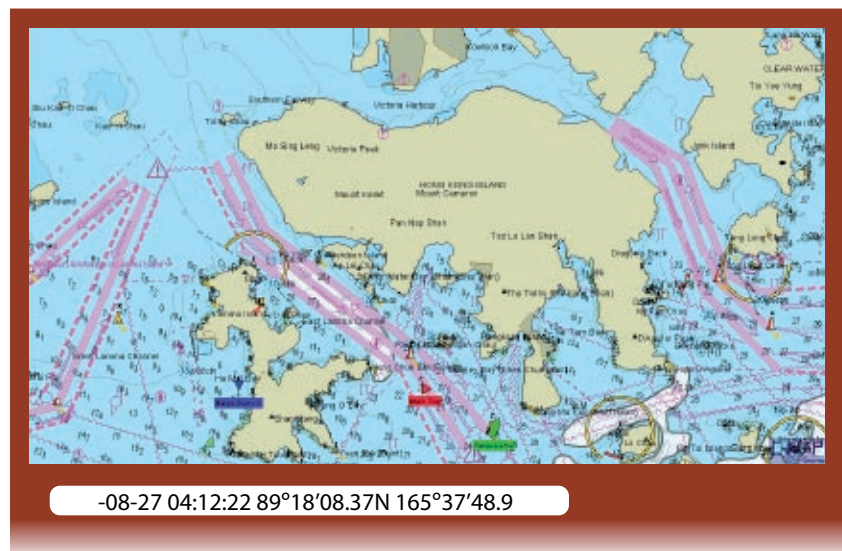


Marine Asset Tracker

Pole Star's Marine Asset Tracker system (MAT) is a reliable satellite tracking transceiver linked to a powerful and flexible "pay as you go" web-based service. The system enables the workboat operator to monitor the safe passage of their powered vessels and towed unpowered barges through adverse weather and sea conditions or through high security risk areas.

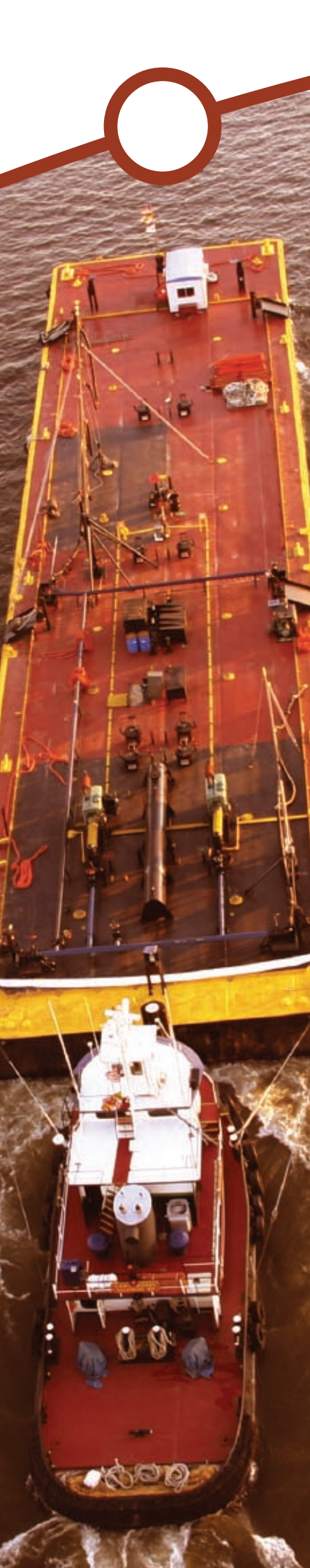
Key features

- View fleet on C-Map™ charts with zoom & pan functionality
- View Fleet List for latest data on entire fleet
- Weather forecasting and storm, cyclone, hurricane information
- Poll a vessel to receive an immediate position report (specified hardware options)
- Set your own geo-zones and receive notifications as assets enter or leave
- Receive position reports and geo-zone warnings by email and SMS
- Choice of hardware for powered and unpowered vessels



Hardware options

	Vessel type	Battery duration	Variable position reports	Poll for position
MAT1	Powered	n/a	✓	✓
MAT3	Unpowered	12 months		
MAT4	Unpowered	4 months		
MAT5	Powered	14 days	✓	✓



Using MAT

Track history



This five week voyage could be tracked with a MAT1 on a powered vessel or a MAT3 or MAT4 on an unpowered vessel.

MAT provides an essential tool for analyzing actual progress of a vessel against its planned schedule. You can display the voyage history for a selected vessel and click on an individual icon along the trail to display the associated position report.

Monitoring weather conditions

MAT offers a range of interactive features to monitor weather and sea conditions.

A 10 day forecast is accessible via the C-Map™ charts, with a choice of meteorological parameters which you can view in greater detail. Selecting details of wind, swell or wave and choosing the forecast interval, these can then be overlaid as graphics on the charts, giving instant access to updated information.

A further option is the provision of the cyclone information. This can be displayed on the chart, as shown, giving both forecast and historical data.



