

# Intellian® v100GX

1 meter Marine Stabilized  
Ku-to-Ka Band Convertible  
Communication Antenna System

Defining a new standard prepared for the future

**Intellian® v100GX** is a 1 meter Ku-band to Ka-band convertible maritime stabilized antenna, a ready-to-use system for the super-fast, Global Xpress™(GX) Ka-band broadband service from Inmarsat.

The v100GX offers a robust, affordable, plug and play conversion kit to enable a smooth upgrade path from Ku to GX 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 v100GX is optimized for GX service at the same time.

The v100GX'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 v100GX supports low elevation angle (-20°) capability to guarantee reliable connection at extremely high latitude.

The v100GX's seamless end-to-end solution is to offer hassle-free installation, operation, and maintenance. The v100GX 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 an easier, user-friendly, and convenient manner.

The v100GX 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.

## Key Features

- Ready for Inmarsat Global Xpress™ (GX) Service
- Fully Optimized for Ku or Ka-Band Operation
- Quick and Easy Conversion Kit
- Next Generation Graphic-based Remote Control Program
- SDK Offered for Seamless Integration and Operation



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### Frequency Tuned Radome

To ensure efficient operations for both Ku-band VSAT and Ka-band Inmarsat Global Xpress™ 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.

### Ku and Ka Band Optimized Reflector

The v100GX is designed and engineered to operate on Ku and Ka-bands while maximizing the RF performance on both bands. The reflector of the v100GX is capable of handling either Ku or Ka-bands, eliminating the need to replace the reflector when switching between bands. The system will be supplied with a Ku-band feed chain as standard.

### Simple Conversion From Ku to GX

The v100GX can be easily and quickly converted from a Ku-band system to a Ka-band GX 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 GX Conversion kit. Once the ACU is replaced, and power is supplied, the system is immediately ready for operation on the GX service.

### Gyro-Free Satellite Search Capability

Intellian's new generation Gyro-free satellite search function enables the v100GX to acquire and lock onto the satellite without requiring a separate input from the ship's gyrocompass.

### Patent Pending Intellian Global PLL LNB

The v100GX 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 v100GX by far the only system that is ready for Global Ku-band VSAT service to date.

### Industry-leading Standards Compliance

The v100GX is designed to meet or exceed FCC and ETSI specifications, as well as Res EN60945, EN60950, R&TT, DNV2.4 Class C and MIL-STD-167-1A specifications.

### Auto Beam Switching (ABS) Available

The v100GX supports ABS via OpenAMIP protocol of iDirect and the ROSS Open Antenna Management (ROAM) protocol of Comtech.

### 3 Year Parts, 1 Year Labor Warranty

### Global 24/7 Technical Support

## Technical Specifications

ADE Specification	
Radome (W x H)	133 cm x 149 cm (52" x 59")
Dish Diameter	103 cm (41")
Antenna Weight	Approx. 128kg (282 lbs)
Platform	Azimuth, Elevation, Cross-level
Azimuth Range	Unlimited
Elevation Range	-20 ° to +115°
Cross-level Range	Up to ±37°
RX Frequency	10.95~12.75GHz Ku-band
RX Gain	39.8 dBi @ mid band
TX Frequency	13.75~14.5GHz Ku-band
TX Gain	41.3 dBi @ mid band
Cross-pol Isolation	Minimum 35 dB
G/T	> 18.3 dB/K
Polarization	Cross-pol and Co-pol
Power Consumption	100 ~ 240V AC, 50/60Hz, 4A
BDE Specification	
Dimensions (W x D x H)	43.1 cm x 38 cm x 4.4 cm (17" x 15" x 1.7")
Weight	3.5kg (7.7 lbs)
Ship's Gyrocompass Interface	NMEA 2000 / NMEA 0183
GPS Interface	NMEA In / NMEA Out
Serial port	57600bps 8, N, 1, RS-232C
Modem Interface	Ethernet port / RS-232C / I/O ports
Ethernet port	RJ45, TCP/ IP connection
RF Interface	Antenna RX: N-Type, Modem RX: F-Type
Power Consumption	100 ~ 240V AC, 50/60Hz, 1A

## System Diagram



ISO 9001, 14001 Certified

[www.intelliantech.com](http://www.intelliantech.com)

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