIME PULSE
23	VCC		ADDET_N
24	GND		hRESET

Functional Ports

2 x UART	1 x 1PPS
Data Ports: NMEA 0183(Compatible with BDS);	

Physical Specifications

Dimensions	16.0 x 12.2 x 2.4mm
Package	24 pin SMD
Weight	0.8g
Temperature	Operating -40°C~+85°C Storage -45°C~+90°C

Electrical Specifications

Voltage	3.0V ~ 3.6V DC
LNA	2.7V ~ 3.3V, <100mA
Power Consumption ⁴	90mW

Functional Characteristics

DGNSS *, AGNSS *,
single-frequency RTK positioning

- NOTE: 1 Simultaneously running three systems at most.
2 Open sky, using TruePoint RTK algorithm
3 Open sky, continuous tracking

Performance Specifications

Channel	Based on 64-Channel SoC - UFirebird
Frequency ¹	BDS B1 GPS L1 GAL E1
Modes	Single-system or multi-system raw data output Off-chip high-precision positioning using TruePoint RTK algorithm
Time to First Fix (TTFF) ²	Cold Start : <29s Hot Start : <1s Re-acquisition : <1s AGNSS <5s
Update Rate	1Hz
1PPS	Support
Sensitivity	GN
Tracking	-159dBm
Acquisition	-146dBm
Hot Start	-150dBm
Reacquisition	-157dBm