

Equipment Management

As maritime satellite terminals traveling over a large geographical area, remote management of terminals is essential in order to keep the operating cost of the DVB-RCS network low. The Nera SatLink Marine is equipped with a powerful command line interface that is remotely accessible via Telnet, both from the Hub and the local LAN. Typical management tasks performed via the command line interface are:

- Configuration of the terminal
- Collection of statistics and performance data
- Access to event logs and alarms
- Download of new software via TFTP
- Backup of terminal configuration data

Web-based interface to a subset of the command line functionality is available. The Web interface can be accessed from either the Hub or the local LAN, offering easy and intuitive access to the most common terminal management functionality.

The Nera SatLink Marine is delivered with SNMP for remote management. This management option is ideal when managing a large number of terminals from the Hub.

Access to the management interface is password protected with two levels of access rights:

- **Normal user** - Access to:
 - View performance and statistics data
 - View configuration parameters
 - View event logs and clear alarms
 - Manually log the terminal on and off the DVB-RCS network
- **Super user** - Access to:
 - The privileges of the normal users
 - Alter all terminal configuration parameters

The Nera SatLink Marine offer the follow functionality for easy and safe software upgrade from the Hub:

- Manual SW update via TFTP by the super user
- Prepared for automatic SW upgrade via multicast to be initiated from the Hub or the terminal management interface
 - Can be easily tailored to suit the service provider's requirements
- Capacity to store two software images in non-volatile memory – automatic fallback to last working software version in case of failures during software upgrade

