

Product Name	Description	Version
LC23030-Vx	Dual-frequency multi-constellation GNSS mouse / 2m, USB	0.2
LC23032-Vx	Dual-frequency multi-constellation GNSS mouse / 2m, PS2	
LC23036-Vx	Dual-frequency multi-constellation GNSS mouse / 3m, RJ11	

Datasheet of GPS mouse, LC2303x-Vx series



1 Introduction

LC2303x-Vx series products are high-performance dual-band GNSS receivers (also known as GNSS mouse) that are capable of tracking all global civil navigation systems (GPS, GLONASS, BDS, GALILEO, QZSS and IRNSS). The GNSS mouse will acquire both L1 and L5 signals at a time while providing the better position accuracy. It can provide user with fast Time-To-First-Fix, superior sensitivity and low power consumption. Its far-reaching capability meets the sensitivity requirements of car navigation as well as other location-based applications.

2 Features

- Concurrent reception of L1 and L5 band signals
- Multi-Constellation GPS, GLONASS, Galileo, BeiDou, QZSS and IRNSS (NavIC)
- Support for SBAS ranging, WAAS, EGNOS, MSAS and GAGAN
- Fast TTFF at low signal level
- Free hybrid ephemeris prediction to achieve faster cold start
- Smart jammer detection and suppression
- Build-in micro battery to reserve system data for rapid satellite acquisition
- Brand New Design with improved visibility on signal LEDs
- LED indicator for GNSS fix or not

- Waterproof

3 Application

- Personal positioning and navigation
- Automotive navigation
- Marine navigation
- High-quality NTP time server

4 GNSS receiver

Frequency	LC23030-V2 LC23032-V2 LC23036-V2	GPS/QZSS: L1 C/A, L5C GLONASS: L1OF BEIDOU: B1I, B2a GALILEO: E1, E5a
	LC23030-V3 LC23032-V3 LC23036-V3	GPS/QZSS: L1 C/A GLONASS: L1OF BEIDOU: B1I GALILEO: E1 IRNSS L5
Channels	Support 135 channels	
Update rate	1Hz default, up to 10Hz	
Acquisition Time	Hot start (Open Sky)	2s (typical)
	Cold Start (Open Sky)	28s (typical) without AGPS
Position Accuracy	LC2303x-V2	Autonomous: 1.5m ⁽¹⁾ (CEP)
	LC2303x-V3	Autonomous: 2.5m ⁽¹⁾ (CEP)
Datum	WGS-84 (default)	
Max. Altitude	< 18,000 m	
Max. Velocity	< 500 m/s	
Protocol Support	NMEA 0183 ver. 4.1	115200 bps , 8 data bits, no parity, 1 stop bits (default) 1Hz: GGA, GLL, GSA, GSV, RMC, VTG, GST

Note 1: Depends on the satellite visibility, geometric distribution of satellites in the sky, and received signal quality and characteristics.