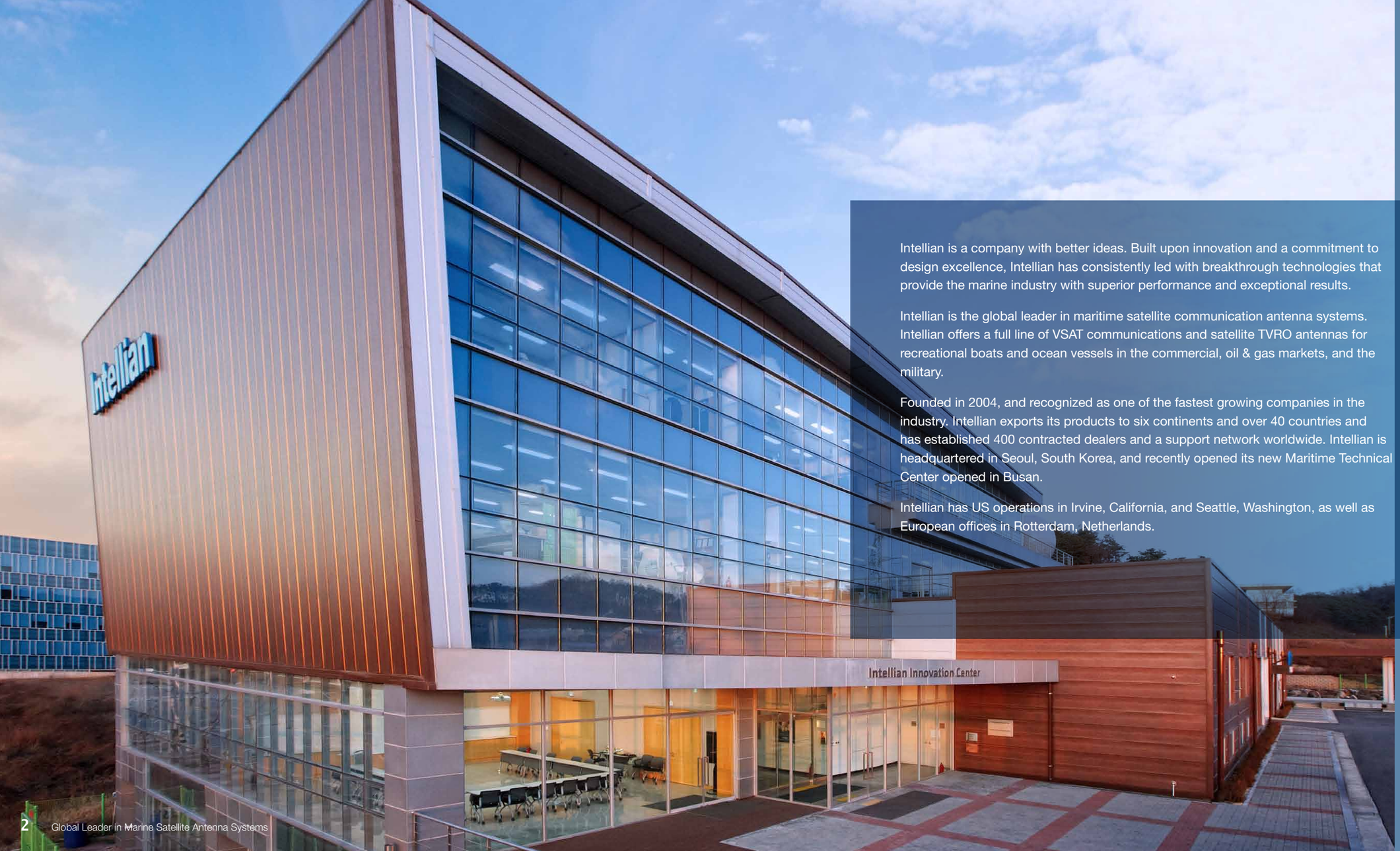
Intellian®

INTELLIAN VSAT

MARITIME STABILIZED VSAT ANTENNA SYSTEM SOLUTION



Proven Leadership in Marine Satellite Antenna Technology

Intellian is a company with better ideas. Built upon innovation and a commitment to design excellence, Intellian has consistently led with breakthrough technologies that provide the marine industry with superior performance and exceptional results.

Intellian is the global leader in maritime satellite communication antenna systems. Intellian offers a full line of VSAT communications and satellite TVRO antennas for recreational boats and ocean vessels in the commercial, oil & gas markets, and the military.

Founded in 2004, and recognized as one of the fastest growing companies in the industry. Intellian exports its products to six continents and over 40 countries and has established 400 contracted dealers and a support network worldwide. Intellian is headquartered in Seoul, South Korea, and recently opened its new Maritime Technical Center opened in Busan.

Intellian has US operations in Irvine, California, and Seattle, Washington, as well as European offices in Rotterdam, Netherlands.

VSAT Antenna System

In our modern world, staying connected is increasingly important.
Few of us venture far from home without a mobile phone or laptop computer.
For ships at sea, staying connected to the home office has long been a challenge.
However, with the connection provided by Intellian's rapidly growing line of VSAT antenna systems, ships can now connect to the world's high-speed, always-on broadband network for commerce, navigation and communication.

Intellian offers fleet owners and IT managers a full line of VSAT antennas for a variety of vessels. From our compact v60 to the state-of-the-art v80G to the large v240C, every antenna Intellian builds is designed to meet the demands of mission critical 24/7 communications.
Open architecture allows Intellian VSAT antennas to operate seamlessly with any of the world's VSAT providers.

Furthermore, Intellian antennas are engineered and tested to function flawlessly in the most extreme conditions,whether it's tropical heat and humidity in the Panama Canal or frigid winter storms around Cape Horn.

Intellian v-Series antennas are 3-axis stabilized maritime VSAT satellite communication antenna systems that offer exceptional value and superior RF performance in their respective model configurations. Built under the highest engineering standards to ensure that they meet a wide variety of compliance requirements worldwide, all Intellian v-Series equipment meet or exceed FCC and ETSI specifications, as well as Res 902 (WRC-03), EN60945, EN60950, R&TTE, DNV 2.4 Class 4 and MILSTD-167 specifications.

