

LOCOSYS



The Multi-GNSS Generation

Navigated by innovation and quality excellence,
LOCOSYS is expanding its GNSS territory
from land to air.



www.locosystech.com

GPS/GNSS Module							
Global Navigation Satellite System	Interface	Input Voltage	Power(mA)	V _B (uA)	Operating Temp(°C)	Dimension(mm)	
CSR (SiRF IV)							
S4-0606	★ ★	UART/I ² C/SPI	1.71V ~ 1.89V	30mA	8uA	-40 ~ 85	6 x 6 x 1.2 mm
S4-1513-2R	★ ★	UART	3.0V ~ 3.6V	33mA	660uA	-40 ~ 85	15 x 13 x 2.2 mm
S4-1612-2R	★ ★	UART	3.0V ~ 3.6V	33mA	660uA	-40 ~ 85	16 x 12.2 x 2.2 mm
S4-1613-2R	★ ★	UART	3.0V ~ 3.6V	33mA	660uA	-40 ~ 85	15.9 x 13.1 x 2.2 mm
HED							
HD-1010	★ ★	UART	3.0V ~ 3.6V	29.5mA	13uA	-40 ~ 85	10.1 x 9.7 x 2.0 mm
HD-1612	★ ★	UART	3.0V ~ 3.6V	29.5mA	13uA	-40 ~ 85	16 x 12.2 x 2.2 mm
MTK							
MC-1010-2RE	★ ★	UART	3.0V ~ 4.3V	17mA	6uA	-40 ~ 85	10.1 x 9.7 x 2.0 mm
MC-1108-2RE	★ ★	UART	3.0V ~ 4.3V	17mA	6uA	-40 ~ 85	11.4 x 8.8 x 2.0 mm
MC-1513-2RE	★ ★	UART	3.0V ~ 4.3V	12mA	6uA	-40 ~ 85	15 x 13 x 2.2 mm
MC-1612-2RE	★ ★	UART	3.0V ~ 4.3V	18mA	6uA	-40 ~ 85	16 x 12.2 x 2.2 mm
MC-1613-2RE	★ ★	UART	3.0V ~ 4.3V	18mA	6uA	-40 ~ 85	15.9 x 13.1 x 2.2 mm
CSR (SiRF IV)							
S4-1513	★ ★	UART	1.71V ~ 1.89V	27.5mA	660uA	-40 ~ 85	15 x 13 x 2.2 mm
S4-1513-2E	★ ★	UART	3.0V ~ 3.6V	33mA	660uA	-40 ~ 85	15 x 13 x 2.2 mm
S4-1612-2E	★ ★	UART	3.0V ~ 3.6V	33mA	660uA	-40 ~ 85	16 x 12.2 x 2.2 mm
S4-1613-2E	★ ★	UART	3.0V ~ 3.6V	33mA	660uA	-40 ~ 85	15.9 x 13.1 x 2.2 mm
MTK							
MC-1010	★ ★	UART	3.0V ~ 4.3V	17mA	6uA	-40 ~ 85	10.1 x 9.7 x 2.0 mm
MC-1108	★ ★	UART	3.0V ~ 4.3V	17mA	6uA	-40 ~ 85	11.4 x 8.8 x 2.0 mm
MC-1513	★ ★	UART/I ² C	3.0V ~ 4.3V	12mA	6uA	-40 ~ 85	15 x 13 x 2.2 mm
MC-1612	★ ★	UART	3.0V ~ 4.3V	18mA	6uA	-40 ~ 85	16 x 12.2 x 2.2 mm
