VERSATILE & FULLY INTEGRATED TERMINAL

▷ X, Ku and Ka-band configurations
▷ High data rate secured communications
▷ 3-axis stabilized 40 cm antenna
▷ Easy on-board installation
▷ Compatibility with a wide range of modems
Design and architecture
DIVESAT provides high data rate full duplex communication capability.
It is a fully integrated terminal with RX & TX chains located right underneath the radome. EIRP and consequently data rate are maximized in order to reduce the duration of SATCOM indiscretion.
Last, the architecture of the outboard unit minimizes both the IR and radar signature.

X, Ku and Ka-Band configurations
DIVESAT is compatible with most satellite resources including military satellites operating in X or Ka-band and civil satellites in Ku or Ka-band.

Easy integration - Flexibility
Special care has been taken to limit the impact of the terminal integration onboard submarines. The terminal is very compact (e.g. Ø < 50 cm for the outboard unit).
DIVESAT is compatible with a wide range of mast raising equipment including non-penetrating masts. Flexibility in the design of the submarine fin is also provided to shipyards thanks to the possibility to combine on a single mast the SATCOM terminal and another sensor.

3-axis stabilized antenna
The 3-axis pedestal is the guarantee of a seamless worldwide operation whatever the frequency band, even at high sea state or when a high elevation satellite is used.

Compatible with a wide range of modems
Thanks to a standard interface, DIVESAT can be fitted with a wide range of modems. For better flexibility under all satellite coverages, DIVESAT can be also delivered with Thales’s secure Modem 21e.
In addition to anti-jamming, Modem 21e facilitates the integration of submarine platforms into wider naval forces communication networks.

Large antenna option
When extra capability is required, some submarines can accommodate the larger 75 cm antenna terminal for a global performance 4 times the 40 cm version.

Main Features

**General**
- Ant. Diam.: 40 cm
- RF Perf.: STANAG 4484, MIL-STD-188-164B
- Modem Perf.: STANAG 4486, STANAG 4606, ...
- X-band Freq.: 7.25 – 7.75 GHz (RX) / 7.9 – 8.4 GHz (TX)
- Ku-band Freq.: 10.7 – 12.75 GHz (RX) / 14 – 14.5 GHz (TX)
- Ka-band Freq.: 19.2 – 21.2 GHz (RX) / 30 – 31 GHz (TX)

**X-band**
- EIRP: up to 41 dBW
- G/T: 2 dB/K

**Ku-band**
- EIRP: 46 dBW
- G/T: > 6 dB/K

**Typical data rates**
- X-band: > 128 kbps
- Ku-band: > 256 kbps
- Ka-band: > 512 kbps

**Stabilization and tracking**
- Pedestal: 3-axis
- Tracking: ephemeris, beacon
- Attitude ctrl.: through the ACU using embedded inertial sensors
- Control & Monitoring: Windows-based MMI

**Modem interface**
- L-band: 950 – 2050 MHz

**Physical**
- Overall Ø: < 50 cm (outboard)
- Height: < 70 cm above mast interface (outboard)
- Weight: 200 kg typ. (outboard)
- Cabinet: 10U typ. (inboard)

**Environment (outboard)**
- Op. Temp.: -18°C to +60°C
- Stor. Temp.: -30°C to +70°C
- Shock: MIL-901D
- Shock Perf.: 90g / 2 ms
- Vibrations: MIL-STD-167
- EMI/EMC: MIL-STD461F
- Pressure: > 70 bars