



# v85NX Ka XCVR

## 85CM Ka-Ku CONVERTIBLE

Maritime VSAT Antenna System



### FEATURES

#### HIGHER RF PERFORMANCE

Intellian's highly efficient RF design delivers superior performance compared to other 80 cm class systems, enabling higher data rates and global operation. The compact 85 cm antenna's smaller footprint allows installation on smaller vessels, yet still allows the system to operate on a 1-meter designed network.

The v85NX Ka XCVR delivers improved tracking precision and reliability in a compact and streamlined mechanical design. The system comes standard with a 4.5W XCVR or can be upgraded with 9W XCVR variations.

#### FUTURE PROOF COMMUNICATIONS

The v85NX Ka XCVR can be easily converted from Ka to Ku operation by changing the center-mounted RF Assembly and Feed using an available conversion kit. The frequency tuned reflector and radome ensure maximum performance across both Ka- and Ku- bands.

#### SINGLE COAXIAL CABLE

The v85NX Ka XCVR combines Tx, Rx, and DC power in a single cable solution, enabling faster installation and reduced costs. Dynamic Motor Brakes eliminate the requirement of shipping brackets, and the Dome-On external RF cable connection on the base allows faster and easier installation without removing the radome.

#### EMBEDDED DUAL ANTENNA MEDIATOR

Intellian's new ACU fully supports dual antenna operation without additional complexity and components such as a separate mediator and RF splitters. Streamlined configuration of the dual antenna operation is done via AptusNX.

#### APTUSNX INTELLIGENT DIAGNOSTICS

AptusNX, Intellian's all new integrated M&C platform, provides a responsive user interface to manage antenna systems. It also has an intelligent diagnosis function for accurate and enhanced antenna monitoring, and provides detailed reports and measurement for convenient main-tenance.

#### STANDARDIZED MODULAR COMPONENTS ACROSS NX SERIES

Modular components are used throughout the NX range, such as dynamically braked motors with integrated encoders, and a Main Control Unit. The sharing of common modules across Intellian's NX antenna series reduces the number of spare parts by more than 30%.

# v85NX Ka XCVR

## TECHNICAL SPECIFICATIONS

### ABOVE DECK UNIT

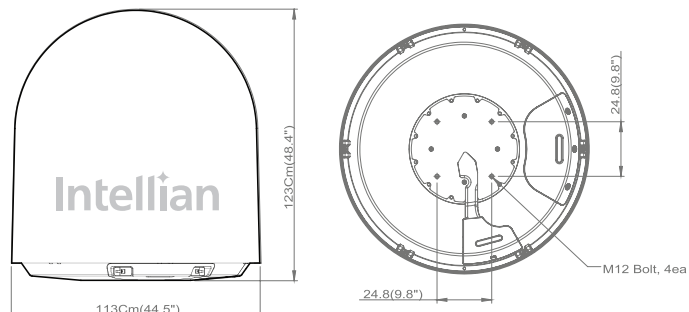
|                        |                                                                                  |
|------------------------|----------------------------------------------------------------------------------|
| Radome Height          | 123 cm / 48.4"                                                                   |
| Radome Diameter        | 113cm / 44.5"                                                                    |
| Empty Dome Weight      | 25 kg / 55.1 lbs                                                                 |
| Reflector Diameter     | 85 cm / 33.5"                                                                    |
| ADU Weight             | 95 kg / 211.6 lbs                                                                |
| Platform               | 3-axis / Azimuth, Elevation, Cross-level                                         |
| Azimuth Range          | Unlimited                                                                        |
| Elevation Range        | -20° to 115°                                                                     |
| Cross-level Range      | ± 37°                                                                            |
| Stabilization Accuracy | 0.2° peak mispointing<br>@max ship motion condition                              |
| Motor Brake System     | Dynamic Brake System                                                             |
| Tx Frequency           | 27.5 ~ 30.0 GHz Ka-band                                                          |
| Tx Gain                | 45.9 dBi @ 28.80 GHz                                                             |
| Rx Frequency           | 17.7~ 20.2 GHz Ka-band                                                           |
| Rx Gain                | 42.6 dBi @ 19 GHz                                                                |
| G/T                    | Min. 18.0 dB/K @ 19.0 GHz (clear Sky, 20° Elevation)                             |
| Transceiver Power      | 4.5W, 9W (Optional)                                                              |
| Polarization           | Dual Circular Polarization<br>RHCP, LHCP (independent to Rx/Tx)                  |
| Antenna Cable          | Single 50-ohm Coax Cable for Rx, Tx, FSK,<br>Reference and Power from ACU to CDU |

### ANTENNA CONTROL UNIT

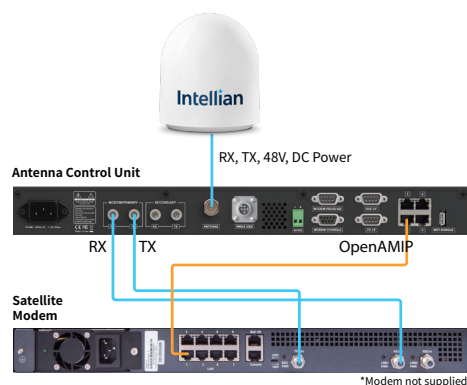
|                       |                                                                 |
|-----------------------|-----------------------------------------------------------------|
| Dimensions (WxDxH)    | 43.1 cm x 35.0 cm x 4.4 cm / 17" x 13.8" x 1.7"                 |
| Weight                | 5.2 kg / 11.5 lbs                                               |
| Display               | 256x64 Graphic OLED                                             |
| Gyrocompass Interface | NMEA 2000, NMEA 0183                                            |
| Mediator Interface    | Yes (Emebded in ACU, Primary<br>/ Secondary control on AptusNX) |
| Modem Interface       | Ethernet port / RS-232C, -422C / I/O Console                    |
| Modem Protocol        | iDirect, Comtech, SatLink, Hughes, GILAT, Newtec                |
| Remote Management     | Yes                                                             |
| Wi-Fi Operation       | Yes (w/ Wi-Fi dongle)                                           |
| Management Port       | Yes                                                             |
| Intellian LAN Port    | Yes                                                             |
| Power Requirement     | 100 ~240 VAC, 50~60Hz, 4A                                       |

## SYSTEM DIMENSION

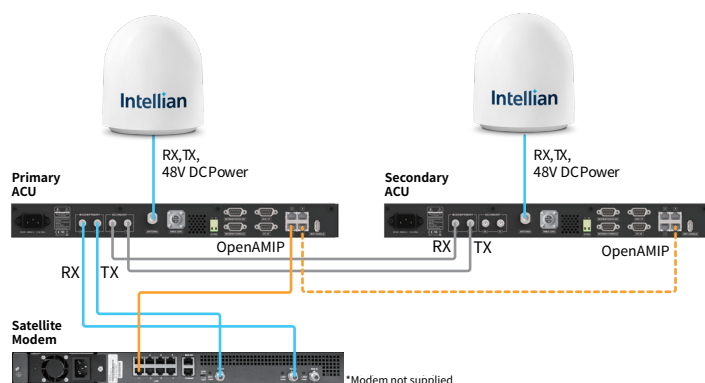
### ADU



## SYSTEM DIAGRAM



## SYSTEM DIAGRAM (DUAL ANTENNA)



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