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## A-511S

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### High Performance High Sensitivity GPS Smart Receiver

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#### GENERAL DESCRIPTION

The A-511S smart GPS receiver is a total solution GPS receiver, designed based on SiRF Star III architecture. This complete enabled GPS smart receiver provides high position, velocity and time accuracy performances as well as high sensitivity and tracking capabilities.

The A-511S smart GPS receiver is ideal for many applications such as car navigation, mapping, surveying, security and so on.

#### APPLICATIONS

- Automotive
- Asset tracking
- Personal/Portable Navigation
- Location Based Services enabled devices
- Sports and Recreation
- Geographic Surveying

#### KEY PRODUCT FEATURES

- Built-in SiRF Star III chipset
- 200,000 effective correlators for fast TTFF
- 20 channels "All-In-View" tracking
- Cold/Warm/Hot start time: 42/38/1 sec. (average)
- Superior sensitivity: -159dBm tracking
- Reacquisition time: 0.1 sec.
- Low power design (75mA, tracking)
- Built-in low noise, high gain active antenna
- Super-cohesive magnetic for installation
- Apply to host devices with TTL/RS232
- Size: 47.0 (L) X 39.0 (W) X 16 (H) mm
- Weight: 66.6g

#### BENEFIT TO USERS

- Low power consumption
- Easy and fast to install
- Superior urban canyon performance
- Competitive cost with high performance

## SPECIFICATIONS

**Key Technology** SIRF Star III chipset

### Performance

#### Receiver

Frequency L1, 1575.42MHz

C/A Code 1.023MHz chip rate

Channel 20 channels all in view

Tracking Sensitivity -159dBm

#### Acquisition Rate

Cold Start 42 sec. (average)

Warm Start 38 sec. (average)

Hot Start 1 sec. (average)

Reacquisition 0.1sec. (average)

Update Rate 1 Hz (max.)

#### Accuracy

Position 5 - 25m CEP without SA

Velocity 0.1m/sec, without SA

Time 1 $\mu$ s synchronized to GPS time

### Dynamic

#### Condition

Altitude <18,000m (60,000 feet)

Velocity <515m/sec (1,000 knots)

Acceleration <4G

Motional Jerk 20m/sec<sup>3</sup> max.

**GPS Protocol** NMEA0183

### Interface

TTL Yes

RS232 Yes

### Dimensions

W x L x H (mm) 39 x 47 x 16

W x L x H (inch) 1.54 x 1.85 x 0.63

Weight 66.6g (2m, cable included)  
112.2g (5m, cable included)

### Power

DC 3.7 ~ 6V, typical 5V  
3.0V, 5.5mAh, Lithium battery

Internal Back-up battery  
Back-up Current 7 $\mu$ A typ.

### Environmental

Operating Temperature -40 °C ~ +85 °C

Storage Temperature -55 °C ~ +85 °C

Relative Humidity 5% to 90% non-condensing

### Others

Data Cable (Length) 2m/5m

### Standard Package

Color Box Yes

Document CD Yes

*All specifications are subject to change without notice*