The v-Series VSAT communication systems are compatible with service providers using the iDirect, Hughes, Comtech, and SatLink modems. Additional modem networks are continually being added to our scope of connection. All Intellian v-Series antennas are equipped with Wide Elevation Search angles with Automatic Skew Angle Control and unlimited azimuth (no cable un-wrap) for uninterrupted and seamless data communication. These exceptional VSAT systems are designed to support single and multi-band LNBs (including Intellian's exclusive Global PLL LNB), both cross-pol and co-pol feeds, various BUC options (4W to 60W) as well as a Dual Mediator option for expanded redundancy and fail safe applications.

Stabilized 3-axis Ku-band, Ka-band, and C-band VSAT Communication Antenna Systems
Leading edge design, robust equipment, groundbreaking reliability and performance

Connecting You with the world of Communication

Intellian meets the demands of your business and personal operations with Internet, data and voice communications you can depend on.

Intellian offers ship owners, fleet IT managers, captains and crew a reliable point of contact between ship and shore. Whether it's downloading the latest company reports, tracking progress, even keeping in contact with family and friends, Intellian VSAT antennas receive and transmit vital information on-demand, 24 hours a day, 7 days a week.

Designed to function seamlessly with most of the world's airtime service providers, you'll find an Intellian VSAT antenna to meet your needs – without extensive customization or complicated reprogramming.

In fact, many of the world's top service providers recommend and install Intellian VSAT communication systems as part of their comprehensive equipment and service packages.

We invite you to learn more about our line of VSAT antennas and how they can maintain a point of contact with your world at sea.

PURPOSE BUILT

Intellian VSAT antenna systems are purpose-built to function flawlessly in the harshest of marine environments. Our innovative design standards provide superior RF Performance with easy installation and maintenance.

OPEN ARCHITECTURE

Our VSAT antennas take advantage of open system architecture, allowing them to work seamlessly with many different service providers, giving you greater flexibility to profitably package your service contracts.

RETURN ON INVESTMENT

At Intellian, we understand that your investment in VSAT communications is made with an expectation of predictable returns. With exceptional performance, durability, customized software and remote access service capability, you'll find the cost of ownership extraordinarily reasonable. From the easy installation to daily use in severe weather conditions, Intellian VSAT antennas and components will consistently add to your bottom line.

EXTENSIVE PRODUCT TESTING

Every Intellian VSAT antenna is subjected to rigorous electronic and environmental tests during design and manufacture to assure reliability and performance right out of the box.

GLOBAL SUPPORT

Intellian maintains corporate service centers in Seoul, Irvine, Seattle and Rotterdam, as well as our new Maritime Technical Center in Busan, Korea. Intellian has distributor and dealer locations in all major ports around the world with trained technicians and professional service staff. You'll find support for your Intellian system where – and when – you need it. Profit from Intellian's commitment to the point of contact.

Environmental Testing Facility for all antennas

inmarsat
Global Xpress™

D E F I N D I N G A N E W S T A N D A R D

Inmarsat GX Ready

R E A D Y F O R T H E F U T U R E

Intellian v60/v60G

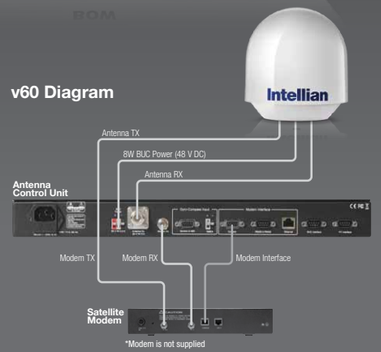
60cm (24") Marine Stabilized Ku-band Communication Antenna System

The v60 is the most compact of Intellian's v-Series 3-axis stabilized marine VSAT communications systems. Its vibration-resistant design criteria meet the same strict standards as all of Intellian's VSAT antennas. The v60 VSAT antenna features unlimited azimuth range (no cable un-wrap), Wide Elevation Angle (-10° to +100°), pre-programmed Global satellite library, built-in GPS, Gyro-free search and easy-to-use remote access management (Uplogix compatible) and maintenance functions.

The v60 also accommodates single or multi-band LNBs, both cross-pol and co-pol feeds and offers BUC options from 4W to 16W. This is an ideal system for vessels that require a small mounting footprint, as well as simple installation, ease of operation and reliable remote maintenance accessibility.

To avoid unnecessary cable runs, the v60G supplies BUC power using the TX cable directly from the ACU.

v60 Diagram



Technical Specifications

Radome (W x H)	78 cm x 84.5 cm (30.7" x 33.3")
Dish Diameter	60 cm (24")
Antenna Weight	59.5 kg (131.2 lbs) variable w/ RF components
Elevation Range	-10° to 100°
Cross-level Range	±30°
Stabilization Accuracy	0.2° peak mis-pointing at max ship motion condition
Turning Rate	Up to 12°/sec & 5°/sec²
TX Frequency	13.75 ~ 14.5GHz Ku-band
RX Frequency	10.95 ~ 12.75GHz Ku-band
TX Gain	38.1 dBi @ Mid band
RX Gain	35.8 dBi @ Mid band
LNB Pol Control	Automatic LNB pol-angle control
Cross-pol isolation	>30 dB at beam center
G/T	13.64 dB/K (clear sky, 30° elev.)

Intellian v80G

83cm (33") Marine Stabilized Ku-band Communication Antenna System

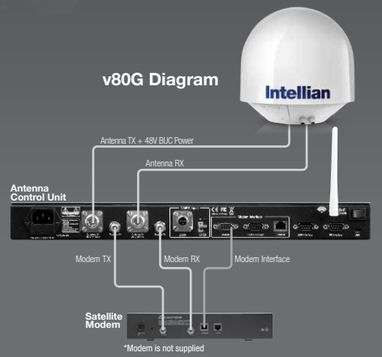
The v80G is suitable for high-speed Internet, weather chart updates, email, file and image transfer, video conference, VoIP, VPNs and database backup. The high-gain RF performance design enables the antenna to operate on the fringes of the signal footprint with superior results.

