UM220-IV M0

Industrial-grade Multi-GNSS
Navigation and Positioning Module

9.7 x 10.1 x 1.9 mm

Industrial Grade

Product Characteristics

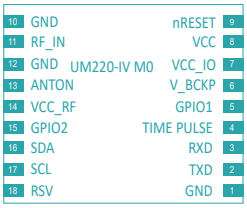
- Ultra-small packaging
- Compact design, small size
- Excellent performance, supporting single-system standalone positioning and multi-system joint positioning
- Anti-jamming technology, which enables the module to work stably in complex electromagnetic environments
- Low power consumption
- Suitable for large-scale applications that require high performance, small size and low cost

Applications

- Tracker
- Vehicle Navigation

Brief Introduction

UM220-IV M0 is a multi-system compact navigation module designed for the automotive market. As the fourth generation of GNSS navigation and positioning module, UM220-IV M0 is based on Unicore's proprietary GNSS SoC UC6226. It is highly integrated, with low power consumption, anti-jamming design, compact size, and is suitable for applications requiring low cost.



Ordering Information

Supply at multiples of 1000 pieces

Physical Specifications

Dimensions	9.7 x 10.1 x 1.9 mm
Package	18 pin SMD
Temperature	Operating -40 °C ~ +85 °C
	Storage -45 °C ~ +90 °C

Electrical Specifications

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

Interfaces

1 x UART (LVTTL)

1 x 1PPS (LVTTL)

Functional Characteristics

Passive Antenna, Active Antenna,
AGNSS *

Note: Supported by specific firmware
1 Simultaneously running three systems at most.Using command to switch between BDS and GLONASS.
2 Open sky.
3 Typical value < 30 m/s open sky.
4 Open sky, continuous tracking.

Performance Specifications

Channel	64 channels, based on UFirebird	
Frequency[1]	GPS L1	
	GLONASS G1	
	BDS B1	
	Galileo E1	
	QZSS	
	SBAS	
Modes	Single-System Standalone Positioning	
	Multi-System Joint Positioning	
Time to First Fix (TTFF)[2]	Cold Start < 28 s	
	Hot Start < 1 s	
	Reacquisition < 1 s	
	AGNSS < 4 s	
Data Update Rate	1 Hz	
Positioning Accuracy (CEP)[3]	Horizontal: 2.0 m	
	Vertical: 3.5 m	
Velocity Accuracy[3](RMS)	0.1 m/s (GNSS)	
1PPS	Support	
Sensitivity	GNSS	
	Tracking	-161 dBm
	Cold Start	-147 dBm
	Hot Start	-155 dBm
	Reacquisition	-158 dBm
Data Format	NMEA 0183, Unicore	