MC-1613	★ ★	UART	3.0V ~ 4.3V	18mA	6uA	-40 ~ 85	15.9 x 13.1 x 2.2 mm
MC-1722	★ ★	UART	3.0V ~ 4.3V	18mA	6uA	-40 ~ 85	17 x 22.4 x 2.2 mm
CSR (SiRF V)							
S5-0707-2R	★ ★ ★ ★	UART	3.0V ~ 3.6V	50mA	-	-40 ~ 85	7.15 x 7.15 x 2.0 mm
S5-1010-2R	★ ★ ★ ★	UART	3.0V ~ 3.6V	20mA	35uA	-40 ~ 85	10.1 x 9.7 x 2.0 mm
CSR (SiRF V) -B: GPS+BeiDou ; -G: GPS+GLONASS							
S5-1612-2E	★ ★ ★ ★	UART	3.0V ~ 3.6V	20mA	35uA	-40 ~ 85	16 x 12.2 x 2.2 mm
HED							
HD-1010-B-G	★ ★ ★ ★ ★	UART	3.0V ~ 3.6V	29.5mA	13uA	-40 ~ 85	10.1 x 9.7 x 2.0 mm
HD-1108-B-G	★ ★ ★ ★ ★	UART	3.0V ~ 3.6V	29.5mA	13uA	-40 ~ 85	11.4 x 8.8 x 2.0 mm
HD-1513-B-G	★ ★ ★ ★ ★	UART	3.0V ~ 3.6V	29.5mA	13uA	-40 ~ 85	15 x 13 x 2.2 mm
HD-1612-B-G	★ ★ ★ ★ ★	UART	3.0V ~ 3.6V	29.5mA	13uA	-40 ~ 85	16 x 12.2 x 2.2 mm
HD-1613-B-G	★ ★ ★ ★ ★	UART	3.0V ~ 3.6V	29.5mA	13uA	-40 ~ 85	15.9 x 13.1 x 2.2 mm
HD-1722-B-G	★ ★ ★ ★ ★	UART	3.0V ~ 3.6V	29.5mA	13uA	-40 ~ 85	17 x 22.4 x 2.2 mm
MTK							
MC-1010-B-G	★ ★ ★ ★ ★	UART	3.0V ~ 4.3V	20mA	7uA	-40 ~ 85	10.1 x 9.7 x 2.0 mm
MC-1108-B-G	★ ★ ★ ★ ★	UART	3.0V ~ 4.3V	20mA	7uA	-40 ~ 85	11.4 x 8.8 x 2.0 mm
MC-1513-B-G	★ ★ ★ ★ ★	UART/I ² C	3.0V ~ 4.3V	16mA	7uA	-40 ~ 85	15 x 13 x 2.2 mm
MC-1612-B-G	★ ★ ★ ★ ★	UART	3.0V ~ 4.3V	25mA	7uA	-40 ~ 85	16 x 12.2 x 2.2 mm
MC-1612-B2/G2	★ ★ ★ ★ ★	UART	3.0V ~ 4.3V	25mA	4uA	-40 ~ 85	16 x 12.2 x 2.2 mm
MC-1613-B-G	★ ★ ★ ★ ★	UART	3.0V ~ 4.3V	25mA	7uA	-40 ~ 85	15.9 x 13.1 x 2.2 mm
MC-1722-B-G	★ ★ ★ ★ ★	UART	3.0V ~ 4.3V	25mA	7uA	-40 ~ 85	17 x 22.4 x 2.2 mm
STMicro							
ST-1612-G	★ ★ ★ ★	UART/CAN BUS/USB	3.0V ~ 3.6V	50mA	69uA	-40 ~ 85	16 x 12.2 x 2.2 mm
ST-1612-B2/G2	★ ★ ★ ★ ★	UART/CAN BUS/USB	3.0V ~ 4.3V	TBD	TBD	-40 ~ 85	16 x 12.2 x 2.2 mm
ST-1612-DB/-DG	★ ★ ★ ★ ★	UART/CAN BUS/USB	3.0V ~ 4.3V	TBD	TBD	-40 ~ 85	16 x 12.2 x 2.2 mm

