



## Technical Specifications

External Power Supply : 12 V DC or 24 V DC

Battery Back-up : SMF 26000mAH, optional 36000mAH

I/O devices : 4 Digital or Analog, Convertible

Backbone : Inmarsat, GPS

Antena : Inmarsat, GPS omni directional

Installation : Unimount vertical, 4 stainless steel screws mounting from inside

Speaker : 2", 10W

Audio Amplifier : 10W RMS

Electrical Protection : 9V DC to 36V DC, over voltage and reverse polarity protection

Temperature : -25°C to +55°C

Humidity : 10 to 90% RH

Radiation : Resistant to UV rays

Resistant : Salt environment

Vibration : Compliance to En60945

Enclosures : IP65 grade enclosure with waterproof and dust protection

Dimension (W x H x L) : 230 x 200 x 330 mm

Weight : 16.5 kg

Colour : simens Grey

# fleet<sup>TM</sup> control 800



**FleetControl 800** lets you easily track and control your vessels and vehicles, no matter where they are in the world.

inmarsat



SkyWave



Manufactured under the Technical collaboration with Kongsberg Norcontrol IT AS, Norway. By

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## AatashNorcontrol Ltd, India:

Aatash Norcontrol Ltd. (ANL) is a joint venture company between Aatash group of India and Kongsberg group of Norway, incorporated and established as per Indian Companies Act, 1956.

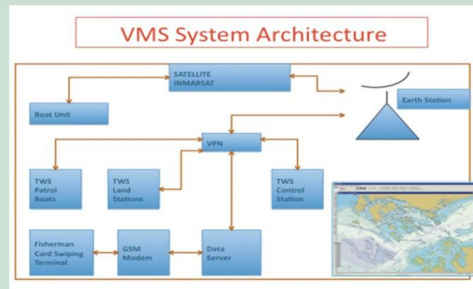
Kongsberg Norcontrol IT AS (KNC) is pioneer in Vessel Tracking and Monitoring System (VTMS). KNC is having their presence in more than 30 countries and has established more than 250 Vessel Monitoring solutions around the World. Apart from VTMS solutions, KNC is engaged in defence products and solutions in a big way. KNC has very long list to whom they have provided VTMS solutions. Some of them are listed below:

- a) U.S.Navy
- b) Canadian Coastguard
- c) Maritime Coastguard Agency U.K. on English Channel
- d) Singapore Marine Agency at Singapore Strait
- e) Suez Canal
- f) Norwegian Coastal Authority
- g) Vessel Traffic & Port Management System in Gulf of Khambhat, India
- h) Kolkata Port Trust, India

To meet the security challenges and threat from sea and coastline, Kongsberg & Aatash have jointly developed a satellite based Vessel Monitoring System. This VMS model Fleet Control 800, is manufactured by us in India.

## Working Methodology Fleet Control 800:

Fleet Control 800 is connected with INMARSAT satellite and provides 2-way data communication using M2M services 24 x 7. The data is transferred to Satellite Earth Station (SES) via INMARSAT satellite, Earth Station pushes the data into Secured Internet Cloud to provide complete security of the data. Control Room receives and transmits the data from the Secured Internet Cloud through VPN.



## VMS Control & Monitoring Stations

- High end computer work station
- Two servers for redundancy
- TWS Software
- Internet in VPN mode



## VMS Maritime Mobile Stations

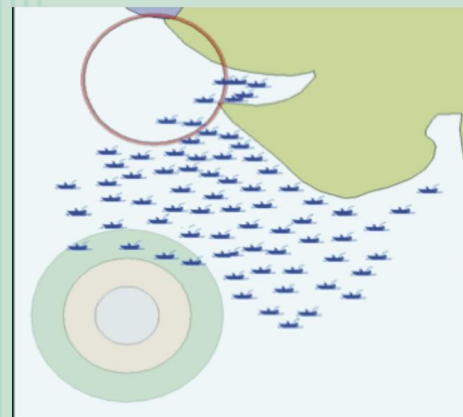
- Marine Mobile Stations connected through satellite
- Monitoring Equipments
- High end laptop computer
  - Inmarsat Fleet Broadband service & Equipment
    - 150 KBPS, Internet - VPN, Voice, Email with Standard IP
  - TWS Software



## VMS tested on a vessel in presence of Gujarat Govt. reps at sea



## Zones and areas can be programmed dynamically



## Boat Unit (Box size depends on Stand-by Battery Power requirement)





# Features of Fleet Control 800 VMS

## Integrated Design

The innovative design is mechanically & electrically fully integrated with autonomous power supply and Central Processing Unit consisting of satellite transceiver, omni-directional antenna, GPS receiver and 4 I/Os. All packed in IP65 certified robust cabinet withstanding temperatures from -25 C to +55 C.

## 24X7

Provides Global Coverage, 24 Hrs, 365 days, monitoring & control with 99% tracking uptime. A perfect global tracking solution for all land and sea needs.

## Beyond VHF Range

When Fleet Control 800 is installed on any small or big fishing vessel, the Control station can track this particular vessel up-to any distance.

## Control & Monitoring Versatility

There can be One Control station and multiple Monitoring Stations or there can be multiple Control Stations. In short, there is no limit to number of Control stations or Monitoring Stations.

Just by changing the password, any Monitoring Station can be converted into the Control Station & vice versa, designed for redundancy purpose.

Software and hardware are versatile to accept tailor-made requirements.

## Built-in Battery

Fleet Control 800 has built-in battery back up which can last for 72 hours in case external power is removed. Longer life battery could also be included if required.

## Tamper Proof

Fleet Control 800 is tamper-proof device in the sense that it will send warning signal to Control room under the following circumstances:

- If someone tries to break-open the box.
- If external power is removed.
- If external warning device is cut-off.
- If panic button wire is cut-off.
- If satellite link is cut-off.

