



**UAV GNSS RECEIVER**  
**GPM-808G**  
**(GPS/GLONASS/BEIDOU+QMC5883)**

Dimensions :52\*52\*20.5 mm

**Cable length: 30CM**



## Applications

- UAV positioning

- **Features**

- Multi-satellite positioning systems support

- GPS/QZSS/GLONASS (GPM-808G)

- GPS/QZSS/Beidou (GPM-808B)

- Based on u-blox8 low power single chip

- Sensitivity

- Acquisition: -148dBm

- Tracking: -167dBm

- Low power: 40mA at continuous tracking

- SBAS (WAAS, EGNOS, MSAS) support

- Higher update rate option (default 1Hz)

- RTCM 2.3 support

- A-GPS support, OMA SUPL/3GPP TS25.171 (GSM/UMTS) compliant

- Easy to use: built-in patch antenna & 6-pin wire to

board connector w/ pitch of 1.0mm

- Backup battery support for faster position fix

- Fully EMI shielded

- Industrial operating temperature range: -40 ~ 85

Default shipment: TTL protocol, 9600,1HZ, standard NMEA-0183 protocol output.

1.Optional 1 baud rate, 4800/9600/19200/38400/57600/115200.

2 .output protocol optional, NMEA-0183 or UBX.

3 .output frequency optional, 1HZ--10HZ output.

Power Supply:DC Voltage3.3V~5.5V,Typical:3.3V or 5.0V

Consumption:Capture 50mA

Receiving Format:GPS,GLONASS,BeiDou,QZSS and SBAS

Receiving Channel:72 Searching Channel

Receiving Sensitivity:Trace -167dBm

Capture-148dBm

Positioning Time:Cold Start:avg36s

Warm Start:avg25s

Hot Start:avg1s

Level Positioning Precison:2.5m At Open Wind

Output Frequency:1Hz-10Hz,Default 1Hz

Speed Precison:0.1 m/s (Without Aid)

Acceleration Precison:0.1 m/s (Without Aid)

