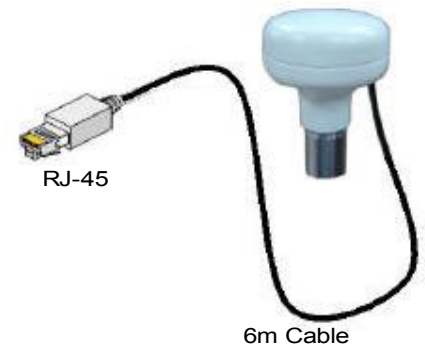


## High Sensitivity Marine Smart Antenna

- Built-in SiRFstarIII chipsets receivers give unparalleled GPS performance and precision. 20 parallel satellite-tracking channels for fast acquisition and reacquisition. Built-in Sony CXD2951GA-4 chipsets receivers give the better Time-To-First-Fix (TTFF) for positioning. 12 parallel satellite-tracking channels for fast acquisition and reacquisition.
- Built-in WAAS/EGNOS Demodulator.
- Built-in rechargeable battery for backup memory and RTC.
- Support NMEA0183 v2.2 data protocol.
- Fast TTFF for cold start, warm start and hot star.
- Serial communication channel with user selectable baud rates allowing to design the maximum interface capability and flexibility.
- Fit for Fish finder, Marine Navigator, Digital Clock and so on.

### SPECIFICATIONS

	PMA-648	PMA-248
GPS IC	SiRFstarIII	Sony CXD2951GA-4
Receiver:	Tracking upto 20 satellites L1, 1575.42 MHz, C/Acode	Tracking upto 12 satellites L1, 1575.42MHz, C/Acode
Accuracy:	Position: 2DRMS approximately 5m, WAAS support Velocity: 0.1 m/s without SA imposed. Time: $\pm 1 \mu$ sec	Position: 2DRMS approximately 2m, WAAS SUPPORT. Velocity: 0.1 m/sec without SA imposed. Time: $\pm 1 \mu$ sec
Acquisition Time:	Cold Start: 42sec (Average) Warm Start: 38sec (Average) Hot Start: 1sec (Min.)	Cold start: 45sec (Average) Warm start: 35sec (Average) Hot start: 2sec (Min.)
Sensitivity:	Acquisition: -148dBm Tracking: -159dBm	Acquisition: -139dBm Tracking: -152dBm
Dynamics:	Altitude: 18000m (Max.) Velocity: 515m/s (Max.) Acceleration: $\pm 4g$ (Max.)	Altitude: 18,000m (Max.) Velocity: 500m/sec (Max.) Acceleration: $\pm 4g$ (Max.)
Navigation update rate :	Once per second	Once per second
Serial Port :	RS-232 and RS-422	RS-232 and RS-422
Baud Rate :	4800 bps (Optional 9600, 19300, 38400 bps)	4800 bps (Optional 9600, 19300, 38400 bps)
Output Message:	NMEA0183 V2.2 GGA, GSV, GSA, RMC (optional VTG, GLL)	NMEA0183 V2.2 GGA, GSV, GSA, RMC (optional VTG, GLL)
Datum:	WGS 84	WGS 84
Power supply :	DC 9V ~ 34V	DC 9V ~ 34V
Power Consumption :	Typical 60mA @ 12V	Typical 60mA @ 12V
Operating Temp.:	-10°C ~ +70°C	-10°C ~ +70°C
Storage Temp.:	-40°C ~ +100°C	-40°C ~ +100°C
Humidity:	5% ~ 95%	5% ~ 95%
Antenna Type:	Built-in Patch antenna	Built-in Patch antenna



#### PMA-248 Pin Assignment

