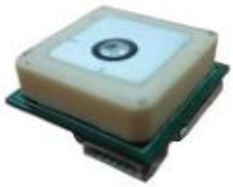
GM-717, High Performance, Compact, All-In-One USB GPS Module

RoHS Compliant





- High sensitivity+:-162dBm tracking/-148dBm acquisition
- Up to 10Hz update rate (default 1Hz)
- OMA SUPL compliant A-GPS support
- Windows **location sensor** support
- Excellent EMI protection

Overview

GM-717 is equipped with the latest **u-blox 7** low-power, high-sensitivity engine, antenna, and wire-to-board connector. The all-in-one design allows quick plug and play.

GM-717 supports either GPS/QZSS or GLONASS. It default works with GPS and QZSS.

Based on our experienced design, GM-717 provides not only excellent GPS performance but also quality and delivery assurance.

Applications

- POS / MID / UMPC / Driving Recorder
- Vehicle navigation device
- Tablet PC / Netbook PC / Notebook PC

Features

- Compact, USB GPS all-in-one module
  - 17 x 17 x 6.5 (mm) only, including antenna and connector
  - Connect to main board via a 6-pin connector
- Tiny – best solution for size demanding device
  - 15 x 15 x 4 (mm) antenna on top of PCB
  - 17 x 17 x 0.7(mm) PCB
  - 1.8 (mm) high connector under PCB
- Backup power for faster position fix.
- GNSS support: either GPS/QZSS (default) or GLONASS
- SBAS (WAAS, EGNOS, MSAS) support

Technical Specifications

Receiver Performance Data+

Receiver Type	56-channel u-blox 7 engine GPS & QZSS:L1 C/A,1575.42MHz, GLONASS:L1OF,1598.0625~1605.375MHz SBAS: WAAS, EGNOS, MSAS
Horizontal Position Accuracy	Autonomous:2.5m (GPS), 4m (GLONASS) SBAS: 2.0m (GPS) (CEP, 50%, 24-hour static, -130dBm)
Velocity Accuracy	<0.1 m/s (speed) <0.5° (heading) (50% @ 30 m/s)
Time Pulse Signal Accuracy	RMS: 30ns (GPS), 50ns (GLONASS) 99%: 60ns (GPS), 100ns (GLONASS)
Time To First Fix (TTFF) Hot start Warm start Cold start	Autonomous (All at -130dBm) 1sec (GPS), 1sec (GLONASS) 28sec (GPS), 25sec (GLONASS) 29sec (GPS), 30 sec (GLONASS)
Sensitivity, dBm (Autonomous)	Acquisition: -148 (GPS), -140 (GLONASS) Tracking: -162 (GPS), -158 (GLONASS)
Navigation. Update Rate	Max. 10Hz Default 1Hz

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Max. Altitude	50,000 m
Max. Velocity	500 m/s
Protocol Support	USB: baud (1200~115200 bps) selectable NMEA 0183 v2.3 (compatible to 3.0) GGA, GLL, GSA, GSV, RMC, VTG, TXT
Dynamics	< 4g

+ Note. According to IC Spec

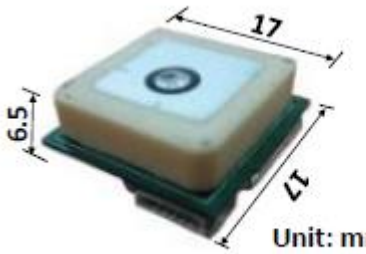
Electrical Data

Power Supply (VCC)	3.1 ~ 5.5 V
Backup power (V_BAT)	1.5 ~ 3.5 V
Power Consumption	52 mA / average acquisition 42 mA / average tracking (8SVs) 13.5uA / backup power (module disabled)
USB I/O (V)	V_{IH}: 0.7*VCC ~ VCC+0.5 V_{IL}: 0 ~ 0.2*VCC V_{OH}: >= VCC-0.4 V_{OL}<= 0.4
Digital I/O (V)	V_{IH}: 0.7*VCC~VCC+0.5, V_{IL}: 0 ~ 0.2*VCC V_{OH}: >= VCC-0.4, V_{OL}<= 0.4

Environmental Data

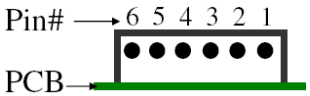
Operating temperature	-40 ~ 85℃
Storage temperature	-40 ~ 85℃

Mechanical Data – 17 x 17 x 6.5 (mm)



Unit: mm
Tolerance : ±0.25 mm

6-pin Interface (USB), pitch 0.8 mm



Pin	Name	Function	I/O
1	GND	Ground	Input
2	VCC	Power supply,	Input
3	DP	USB positive	I/O
4	DM	USB negative	I/O
5	V_BAT	Backup power (1.5 ~ 3.5V)	Input
6	PWR_CTRL	Module power control High or disconnected: power ON Low: power OFF	Input

Ordering Information

GM-717X,

X=A	GPS/QZSS standard module

*This document is subject to change without notice.

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