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Simple Conversion From Ku to Ka

The v100 can be easily and quickly converted from Ku-band system to a Ka-band system with the mounting hardware equipped with an integrated RF module consisting of the BUC and LNB. The BUC & LNB assembly is attached to the rear side of the reflector through a simple process, with no need to balance the system after conversion. The Ku-band feed can be easily and swiftly replaced with the Ka-band feed and is included in the Ku-to-Ka Conversion kit.

Ku and Ka-Band Optimized Reflector

The v100 is designed and engineered to operate on Ku and Ka-bands while maximizing the RF performance on both bands. The reflector of the v100 is capable of handling either Ku or Ka-Bands, eliminating the need to replace the reflector when switching between bands.

Frequency Tuned Radome

To ensure efficient operations for both Ku-band and Ka-band systems, the signal loss of the radome itself was minimized and the performance maximized with an optimized radome design that enhances both the Ka-band an Ku-band system performance.

Patent Pending Intellian Global PLL LNB

The v100 is equipped with Intellian's patent pending Global PLL LNB as standard. Intellian's new Global PLL LNB presents the world's first Ku-band LNB module capable of recieving a full range of operating frequencies from any VSAT satellite around th globe. The PLL LNB incorporates user programmable support of an unlimited number of LO (Local Oscillator) frequencies. This uniquely innovative capability of remotely changing the frequencies of the LNB makes the v100 by far the only system that is ready for Global Ku-band VSAT service to date.

Auto Beam Switching (ABS) Available

The v100 supports ABS via OpenAMIP protocol of iDirect and the ROSS Open Antenna Management (ROAM) protocol of Comtech.

Gyro-Free Satellite Search Capabilty

Intellian's new generation Gyro-free satellite search function enables the v100 to acquire and lock onto the satellite without requiring a separate input from the ship's gyrocompass.



Intellian[®] v100

Technical Specifications

Physical	
Radome Height151.4cm / 59.63"	
Radome Diameter138.0cm / 54.33"	
Reflector Diameter 103cm / 41"	
Weight Approx. 128kg / 282lbs	
Stabilized Pedestal Assembly	
Platform 3-axis : Azimuth, Elevation, Cross-level	
Azimuth Range Unlimited	
Elevation Range -20° to +115°	
Cross-level Range Up to ±37°	
Stabilization Accuracy 0.2° peak mis-pointing @ max ship motion co	ndition
Motor Brake System Elevation, Cross-level	
Reflector & Feed Assembly	
TX Frequency 13.75 ~ 14.5GHz Ku-band	
TX Gain 41.6dBi @ mid band	
RX Frequency 10.7 ~ 12.75GHz Ku-band	
RX Gain 39.4dBi @ mid band	
G/T > 19.6dB/K (Clear Sky, 30° Elevation)	
BUC Power 8W, 16W (optional)	
LNB Intellian PLL LNB	
Polarization Cross-pol and Co-pol	
Antenna Control Unit	
Dimensions (WxDxH) 43.1cm x 38.1cm x 4.4cm / 17" x 15" x 1.7"	
Weight 3.5kg / 7.7lbs	
Display 2 line 40 character graphic VFD module	
Gyrocompass Interface NMEA / NMEA 2000	
Modem Interface Ethernet port / RS-232C / I/O ports	
Modem Protocol iDirect, Comtech, SatLink, Hughes, GILAT	
Remote Management Yes	
Wi-Fi Operation Yes	
Management Port Yes	
Power Requirement 100~240V AC, 50~60 Hz, 1A	

System Diagram



Ku-Band Marine Stabilized VSAT System with 3-axis & 1m Reflector Diameter

Intellian v100 is a 1m Ku-band maritime stabilized

antenna, a ready-to-use system for Ka-band service.

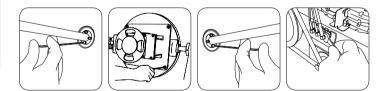
The v100 offers a robust, affordable, plug and play conversion kit to enable a smooth upgrade path from Ku to Ka service in as little as 10 minutes without requiring a factory trained technician. With the improved Ku-band RF performance from the v110, the Ka-band RF performance of the v100 is optimized for Ka-band service at the same time.

The v100's high-gain, highly efficient reflector and tuned radome ensure the best service quality available when configured for Ku or Ka-band operation. In addition, the v100 supports low elevation angle (- 20°) capability to quarantee reliable connection at extremely high latitude.

The v100's seamless end-to-end solution is to offer hassle-free installation, operation, and maintenance. The v100 provides a newly developed, graphic-based antenna remote control program with an additional Software Development Kit (SDK), allowing the NOC or service center to integrate antenna monitoring and control into its existing network management systems in a easier, user-friendly, and convenient manner.

The v100 is available in 3 models that support 4W, 8W, and 16W BUC sizes. All models are built with Co-pol and Cross-pol feed and come equipped with Intellian's Global PLL LNB as standard.

4 step Conversion



- 1. Remove the Ku-band feed by removing 4 bolts.
- 2. Remove the Ku-band BUC/LNB assembly by taking 4 bolts out and attach the Ka-band BUC/LNB assembly by inserting 4 bolts.
- 3. Attach the Ka-band feed by inserting 4 bolts.
- 4. Use same cable connector for Ku-Band BUC/LNB assembly and Ka-Band BUC/LNB assembly.



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