

# GLOBALSAT GPS Dongle

Hardware Data Sheet

Product No : ND-105C

Version 1.0



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Issue Date	APPR	CHECK	PREPARE
2013/11/15	Ray		Mason

# Product Description

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## Product Description

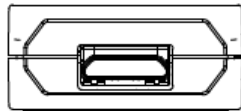
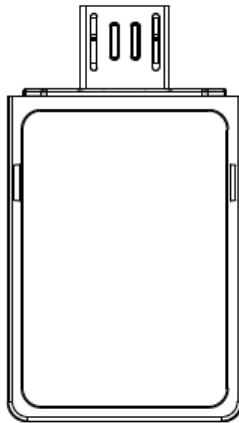
ND-105C features high GPS sensitivity, Micro USB interface, low power consumption and ultra small form factor. This product is powered by MTK GPS solution; it can provide you with superior sensitivity and performance even in urban canyon and dense foliage environment. ND-105C supports up to 210 PRN channels. With 66 search channels and 22 simultaneous tracking channels, ND-105C acquires and tracks satellites in the shortest time even at indoor signal levels. Through ND-105C's excellent low-power consumption characteristic, while using power sensitive devices, especially portable applications. ND-105C PCBA with a simple ID design is suitable for the following device accessory:

- Smart Phone
- Tablet PC
- Portable device

## Product Features

- MediaTek high performance GPS Chipset
- Very high sensitivity (Chip Tracking Sensitivity: -165 dBm)
- Extremely fast TTFF (Time To First Fix) at low signal level
- Micro USB interface.
- Built-in LNA
- Built-in GPS Antenna
- Built-in GPS status LED(Red).
- Built-in Back up Battery.
- Compact size (30.4 mm x 15.4 mm x 4.5 mm) suitable for portable application
- Very low power consumption
- Support NMEA0183 V4.0(GGA,GSA,GSV,RMC)
- Support SBAS (WASS, EGNOS, MSAS, GAGAN), QZSS
- Micro USB Supports Android & Window8 operating system.

## Product Appearance



## Electrical Specification

### Absolute Maximums Ratings

Parameter	Min.	Typ.	Max.	Conditions	Unit
<b>POWER Supply</b>					
Main power supply(VCC)	4.5	5.0	5.5		V
power consumption		35			mA
Back up Battery consumption	6.7	6.9	7.2		uA
<b>RF</b>					
Operating Frequency		1.575			Ghz