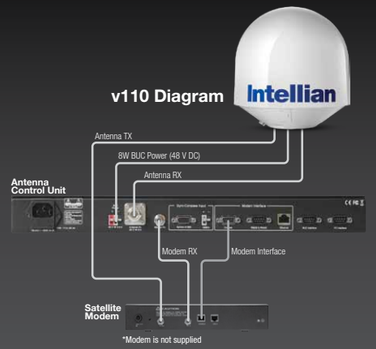
The new Antenna Control Unit (ACU) supports Wi-Fi or PC diagnostic connectivity; in addition, the antenna is equipped with Bluetooth capability for ease of service.

Intellian's v80G features unlimited azimuth range (no cable un-wrap), Wide Elevation Angle (-15° to +110°), Gyro-free search, and easy-to-use remote management and maintenance functions. The v80G also accommodates single or multi-band LNBs, both cross-pol and co-pol feeds and offers BUC options from 4W to 16W. It is designed and built to meet or exceed industry and military standards for vibration, shock and environmental testing to ensure reliability in rugged sea conditions.

Technical Specifications

Radome (W x H)	113 cm x 114 cm (44.5" x 44.9")
Dish Diameter	83 cm (32.7")
Antenna Weight	89.1 kg (196.4 lbs) variable w/ RF components
Elevation Range	-15° to +110°
Cross-level Range	±30°
Stabilization Accuracy	0.2° peak mis-pointing at max ship motion condition
Turning Rate	Up to 12°/sec & 5°/sec²
TX Frequency	13.75 ~ 14.5GHz Ku-band
RX Frequency	10.95 ~ 12.75GHz Ku-band
TX Gain	39.6 dBi @ mid band
RX Gain	38.3 dBi @ mid band
LNB Pol Control	Automatic LNB pol-angle control
Cross-pol isolation	>35 dB at beam center
G/T	16.0 dB/K (clear sky, 30° elev.)





Technical Specifications

Radome (W x H)	147.4 cm x 152.3 cm (58" x 60")
Dish Diameter	1.05 m (42")
Antenna Weight	139.5 kg (307.5 lbs) variable w/ RF components
Elevation Range	-15° to +120°
Cross-level Range	Up to ±37°
Stabilization Accuracy	0.2° peak mis-pointing at max ship motion condition
Turning Rate	Up to 12°/sec & 5°/sec²
TX Frequency	13.75 ~ 14.5GHz Ku-band
RX Frequency	10.95 ~ 12.75GHz Ku-band
TX Gain	41.7 dBi @ Mid band
RX Gain	39.8 dBi @ Mid band
LNB Pol Control	Automatic LNB pol-angle control
Cross-pol isolation	>35 dB at beam center
G/T	18.5 dB/K (clear sky, 30° elev.)

Intellian v110/v110G

1.05m (42") Marine Stabilized Ku-band Communication Antenna System

The v110's 3-axis stabilized antenna with enhanced vibration and shock damping design, allows it to perform extremely well on vessels that require "always on", high-quality broadband communications in rough sea and weather conditions. The Wide Elevation Angle (-15 ° to +120°) and superior RF performance on Gain and X-pol isolation enables seamless signal reception while the vessel is traveling near the equator or Polar Regions.

With built-in auto LNB Pol control, GPS interface, Gyro-free search and customized antenna brake system, it is easy to see why this VSAT system stands out as a cost effective solution for reliable satellite communications.

The Intellian v110's Open Platform compatibility supports Auto Beam Switching via OpenAMIP protocol of iDirect and ROSS Open Antenna Management (ROAM) protocol of Comtech, as well as Hughes, SatLink and others.

Intellian v110GX

Defining a new standard ready for the future

1.03m (41") Marine Stabilized **Ku-to-GX Convertible** Communication Antenna System

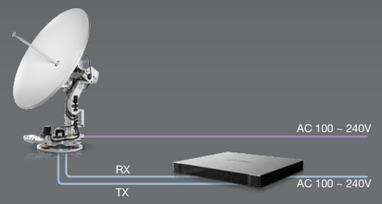
Key Features

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

ADE Specifications	
Radome (W x H)	133 cm x 149 cm (52" x 59")
Dish Diameter	103 cm (41")
Antenna Weight	Approx. 130kg (287 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	41.7 dBi @ mid band
Cross-pol isolation	Minimum 35 dB
G/T	> 18.5 dB/K
Polarization	Cross-pol and Co-pol
Power Consumption	100 ~ 240V AC, 50/60Hz, 4A
BDE Specifications	
Dimensions (W x D x H)	43.1 cm x 38.1 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	NMEA In / NMEA Out
Serial port	19200bps 8, N, 1, RS-232C
Modem Interface	Ethernet port / RS-232C / I/O ports
Ethernet port	RJ45, TCP/ IP connection
RF Interface	TX: F-Type, RX: F-Type
Power Consumption	100 ~ 240V AC, 50/60Hz, 4A

Intellian's v110GX is a 1 meter Ku-band to Ka-band Cnvertible maritime stabilized antenna, a ready-to-use system for the super-fast, Global Xpress™ (GX) Ka-band broadband service from Inmarsat. The v110GX offers a robust, affordable, plug and play conversion kit to enable a smooth upgrade path from Ku to GX service within 10 minutes or less. With the improved Ku-band RF performance from the v110, the Ka-band RF performance of the v110GX is optimized for GX service at the same time. The v110GX's high-gain, highly-efficient reflector and tuned radome ensure the best service quality available for Ku-Ka dual band operation.

In addition, the v110GX supports low elevation angle (-20°) capability to guarantee reliable connection at extremely high latitude. The v110GX is available in 3 models that support 4W, 8W, and 16W BUC respectively. All models are built with Co-pol and Cross-pol feed and equipped with Intellian's Global PLL LNB as a default.