GPS/GNSS ModuleGlobal
Navigation
Satellite System

Interface

Input Voltage

Power(mA)

VB(uA)

Operating Temp(°C)

Dimension(mm)



-B: GPS+BeiDou ; -G: GPS+GLONASS

CSR

LS26020/21-2R	★ ★	USB	3.0V ~ 3.6V	42.5mA	660uA	-40 ~ 85	
LS26020/21-E	★ ★	USB	3.0V ~ 3.6V	48mA	660uA	-40 ~ 85	
LS26020/21-G	★ ★ ★ ★	USB	3.0V ~ 3.6V	35mA	35uA	-40 ~ 85	PCIe Full/Half Mini Card
HED							
LS26080/81	★ ★	USB	3.0V ~ 3.6V	45.5mA	13uA	-40 ~ 85	
LS26080/81-B/-G	★ ★ ★ ★ ★	USB	3.0V ~ 3.6V	45.5mA	13uA	-40 ~ 85	PCIe Full/Half Mini Card
MTK							
LS26030/31-2RE	★ ★	USB	3.0V ~ 3.6V	35mA	6uA	-40 ~ 85	
LS26030/31-B/-G	★ ★ ★ ★ ★	USB	3.0V ~ 3.6V	40mA	7uA	-40 ~ 85	PCIe Full/Half Mini Card
LS26030/31	★ ★	USB	3.0V ~ 3.6V	35mA	6uA	-40 ~ 85	

Timing Module

ST-1612-T	★ ★ ★ ★	UART/CAN BUS/USB	3.0V ~ 3.6V	38mA	69uA	-40 ~ 85	16 x 12.2 x 2.2 mm
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GPS/GNSS Smart AntennaGlobal
Navigation
Satellite System

Interface

Input Voltage

Power(mA)

Operating Temp(°C)

Dimension(mm)

Antenna Size(mm)

Connector

-B: GPS+BeiDou ; -G: GPS+GLONASS

CSR (SiRF IV)

LS20220-2R		USB	4.75V ~ 5.25V	22mA			
LS20221-2R	ROM	★ ★	UART	3.0V ~ 4.3V	13mA		
LS20222-2R			RS232	4.0V ~ 6.0V	19mA	-40 ~ 85	30 x 30 x 8 mm
LS2022G-2R			UART/RS232	3.0V ~ 4.3V/4.0V ~ 6.0V	24mA/27mA		
LS20220-2E			USB	4.75V ~ 5.25V	34mA		
LS20221-2E	Flash	★ ★	UART	3.0V ~ 4.3V	16mA		
LS20222-2E			RS232	4.0V ~ 6.0V	22mA	-40 ~ 85	30 x 30 x 8 mm
LS2022G-2E			UART/RS232	3.0V ~ 4.3V/4.0V ~ 6.0V	27mA/30mA		

HED

LS20080		USB	4.75V ~ 5.25V	47.5mA			
LS20081	ROM	★ ★	UART	3.0V ~ 3.6V	30.5mA	-40 ~ 85	30 x 30 x 8 mm
LS20082			RS232	4.0V ~ 6.0V	37.5mA		25 x 25 x 4 mm
LS2008G			UART/RS232	3.0V ~ 3.6V/4.0V ~ 6.0V	35.5mA/38.5mA		

LS2008G-B/-G

LS2008G-B/-G	Flash	★ ★ ★ ★ ★	UART/RS232	3.0V ~ 3.6V/4.0V ~ 6.0V	35.5mA/38.5mA	-40 ~ 85	30 x 30 x 8 mm
LS2008G-B2/-G2							

MTK-MEMS Integrated

LS2013I(R)	Flash	★ ★	UART&I ² C	3.8V ~ 5.5V	28mA		
LS2013I(F)-G		★ ★ ★ ★	UART	3.8V ~ 5.5V	29mA	-40 ~ 85	30 x 30 x 8 mm

MTK

LS20030-2RE		USB	4.75V ~ 5.25V	30mA			
LS20031-2RE	ROM	★ ★	UART	3.0V ~ 4.3V	12mA		
LS20032-2RE			RS232	4.0V ~ 6.0V	18mA	-40 ~ 85	30 x 30 x 8 mm
LS2003G-2RE			UART/RS232	3.0V ~ 4.3V/4.0V ~ 6.0V	23mA/26mA		25 x 25 x 4 mm

