GM-210 GPS Receiver

■ Features:

- Builds on SiRF Star II chipset with embedded ARM7TDMI CPU available for customized applications in firmware。
- 12 parallel satellite-tracking channels for fast acquisition and reacquisition。
- High speed signal acquisition using 1920 time/frequency search channels.
- Built-in hardware Tracking Loop Processor WAAS/EGNOS Demodulator and NDGPS/U.S. Coast Guard Beacon support。
- Low power consumption。
- Built-in rechargeable battery for memory and RTC backup and for fast Time to First Fix(TTFF)。
- Support NMEA0183 v2.2 data protocol。
- Enhanced algorithms provide superior navigation performance in urban, canyon and foliage environments。
- For Car Navigation , Marine Navigation ,Fleet Management ,AVL and Location-Based Services , Auto Pilot ,Personal Navigation or touring devices ,Tracking devices/systems and Mapping devices application。

■ Specifications

- Tracks up to 12 satellites.
- Receiver: L1, C/A code
- Snap Start: <3 sec(at < 25 minutes off period).
- Update rate: 1 HZ.
- Acquisition time

  Reacquisition 0.1sec.averaged
  Hot start 8 sec., averaged
  Warm start 38 sec., averaged
  Cold start 45 sec., averaged
- Position accuracy:
  - ◆ Non DGPS (Differential GPS)

    Position 5-25 m CEP without SA
    Velocity 0.1 m/sec, without SA
    Time 1 usec sync GPS Time
  - ◆ DGPS (Differential GPS)

    Position 1 to 5 m, typical
    Velocity 0.05 m/sec, typical
  - ◆ EGNOS/WAAS/Beacon

    Position

    < 2.2 m, horizontal 95% of time

    < 5 m, vertical 95% of time
- Dynamic Conditions:

  Altitude 18,000 meters (60,000 feet)max
  Velocity 515 meters / second (700 knots) max
  Acceleration 4 G, max
  Jerk 20 meters/second, max
- Antenna Type: Built in Patch Antenna
- Minimum signal tracked: -175dBW
- Dimension: 66x51x22.5 mm
- Weight : <100g
- LED function:

  power On/Off and Navigation Update Indication
- Operation Temperature:

  -40 ℃to +80 ℃
- Store Temperature:

  -45 ℃to +100 ℃
- Operation Humidity:

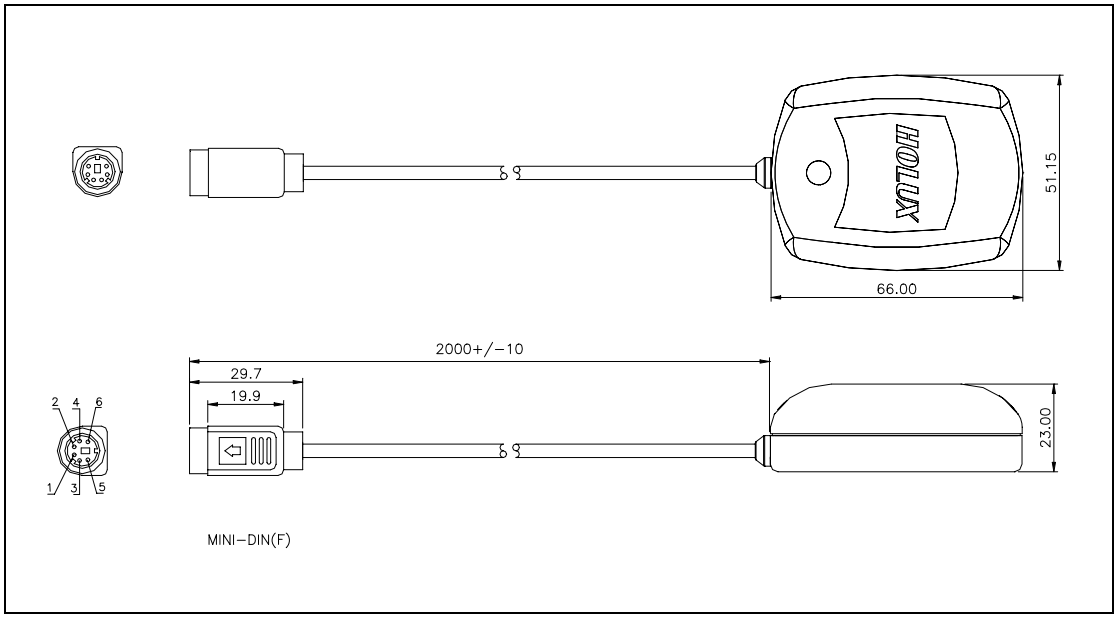
  5% to 95% No condensing.
- Power consumption

