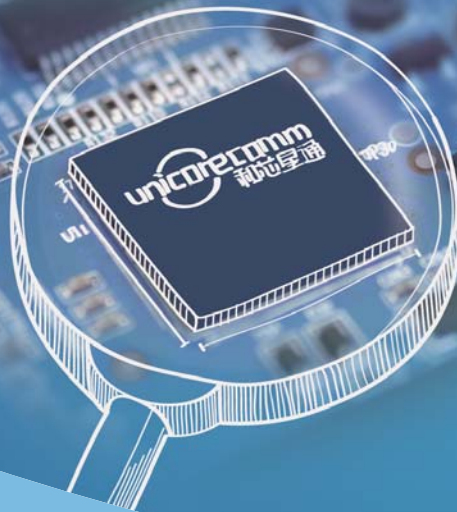


# UFirebird™ UC6226

Ultra-low Power GNSS SoC



With the 28nm process and ingenious PMU design, UFirebird™(UC6226) features ultra-low power consumption and ultimate miniaturization, thus significantly improving the battery life. UC6226 is equipped with a built-in Sensor Hub which is capable of providing access for multiple sensors for fusion positioning. Through precise identification of the scene and context, it can ensure more accurate positioning experience even in the harsh signal

environment. UC6226 is developed for global application, and it supports GPS, BDS, GLONASS, Galileo, and it can achieve multiquad-system joint positioning. The high integration design reduces the quantity of peripheral devices and the board area. For QFN40 package, UFirebird complies with the AEC-Q100 reliability standard.

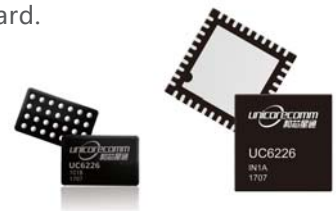
## Product advantages

- Ultra-low power consumption
- Global application, supporting GPS, BDS, GLONASS and Galileo systems as well as WAAS/QZSS/EGNOS/MSAS/GAGAN enhanced signal
- Built in Sensor Hub, leading PDR algorithm, running three system simultaneously

## Packaging

QFN40 5x5mm  
WLCSP 1.73x2.87mm

- Built-in anti-interference module, excellent adaptability to complex integrated application with 2G/3G/4G or other high frequency signals, such as mobile phones, wearables and vehicle navigation
- High integration, simple peripheral devices, and significantly reduced hardware cost.
- One-stop location-based service
- Compatible mainstream package
- Ultimate miniaturization





# Technical Specifications

## GNSS Performance

Single Point Positioning	2.0m CEP
D-GNSS	<1.0m CEP
Time To First Fix(TTFF)	Cold Start<29s
Velocity Accuracy	AGNSS<4s
Frequency	Hot Start<1s
Channel	Reacquisition<1s
Velocity Accuracy	0.1m/s
Sensitivity	GPS BDS GLONASS
Cold Start	-147dBm -146dBm -146dBm
Tracking	-162dBm -162dBm -160dBm
Hot Start	-152dBm -150dBm -150dBm
Reacquisition	-157dBm -157dBm -157dBm

## Electrical and Environment Feature

	QFN	WLCSF
Power Supply	1.7V~3.6V (use DC~DC) 1.2V~1.98V (bypass DC~DC)	1.2V~1.98V (bypass DC~DC)
IO	1.7V~1.9V; 2.8V~3.6V	1.7V~1.9V
Data updating rate	Maximum: 10Hz (Required customized version)	

## Interface

Serial ports	1 UART	1 SPI Master
	1 I2C	1 SPI Slave
IO	2 Configurable Ie PPS	
	2 external interruptinput	
	2 PIO, used for Antenna Detect	

## Features

Sensor Hub	post-processing Supports ten-axis sensor input (acceleration, gyroscope, magnetometer, barometer) Supports vehicle odometer pulse / information input
Geo-fence	Required customized version
Hybrid	sensor and GNSS fusion positioning
Anti-interference	Built-in, Active anti-jamming signal detection and removal
LNA	Built-in
DC-DC	Built-in, optional
Data updatingrate	Maximum 10Hz
Data Format	NMEA0183, Unicore Protocol
GNSS clock input	Support TCXO or Crystal
RTC Input	32.768kHz optional (Frequency can be divided by GNSS clock)
Storage	Built-in ROM firmware, support external SPI Flash and AP SPI firmware

## Environment

Temperature	oprating: -40°C~+85°C storage: -50°C~+125°C
Humidity sensor	MSL3
RoHS	Complaint
AEC-Q100	Optional, support QFN 40 packaging

## CONTACT US