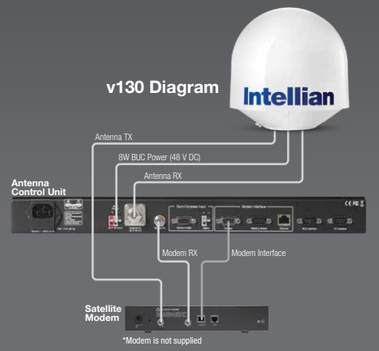
Intellian v130

1.25m (50") Marine Stabilized Ku-band Communication Antenna System

This sophisticated 1.25 m (50") Ku-band VSAT communication system is engineered to the most stringent criteria to provide access to a large scale spectrum of broadband data, Internet and voice communications with Open Platform architecture. Key features include Wide Elevation Angle (-20° ~ +120°), built-in GPS and GPS Interface, Gyro-free search, preloaded Global satellite library, automatic LNB pol-angle control, superior RF performance on Gain and X-pol isolation with unlimited azimuth (no cable un-wrap) and a 3-axis stabilized antenna.

The v130 VSAT system supports single and multi-band LNBs (including Intellian's Exclusive Global PLL LNB), both cross-pol and co-pol feeds, various BUC options (4W to 16W) as well as Dual Antenna configuration with Intellian's VSAT Mediator for expanded redundancy.

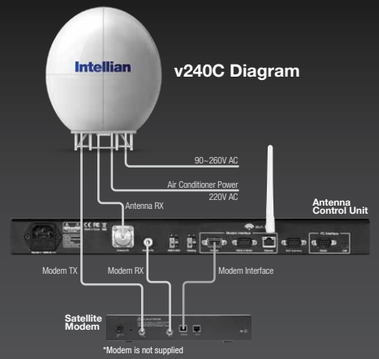
Intellian's v-Series ACU has TCP/IP web-based protocol with an embedded self-diagnosis function which allows the v130 antenna to be remotely monitored and controlled from any Internet connection.



Technical Specifications	
Radome (W x H)	165.2 cm x 168.9 cm (65" x 66.5")
Dish Diameter	1.25 m (50")
Antenna Weight	149.7 kg (337 lbs) variable w/ RF components
Elevation Range	-20° to +120°
Cross-level Range	Up to ±37°
Stabilization Accuracy	0.2° peak mis-pointing at max ship motion condition
Turning Rate	Up to 12°/sec & 5°/sec²
TX Frequency	13.75 ~ 14.5GHz Ku-band
RX Frequency	10.95 ~ 12.75GHz Ku-band
TX Gain	43.2 dBi @ Mid band
RX Gain	42.1 dBi @ Mid band
LNB Pol Control	Automatic LNB pol-angle control
Cross-pol isolation	>35 dB at beam center
G/T	20.2 dB/K (clear sky, 30° elev.)

Intellian v240C

2.4m (94") Marine Stabilized C-band Communication Antenna System



Technical Specifications

Radome (W x H)	3.3 m x 3.52 m (130" x 139")
Dish Diameter	2.4 m (94")
Antenna Weight	685 kg (1510 lbs)
Elevation Range	-15° to +120°
Cross-level Range	± 30°
Stabilization Accuracy	0.2° peak mis-pointing at max ship motion condition
Turning Rate	Up to 12°/sec & 5°/sec²
TX Frequency	5.58GHz ~ 6.725GHz
RX Frequency	3.4GHz ~ 4.2GHz
TX Gain	41.9 dBi @ 6.18GHz
RX Gain	38.6 dBi @ 3.9GHz
LNB Pol Control	Automatic LNB pol-angle control
Cross-pol isolation	Minimum 35 dBi
G/T	20 dBi/K (Clear Sky, 20° elev.)

The v240C C-band VSAT antenna is ideally suited to provide superb signal clarity from any airtime services provider, in any ocean, even in extreme latitudes.
The rugged composition and sturdy design of the antenna and components provides seamless Internet, data and voice communications.

Intellian's patented Automatic Polarization Switching control feature offers Linear and Circular or Linear only, Circular only polarization configurations, eliminating the need for a manual change.

High-gain RF performance, Wide Elevation Angle (-15° ~ +120°), ship's gyro and GPS interfaces and the 3-axis stabilization provide secure connectivity for your application needs.

Intellian's v240C supports Automatic Beam Switching via iDirect OpenAMIP & ROSS Open Antenna Management (ROAM) protocols.
For remote monitoring and control onboard, the v240C features Wi-Fi access via the ACU and Bluetooth connectivity via the antenna for diagnostics and system control.

The v240C requires minimal involvement to commission and is an easy retrofit to replace obsolete C-band VSAT systems using existing radomes.

Intellian VSAT ACU

Intellian VSAT communication systems have 4 models of Antenna Control Units (ACU) depending on the design specifications, functions and features of the system.
As our technology is enhanced and expands, the ACU capabilities and performance are also enriched.

V1-8196
v60G, v110G ACU

Antenna Model	v60 / v110 / v130	v60G / v110G	v80G	v240C
Dimensions (W x D x H)	43.2 cm x 38.1 cm x 4.4 cm (17" x 15: x 1.7")	43 cm x 26.6 cm x 4.4 cm (17" x 15: x 1.7")	43 cm x 26.6 cm x 4.4 cm (17" x 15: x 1.7")	43 cm x 26.6 cm x 4.4 cm (17" x 15: x 1.7")
Weight	5.2 kg (11.5 lbs)	5.2 kg (11.5 lbs)	5.2 kg (11.5 lbs)	3 kg (6.6 lbs)
Gyro Interface	NMEA 0183 / Synchro	NMEA 0183 / Synchro	NMEA 0183 / NMEA 2000	NMEA 0183 / NMEA 2000
Serial Interface	19200bps 8, N, 1, RS-232C	19200bps 8, N, 1, RS-232C	57600bps 8, N, 1, RS-232C	57600bps 8, N, 1, RS-232C
Wi-Fi			✔	✔
Bluetooth			✔	✔
Flash-Memory Firmware Upgrade Antenna Log			✔	✔
BUC Power	✔	✔	✔	
Number of Cables from antenna to BDE (with 8W BUC)	3	2	2	Only 1 RX Cable

Intellian Dual VSAT Mediator

Dual VSAT Antenna configuration options with Intellian's VSAT Mediator provide expanded redundancy. When uninterrupted broadband service at sea is critical, the Dual VSAT Mediator continuously monitors signal reception strength and automatically selects the antenna with the best signal quality for seamless service and connection.