LS20030

LS20031	Flash	★ ★	USB	4.75V ~ 5.25V	22mA		
LS20032			UART	3.0V ~ 4.3V	13mA	-40 ~ 85	30 x 30 x 8 mm
LS2003G			RS232	4.0V ~ 6.0V	19mA		25 x 25 x 4 mm
LS20030-2RE			UART/RS232	3.0V ~ 4.3V/4.0V ~ 6.0V	24mA/27mA		
LS20031-2RE							

LS20030-B/-G

LS20031-B/-G		USB	4.75V ~ 5.25V	34mA			
LS20032-B/-G	Flash	★ ★ ★ ★ ★	UART	3.0V ~ 4.3V	16mA		
LS2003G-B/-G			RS232	4.0V ~ 6.0V	22mA	-40 ~ 85	30 x 30 x 8 mm
LS2003G-B2/-G2			UART/RS232	3.0V ~ 4.3V/4.0V ~ 6.0V	27mA/31mA		25 x 25 x 4 mm
LS2003G-B2/-G2							

STMicro

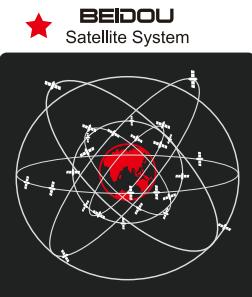
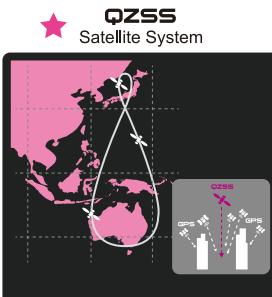
LS2009G-G	Flash	★ ★ ★ ★	UART/RS232	3.0V ~ 4.3V/4.0V ~ 6.0V	52mA/56mA	-40 ~ 85	30 x 30 x 8 mm
LS2009G-B2/-G2		★ ★ ★ ★ ★					

