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

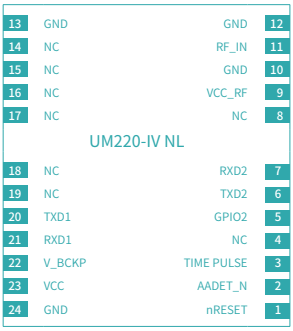
Vehicle Monitoring

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		