UM220-IV NL

Industrial Grade Multi-GNSS
Navigation and Positioning Module

Industrial Grade

16.0 x 12.2 x 2.4 mm

Product Characteristics

- Excellent navigation and positioning performance, supporting single-system standalone positioning and multi-system joint positioning
- Anti-jamming design, which enables the module to work stably under complex electromagnetic environments
- Low power consumption design
- Hardware compatible with previous generation products and mainstream GPS modules
- Supports NMEA V4.1 protocol
- Surface Mount Device which facilitates users to produce
- Raw observation data output (optional)

Applications

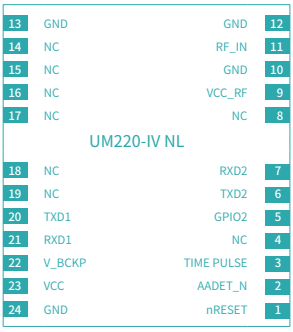
- Vehicle Navigation
- Vehicle Monitoring

Ordering Information

Supply at multiples of 500 pieces

Brief Introduction

UM220-IV NL is a multi-system GNSS module based on Unicore's proprietary low power high performance SoC - UFirebird. It supports AGNSS function, which improves the positioning speed with the help of assisted data transmitted through network. The module also supports high precision solution on the user's hardware platform to improve positioning accuracy. 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.



Physical Specifications

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

Electrical Specifications

Voltage	3.0 V ~ 3.6V DC
LNA	3.0 V ~ 3.3V, < 100 mA
Power Consumption[2]	50 mW

Interfaces

2 x UART (LVTTL)
1 x 1PPS (LVTTL)

Functional Characteristics

AGNSS *
Raw observation output

NOTE: * Supported by specific firmware
1 Open sky, using TruePoint RTK algorithm
2 Open sky, continuous tracking
3 Typical value, < 30m /s open sky; 4 Open sky, continuous tracking

Performance Specifications

Channel	64 channels, based on UFirebird		
Frequency[1]	GPS L1		
	BDS B1		
	Galileo E1		
	QZSS		
Modes	Single-system standalone positioning or multi-system joint positioning		
Time to First Fix (TTFF)[1]	Cold Start: < 28 s	Positioning Accuracy (CEP)[3]	Horizontal: 2.0 m
	Hot Start: < 1 s		Vertical: 3.5 m
	Reacquisition: < 1 s	Velocity Accuracy(RMS)[3]	0.1 m/s
	A-GNSS: < 4 s		
Data Update Rate	1 Hz		
1PPS	Support		
Sensitivity	GNSS		
	Tracking	-160 dBm	
	Cold Start	-147 dBm	
	Hot Start	-151 dBm	
	Reacquisition	-158 dBm	
Data Format	NMEA 0183, Unicore		