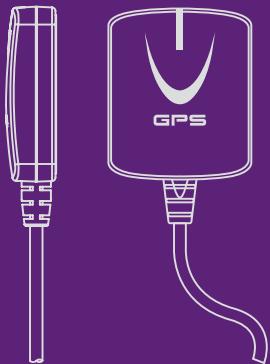
Sample image

GPS/GNSS Smart Antenna		Global Navigation Satellite System									
Model	Base	ROM	Flash	UART	3.0V ~ 3.6V	29.5mA	-40 ~ 85	15.5 x 15.5 x 6.6 mm	15 x 15 x 4 mm	SMT Pad	
HED		-B: GPS+BeiDou ; -G: GPS+GLONASS									
	LS2008C	ROM	★ ★	UART	3.0V ~ 3.6V	29.5mA	-40 ~ 85	15.5 x 15.5 x 6.6 mm	15 x 15 x 4 mm	SMT Pad	
	LS2008C-B/-G	Flash	★ ★ ★ ★ ★	UART	3.0V ~ 3.6V	29.5mA	-40 ~ 85	15.5 x 15.5 x 6.6 mm	15 x 15 x 4 mm	SMT Pad	
MTK		LS2003C-2RE	ROM	★ ★	UART	3.0V ~ 4.3V	17mA	-40 ~ 85	15.5 x 15.5 x 6.6 mm	15 x 15 x 4 mm	SMT Pad
	LS2003C-B/-G	Flash	★ ★	UART	3.0V ~ 4.3V	20mA	-40 ~ 85	15.5 x 15.5 x 6.6 mm	15 x 15 x 4 mm	SMT Pad	
HED		LS2008D	ROM	★ ★	UART	3.0V ~ 3.6V	29.5mA	-40 ~ 85	21 x 17 x 7.2 mm	15 x 15 x 4 mm	1.0mm Pitch Connector
	LS2008D-B/-G	Flash	★ ★ ★ ★ ★	UART	3.0V ~ 3.6V	29.5mA	-40 ~ 85	21 x 17 x 7.2 mm	15 x 15 x 4 mm	1.0mm Pitch Connector	
MTK		LS2003D-2RE	ROM	★ ★	UART	3.0V ~ 4.3V	17mA	-40 ~ 85	21 x 17 x 7.2 mm	15 x 15 x 4 mm	1.0mm Pitch Connector
	LS2003D	Flash	★ ★	UART	3.0V ~ 4.3V	17mA	-40 ~ 85	21 x 17 x 7.2 mm	15 x 15 x 4 mm	1.0mm Pitch Connector	
LS2003D-B/-G	Flash	★ ★ ★ ★ ★	UART	3.0V ~ 4.3V	20mA	-40 ~ 85	21 x 17 x 7.2 mm	15 x 15 x 4 mm	1.0mm Pitch Connector		
MTK		LS2003E-2RE	ROM	★ ★	UART	3.0V ~ 4.3V	17mA	-40 ~ 85	22 x 22 x 7.5mm	18 x 18 x 4 mm	1.0mm Pitch Connector
	LS2003E	Flash	★ ★	UART	3.0V ~ 4.3V	17mA	-40 ~ 85	22 x 22 x 7.5mm	18 x 18 x 4 mm	1.0mm Pitch Connector	
LS2003E-B/-G	Flash	★ ★ ★ ★ ★	UART	3.0V ~ 4.3V	20mA	-40 ~ 85	22 x 22 x 7.5mm	18 x 18 x 4 mm	1.0mm Pitch Connector		
MTK		LS2003H-2RE	ROM	★ ★	UART	3.0V ~ 4.3V	21mA	-40 ~ 85	14 x 9.6 x 1.7mm	3.23 x 1.66 x 0.45 mm	SMT Pad
	LS2003H	Flash	★ ★	UART	3.0V ~ 4.3V	21mA	-40 ~ 85	14 x 9.6 x 1.7mm	3.23 x 1.66 x 0.45 mm	SMT Pad	
LS2003H-B/-G	Flash	★ ★ ★ ★ ★	UART	3.0V ~ 4.3V	28mA	-40 ~ 85	14 x 9.6 x 1.7mm	3.23 x 1.66 x 0.45 mm	SMT Pad		
CSR (SIRF V)		LS2022A	Flash	★ ★	UART	1.71V ~ 1.89V	34mA	-40 ~ 85	17 x 6 x 5.85 mm	16 x 6 x 4 mm	0.5mm Pitch FPC
	LS2022A	Flash	★ ★	UART	1.71V ~ 1.89V	34mA	-40 ~ 85	17 x 6 x 5.85 mm	16 x 6 x 4 mm	0.5mm Pitch FPC	
CSR (SIRF V)		LS20229-A	Flash	★ ★	UART	1.71V ~ 1.89V	34mA	-40 ~ 85	12x12x5.4 mm	12 x 12 x 3.5 mm	0.5mm Pitch FPC
	LS20229-A	Flash	★ ★	UART	1.71V ~ 1.89V	34mA	-40 ~ 85	12x12x5.4 mm	12 x 12 x 3.5 mm	0.5mm Pitch FPC	

Specifications are subject to change without notice.

The GNSS Generation » ★ ★ ★ ★ ★





CSR

LS2302x-2R/-2E/-G

HED

LS2308x-/B/-G
LS2308x-B2/-G2

MTK

LS2303x-/2R-/B/-G
LS2303x-B2/-G2

STMicro

LS2309x-G
LS2309x-B2/-G2

LOCOSYS GNSS Mouse Series

LS230xx series products are complete GNSS receivers based on the proven technology found in LOCOSYS GNSS module with CSR/HED/MTK/STMicro different chip solutions. The GNSS mouse will acquire a lot of satellites at a time while providing fast Time-To-First-Fix, one-second navigation update and low power consumption. It can provide you with superior sensitivity and performance even in urban canyon and dense foliage environment.