The identity of Fleet Control 800 remains unique in the whole world and cannot be cloned by the vessel owner or enemy, which makes it an ideal secured identification device.

## Panic Button

It has a built-in panic button, which fishermen can use in case of emergency.

## Chart Interface

In Control room, the vessels will be monitored on the digital chart, which will show International Maritime Border (IMB).

## Over the Air Programming

Apart from IMB, many more Geo-Fence can be generated to keep away the vessels from other security regions. Areas and zones could be dynamically programmed or altered. The Fleet Control 800 can be switched from Active to Sleep mode and vice versa, over the air.

## Warning System

If any vessel is going near or crossing the IMB, it will send a warning signal to Control room automatically.

The false alarm situation can be controlled from the Control Room.

## Alerting Boats

In case of natural calamities or if the vessel is near or crossing IMB, the Control Room can send warning signal to fishing vessels in local language,

## Recording & Replay

The system records all parameters and communications continuously with date & time stamping and has facility to replay any part of it for analysis, investigation or for any other purpose. Control room can also be created on Coastguard/ Navy vessel, which gives extra punch and power while interrogating the fishing vessel in the sea.

## Secured Data

The secured Gateway encrypted data and server client architecture makes it very secure transmission and therefore useful for Govt, Navy and all other types of Fleet Administrator.

## Software

The dedicated tracking 128 bit password protected software having capability for dynamic programming offers tailor made solutions. It is also capable of recording and replay of all tracks with Lat/ Long, date and time stamping on digital chart, as per IALA guidelines for VTS.

This fishing vessel can also be tracked on radar based Vessel Traffic Management System VTMS.

The biometric card data of Fishermen can be integrated with the software, which will track not only the fishing vessels but also keep track of the crew on the fishing vessels.

## Low Cost

Most cost effective solution, using Inmarsat M2M service. Finding gaps to send the data and messages makes it most cost effective satellite based solution available today. It combines low investment with modest airtime/ running cost.

## Optional Features

A track & plot display could be integrated with this device, which could help display any chart and or additional fishing or navigation related information. Location of Fish Catch availability data could be transmitted from the Base Station to all the boats for display and guidance.

With a keyboard associated with the display the fishermen can feed information on daily fish catch realized, which can be transmitted to the base station or any other required agency.

Integration of Satellite Based Synthetic Aperture Radar (SAR) will provide data of all the contacts in the region of interest. When such data is over-layered with the VMS data at the Base Station, it can easily identify boats not having VMS device and declare them as suspect vessels, which can be then referred to the Navy/ Coast Guard for investigation. We could use the satellite available with Kongsberg that provide SAR coverage.

## Miscellaneous

**Delivery Period:** We can deliver 500 -1000 VMS device per month.

**Warranty Period:** One year from the date of installation or 15 months from the date of supply which ever is earlier.

**Maintenance:** We can provide the maintenance from our local agent's office. However, we can also train your engineers to make you self sufficient on maintenance part.



## 24/7

Providing global coverage, 24 hours – 365 days, monitoring and control with 99% tracking up time. **FleetControl 800** is the perfect global tracking and controlling solution for all your land and sea tracking needs.



## Low Cost

**FleetControl 800** is low investment and has a modest airtime running cost.

## Open Architecture

**FleetControl 800** has an open architecture which is programmable by users, to suit their tailor made requirements.

## Over the Air

**FleetControl 800** is upgradable remotely over the air without wasting valuable resources and money. This drastically reduces out warranty maintenance cost. This precise geofence can be uploaded over the air along with many more configuration changes which are possible. It is quick and easy.

## Integrated Design

The innovative design of **FleetControl 800** is a mechanically and electrically fully integrated device with autonomous power supply and central processing unit consisting of satellite transceiver omni directional antenna, GPS receiver with antenna and 4 I/Os. All are packed-in IP65 certified robust cabinet withstanding temperature from -25°C to +55°C.

## Built-in Battery

**FleetControl 800** has an in-built rechargeable SMF battery of 26000 mAh. For any reason if external power supply is not available, **FleetControl 800** automatically switches over to internal battery supply and power saving mode. The internal battery supplies power to **FleetControl 800** continuously for 30 days. When external power supply is restored, the internal battery automatically starts charging.

## Versatile

**FleetControl 800** is upgradable by adding the accessories like display unit, key board for transferring small messages.



## Economy

**FleetControl 800** is the most cost effective solution, using Inmarsat IsatM2M service. Finding gaps to send the data and messages, makes it a more cost effective solution available today in satellite based solutions.

## Secured Data

The secured gateway encrypted data and server-client architecture, makes it very useful for Government, Navy and all other types of fleet administrators.

## Warning System

In-built, pre-programmed voice IC enables the fleet administrator to send the messages to vessel/vehicle in local language.

## Software

The dedicated tracking 128 bit password protected software is capable of defining geofence, path, secured areas etc. The fleet administrator also has full control over the report generation in a tailor made fashion. This unique feature allows **FleetControl 800** to configure the system as per individual requirement. The software is capable of recording and replaying all tracks with Lat. /Long, date and time stamping on digital chart, as per IALA guidelines for VTS.



## Secured Hardware

**FleetControl 800** in-built limit switch which sends automatic warning signals to fleet administrator in case of force open and also sends warning signals if power cables are removed. This unique feature makes **FleetControl 800** more informative and capable to use as a secured device.

## Panic Button

The panic button allows the master of the vessel to send distress signals to fleet administrator, making this **FleetControl 800** a life saving instrument and helps Search & Rescue teams to find the vessel in distress, easily.