Dynamic Characteristics:Max Height:18000m

Max Speed:5153m/s

Max Acceleration:4G

Support Rate:4800bps to 115200bps,Default9600dps

Working Temperature:-40-+8

## Technical Specifications

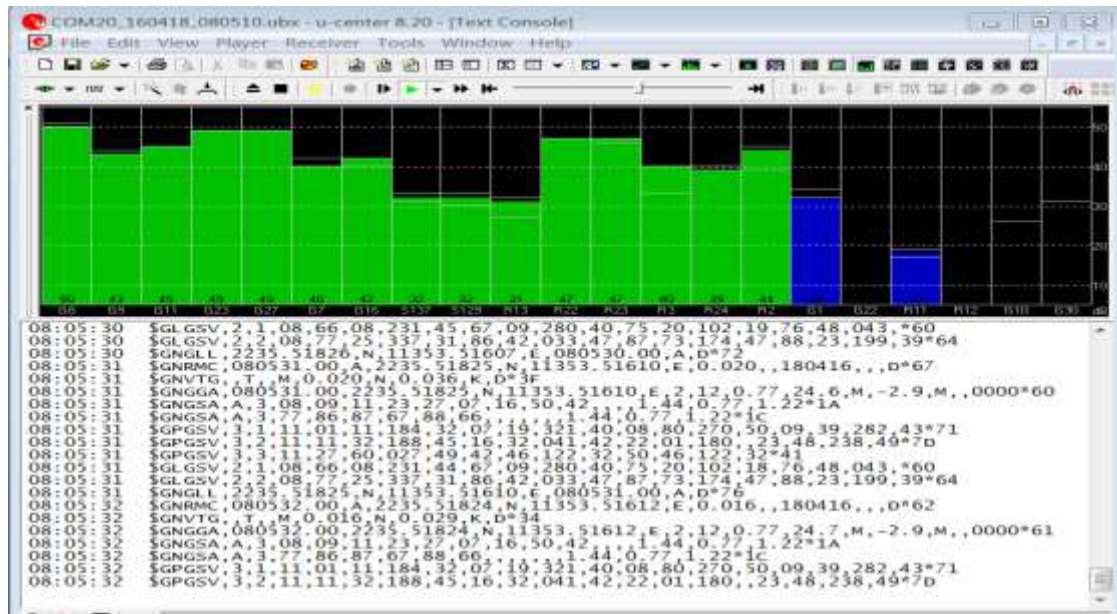
### Receiver Performance Data

<b>Receiver Type</b>	72-channel u-blox 8 engine GPS & QZSS:L1 C/A,1575.42MHz, GLONASS (GPM-808G): L1OF, 1598.0625~1605.375MHz BEIDOU (GPM-808B): B1 1561.098 MHz SBAS: WAAS, EGNOS, MSAS
<b>Horizontal Position</b>	2.5m (Autonomous)
<b>Accuracy</b>	(including SBAS & QZSS; CEP, 50% 24hr static, -130dBm, >6 SVs)
<b>Velocity Accuracy</b>	0.05 m/s (speed) <0.3(heading) (50% @30m/s)
<b>Time Pulse</b>	30ns (RMS)
<b>Signal Accuracy</b>	<60ns (99%)
<b>Time Pulse Frequency</b>	0.25 Hz ~ 10 MHz
<b>Time To First Fix</b>	Autonomous
<b>Hot start</b>	1.5 sec
<b>Cold start</b>	26 sec (50% -130dBm)
<b>Sensitivity (Autonomous)</b>	-148dBm (acquisition) -167dBm (tracking)
<b>Navigation. Update Rate</b>	Max. 10Hz, GPS & GLONASS or GPS & Beidou Max. 18Hz, GPS only Default 1Hz
<b>Max. Altitude</b>	50,000 m
<b>Max. Velocity</b>	<1,852 km/hr
<b>Protocol Support</b>	NMEA 0183 v2.3 and V4.x UART: 9600bps N,8,1; GGA, GLL, GSA, GSV, RMC, VTG, TXT
<b>SBAS Support</b>	WAAS, EGNOS, MSAS
<b>RTCM 2.3</b>	Messages 1, 2, 3, 9
<b>Dynamics</b>	<4g

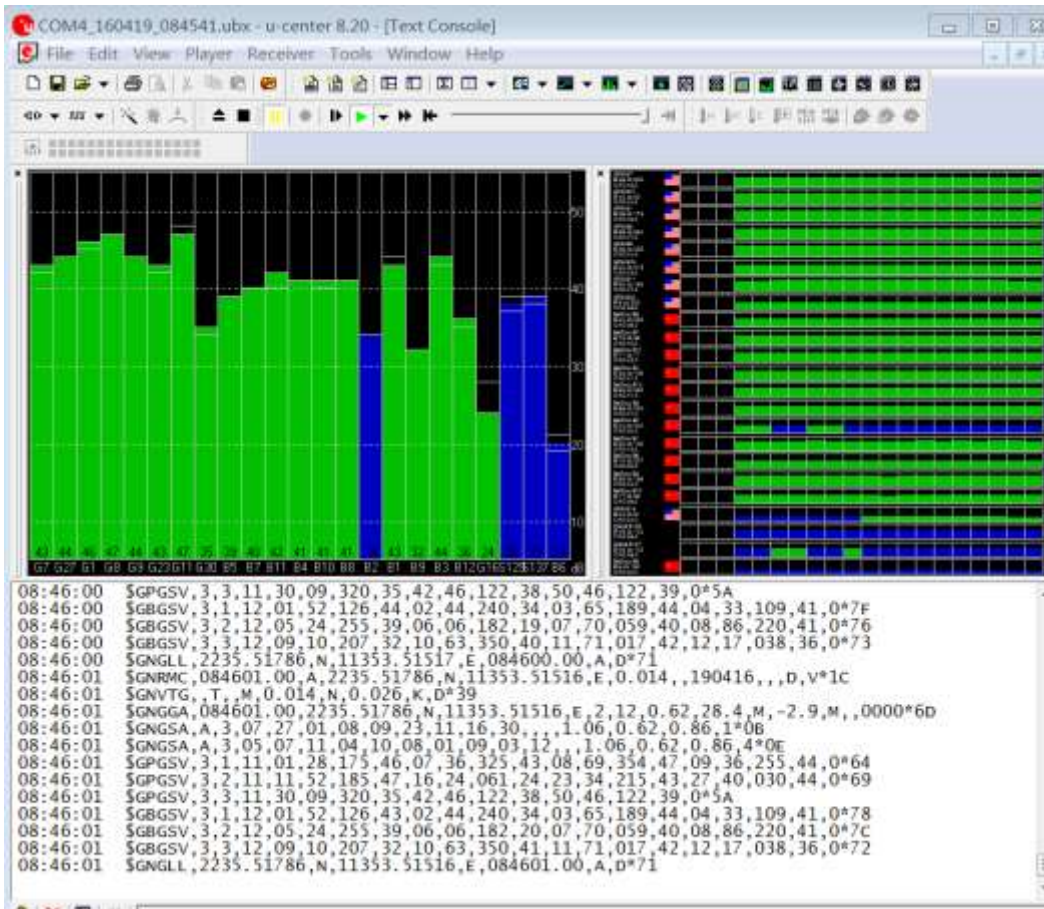
Shock

Half sine 30g/11ms

### Test data(GPS+GLONASS):



### Test data(GPS+BEI DOU):



## QMC5883 Test Data:



## PIN definition:

### Connector PIN definition:



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