LOCOSYS GNSS Mouse Series



■ USB



■ PS2



■ RJ-11



47344





LOCOSYS

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LOCOSYS



Tracking every step you make & knowing how fast you are

GW-60

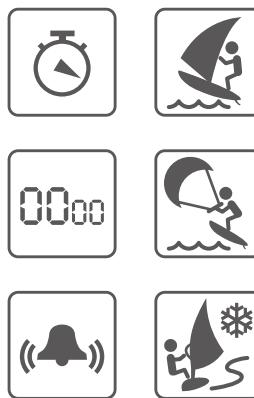
GW-60



SPECIFICATIONS

- Size
- Weight
- Display
- MCU
- GPS
- BLE
- Battery type
- Waterproof
- Memory
- Language
- Connection

49(Φ) * 14.5 (H) mm
57 g
LCM 128X128 FSTN Black/White
STM32 Cortex®-M3
LOCOSYS GPS
Optional
Rechargeable lithium-ion battery 250 mAh
50 m / 5 ATM
Flash memory for 1,000,000 GPS points
English
USB charging clip



FEATURES

- ◆ Top 10 speed smart record
- ◆ Intelligent session speed report
- ◆ 10-seconds average speed display
- ◆ Multi-functional push button operation
- ◆ High sensitivity GPS performance
- ◆ Rechargeable lithium-ion battery
- ◆ Time mode (Alarm, Timer, Stopwatch)
- ◆ Google Earth KML/GPX format support
- ◆ Built in flash memory to store 1,000,000 GPS logged points
- ◆ Waterproof 50 m / 5 ATM

SOFTWARE

- Clock
- Alarm
- Stopwatch
- Kitchen timer
- Data logger

Speed

Auto sync with GPS time
Buzzer and vibrator
Yes
Buzzer and vibrator
Data logging rate: 1Hz, 5Hz, or "smart" rate
Log record includes: UTC time, position, altitude, Doppler Speed over ground, Doppler vertical speed , satellites used, Standard Deviation of Speed (SDOS)
Speed sample resolution: 1 cm/s
SDOS resolution: 1 cm/s
Measured speed range 0-1000 km/h
Typical accuracy of 10s average speed measurement: ~3 cm/s, 99.7% certainty
Accuracy of specific measurement can be determined from SDOS of speed samples used to compute average speed.

LOCOSYS

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47344

LOCOSYS



GNSS



GSM / GPRS



Bluetooth



The World's Smallest GNSS, GSM/GPRS, Bluetooth Module

GGB-1916

LOCOSYS
www.locosystech.com

ALL IN ONE SOLUTION

GGB-1916

The World's Smallest GNSS, GSM/GPRS, Bluetooth Module



19 x 16 x 1.9 mm

- > GGB-1916 module is a versatile module that integrates GNSS, 2.5G GSM/GPRS and classic Bluetooth in a miniature QFN (Quad Flat No leads) form factor. Its built-in highly integrated power management units and efficient DC/DC converters make not only switch individual features of the power by software commands but also perform brilliant low power consumption.

All parts of RF functions are included, such as the transceiver and power amplifier of GSM, band pass filter of Bluetooth as well as SAW filter and LNA of GNSS. No abstruse RF knowledge is required. Just connect antennas to it. Besides, all functions of GNSS, A-GNSS, GSM and Bluetooth are software controlled via single UART port. These ease the use, shorten the development time and make the fast time to market.

