

GPS 10

GPS Module



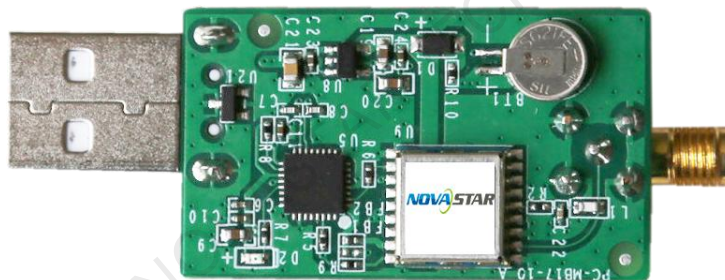
GPS10, a calibration accessory for the lamppost LED display, is developed by NovaStar, using the latest GPS high-accuracy module to support GPS/QZSS and GLONASS satellite information receiving, being set with 3m extended GPS antenna to prevent the interference from cabinet tightness and therefore making signal transmission more stable, and having the standard USB2.0 interface to make the accessory easily access into all kinds of built-in devices with the product's flexibility.

Features

- The latest high-accuracy module of U-blox which is used for design
- External antenna which can externally connect the active GPS antenna
- 3m extended GPS antenna
- Standard USB2.0 interface
- FT232 chip for USB to serial port module
- High-consistency time service
- Low power consumption and low system power consumption
- High sensitivity and high horizontal integration capability

Appearance

Front Panel



Rear Panel



Specifications

Control Interface	
Antenna interface	To connect the external GPS module antenna.
USB	To connect to the USB interface of the control card.
Overall Specifications	
Input power	4.5V to 5.25V
Overall power consumption	10mW
Operating temperature	-20°C to 60°C
Storage temperature	-40°C to 80°C
Dimension (L*W*H)	40.00*23.00*16.53mm
Weight	8g
Note	
No hot plug during normal operating of the module.	

Performance and Parameters		
Receiver type	56 Channels u-blox and 7 engine GPS/QZSS L1C/A SBAS: WAAS,EGNOS,MSAS	
Time-To-First-Fix ¹	Cold start	29s
	Warm start	18s
	Hot start	1s
	Aided starts ²	5s
Sensitivity ³	Tracking & Navigation	-161dBm
	Reacquisition	-160dBm
	Cold start	-148dBm
	Warm start	-148dBm
	Hot start	-156dBm
Horizontal position	Autonomous	2.5m

accuracy ⁴	SBAS	2.0m
Accuracy of time pulse signal	RMS	30ns
	99%	60ns
Frequency of time pulse signal	0.25Hz...10MHz (configurable)	
Max navigation update rate	10Hz	
Velocity accuracy ⁵	0.1m/s	
Heading accuracy ⁵	0.5 degrees	
Operational limits ⁶	Dynamics	≤4g
	Altitude	50,000m
	Velocity	500m/s

GLONASS Performance and Parameters

Receiver type	56 Channels u-blox and 7 engine GLONASS L1 FDMA	
Time-To-First-Fix	Cold start	30s
	Warm start	25s
	Hot start	1s
Sensitivity	Tracking & Navigation	-158dBm
	Reacquisition	-156dBm
	Cold start	-140dBm
	Warm start	-145dBm
	Hot start	-156dBm
Horizontal position accuracy	4.0m	
Accuracy of time pulse signal	RMS	50ns
	99%	100ns
Frequency of time pulse signal	0.25Hz...10MHz (configurable)	
Max navigation update rate	10Hz	

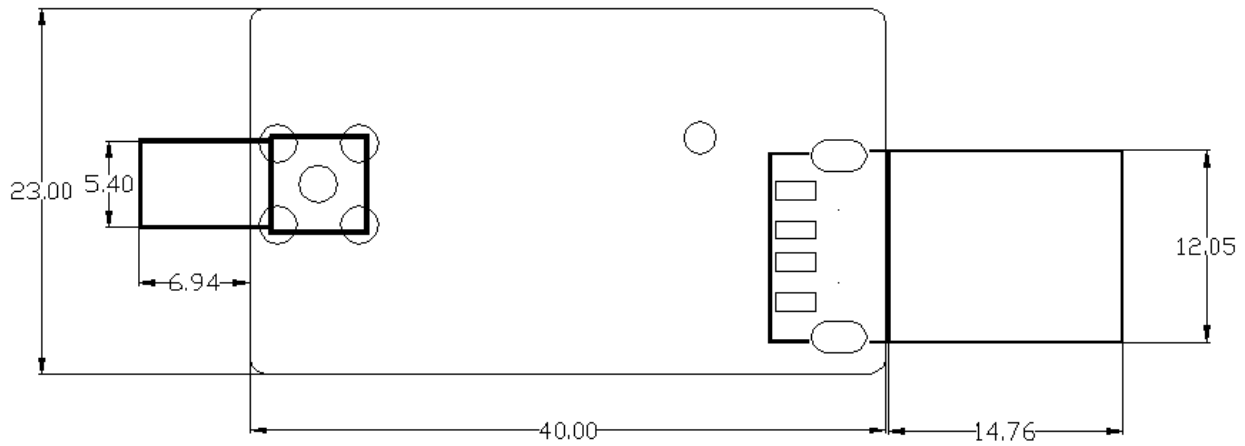
Velocity accuracy	0.1m/s	
Heading accuracy	0.5 degrees	
Operational limits	Dynamics	≤4g
	Altitude	50,000m
	Velocity	500m/s

Notes:

- ¹All satellites at -130dBm
- ²Dependent on aiding data connection speed and latency
- ³Demonstrated with a good external LNA
- ⁴ CEP, 50%, 24HOURS STATIC, -130dBm, > 6SVs
- ⁵50% @ 30m/s
- ⁶Assuming Airborne < 4g platform

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Dimensions



Dimensions of GPS10 (mm)

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