

Intellian® v100

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



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 and 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 receiving a full range of operating frequencies from any VSAT satellite around the 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 Capability

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.

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Technical Specifications

Physical	
Radome Height	151.4cm / 59.63"
Radome Diameter	138.0cm / 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 condition
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

Intellian® v100 is a 1m Ku-band maritime stabilized antenna, a ready-to-use system for Ka-band service.

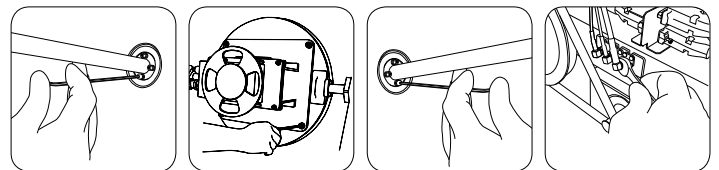
The v100 offers a robust, affordable, plug and play conversion kit to enable a smooth upgrade path from Ku to Ka service in as little as 10 minutes without requiring a factory trained technician. With the improved Ku-band RF performance from the v110, the Ka-band RF performance of the v100 is optimized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

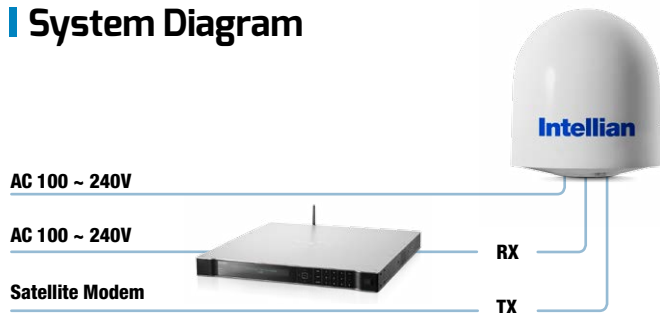
The v100 is available in 3 models that support 4W, 8W, and 16W BUC sizes. All models are built with Co-pol and Cross-pol feed and come equipped with Intellian's Global PLL LNB as standard.

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.

System Diagram



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