Product Features

GNSS Feature	Specifications are subject to change without notice.
GPS, GALILEO, QZSS	L1 1575.42MHz, C/A code
GLONASS	L1 1598.0625MHz ~ 1605.375MHz, C/A code
SBAS	WAAS, EGNOS, MSAS, SDCM, GAGAN <ul style="list-style-type: none">● EPO (Extended Prediction Orbit) data service● EASY: Embedded Assist System which accelerates TTFF by predicting satellite navigation messages from received ephemeris.
A-GNSS	
Channels	Support 99 channels (33 tracking, 99 acquisition)
Update rate	1 Hz default, up to 10 Hz
Sensitivity	<ul style="list-style-type: none">● Tracking: up to -165 dBm● Acquisition: up to -148 dBm
Antenna	Passive or active antenna support
GSM/GPRS Feature	
Frequency bands	Quad-band GSM 850/E-GSM 900/DCS 1800/PCS 1900 <ul style="list-style-type: none">● Class 4 (2 W) for GSM 850 and E-GSM 900● Class 1 (1 W) for DCS 1800 and PCS 1900
Output power	
GPRS connectivity	GPRS multi-slot class 12
Audio	Analog interface. Integrated maximum 0.8W high power class AB speaker amplifier.
SIM interface	Support SIM card: 1.8V, 3.0V
SMS	Text and PDU mode
Bluetooth Feature	
Output power	Class 1 (1 W)
version	Bluetooth specification 3.0



About

LOCOSYS

Founded in 2006, LOCOSYS is a R&D focused company with a very strong technical team as its backbone constantly propelling it forward as a leader in the GPS/GNSS market. All team members are highly experienced and have been engaged in the field of electronics, navigational communications and GPS related applications for many years. Our design capabilities and technical expertise in developing superior GPS products/modules keep us at the forefront of the GPS/GNSS market. LOCOSYS also provides GPS/GNSS related end-products and all are manufactured by ISO/TS 16949 certificated production line in Taiwan. Our numerous years of experience in the GPS market, outstanding product design capabilities, high-quality products, skillful technical service and worldwide network are our biggest assets.



47344

www.locosystech.com

LOCOSYS

Complete, Innovative , High-Performance GNSS Solutions

HD Series



HD-1612-GA/BA

GNSS Module



16 x 12.2 x 2.2 mm

HD-1010-GA/BA

GNSS Module



10.1 x 9.7 x 2.2 mm

SPECIFICATIONS

- Chip
- Frequency

- Channels
- Update rate
- Sensitivity

- Acquisition Time

- Position Accuracy
- Max. Altitude
- Max. Velocity
- Protocol Support

HD8020

GPS, GALILEO, QZSS: L1 1575.42MHz, C/A code

GLONASS : L1 1598.0625MHz, C/A code

BEIDOU: B1 1561.098MHz, C/A code

[HD-1612-GA / HD-1010-GA](#)

[HD-1612-BA / HD-1010-BA](#)

Support 72 channels

1Hz default, up to 20Hz.

Tracking

-160 dBm up to -161dBm (with external LNA)

Cold start

-146.5 dBm up to -148 dBm (with external LNA)

Hot start (Open Sky)

< 1s (typical)

Cold Start (Open Sky)

28s (typical)

Autonomous

2.5m CEP

< 18,000 m

< 515 m/s

NMEA 0183 ver 4.0

9600bps, 8 data bits, no parity, 1 stop bits (default)

1Hz: GGA, GLL, GSA, GSV, RMC, and VTG

FEATURES

- ◆ HED high sensitivity solution
- ◆ Support GPS, GLONASS, GALILEO ,QZSS and BEIDOU
- ◆ Capable of SBAS (WAAS, EGNOS, MSAS, GAGAN, SDCM)
- ◆ Support 72-channel GNSS
- ◆ Fast TTFF at low signal level
- ◆ Support 1PPS synchronize with NMEA output
- ◆ Built-in DC/DC converter to save power
- ◆ Built-in LNA and SAW filter
- ◆ Up to 20 Hz update rate
- ◆ Supported antenna short circuit detection
- ◆ Support AGPS
- ◆ SMD type; RoHS compliant
- ◆ ISO/TS 16949 quality control

LOCOSYS

20F.-13, No.79, Sec. 1, Xintai 5th Rd.
Xizhi Dist., New Taipei City 22101
Taiwan R.O.C.

