

Mars600-mini is a GPS Mouse receiver build-in high performances -160dBm Atheros GPS chipset. **Mars600-mini** provides customer high position, velocity and time accuracy performances as well as high sensitivity and tracking capabilities. Customers benefit from the strength of both companies.

Thanks to the low power consumption technology, the GPS-Mouse receiver is ideal for many portable applications such as PDA, Tablet PC, smart phone etc.



Features

- ◆ Built-in high performance u-blox6 GPS chipset.
- ◆ Current consumption 75mA
- ◆ 50 channels parallel.
- ◆ Average Cold Start in 29 seconds.
- ◆ -160 dBm sensitivity in tracking mode
- ◆ NMEA0183 compliant protocol
- ◆ SBAS (WAAS, EGNOS, MSAS, GAGAN)
- ◆ GALILEO Ready
- ◆ Water proof IPX6

Applications

- ◆ Automotive
- ◆ Personal/Portable Navigation (PDA)
- ◆ Geographic Surveying
- ◆ Sports and Recreation
- ◆ Marine Navigation
- ◆ Fleet Management
- ◆ AVL and Location-Based Services

Specifications

General		Accuracy	
GPS Chip	U-Blox 6 GPS chip	Position	
Frequency	L1, 1575.42MHz	2.5 meters CEP	
C/A Code	1.023 MHz chip rate		
Channels	50 CH	Time	1ms synchronized to GPS time
		Datum	
Sensitivity		WGS-84	
To – 160Bm Tracking, Superior Urban Canyon Performance		Dynamic Conditions	
		Altitude	50,000 meters max.
Acquisition Rate		Velocity	500 meters /sec max.
Cold Start	29 sec, average	Acceleration	<4g
Warm Start	29 sec, average		
Hot Start	<1 sec, average	GPS Protocol	
Reacquisition	0.1sec, average	Default: NMEA-0183, GGA(1), GSA(1), GSV(1), RMC(1), Band rate 9600 bps, Data bit : 8, stop bit : 1	
Accuracy	Snap start 0.2s, average		
Power			
Operation Power	5.0 VDC+10%	Device Size	
Current Consumption	75mA	41.0x36.0x15.0 mm	
Environmental			
Operating Temperature	- 40 °C to + 80 °C		
Relative Humidity	5% to 95% non-condensing	Water Proof	
		IPX6	

Hardware Interface

The Mars600-mini includes an antenna in a unique style waterproof gadget. We can manufacture variable connector cable to suit your demands. Like USB, PHR(JST), GHR(JST), Molex, PS2, RJ11, D-Sub 9..etc. You provide me specification, we manufacture the cable and connector.



Mars600-mini Standard PIN OUT

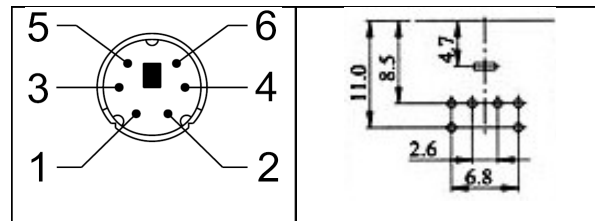
- Pin Assignment of standard PS2 male Din Jack

Pin	Signal
1	GND
2	VCC 5.0V
3	N.C.
4	TTL RX
5	N.C.
6	TTL_TX

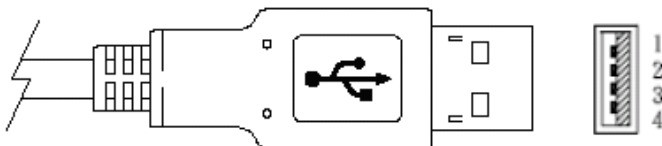
Mars600-mini-T

Pin	Signal
1	GND
2	VCC 5.0V
3	RS-232 Rx
4	N.C.
5	RS-232 Tx
6	N.C.

Mars600-mini-R



- Pin Assignment of A Type USB connector (figure 2)



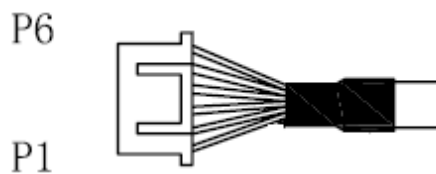
Pin	Signal
1	+5.0 VDC
2	D-
3	D+
4	GND

- Pin Assignment of RJ11 connector



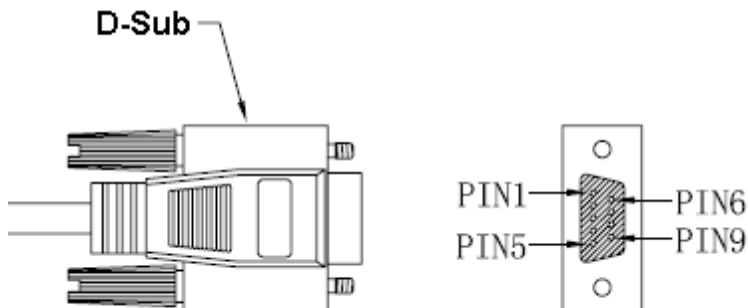
Pin	Signal
PIN1	VCC 5.0V
PIN2	RX (RS232)
PIN3	TX (RS232)
PIN4	GND
PIN5	N.C.
PIN6	N.C.

- Pin Assignment of PHR 6 PIN connector



Pin	Signal
PIN1	VCC 5.0V
PIN2	RX (RS232)
PIN3	TX (RS232)
PIN4	GND
PIN5	N.C.
PIN6	N.C.

- Pin Assignment of D-SUB 9 PIN Female connector



Pin	Signal
PIN1	N.C.
PIN2	TTL-TX
PIN3	TTL-RX
PIN4	N.C.
PIN5	GND
PIN6	VCC 5.0V
PIN7	N.C.
PIN8	N.C.
PIN9	N.C.

NMEA output message

NMEA-0183 V3.0 Output Messages

NMEA Sentence	Description
GGA (default)	Global Positioning System Fixed Data
GLL	Geographic Position - Latitude/Longitude
GSA (default)	GNSS DOP and Active Satellites
GSV (default)	GNSS Satellites in View
RMC (default)	Recommended Minimum Specific GNSS data
VTG	Course Over Ground and Ground Speed
ZDA	Time and Date

The detail information please refers to SSFXXXX series GPS module NMEA protocol reference manual.

Ordering code

Mars600-mini- X X

a b

Defaultl ordering code: Mars600-mini-T2

a. cable type:

T: PS2 TTL ;

R: PS2 RS232 ;

U: USB ;

J: RJ11 ;

H: PHR6 ;

D: DB9

b. Baud Rate setting:

1 : 4800 bps;

2 : 9600 bps;

3 : 19200 bps;

4 : 38400 bps;

5 : 57600 bps;

6 : 115200 bps