

GM-242I, Slim, Easy to Use

GPS Engine w/ Digital &

I-PEX RF Connectors

RoHS
Compliant



Overview

GM-242I is equipped with -159dBm engine, I-PEX RF connector and measures just 42x8x5.1 (mm). The slim design allows it to be used in dimension demanding devices such as notebook PC etc.

Our experienced design provides not only fast acquisitions and excellent tracking performance but also quality and delivery assurance.

Applications

- Notebook PC / Netbook / Tablet
- Smart phone, MID, UMPC, PND
- Digital camera
- Personal/pet tracker

Features

- Slim: 8 (W) x 42 (L) x 5.1 (H) (mm)
- I-PEX RF connector for external passive antenna
- Module ON/OFF control for power saving
- Backup power pin for fast position fix
- Easy to use 6-pin connector
- High performance: -159dBm tracking sensitivity
- A-GPS support
- Excellent EMI protection

Technical Specifications

Receiver Performance Data⁺

Receiver Type	50-channel,
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	L1 frequency, C/A code
Horizontal Position Accuracy	< 2.5m (Autonomous) < 2.0m (WAAS) (CEP, 50%, 24-hour static, -130dBm, SEP < 3.5m)
Velocity Accuracy	<0.1 m/s (speed) <0.5° (heading) (50% @ 30 m/s)
Time To First Fix	Autonomous (All at -130dBm)
Hot start	1sec
Warm start	32sec
Cold start	32sec
Sensitivity (Autonomous)	-142dBm (acquisition) -159dBm (tracking & navigation)
Max. Update Rate	4Hz
Max. Altitude	< 18,000 m
Max. Velocity	< 1,852 km/hr
Protocol Support	NMEA 0183 v2.3 UART: 38400bps N,8,1; GGA, GLL, GSA, GSV, RMC, VTG, TXT
SBAS Support	WAAS, EGNOS, MSAS, GAGAN
Dynamics	< 4g

⁺ Note. According to IC Spec

Electrical Data

Power Supply	3.3 ~ 6 V
Power Consumption	55mA / average tracking
Backup battery	1.4 ~ 3.6 V

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Environmental Data

Operating temperature	-40 ~ 85°C
Storage temperature	-40 ~ 85°C

Mechanical Data – 42 x 8 x 5.1

TTL UART

Pin	Name	Function	I/O
1	GND	Ground	Input
2	VCC	3.3 ~ 6 V power supply	Input
3	TXA	Port A serial data output (from GPS)	Output
4	RXA	Port A serial data input (to GPS)	Input
5	V_BAT	Backup power (1.4 ~ 3.6V)	Input
6	PWR_CTRL	Module power control High or disconnected: power ON Low: power OFF	Input

Application

1. Connect the passive antenna to the I-PEX connector of GM-242I.
2. Connect 6-pin interface to main board.
3. To save power, turn off the GPS module via pin 6.

Ordering Information

GM-242I

TTL UART interface, 38400bps, N-8-1, GGA, GLL, GSA, GSV, RMC, VTG, TXT @1Hz
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*This document is subject to change without notice.