Tel: 886-2-8698-3698
Fax: 886-2-8698-3699
Mail: info@locosystech.com

www.locosystech.com



LOCOSYS

RTK High Precision GNSS Module for Automotive/Industrial applications



MC-1612A-B2/G2

MC-1612A-B2/G2

GNSS Module



16 x 12.2 x 2.2 mm

SPECIFICATIONS

- Chip
- Frequency
- Update rate
- Sensitivity
- Acquisition Time
- Position Accuracy
- Max. Altitude
- Max. Velocity
- Protocol Support

HIGHLIGHTS

- ◆ Base on MediaTek AEC-Q100 certified chipset for Automotive Grade
- ◆ Capable of SBAS (WAAS, EGNOS, MSAS, GAGAN)
- ◆ Low power consumption
- ◆ Fast TTFF at low signal level
- ◆ Built-in 12 multi-tone active interference canceller
- ◆ Up to 10 Hz update rate
- ◆ ±10ns high accuracy time pulse (1PPS)
- ◆ Indoor and outdoor multi-path detection and compensation
- ◆ IATF 16949 quality control
- ◆ Superior smart power management for different application
- ◆ Advanced jamming and spoofing detection
- ◆ Support Qianxun SI Network (支持千寻地面增强系统)



MediaTek MT3303

GPS, GALILEO, QZSS: L1 1575.42MHz, C/A code

MC-1612A-B2

BEIDOU: B1 1561.098MHz, C code

MC-1612A-G2

GLONASS : L1 1598.0625MHz, C/A code

1Hz default, up to 10Hz.

Tracking up to -165dBm

Cold start up to -148dBm

Hot start (Open Sky) < 2s

Hot start (Indoor) < 30s (typical)

Cold Start (Open Sky) 31s (typical) without AGPS

< 15s (typical) with AGPS (hybrid ephemeris prediction)

Autonomous / SBAS 2.5m CEP / 2.5m (depends on accuracy of correction data)

< 18,000 m, up to 50,000m by request

< 515 m/s

NMEA 0183 ver 4.10 9600 bps⁽¹⁾, 8 data bits, no parity, 1 stop bits (default)

1Hz: GGA, GLL, GSA, GSV, RMC, VTG

Real-time Differential Correction RTCM SC-104 v2.x message types 1,2,3, and 9

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47344

LOCOSYS



Automotive Dead Reckoning Technology

ST-1612-DB/DG

GNSS Module

ST-1612-DB/DG

GNSS Module



16 x 12.2 x 2.2 mm

HIGHLIGHTS

- ◆ Base on ST TESEO III Engine Chip
- ◆ Fully Automotive Dead Reckoning
- ◆ Supported Odometer and CAN bus input
- ◆ Integrated 3D Gyro and 3D accelerometer
- ◆ Multi- GNSS with triple constellation tracking
- ◆ Operating Temperature ranges from -40 to 85°C
- ◆ LOCOSYS ISO/TS16949 certificated production line



SPECIFICATIONS

- Chip
- Frequency
- Channels
- Update rate
- Sensitivity
- Acquisition Time
- Position Accuracy
- Max. Altitude
- Max. Velocity
- Protocol Support

STA8090 series

GPS, GALILEO, QZSS: L1 1575.42MHz, C/A code

BeiDou: B1 1561.098MHz, C code

GLONASS : L1 1598.0625MHz, C/A code

Support 48 channels

1Hz default, up to 10Hz.

Tracking

Cold start

Cold Start (Open Sky)

Autonomous

SBAS

< 18,000 m

< 515 m/s

NMEA 0183 ver 3.01

Real-time Differential Correction

ST-1612-DB

ST-1612-DG

up to -161dBm (with external LNA)

up to -147dBm (with external LNA)

37s (typical)

2m CEP

1.8m (depends on accuracy of correction data).

115200 bps(1), 8 data bits, no parity, 1 stop bits (default)

1Hz: GGA, GLL, GSA, GSV, RMC, VTG

RTCM SC-104 v2.x message types 1 and 9