

GR-5019, MT3339

Ultra-High Performance,

GPS Mouse Receiver

Overview

GR-5019 is an easy to use, ultra-high performance, low power, industrial grade GPS receiver. It supports multiple satellite positioning systems – GPS, QZSS and SBAS.

The IP67 waterproof feature makes this cable receiver an ideal solution for outdoor applications.

Our experienced design fully exhibits the excellent performance of MT3339 chip. It works in GPS signal difficult environment, provides fast acquisitions and excellent tracking performance.

Applications

- High-precision clock/timing
- Automatic vehicle location
- Vehicle navigation device
- Timing (GPS clock, FEMTO cell, traffic lights etc)
- DGPS (RTCM SC-104)*

Features

- High performance: -165dBm⁺ tracking sensitivity
- Low power: 30mA at continuous tracking (RS232)
- GPS/QZSS/SBAS support
- Supported SBAS: WAAS/EGNOS/MSAS/GAGAN
- 12 multi-tone active interference cancellers
- Indoor/outdoor multi-path detection & compensation
- Up to 10Hz update rate*
- Backup battery support for faster position fix
- LED for position fix indication
- **IPX7** Waterproof



- Built-in magnet
- Industrial operating temperature range: **-40 ~ 85°C**

Notes

* Some features need commands programmed by customers

Technical Specifications

Receiver Performance Data⁺

Receiver Type	GPS Chipset: MT3339 Frequency: L1, 1575.42MHz C/A code: 1.023 MHz chip rate Channels: Tracking: 22 /acquisition: 66
Horizontal Position Accuracy	< 3.0m (Autonomous) < 2.5m (WAAS) (CEP, 50% 24hr static, -130dBm)
Velocity Accuracy	< 0.1 m/s (autonomous) < 0.05 m/s (SBAS) (50%@30m/s)
PPS Signal Accuracy	±10ns RMS (1PPS output)
Time To First Fix	Autonomous <1sec Hot start <35sec Warm start <35sec Cold start (50% -130dBm)
Sensitivity (Autonomous)	-148dBm (acquisition) -165dBm (tracking)

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Update Rate	Default 1Hz, max. 10Hz,
Max. Altitude	18,000 m
Max. Velocity	<1,852 km/hr
Protocol Support	NMEA 0183 v3.01 UART:4800/9600(default)/38400/115200 bps N,8,1; GGA, GLL, GSA, GSV, RMC, VTG
SBAS Support	WAAS, EGNOS, MSAS, GAGAN

Electrical Data

Power Supply	3.3 ~5.5 VDC
Power Consumption	30 mA/average tracking





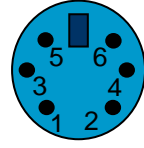

Environmental Data

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

Other Data

Cable Length	1.5m for GR-5019U 3m for GR-5019R <1m for GR-5019T
Dimension	40 x 45 x 16 (mm)

Interfaces

	GR-5019T	GR-5019R	GR-5019U
			
			
Pin	Mini-Din 6-pin PS/2 Male Plug	Mini-Din 6-pin PS/2 Male Plug	USB A type Male Plug
1	GND	GND	VDD 5V
2	VCC	VCC	D-
3	TXD-TTL	TXD-TTL	D+
4	NC	RX-RS232	GND
5	NC	TX-RS232	
6	RXD-TTL	RXD-TTL	

Ordering Information

GR-5019X

T	TTL; mini-din 6-pin male connector
R	RS232; mini-din 6-pin male connector
U	USB; type A connector

*H/W (connector, cable length etc.) or S/W (baud rate, sentence etc.) customization are welcome.

*This document is subject to change without notice.