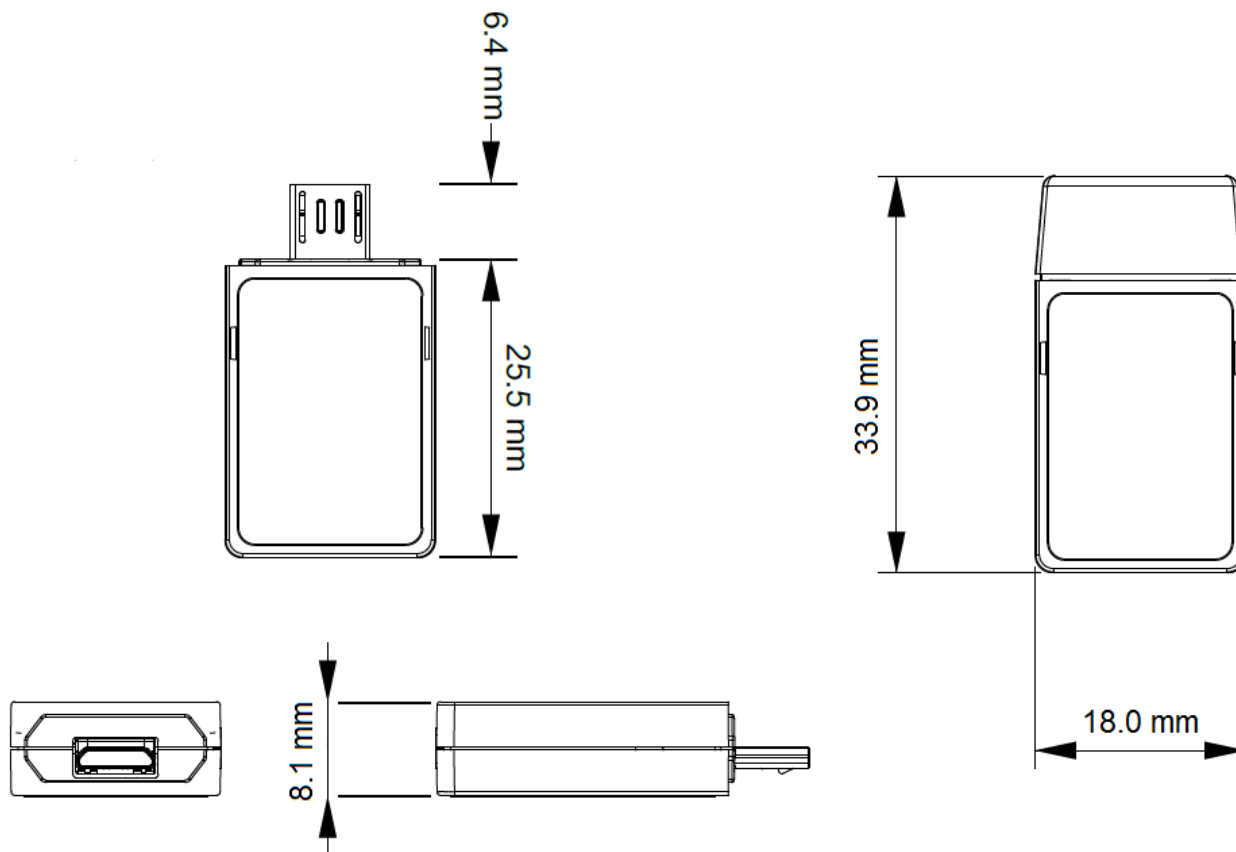
### Environmental Characteristics

Parameter	Min	Typ	Max	Unit
Humidity Range	5		95	% non-condensing
Operation Temperature	-20	25	60	°C
Storage Temperature	-40		85	°C

## Receiver Performance

Sensitivity	Chipset Tracking :	-165dBm
	Chipset Autonomous acquisition :	-148 dBm
Time-To-First-Fix	Cold Start – Autonomous	< 35s
	Warm Start – Autonomous	< 35s
	Hot Start – Autonomous	< 1s
Horizontal Position Accuracy	Autonomous	< 3m (2D RMS)
	SBAS	<2.0m
Velocity Accuracy	Speed	< 0.01 m/s
	Heading	< 0.01 degrees
Reacquisition	0.1 second, average	
NMEA Update Rate	1 Hz(GGA,GSA,GSV,RMC)	
Maximum Altitude	< 18,000 meter	
Maximum Velocity	< 515 meter/ second	
Maximum Acceleration	< 4G	

### Physical Characteristic



Type	Micro USB GPS Dongle
Dimensions	30.4 mm * 15.4 mm * 4.5 mm ±0.2mm



## RoHS / Lead Free Compliance

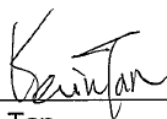
Dear Sales:

This letter is intended to answer questions you may come across regarding the compliance of Globalsat WorldCom Corporation products with the following European Directive 2011/65/EU ( RoHS ) :

- Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment ( RoHS ) .

This Directive aim is to avoid or limit the use of hazardous material compliant and meet the Standard by July.16,2011 of less than "0.1% by weight per homogeneous material for lead,hexavalent chromium,mercury, PBB and PBDE and 0.01% by weight and per homogeneous material for cadmium".

Globalsat has incorporated the requirement of 2011/65/EU into the product / technology development roadmaps and is committed to make lead free / RoHS fully compliant product available for shipment by July.16,2011.



Kevin Tan  
Quality Assurance Manager



Prince Cheng  
Chief Executive Officer ( CEO )

### Reversion history

Reversion	Date	Name	Status / Comments
V1.0	20131115	Mason	Initial Version