Capable of monitoring and controlling two VSAT systems simultaneously, the Dual VSAT Mediator is designed to control a redundant system with two Intellian v-Series antennas.

M2-TV03
Intellian Dual VSAT Mediator

Intellian Global PLL LNB

Key Features

- Specially designed for marine VSAT antennas
- Capable of communicating with all global Ku-band satellite services
- User programmable support for an unlimited number of LO frequencies
- Capable of substituting any type of PLL LNBs (1, 2, 3, or 4-band) on the market
- Offers the highest frequency stability of ±10KHz (1ppm) as standard

The ground-breaking and patent-pending Intellian 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. Users can define the required LO (Local Oscillator) frequency or select from a pre-programmed LO library in the Intellian antenna control unit. The PLL LNB incorporates user programmable support of an unlimited number of LO frequencies and is capable of substituting any type of LNB products on the market. The set up procedure can even be handled from a remote IP access at any time and any location.

Designed and manufactured by Intellian engineers specifically for marine VSAT, the Global PLL LNB is fine tuned for the Intellian VSAT product line to enhance overall system performance. With the highest frequency stability of + 10KHz (+1ppm) as standard, the units have been tested by Intellian's rigorous and extensive in-house testing programme to guarantee exceptional accuracy and ensure that the Global PLL LNB offers superb performance and long term reliability. The PLL LNB will operate over the following standard LO Frequencies 9.75, 10.0, 10.25, 10.5, 10.6, 10.678, 10.7, 10.75, 10.8, 11.0, 11.05, 11.2, 11.25 and 11.3 GHz, as well as any special dedicated frequencies, ensuring future proof operation.

V1-1205
Global PLL LNB

Intellian BUC Options

The BUC (Block Up-Converter) makes up a part of the VSAT antenna system.
Intellian currently offers various VSAT BUC options from 4W to 60W. BUCs are generally used in combination with LNB (Low-Noise Block converters). The BUC makes up the "transmit" side of the system, while the LNB makes up the "receive" side. VSAT Satellite communication systems utilize both a BUC and LNB(s) for bi-directional Internet access via satellite.

BUC Options		v60/v60G	v80G	v110/v110G	v110GX	v130	v240C
NJRC 4W	Ku-Band	✔	✔	✔	✔	✔	
NJRC 8W		✔	✔	✔		✔	
Codan 8W				✔		✔	
Codan 8W Mini		✔	✔	✔	✔	✔	
Codan 16W Mini		✔	✔	✔	✔	✔	
Codan 25W	C-Band						✔
Codan 40W							✔
Codan 60W							✔

V1-2101
NJRC 4W BUC

Intellian VSAT LNB

The purpose of the LNB is to use the super heterodyne principle to take a block (or band) of relatively high frequencies and convert them to similar signals carried at a much lower frequency. The lower frequencies travel through cables with much less attenuation, so there is much more signal left at the satellite receiver end of the cable.

In order to receive narrow bandwidth signals a highly stable LNB is required. Intellian VSAT systems support various LNB options (single and multi-band) and vendors.

LNBs are specific to satellite frequencies; therefore, the VSAT service provider will determine the LNB configurations and types to apply to the VSAT system.

Ku-band PLL LNB

- Single-band
- Dual-band
- Tri band
- Quad-band

VSAT LNB Features

- High LO Stability
- Low phase noise
- Low noise figure

Intellian Service Kit

While some diagnostic and repair services related to the function of your Intellian antenna system can be handled remotely, having spare parts and tools available will help you restore your system should problems arise.
To make it easy, we've assembled service kits for our systems, with components and tools packed secured in water-tight, shock-resistant cases.

