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1 Introduction:

SDG-812 is a GPS with Bluetooth interface and an integrated built-in memory, which provides an impressive data capacity. SDG-812 is not only a GPS receiver, but also a SD memory card. You can easily organize, store, and share files or documents.

The dimension of SDG-812 is **the smallest one in the market**, you can easily bring it with your handheld device without occupying much space, and SDG-812 equipped with helix Antenna, you can complete the GPS fix in your car either at front seat or back seat easily.

It also allow for tracking signals and large map data according to the mapping software usage. It's sleek and stylish design of look can go with any kind of the Pocket PC. With the smallest dimension and light and handy appearance, it is convenient for you to put it in pocket and bring it to anywhere you go.

Just plug it into your Pocket PC, and use it to receive the GPS signal right away! Its cylindrical antenna can receive the signal from all directions by 360 degree. It satisfies a wide variety of applications, including car navigation, personal touring navigation or tracking and even marine navigation purpose.

With our professional manufacturing technology along with the cutting edge, SiRF Star III chipset, this receiver has provided higher sensitivity, lower power usage and much more rapid time-to-fix.

1-1 Feature

- SiRF Star III high performance and low power consumption chipset
- Built-in high sensitivity GPS antenna
- LED to show GPS fix or not fix
- Built-in super capacitor to receive system data for rapid satellite acquisition
- Bluetooth interface
- Operating platform: Windows CE , Windows mobile ,Windows XP, Symbian , Linux , Palm and Mac

1-2 LED Function

GPS Status LED(Blue)

- Blink ---- GPS position is not fixed
- Solid --- GPS position is fixed





2. GPS setting and pairing

Install Free GPS utility Gps Viewer

- a. Open the Bluetooth funtion
- b. Running the GPS Viewer and click scan

🞥 GPS Viewer	- 4 ° x 4€ 10:58 🛛 🛞
Com Port: COM1:	-
Baudrate: 4800	~
Scan	Open GPS
Power Save	WAAS/EGNOS
Hot Start	Cold Start
Warm Start	
Setup GPS Status	
Tools	▲

c. The Bluetooth will search and paring , Select SPECTEC SD-GPS when seach finish





d. key in the pin code " 000000"



e. The GPS comport will be found





f. Click Open GPS



g. Select incoming device " SPECTEC SD-GPS "







h. Click GPS Status







NOTE: The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

To comply with the FCC RF exposure compliance requirements, this device and its antenna must not to be co-located or operating to conjunction with any other antenna or transmitter.

FCC INFORMATION

The Federal Communication Commission Radio Frequency Interference Statement includes the following paragraph:

The equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to part 15 of the FCC Rules. These limits are designed to pro-vide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference

to radio communication. However, there is no grantee that interference will not occur

in a particular installation. If this equipment dose cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on,

the user is encouraged to try to correct the interference by one or more of the follow- ing measures:

--Reorient or relocate the receiving antenna.

--Increase the separation between the equipment and receiver.

--Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

--Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the

following two conditions: (1) this device may not cause harmful interference, and (2) this device

must accept any interference received, including interference that may cause undersired operation.





