

Mini GPS Locator

Model: GU-158

V1.0 2012-02-24



DB-9 interface with RS-232 protocol



USB interface

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Overview:

The main goal of GU-158 is to be used as a part of integrated system, which can be a simple PVT (Position-Velocity-Time) system, for instance, G-mouse, PND (Personal Navigation Device), or complex wireless systems, such as a system with GSM function, a system with Bluetooth function, and a system with GPRS function. The module (GU-158) can be the best candidate for users' systems as the users' systems need the careful consideration on the performance, sensitivity, power consumption, and/or size of the module. In the specification of GU-158 at the next page, it is noticeable that in addition to excellent start-up times and position accuracy, the updated rate can be up to 5 Hz and the sensitivity of -160dbm.

Features:

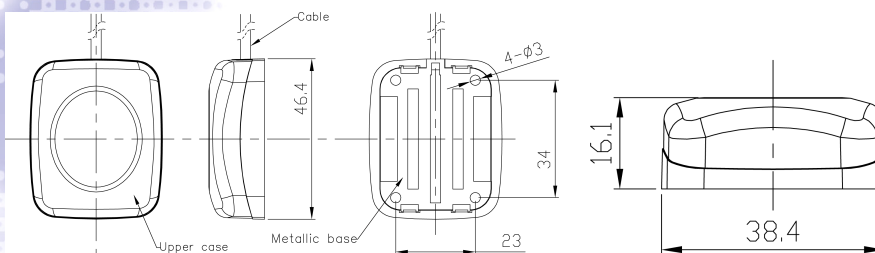
- Active antenna on board helps the system integrators to do the design-in easily.
- High sensitive GPS Locator and GPS antenna.
- The perfect match is most suitable for any mobile devices, such as PND, GPS PDA, personal tracker and any portable devices, which need GPS features.

Specifications:

PHYSICAL CONSTRUCTION	
Dimension	L46.4mm*W38.4mm*H16.1mm
Weight	214 gram(with cable)
Receiving frequency	1575.42MHZ; C/A code
Enclosure	Highly impact; corrosion-proof
Mounting	Magnetic mount
Construction	Ultrasonic welded, fully waterproof
ENVIRONMENTAL CONDITIONS	
Temperature	Operating: -30 ~ +80 °C
	Storage: -35 ~ +85 °C
COMMUNICATION	
Protocol	NMEA V3.01
Interface	USB 2.0, RS-232, TTL
INTERFACE CAPABILITY	
Standard Output Sentences	GGA, GLL, GSA, GSV, RMC, VTG
PERFORMANCE	
Built-in Antenna	Highly-reliable ceramic patch
Sensitivity	-160dBm
SBAS	1 channel (Support WAAS, EGNOS, MSAS, GAGAN)
Receiver architecture	50 parallel channels
Start-up time	1 sec. typical (hot start)
	35 sec. typical (warm start)
	41 sec. typical (cold start)
Position accuracy*	Without aid: 2.5 CEP WAS: 2 m
Velocity	0.1 Knot RMS steady state
Update Rate	1 Hz(standard), Optional: Up to 5Hz
Power Supply	5V
Power Consumption	Acquisition: 67mA, Tracking: 47mA
Baud Rate	9600 bps (default)
	Optional: 4800/19200/38400/115200 bps are adjustable
POWER CABLE	
Length	5m

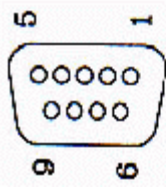
* CEP, 50%, 24 hours static, -130dBm, SEP: <3.5m

Application Diagram: (UNIT 單位:mm, TOLERANCE 公差:0.3mm)



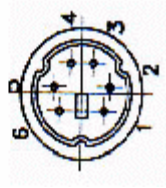
Pin Assignment:

DB-9 Female



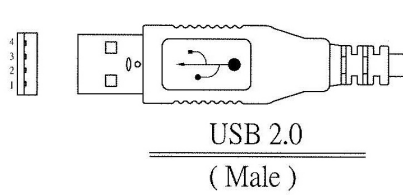
Pin1=n/c
Pin2=TXA
Pin3=RXA
Pin4=n/c
Pin5=GND
Pin6=n/c
Pin7=n/c
Pin8=n/c
Pin9=n/c

DIN-6PIN



Pin1=n/c
Pin2=GND
Pin3=n/c
Pin4=n/c
Pin5=+5V DC
Pin6=n/c

USB2.0 (Male)



Pin1= +5V
Pin2= D-
Pin3= D+
Pin4= GND

Pin No.	Title	I/O	Note
1	NC	-	
2	TXA	O	Serial port
3	RXA	I	Serial port
4	NC	-	
5	GND	G	Ground
6	NC	-	
7	NC	-	
8	NC	-	
9	NC	-	

Pin No.	Title	I/O	Note
1	NC	-	
2	GND	G	Ground
3	NC	-	
4	NC	-	
5	VCC	P	Voltage input 5V DC \pm 5%
6	NC	-	

Table 2.1 Description of pin definition for GU-158 (DB-9 Female & Din-6 pin)

Pin No.	Title	I/O	Note
1	+5V	-	Voltage input 5V DC \pm 5%
2	D-	G	Serial port
3	D+	-	Serial port
4	GND	-	Ground

Table 2.2 Description of pin definition for GU-158 (USB Male)