V1-4000
V110 Spare Parts Kit
Level 1

	v60	v60G	v80G	v110
Radome(WxH)	78cmx84.5cm (30.7"x33.3")	78cmx84.5cm (30.7"x33.3")	113cmx114cm (44.5"x44.9")	147.4cmx152.2cm (58"x59.9")
DishDiameter	60cm (24")	60cm (24")	83cm (33")	1.05m (42")
Weight	59.5kg (131.2lbs) (variable w/ RF components)	59.5kg (131.2lbs) (variable w/ RF components)	89.1kg (196.4lbs) (variable w/ RF components)	139.5kg (307.5lbs) (variable w/ RF components)
Stabilized Pedestal Assemby				
Pedestal Type	3-axis/Azimuth, Elevation, Cross-level	3-axis/Azimuth, Elevation, Cross-level	3-axis/Azimuth, Elevation, Cross-level	3-axis/Azimuth, Elevation, Cross-level
Azimuth Range	Unlimited (no cable un-wrap)	Unlimited (no cable un-wrap)	Unlimited (no cable un-wrap)	Unlimited (no cable un-wrap)
Elevation Range	-10° to +100°	-10° to +100°	-15° to +110°	-15° to +120°
Cross-level Range	Up to ± 30°	Up to ± 30°	Up to ± 30°	Up to ± 37°
Stabilization Accuracy	0.2° peak mis-pointing at max ship motion conditon	0.2° peak mis-pointing at max ship motion conditon	0.2° peak mis-pointing at max ship motion conditon	0.2° peak mis-pointing at max ship motion conditon
Safety Brake System	Yes	Yes	Yes	Yes
Max Ship Motion				
Roll / Pitch / Yaw	±25° roll, ±15° pitch, ±8° yaw @ 6 sec period	±25° roll, ±15° pitch, ±8° yaw @ 6 sec period	±25° roll, ±15° pitch, ±8° yaw @ 6 sec period	±25° roll, ±15° pitch, ±8° yaw @ 6 sec period
Turning Rate	Up to 12°/sec & 5°/sec²	Up to 12°/sec & 5°/sec²	Up to 12°/sec & 5°/sec²	Up to 12°/sec & 5°/sec²
Reflector And Feed Assembly				
TX Frequency	13.75~14.5GHz Ku-band	13.75~14.5GHz Ku-band	13.75~14.5GHz Ku-band	13.75~14.5GHz Ku-band
RX Frequency	10.95~12.75GHz Ku-band	10.95~12.75GHz Ku-band	10.7~12.75GHz Ku-band	10.95~12.75GHz Ku-band
TX Gain	38.1 dBi @ mid band	38.1 dBi @ mid band	39.6 dBi @ mid band	41.7 dBi @ mid band
RX Gain	35.8 dBi @ mid band	35.8 dBi @ mid band	38.3 dBi @ mid band	39.8 dBi @ mid band
Min. Cross-pol Isolation	>30 dB at beam center	>30 dB at beam center	>35 dB at beam center	>35 dB at beam center
G/T	13.64 dB/K	13.64 dB/K	16.0 dB/K	18.5 dB/K
LNB Pol Control	Automatic LNB pol-angle control	Automatic LNB pol-angle control	Automatic LNB pol-angle control	Automatic LNB pol-angle control
Antenna Control Unit				
Size(WxDxH)	43.1cmx38.1cmx4.4cm (17" x 15" x 1.7")	43.1cmx38.1cmx4.4cm (17" x 15" x 1.7")	43.1cmx38.1cmx4.4cm (17" x 15" x 1.7")	43.1cmx38.1cmx4.4cm (17" x 15" x 1.7")
Weight	5.2kg (11.5 lbs)	5.2kg (11.5 lbs)	5.2kg (11.5 lbs)	5.2 kg (11.5 lbs)
Input Power	100~240V AC (Max 350W included BUC power)	100~240V AC (Max 350W included BUC power)	100~240V AC (Max 350W included BUC power)	100~240V AC (Max 350W included BUC power)
Ship's Gyrocompass Interface	Synchro / NMEA 0183	Synchro / NMEA 0183	NMEA 0183 / NMEA 2000	Synchro / NMEA 0183
Modem Interface	Ethernet / RS-232C / Console	Ethernet / RS-232C / Console	Ethernet / RS-232C / Console	Ethernet / RS-232C / Console
ABS (OpenAMIP/ROSS ROAM)	✔	✔	✔	✔
Remote Access	✔	✔	✔	✔
WI-FI ACU Operation			✔	
Bluetooth Antenna Operation			✔	
8W BUC Power Supply	✔	✔	✔	✔
Combined BUC Power & TX Cable		✔	✔	
Buc Options				
NJRC 4W (NJT5017)	✔	✔	✔	✔
NJRC 8W (NJT 5118/ 5218)	✔	✔	✔	✔
NJRC 8W Extended (NJT5218NM_8W)	✔	✔	✔	✔
Codan 8W (6908)				✔
Codan 16W (6916)				✔
Codan 8W mini (4908)	✔	✔	✔	✔
Codan 16W mini (4916)	✔	✔	✔	✔
Codan 25W (6725)				
Codan 40W (6740)				
Codan 60W (6760)				
Air Conditioner				