  <170mA at 4.5- 5.5V input
- Protocol and interface:
  - ◆ NMEA output protocol: V.2.2

    Baud rate: 4800 bps
    Data bit: 8
    Parity: N
    Stop bit: 1
    Output format:
    Standard: GGA,GSA,GSV, RMC.
    Optional: GLL,VTG, SiRF binary
  - ◆ Interface:

    RS232 + CMOS TTL Level, or
    RS-232 + DGPS

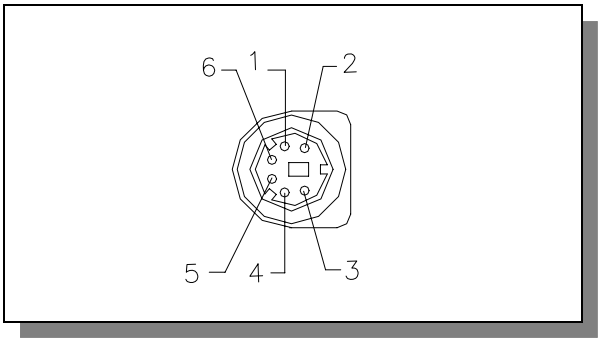
■ Physical Dimension：



■ Output terminal and definition

Output terminal: Mini-Din (MD6)female。

Pin definition:



(Mini-Din 6 pin female)

Pin	Signal and description
1	TX_RS232 (RS232 level)
2	+5 VDC
3	TX_TTL (CMOS TTL level)
4	Ground
5	RX_TTL (CMOS TTL level)or DGPS input(RS232 level)
6	RX_RS232 (RS232 level)

■ Order information

G M – 210 XX –Y

| | |
(1) (2) (3)

(1) Model name:

(2) XX: Color option

GR: Top-Gray, Bottom-Black .

TB: Top-Translucent Blue, Bottom-Gram

WW: Walnut Wood

(3) Y: Output Type option

1: RS232+TTL

2: RS232 + DGPS

Model	**Output level**	**Option Accessories type**(1)
GM-210-GR-1	RS-232+TTL	1,2,3,4,5,6,7,8,9
GM-210-TB-1	RS-232+TTL	1,2,3,4,5,6,7,8,9
GM-210-WW-1	RS-232+TTL	1,2,3,4,5,6,7,8,9
GM-210-GR-2	RS-232+DGPS	1,3,4,6,7,8,9
GM-210-TB-2	RS-232+DGPS	1,3,4,6,7,8,9
GM-210-WW-2	RS-232+DGPS	1,3,4,6,7,8,9

(1) Option Accessories type reference section 7.2

Accessories type

Type	Name	Function description
1	CA-RS232	Convertible cable, Comport, 5VDC input.
2	CA-USB	USB connector
3	CA-IPAQ36xx	Convertible cable, Compaq PDA H36xx, with Cigarette Charger
4	CA-IPAQ38xx	Convertible cable, Compaq PDA H38xx, with Cigarette Charger
5	CA-CASSIOPEIA	Convertible cable, Cassio E125/M500 PDA , with Cigarette Charger
6	CA-JORNADA	Convertible cable, HP PDA 540 Jornada, with Cigarette Charger
7	CA-M50X	Convertible cable, Palm PDA M505/M500,IBM Workpad C505/C500, with Cigarette Charger
8	CA-6V30V	High power connector, 6-30VDC input
9	A-20005	12V-26V Cigarette Adapter /Charger

Specifications are preliminary and subjected to change without notice