GR-401W,

Ultra-High Performance

GPS Mouse Receiver



Overview

GR-401W is an easy to use, ultra-high performance, low power, industrial grade mouse type GPS receiver. It provides excellent acquisitions and tracking performance and supports USB interface. The additional screws enable the USB connector securely attaches to the main body.

Applications

- Vehicle navigation device
- Fleet management

Features

- Based on SiRFstarIV low power single chip
- High performance: -163dBm tracking sensitivity
- Low power: 45 mA at continuous tracking
- SBAS (WAAS, EGNOS, MSAS, GAGAN) support
- A-GPS ready, local ephemeris prediction
- Backup battery support for faster position fix
- Blue LED for position fix indication
- Built-in magnet, USB connector with screws
- Industrial operating temperature range: -40 ~ 85℃

Technical Specifications

Receiver Performance Data+

Receiver Type	48 channels, GPS/QZSS: L1 1575.42MHz
Horizontal Position Accuracy	< 2.5m (Autonomous) (50% 24hr static, -130dBm)
Velocity Accuracy	<0.01 m/s (speed) <0.01° (heading); (50%@30m/s)
Time To First Fix Hot start	Autonomous <1sec
Warm start Cold start	<35sec <35sec; (50% -130dBm)
Sensitivity (Autonomous)	-147dBm (acquisition) -163dBm (tracking)
Update Rate	Default: 1Hz; Max. 5Hz
Max. Altitude	<18,000 m or 60,000 ft
Max. Velocity	<1,852 km/hr or 1,000 knots
Protocol Support	NMEA v3.00, OSP, 4800 bps N,8,1; GGA, GSA, GSV, RMC
SBAS Support	WAAS, EGNOS, MSAS,GAGAN
Dynamics	<4g

+ Note. According to IC Spec

Electrical Data

Power Supply	5 VDC
Power Consumption (average tracking)	45 mA (GR-401WU)

Environmental Data

Operating temperature Storage temperature	-40 ~ 85℃ (battery: -20 ~ 60℃) -40 ~ 60℃
Operating humidity	5% ~ 95% non-condensing
Waterproof	IPX7

Other Data

Cable Length	2.4 m
Dimension	40 x 45 x 18.5 (mm)
LED for GPS Position Fix Indication	Always ON : Position is not fixed and before 3D-position fix Blinking : After 3D position fix

Pin Definition

Pin	Name	Function	I/O
1	VDD 5V	Power supply	Input

2	D-	USB D+	Input/ Output
3	D+	USB D+	Input/ Output
4	GND	Ground	Input

*This document is subject to change without notice.