	v110G	v110GX	v130	v240C
Radome(WxH)	147.4cmx152.2cm (58"x59.9")	133cm x149cm (52"x53")	165.2cmx168.9cm(65"x66.5")	3.3mx3.52m(130"x139")
DishDiameter	1.05m(42")	103cm (41")	1.25m(50")	2.4m(94")
Weight	139.5kg(307.5lbs) (variable w/ RF components)	Approx. 130kg (287lbs)	149.7kg(337lbs) (variable w/ RF components)	685kg(1,510lbs) (variable w/ RF components)
Stabilized Pedestal Assemby				
Pedestal Type	3-axis/Azimuth, Elevation, Cross-level	3-axis/Azimuth, Elevation, Cross-level	3-axis/Azimuth, Elevation, Cross-level	3-axis/Azimuth, Elevation, Cross-level
Azimuth Range	Unlimited (no cable un-wrap)	Unlimited (no cable un-wrap)	Unlimited (no cable un-wrap)	Unlimited (no cable un-wrap)
Elevation Range	-15° to +120°	-20° to +115°	-20° to +120°	-15° to +120°
Cross-level Range	Up to ± 37°	Up to ± 37°	Up to ± 37°	± 30°
Stabilization Accuracy	0.2° peak mis-pointing at max ship motion conditon	0.2° peak mis-pointing at max ship motion conditon	0.2° peak mis-pointing at max ship motion conditon	0.2° peak mis-pointing at max ship motion conditon
Safety Brake System			Yes	Yes
Max Ship Motion				
Roll / Pitch / Yaw	±25° roll, ±15° pitch, ±8° yaw @ 6 sec period	±25° roll, ±15° pitch, ±8° yaw @ 6 sec period	±25° roll, ±15° pitch, ±8° yaw @ 6 sec period	±25° roll, ±15° pitch, ±15° yaw @ 6 sec period
Turning Rate	Up to 12°/sec & 5°/sec²	Up to 12°/sec & 5°/sec²	Up to 12°/sec & 5°/sec²	Up to 12°/sec & 5°/sec²
Reflector And Feed Assembly				
TX Frequency	13.75~14.5GHz Ku-band	13.75~14.5GHz Ku-band	13.75~14.5GHz Ku-band	5.58GHz~6.725GHz c-band
RX Frequency	10.95~12.75GHz Ku-band	10.95~12.75GHz Ku-band	10.95~12.75GHz Ku-band	3.4GHz~4.2GHz c-band
TX Gain	43.2 dBi @ mid band	41.7 dBi @ mid band	41.7 dBi @ mid band	41.9 dBi @ 6.18GHz C-band
RX Gain	42.1 dBi @ mid band	39.8 dBi @ mid band	39.8 dBi @ mid band	38.55 dBi @ 3.9GHz C-band
Min. Cross-pol Isolation	>35 dB at beam center	>35 dB at beam center	>35 dB at beam center	>35 dB at beam center
G/T	18.5 dB/K	18.5 dB/K	20.2 dB/K	20 dB/K
LNB Pol Control	Automatic LNB pol-angle control	Automatic LNB pol-angle control	Automatic LNB pol-angle control	Automatic LNB pol-angle control
Antenna Control Unit				
Size(WxDxH)	43.1cmx38.1cmx4.4cm (17" x 15" x 1.7")	43.1cmx38.1cmx4.4cm (17" x 15" x 1.7")	43.1cmx38.1cmx4.4cm (17" x 15" x 1.7")	43.1cmx38.1cmx4.4cm (17" x 15" x 1.7")
Weight	5.2 kg (11.5 lbs)	3.5kg (7.7 lbs)	5.2 kg(11.5lbs)	3.0kg (6.6lbs)
Input Power	100~240V AC (Max 350W included BUC power)	100~240V AC (Max 350W included BUC power)	100~240V AC (Max 350W included BUC power)	90~260V AC
Ship's Gyrocompass Interface	Synchro / NMEA 0183	NMEA0183 / NMEA2000	Synchro / NMEA 0183	NMEA 0183 / NMEA 2000
Modem Interface	Ethernet / RS-232C / Console	Ethernet / RS-232C / Console	Ethernet / RS-232C / Console	Ethernet / RS-232C / Console
ABS (OpenAMIP/ROSS ROAM)	✔	✔	✔	✔
Remote Access	✔	✔	✔	✔
WI-FI ACU Operation				✔
Bluetooth Antenna Operation				✔
8W BUC Power Supply	✔		✔	
Combined BUC Power & TX Cable	✔			
Buc Options				
NJRC 4W (NJT5017)	✔	✔	✔	
NJRC 8W (NJT 5118/ 5218)	✔		✔	
NJRC 8W Extended (NJT5218NM_8W)	✔		✔	
Codan 8W (6908)	✔		✔	
Codan 16W (6916)	✔		✔	
Codan 8W mini (4908)	✔	✔	✔	
Codan 16W mini (4916)	✔	✔	✔	
Codan 25W (6725)				✔
Codan 40W (6740)				✔
Codan 60W (6760)				✔
Air Conditioner				✔

3-Axis Marine VSAT Communication Systems

Ku-band 3-axis Stabilized VSAT Communication Systems

V1-60	v60 Ku-band, X-pol only w/o BUC and LNB
V1-61	v60 Ku-band, X-pol and Co-pol w/o BUC and LNB
VG-60	v60G Ku-band, X-pol only w/o BUC and LNB, G-model
VG-61	v60G Ku-band, X-pol and Co-pol w/o BUC and LNB, G-model

Note:
1. LNB Option: NJRC Single-band LNB, SMW Multi-band (3) LNB, SMW Multi-band (4) LNB
2. BUC Option: NJRC 4W BUC, NJRC 8W & 8W extended BUC, CODAN mini 8W & mini 16W BUCC
3. G-model: 2 coaxial cables only to ACU, no BUC power cable needed

NEW **V2-80**	v80G Ku-band, X-pol only w/o BUC and LNB, G-model
NEW **V2 -81**	v80G Ku-band, X-pol and Co-pol w/o BUC and LNB, G-model
V1-110	v110 Ku-band, X-pol only w/o BUC and LNB
V1-111	v110 Ku-band, X-pol and Co-pol w/o BUC and LNB
VG-110	v110G Ku-band, X-pol only w/o BUC and LNB, G-model
VG-111	v110G Ku-band, X-pol and Co-pol w/o BUC and LNB, G-model
NEW **V3-111-X1W**	V110GX Ku to Ka-band, X-pol and Co-pol w/ 4W BUC
NEW **V3-111-X8W**	V110GX Ku to Ka-band, X-pol and Co-pol w/ 8W BUC
NEW **V3-111-X9W**	V110GX Ku to Ka-band, X-pol and Co-pol w/ 16W BUC
V1-130	v130 Ku-band, X-pol only w/o BUC and LNB
V1-131	v130 Ku-band, X-pol and Co-pol w/o BUC and LNB

Note:
1. Basic VSAT Systems features Ku-band TX/ RX linear polarized feed assembly with auto skew-angle control system
2. All VSAT systems include 19" rack-type Intellian Antenna Control Unit
3. LNB Option: NJRC Single-band LNB, NJRC Dual-band LNB, SMW Multi-band (3) LNB, SMW Multi-band (4) LNB
4. BUC Option: NJRC 4W BUC, NJRC 8W & 8W extended BUC, CODAN 8W & mini 8W BUC, CODAN 16W & mini 16W BUC

NEW **VC1-240**	v240C C-band, Circular-pol only w/o BUC and LNB
NEW **VC1-241**	v240C C-band, Circular-pol and Linear-pol w/o BUC and LNB

Note:
1. C-band LNB Option: NJRC Single-band LNB, NJRC Dual-band LNB, SMW Multi-band (3) LNB, SMW Multi band (4) LNB
2. C-band BUC Option: NJRC 8W & 8W Extended BUC, CODAN 8W, 16W, 25W, 40W & 60W BUC

LNB and BUC Options, (cont.)