Technical specifications

<p>Communication service</p> <ul style="list-style-type: none"> ➤ Provides Internet connectivity at speeds up to 8Mbps IP throughput. ➤ Applications as digital video broadcast, E-mail, backup databases, VoIP, VPN, and more. <p>Satellite coverage</p> <ul style="list-style-type: none"> ➤ Any Ku-band DVB RCS satellites available Worldwide ➤ Coverage The Americas and Europe, North America, Asia, Caribbean, plus (Details on request) ➤ Many new applications and Opportunities arise every day in regions without wired or cellular or nonexistent copper and fiber infrastructure. ➤ At sea, where the need is obvious, Broadband Communications via Nera SatLink Marine equipment giving the customer a perfect choice for this growing requirement. <p><u>Type approval</u></p> <ul style="list-style-type: none"> ➤ The equipment fully meets European Conformity (CE) product safety and radio noise standards as applicable to Goods sold in the EU and EEA. ➤ Electromagnetic compatibility Radiate : EN 60945 & prETS 300 339 Conducted : EN 60945 & prETS 300 339 ➤ National type approvals; details on request. 	<p>Interface</p> <ul style="list-style-type: none"> ➤ Ethernet RJ45 connector for IP traffic to connect to a PC, Ethernet switch, IP router etc. ➤ Gyro input to stabilize antenna (Step, synchrony or NMEA input) ➤ Two (2) 50 ohms Coaxial Cables between ODU and IDU (RX + TX) ➤ 230 VAC mains (115VAC option) <p>Dimension / General parameters</p> <p><u>Out-door Unit (Antenna)</u></p> <table border="0"> <tr><td>Height</td><td>150 cm</td></tr> <tr><td>Diameter</td><td>131 cm</td></tr> <tr><td>Weight</td><td>114 kg</td></tr> </table> <p><u>In-door Unit (19" Cabinet)</u></p> <table border="0"> <tr><td>Height</td><td>29 cm (6U)</td></tr> <tr><td>Width</td><td>52 cm</td></tr> <tr><td>Depth</td><td>54 cm</td></tr> <tr><td>Weight</td><td>24 kg</td></tr> </table> <p><u>Coaxial Cabling ODU – IDU</u></p> <table border="0"> <tr><td>RG 223</td><td>15 meter</td></tr> <tr><td>RG214</td><td>30 meter</td></tr> <tr><td>Times LMR 400</td><td>60 meter</td></tr> <tr><td>Times LMR 600</td><td>90 meter</td></tr> </table> <p><u>Power Supply</u></p> <p>- AC operation 230VAC +/- 10% 47-100 Hz (115VAC Option)</p> <p><u>Power consumption</u></p> <p>ODU (less HPA) requires 100W IDU (incl. HPA) requires 200W</p> <p><u>Radio frequency characteristics</u></p> <table border="0"> <tr><td>Transmit frequency</td><td>14.0-14.5 GHz</td></tr> <tr><td>Receive frequency</td><td>10.95-12.75 GHz</td></tr> </table>	Height	150 cm	Diameter	131 cm	Weight	114 kg	Height	29 cm (6U)	Width	52 cm	Depth	54 cm	Weight	24 kg	RG 223	15 meter	RG214	30 meter	Times LMR 400	60 meter	Times LMR 600	90 meter	Transmit frequency	14.0-14.5 GHz	Receive frequency	10.95-12.75 GHz	<p>Antenna Characteristics</p> <table border="0"> <tr><td>Type</td><td>: Spun Aluminum reflector</td></tr> <tr><td>Size</td><td>: 1 m diameter</td></tr> <tr><td>Feed</td><td>: Cassegrain feed with center focus splash plate</td></tr> <tr><td>Polarization</td><td>: Linear w/motorized skew adjustment</td></tr> <tr><td>Polarization control</td><td>: 24 volt DC motor feedback with pot</td></tr> </table> <p>Typical Antenna Gain</p> <table border="0"> <tr><td>TX</td><td>: 40 dBi at 14.0 GHz</td></tr> <tr><td>RX</td><td>: 39 dBi at 12.5 GHz</td></tr> </table> <p><u>Stabilized Antenna Pedestal</u></p> <table border="0"> <tr><td>Three-axis</td><td>: Level, Cross Level, AZ</td></tr> <tr><td>Stabilization</td><td>: Torque Mode Servo</td></tr> <tr><td>Stab Accuracy</td><td>: Max. 0.1 degrees RMS</td></tr> </table> <p>Range of motion:</p> <table border="0"> <tr><td>Elevation:</td><td>: -15 to 85</td></tr> <tr><td>Cross Level:</td><td>: +/- 25 degrees</td></tr> <tr><td>Azimuth:</td><td>: Unlimited</td></tr> </table> <p>Environmental characteristics</p> <p><u>Temperature</u></p> <table border="0"> <tr><td>ODU</td><td>: -35°C to +55°C</td></tr> <tr><td>IDU</td><td>: 0°C to +40°C</td></tr> </table> <p><u>Humidity</u></p> <table border="0"> <tr><td>ODU</td><td>: Up to 100%</td></tr> <tr><td>IDU</td><td>: Up to 90%</td></tr> </table> <p><u>Other ODU parameters</u></p> <p>Withstand relative average winds up to 100 MPH from any direction.</p> <p>Roll : +/-25° with 6-12 seconds periods Pitch: +/-15° with 6-12 seconds periods Yaw: +/-8° with 15 to 20 seconds periods</p> <p>Turning rate: Up to 12° per second Headway: Up to 50 knots Mounting height: Up to 150 feet.</p>	Type	: Spun Aluminum reflector	Size	: 1 m diameter	Feed	: Cassegrain feed with center focus splash plate	Polarization	: Linear w/motorized skew adjustment	Polarization control	: 24 volt DC motor feedback with pot	TX	: 40 dBi at 14.0 GHz	RX	: 39 dBi at 12.5 GHz	Three-axis	: Level, Cross Level, AZ	Stabilization	: Torque Mode Servo	Stab Accuracy	: Max. 0.1 degrees RMS	Elevation:	: -15 to 85	Cross Level:	: +/- 25 degrees	Azimuth:	: Unlimited	ODU	: -35°C to +55°C	IDU	: 0°C to +40°C	ODU	: Up to 100%	IDU	: Up to 90%
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System Block Diagram

Out-Door Unit (ODU), (Antenna)