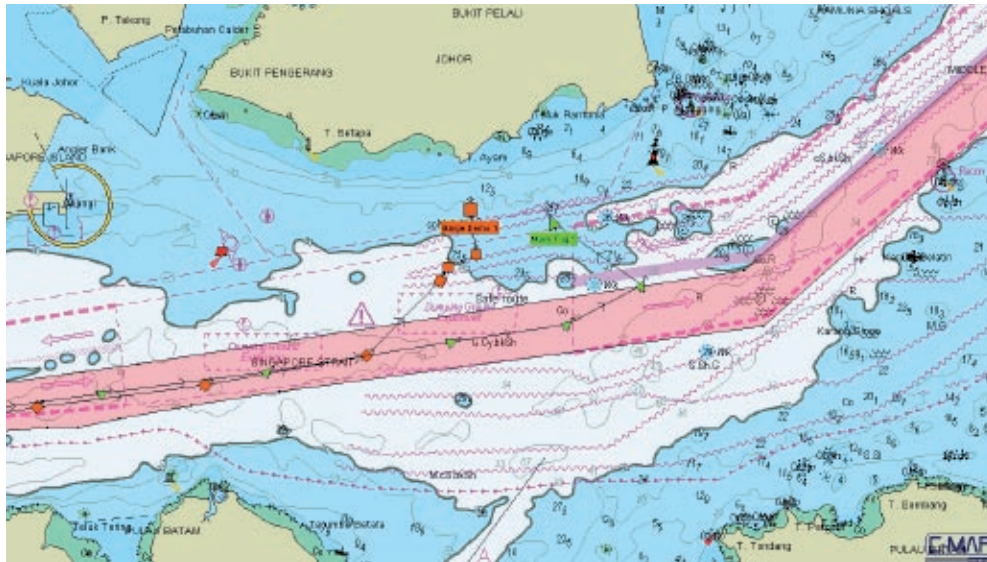
Cyclone: historical (H) and forecast (F)

Geo-zones

Using geo-zones in conjunction with geo-zone notifications enables the user to enhance operational efficiency and risk management.

MAT allows you to create a geo-zone to define a specific area and display it on the charts. This could be a shipping channel within which the fleet must sail, or a sensitive area such as a known piracy zone or environmentally protected area, which the fleet should avoid.

Once the geo-zone is created, you can program the MAT system to alert you by email/SMS, should a position report be transmitted when the vessel is inside or outside the defined area, according to your requirements.



Details of shipping channel

Requesting a position report

With MAT1 and MAT5, you have the ability to poll a vessel to request an immediate position report. This feature enables you to have accurate and updated information on a vessel; for example, in the event of a bad weather alert or a geo-zone notification received if the vessel has deviated from its planned course.

In addition, with MAT1 and MAT5, you can change the reporting interval. This is another useful tool if the vessel is involved in any incident and needs more frequent monitoring, until normal progress is resumed.

Budget management

Pole Star's credit-based payment system is the key to ensuring you remain in full control of your Marine Asset Tracker account.

Each MAT service activity has a credit tariff which makes budget forecasting simple and provides maximum flexibility for the user. Online reports track costs and give current account status for fleet and for individual vessels, so that analysis of per vessel cost/usage and rebilling, where appropriate, is straightforward.

Marine Asset Tracker (MAT) Feature Summary

FEATURE	DESCRIPTION	MAT TYPE			
		1	3	4	5
PRICING					
Registration	One-off fee for registering a transceiver on the MAT system billed in credits	✓	✓	✓	✓
Pay as you go	Credits system allows for flexible usage	✓	✓	✓	✓
HARDWARE OPTIONS					
Battery charger	Battery charger for charging unit			✓	
Integral power pack	Replaceable internal power pack		✓		
CHARTS					
Fleet List	Latest position report data and map for each vessel	✓	✓	✓	✓
Interactive Fleet Map	Shows the position of fleet on C-Map™ charts with zoom and pan	✓	✓	✓	✓
Weather information	10 day meteorological forecast and cyclone information	✓	✓	✓	✓
Geo-zones	Set and display your own zones	✓	✓	✓	✓
POSITION REPORTING*					
Automatic Position Report (APR)	A position report sent automatically at a fixed interval	✓	✓	✓	✓
Change reporting interval	Send a command to change the interval between automatic position reports	✓			✓
Request a position report (poll)	Send a command to request an immediate position report	✓			✓
Overdue position reports	Receive a warning if a vessel has not reported	✓	✓	✓	✓
Monthly battery report	Full diagnostic check of battery condition				✓
Position report history	View and download a log of all position reports	✓	✓	✓	✓
Enter position	Manually enter position reports	✓	✓	✓	✓
TOOLS					
Postings	Manually enter extra information to be displayed in a position report	✓	✓	✓	✓
Email notifications	Send position reports to an unlimited number of email addresses	✓	✓	✓	✓
SMS notifications	Send position reports to mobile phone numbers by SMS	✓	✓	✓	✓
Geo-zone notifications	Alert when vessel reports a position in or out of a user defined zone	✓	✓	✓	✓
USERS					
Master user	A username and password with full control of the service	✓	✓	✓	✓
Standard users	Ability to create up to 10 Standard logins to access specific parts of the fleet eg by superintendent or type of vessel	✓	✓	✓	✓

*Pole Star will use reasonable endeavours to track your transceiver and deliver your position reports. However, sometimes this is not possible due to factors beyond our control, such as satellite communications failure.