

UFirebird UC6226

Multi-GNSS Positioning SoC



Product Advantages

- » Ultra-low power consumption
- » Supports GPS, BDS, GLONASS, Galileo single-system standalone positioning and multi-system joint positioning
- » Built-in anti-jamming module, adaptable to various environments
- » High integration, simple peripheral devices, cost-effective
- » Compatible with mainstream package



Automotive Grade



Industrial Grade

Applications



Tracker



Smart Phone



IoT



Vehicle Navigation



Wearables

Brief Introduction

With the 28nm process and ingenious PMU design, UFirebird UC6226 features ultra-low power consumption and ultimate miniaturization, significantly improving the battery life of users' devices.

UC6226 is developed for global applications, supporting GPS, BDS, GLONASS, Galileo multi-system joint positioning. The high integration design reduces the use of peripheral devices and the board area. UC6226 adopts QFN40 package and complies with the AEC-Q100 reliability standard.

Ordering Information

Supply in multiples of 3000 pieces.

Performance Specifications

Channel	64 channels	Power Consumption @ 3.3 V	Acquisition 23.83 mA (dual-GNSS joint positioning) Tracking 24.13 mA dual-GNSS joint positioning
Frequency	GPS L1, BDS B1, GLONASS G1, Galileo L1 (Concurrent reception of 2 or 3 GNSS signals)	Interfaces	UART× 2
Horizontal Positioning Accuracy	< 2.0 m (RMS)	Data Format	NMEA0183, Unicore
Time To First Fix (TTFF) ¹	Cold Start < 28 s AGNSS ² < 4 s Hot Start < 1 s Reacquisition < 1 s	Data Update Rate	1 Hz
Velocity Accuracy	0.1 m/s	Firmware	Flash
Sensitivity	GNSS	Operating Temperature	-40 °C ~ +85 °C
Cold Start	-147 dBm	Other Functions	Anti-jamming: Built-in, active detection and removal LNA: Built-in RTC input: 32.768 kHz DC/DC: Built-in, optional
Tracking	-160 dBm		
Hot Start	-154 dBm		
Reacquisition	-158 dBm		

Product	Package	Flash	Grade	Main Supply	IO Supply
UC6226NIS-E310E1	QFN40 5.0 × 5.0 × 0.75 mm	Yes	Industrial	3.0 ~ 3.6 V	3.0 ~ 3.6 V
UC6226NIS-E310E2	QFN40 5.0 × 5.0 × 0.75 mm	Yes	Industrial	1.2 ~ 1.98 V	1.7 ~ 1.9 V
UC6226NAS	QFN40 5.0 × 5.0 × 0.75 mm	Yes	Automotive	3.0 ~ 3.6 V	3.0 ~ 3.6 V

Note: 1. Satellite signal strength reaching -130 dBm
2. Timely input of assisted data