

# MINOR VESSELS SATCOM CAPABILITIES

THE NEXT GENERATION OF NAVAL  
MILITARY SATCOM TERMINALS



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## SCOTPATROL AUSTRALIA IS THE NEXT GENERATION NAVAL TERMINAL DESIGNED TO EXTEND SATCOM CAPABILITIES TO PATROL BOATS AND AUXILIARIES.

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With the Australian Defence budget under increasing pressure, access to Wideband Global Satellite (WGS) is being sought by as many ADF units as possible in order to reduce pay for service SATCOM subscription fees. ScotPatrol Australia has been specifically designed to do this.

A prototype of ScotPatrol Australia was trialled by the RAN on HMAS Melville for six months in 2010. The results of that trial were extremely encouraging. Valuable lessons were gained from that trial and have been used to improve ScotPatrol Australia, especially weight reduction.

As a result of the trial SCOTPatrol Australia is now precision manufactured from carbon fibre which gives it a reduced magnetic footprint, exceptional strength to withstand shock, vibration and harsh operating environments, while making it the lightest ever naval SATCOM terminal of its type.

The reduced top-weight, together with a compact footprint above and below decks makes for easier integration on smaller vessels such as Patrol Boats. In addition, through-life performance benefits can be derived from easier logistics and materials handling, and less stress on mechanical components such as motors and bearings.

With the capability to transmit large volumes of data over Ku, Ka and X bands, SCOTPatrol can act as a beyond-line-of-sight (BLOS) relay for video, multispectral and radar imagery, from intelligence, surveillance and reconnaissance (ISR) assets such as helicopter UAVs.

SCOTPatrol incorporates much of the performance and functionality found on the larger SCOT terminals – which have been tried and tested for nearly forty years. The advanced 3-axis stabilised platform for example is used to reject ship motion so that the antenna always remains accurately pointed at the satellite without the “keyhole effect” of a 2-axis system.

More powerful amplifiers and a thermal management system can be added as options for those customers seeking greater transmission capacity. The terminal is both light and compact to take account of the top weight and space constraints in most small warships.

### TERMINAL FEATURES

#### Above decks antenna assembly

- Fully balanced configuration including polarisation axis where required
- Unlimited azimuth rotation
- Ship motion rejection:
  - Roll up to 35°, 4.5 second period
  - Pitch up to 15°, 3.5 second period
- RF equipment mounted in antenna assembly, L band interface to below decks
- Environmental
  - Temperature range from -20°C to +50°C
  - Wind speeds up to 100knots

#### Control and Monitoring (C&M)

- Below deck computer based C&M system
- Terminal stores satellite position in conjunction with the ship's position from GPS, allowing the operator to acquire or change satellites without referring to satellite ephemeris data
- Comprehensive Built in Test (BIT)
- Environmental
  - Temperature range from 0°C to 40°C

#### Ship Interfaces

- Antenna assembly – mechanical
- Prime power (115Vac/230Vac, 60/50Hz)
- Ship's compass (SHRTU synchro format or NMEA-0183)
- GPS input (NMEA-0183)
- L Band modem connection Tx and Rx
- Remote C&M ethernet interface (SNMP)

#### Options

- Thermal management system
- Higher power amplifiers
- Dual antenna systems
- Remote antenna display
- Remote Mute

#### The terminals meet the following military standards:

- MIL-STD-167-1
- MIL-STD-901
- MIL-STD-461E
- MIL-STD-188-164A



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