3. SDG-812 Specification Table

ChipsetSiRF Start IIIFrequencyL1, 1575.42 MHz $C/A Code$ 1.023 MHz chip rate $C/A Code$ 20 channel all-in-view tracking Accuracy 10 meters, 2D RMS $1\sim5$ meters, 3D RMS with WAAS, EGNOS correctedVelocity0.1m/secTime1 micro-second synchronized to GPS time Datum WGS-84 (default) Protocol (customized protocol can be made if the offer is for more than 1000 pcs) GPS ProtocolNMEA 0183 (default)GPS Output format GGA(1 sec), GSA(1 sec), GSV(5 sec), RMC, 9600bps Dynamic Condition 150 meters/sec (1,000 knots) max.Velocity Limit515 meters/sec (1,000 knots) max.Jerk Limit20m/sec**3Temperature $40^{\circ}C \sim +85^{\circ}C$ Humidity $5 \sim 95 \text{ MA}$ Power 0 met 24 mm * 2.1 mmMemory: Expansion Slot Micro SD card (TransFlash Card) memory Size : 512MB, up to 2GB Other Characteristics 0 met 43 sec., average; Cold start < 42 sec., average	Electrical Characteristics (Receiver)		
Frequency L1, 1575.42 MHz C/A Code 1.023 MHz chip rate Channels 20 channel all-in-view tracking Accuracy 10 meters, 2D RMS Position Horizontal 10 meters, 3D RMS with WAAS, EGNOS corrected Velocity 0.1m/sec Time 1 micro-second synchronized to GPS time Datum WGS-84 (default) Protocol (customized protocol can be made if the offer is for more than 1000 pcs) GPS Protocol NMEA 0183 (default) GPS Protocol NMEA 0183 (default) GPS Output format GGA(1 sec), GSV(5 sec), RMC, 9600bps Dynamic Condition 1 Acceleration Limit Less than 4g Altitude Limit 18,000 meters (60,000 feet) max. Velocity Limit 515 meters/sec (1,000 knots) max. Jerk Limit 20m/sec**3 Temperature Operating Operating -40°C ~+85°C Humidity 5~95% non-condensing Power 0 Query 0.33V Power Consumption -95 mA Physical Characteristics 62 mm * 24 mm * 2.1 mm Weight Approximately 30 grams	Chipset	SiRF Start III	
C/A Code 1.023 MHz chip rate Channels 20 channel all-in-view tracking Accuracy 10 meters, 2D RMS Position Horizontal 10 meters, 3D RMS with WAAS, EGNOS corrected Velocity 0.1m/sec Time 1 micro-second synchronized to GPS time Datum WGS-84 (default) Protocol (customized protocol can be made if the offer is for more than 1000 pcs) GPS Protocol NMEA 0183 (default) GPS Protocol NMEA 0183 (default) GPS Output format GGA(1 sec), GSV(5 sec), RMC, 9600bps Dynamic Condition 40°C ~+85°C Altitude Limit 18,000 meters (60,000 feet) max. Velocity Limit 515 meters/sec (1,000 knots) max. Jerk Limit 20m/sec**3 Power 95 mA Physical Characteristics 95 mA Physical Characteristics 62 mm * 24 mm * 2.1 mm Weight Approximately 30 grams Memory: Expansion Slot Micro SD card (TransFlash Card) memory Size : 512MB, up to 2GB Other Characteristics 10 Other Characteristics 10 Other Characteristics 10 Other Characteristics <td< td=""><td>Frequency</td><td>L1, 1575.42 MHz</td></td<>	Frequency	L1, 1575.42 MHz	
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Velocity0.1m/secTime1 micro-second synchronized to GPS timeDatumWGS-84 (default)Protocol (customized protocol can be made if the offer is for more than 1000 pcs) GPS ProtocolNMEA 0183 (default)GPS ProtocolNMEA 0183 (default)GPS Output formatGGA(1 sec), GSA(1 sec), GSV(5 sec), RMC, 9600bpsDynamic ConditionAcceleration LimitLess than 4gAltitude LimitAltitude Limit18,000 meters (60,000 feet) max.Velocity Limit515 meters/sec (1,000 knots) max.Jerk Limit20m/sec**3Temperature-40°C ~+85°CHumidity5~95% non-condensingPower-40°C ~+85°CMumidity5~95% non-condensingPower Consumption<95 mA	Position Horizontal	1~5 meters, 3D RMS with WAAS, EGNOS corrected	
Time 1 micro-second synchronized to GPS time Datum WGS-84 (default) Protocol (customized protocol can be made if the offer is for more than 1000 pcs) GPS Protocol NMEA 0183 (default) GPS Output format [GGA(1 sec), GSA(1 sec), GSV(5 sec), RMC, 9600bps] Dynamic Condition Acceleration Limit Less than 4g Altitude Limit 18,000 meters (60,000 feet) max. Velocity Limit 515 meters/sec (1,000 knots) max. Jerk Limit 20m/sec**3 Temperature Operating -40°C ~+85°C Humidity Forwer Soft and the second	Velocity	0.1m/sec	
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Altitude Limit18,000 meters (60,000 feet) max.Velocity Limit515 meters/sec (1,000 knots) max.Jerk Limit20m/sec**3TemperatureOperating-40°C ~+85°CHumidity5~95% non-condensingPowerVoltage3.3VPower Consumption<95 mA	Acceleration Limit	Less than 4g	
Velocity Limit515 meters/sec (1,000 knots) max.Jerk Limit20m/sec**3TemperatureOperating-40°C ~+85°CHumidity5~95% non-condensingPowerVoltage3.3VPower Consumption<95 mA	Altitude Limit	18,000 meters (60,000 feet) max.	
Jerk Limit20m/sec**3TemperatureOperating-40°C ~+85°CHumidity5~95% non-condensingPowerVoltage3.3VPower Consumption<95 mA	Velocity Limit	515 meters/sec (1,000 knots) max.	
TemperatureOperating-40°C ~+85°CHumidity5~95% non-condensingPowerVoltage3.3VPower Consumption<95 mA	Jerk Limit	20m/sec**3	
Operating-40°C ~+85°CHumidity5~95% non-condensingPower3.3VPower Consumption<95 mA	Temperature		
Humidity5~95% non-condensingPower3.3VPower Consumption<95 mA	Operating	-40°C ~+85°C	
Power Voltage 3.3V Power Consumption <95 mA	Humidity	5~95% non-condensing	
Voltage 3.3V Power Consumption <95 mA	Power		
Power Consumption <95 mA	Voltage	3.3V	
Physical Characteristics Dimension 62 mm * 24 mm * 2.1 mm Weight Approximately 30 grams Memory: Expansion Slot Micro SD card (TransFlash Card) memory Size : 512MB, up to 2GB Other Characteristics Hot start < 1 sec., average; Warm start < 38 sec., average; Cold start < 42 sec., average	Power Consumption	<95 mA	
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Hot start < 1 sec., average; Warm start < 38 sec., average; Cold start < 42 sec., average	Other Characteristics	5	
	Other Characteristics Hot start < 1 sec		
Reacquistion [] sec average	Desequisition 0.1 and survey 25		
Cortification	Cartification	non 0.1 sec. average	
ECC CE RoHs	FCC CE	RoHs	
Bluetooth Specification	Bluetooth Specification		
Bluetooth V2.0 compliant	Bluetooth V2.0 compliant		
• Supply voltage $: 28.37V$	• Supply voltage • 2.8. 2.7V		
• Suppry voltage . 2.0~3.7 v • Frequency Range: 2.402~2.480GHz			
Receiver Sensitivity - 78dBm			
Transmit Power: Class 2			
• Transmitting Range: 6~10 m			