

Marine Asset Tracker

Technical Specification for MAT2

Pole Star's Marine Asset Tracker system (MAT) is comprised of reliable satellite tracking hardware linked to a powerful web-based service. It provides an effective way of automatically tracking powered and unpowered marine assets in real time.

The system enables the operator of any marine asset to monitor the safe passage of their powered vessels and their towed unpowered vessels through adverse weather and sea conditions or through high security risk areas which may be affecting trade routes.

A flexible “pay as you go” service, MAT is designed primarily for use by tug and barge, support vessel and inshore operators.

Hardware Options

There are a number of hardware options which can be configured for unpowered vessels and to suit the user's operational needs:

- MAT2 - satellite transceiver with battery power pack for use on assets with no power on board.
- MAT2 power pack – external battery packs can be linked to MAT2 units to increase the working life of the MAT2 unit between charges.
- MAT2 solar panels – two different sizes of solar panel with cable connection to MAT2 units extends the life of the MAT2 unit between charges.
- MAT2 charger – for recharging MAT2 external battery packs and MAT2 units.
- MAT2 solar panel fitting bracket – allows easy installation and removal of MAT2 solar panel



Note: Overall package weight is approx 19kg

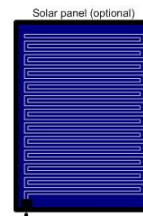
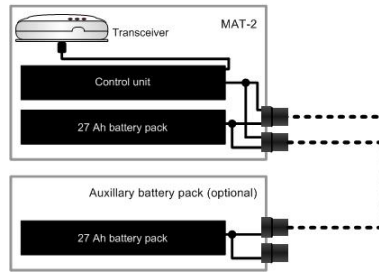
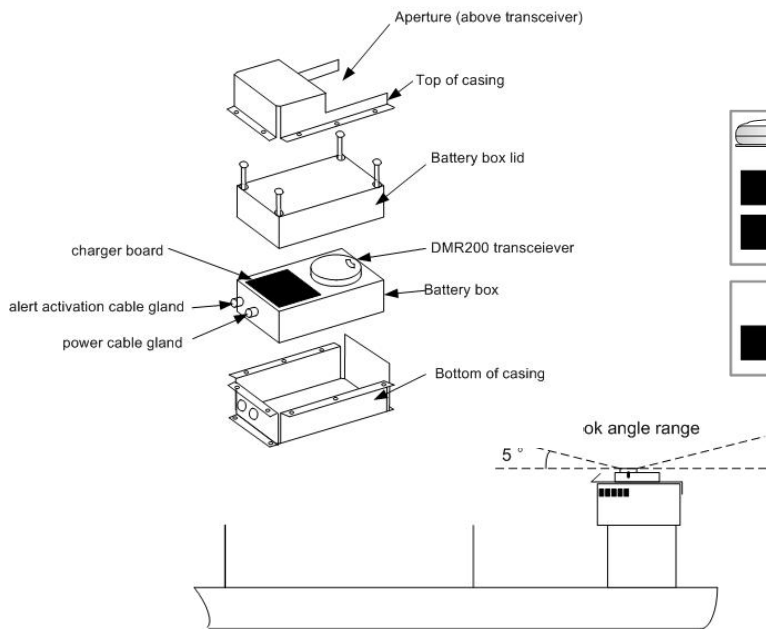
via
inmarsat

Powered by

Purplefinder



Marine Asset Tracker V1.1 2007-01-31



PHYSICAL

Overall Dimensions	Length: 500 mm x Width: 232 mm x Height: 200 mm
Weight	19kg

ENVIRONMENTAL

Operating Temperature Range	-40° to +70° C
Storage Temperature Range	-40° to +85° C
Humidity	95% Relative Humidity at 30° C
Vibration 5-20 Hz: 1.92 m2/s3 random noise, 20-500Hz: -	3dB octave random noise
Shock (survival)	Half sine 6ms, 300m/s2
Transceiver environmental rating	IP56

ELECTRICAL

Power Consumption (typ.@12Vdc)	Receive: 0.9W, Idle: 0.25W, GPS Active: +1.0W; Heater Active: +5.0W, Transmit: 10W;
Mating Connector	Conxall Mini-Con-X® 6282-8SG-3DC

SATELLITE

Coverage:	Global, four overlapping regions & Spot Beams
Frequency Range:	Rx: 1525.0 to 1559.0 MHz, Tx: 1626.5 to 1660.5 MHz
Sensitivity:	>-25dB/K
EIRP:	0 dBW to 9 dBW (0dBW at < 5 degrees)
Elevation Angle Range:	0 to 90 degrees
Modulation:	Forward channel: 32-ary FSK, 20bps,
Reverse Channel:	binary FSK, 4-128bps
Forward Error Correction:	Forward channel: Reed-Solomon (31,15),
Reverse Channel:	Half-rate convolutional (k=7)

GPS

Frequency:	1575.42 MHz
Channels:	16 parallel

CERTIFICATIONS

Inmarsat D+ Type Approval , CEMark



Europe, Middle East, Africa, USA

+44 20 7313 7402 | sales@purplefinder.com

Asia Pacific

+852 2297 2306 | sales@purplefinder.com