V1-1101	NJRC Single-Band LNB; Lo=10.75GHz, 11.70 ~ 12.20GHz
V1-1102	NJRC Single-Band LNB; Lo=11.30GHz, 12.25 ~ 12.75GHz
V1-1103	NJRC Single-Band LNB; Lo=10.00GHz, 10.95 ~ 11.70GHz
V1-1104	NJRC Single-Band LNB; Lo=10.25GHz, 11.20 ~ 11.70GHz
V1-1105	NJRC Dual-Band LNB; Lo=9.75 / 10.6GHz
V1-1201	PLL_LNB_type H (SMW Q-PLL type H/3-band)
V1-1202	PLL_LNB_type J (SMW Q-PLL type J/3-band)
V1-1203	PLL_LNB_type O (SMW Q-PLL type O/Quad-band)
V1-1204	PLL_LNB_type R (SMW Q-PLL type R/Quad-band)
NEW **V1-1205**	Intellian Global PLL LNB
V1-2101	NJRC 4W BUC (NJT5017L_4W)
V1-2102	NJRC 8W BUC (NJT5118NM_8W)
V1-2103	NJRC 8W Extended BUC (NJT5218NM_8W)
V1-2201	CODAN 8W BUC (6908-W/E-48/EX) - v110 and V130 only
V1-2202	CODAN 16W BUC (6916-W/E-AC/EX-CE)
V1-2203	CODAN mini 8W BUC (4908-W/E-DC/EX-CE-NI)
V1-2204	CODAN mini 16W BUC (4916-W/E-DC/EX-CE-NI)

Note:
1. VSAT System doesn't include LNB and BUC price. LNB and BUC need to be purchased separately.
2. When ordering VSAT system, customer needs to specify the LNB and BUC spec so that system can be produced with weight balancing and all the quality checks prior to shipment.

LNB and BUC Options, (cont.)

VC1-2202	CODAN 25W BUC (6725-W/E-AC/EX-CE)
VC1-2101	CODAN 40W BUC (6740-W/E-AC/EX-CE)
VC1-2103	CODAN 60W BUC (6760-W/E-AC/EX-CE)

Note:
1. VSAT System doesn't include LNB and BUC price. LNB and BUC need to be purchased separately.
2. When ordering VSAT system, customer needs to specify the LNB and BUC spec so that system can be produced with weight balancing and all the quality checks prior to shipment.

VSAT Antenna Control Unit (ACU)

V1-8003	AC 19" Rack-mount ACU for Intellian v60, v110, v130
V1-8196	AC 19" Rack-mount ACU for Intellian v60G, v110G
V2-8001	AC 19" Rack-mount ACU for Intellian 80G
NEW **VP-T432**	Antenna Control Unit for V110GX
VC-1024	AC 19" Rack-mount ACU for Intellian v240C

Dual Antenna Mediator(s)

M2-TV03	Intellian Dual VSAT Mediator (Dual VSAT Antenna Auto-switch Controller)

Certified Lifting Strap

V1-9201	Certified Lifting Strap for v60/v60G
V1-9202	Certified Lifting Strap for v60/v60G
V1-9203	Certified Lifting Strap for v130/t130/ t130W

Empty Dome Assemblies

V1-8049	v60/v60G Empty dome and Baseplate Assembly
V1-8198	v80G Empty dome and Baseplate Assembly
V1-8001	v110/v110G Empty dome and Baseplate Assembly
V1-8002	v130 Empty dome and Baseplate Assembly

Note: All Intellian v-Series systems include a radome as a standard default package and these are for spare parts purpose.

Standard Default Package

Antenna and Radome
ACU (Antenna Control Unit)
2ea x ACU Bracket: (ACU 19" Rack)
2ea x ACU Table Bracket: (ACU Table)
1ea x 3m (10ft) RG6 Cable: ACU (MODEM RX) to Modem
2ea x 15 m (49.2 ft) RG6 Cable: Antenna (MODEM IN) to Modem, Antenna (ACU RX) to ACU (ANT RX)
1ea x 15 m (49.2 ft) BUC Power Cable: Antenna (BUC IN) to ACU (BUC POWER) not supplied on G versions
1ea x 1.5 m (5 ft) ACU Power Cord: (CEE7/7)
1ea x 1.8 m (6 ft) PC Serial Cable: ACU to PC
1ea x 1.8 m (6 ft) USB (AA/MM) Cable: ACU to PC
1ea x 1.5 m (5 ft) iDirect Interface Cable: ACU to Modem
2ea x DSub 9 Pin Male Connector: ACU
3ea x Gyro NMEA/BUC Power Connector (AK9502): ACU (GYRO NMEA/BUC Power) and Antenna (BUC IN)
1ea x Intellian Install CD

Test Cable Set

1ea x 3m (10ft) RG6 Test Cable: ACU (MODEM RX) to Modem
2ea x 15 m (49.2 ft) RG6 Test Cable: Antenna (MODEM IN) to Modem, Antenna (ACU RX) to ACU (ANT RX)
1ea x 15m (49.2ft) BUC Power Test Cable: Antenna (BUC IN) to ACU (BUC POWER)

Global Dealers and Distributors

Intellian maintains a worldwide network of over 400 dealers and distributors. You will find highly trained sales consultants, service and customer support representatives well suited to meet your needs. Intellian dealers can be found in North and South America, Europe, Africa, the Middle East and in the Asia/Pacific Region.

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Warranty Policy

For the VSAT systems, 2 year parts and workmanship guarantee with 1 year labor warranty is given when installed by a certified dealer and or an Intellian Technician, from the date of purchase of the product by the end user.

Furthermore if the product was installed by a certified dealer, the scope of this warranty is expanded to cover not just factory labor cost but also on-site dealer/distributor labor charges as well, for warranty repairs performed during the first year; subject to prior authorization from Intellian.

This Limited Warranty does not apply if the product has been damaged by accident, abuse, misuse or misapplication or has been modified without the written permission of Intellian Technologies, Inc., if any Intellian serial number has been removed or defaced, or if any factory-sealed part of the system has been opened without authorization.

www.intelliantech.com

Get the most complete and up-to-date information on all of Intellian's products and services on our website at www.intelliantech.com. Our website has been designed to be a resource to those considering our systems, as well as to our many customers throughout the world.
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Product Information

Vist **www.intelliantech.com**
You'll also find a searchable database of all our dealers and distributors worldwide.

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