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Intellian

Satellite Communication Antenna Systems
Elevate Your Communications Experience
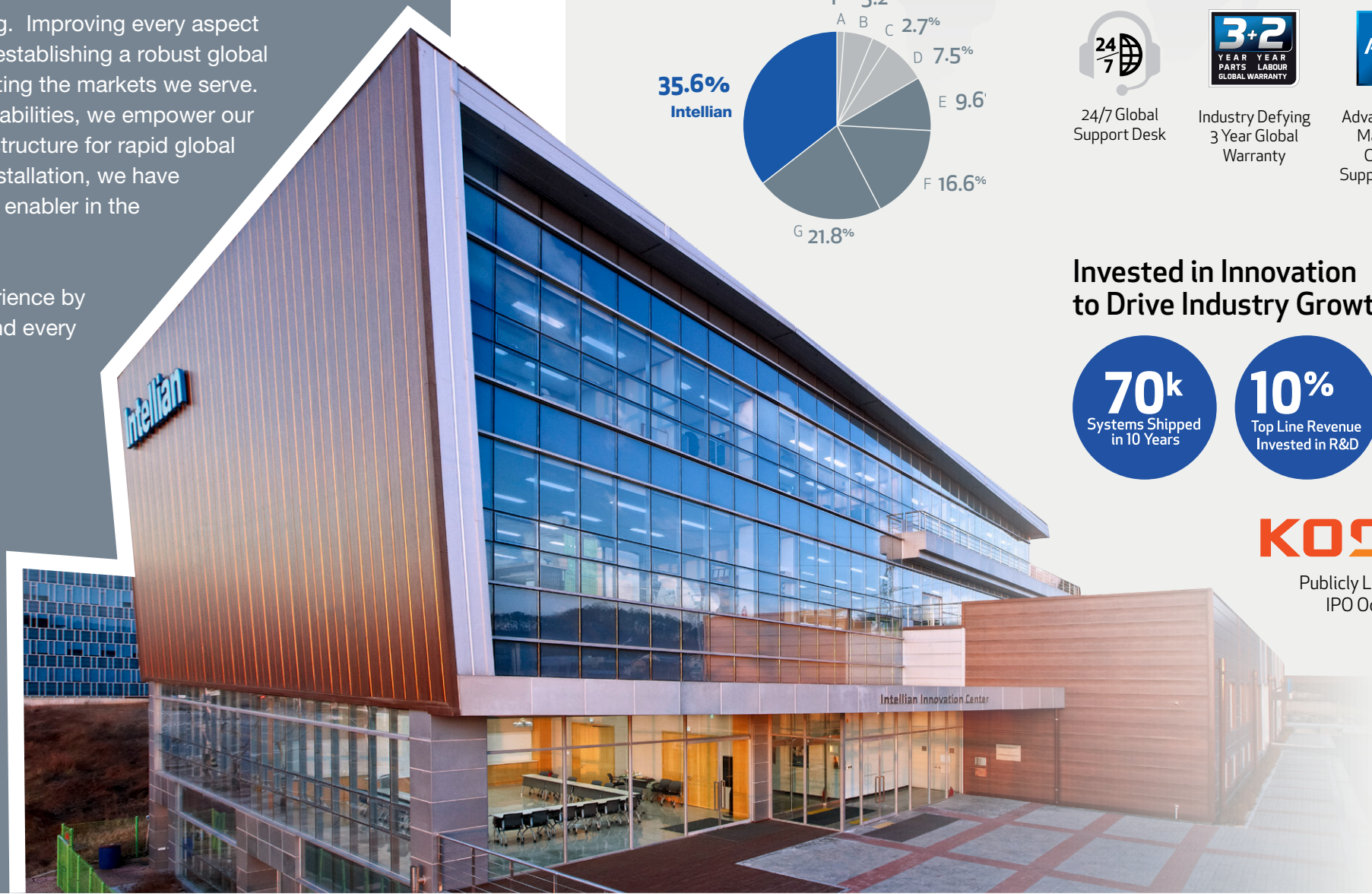
2017_0511_VSAT Brochure_HD

Leading the Evolution of Mobility Communications

Constant, high-speed, global connectivity is an engine for economic growth, for corporate efficiency, and for industrial evolution. Adapting is no longer a choice, but a requirement for survival in the Digital Age.

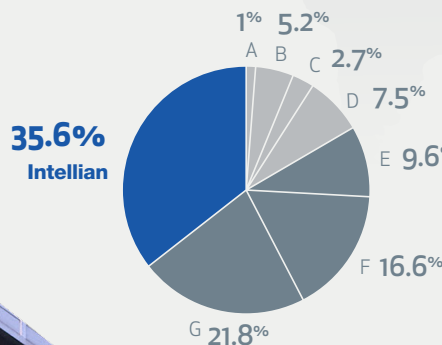The only choice is how you experience your journey to digital transformation.

At Intellian, innovative technology is only the beginning. Improving every aspect of the customer experience is our core objective. By establishing a robust global presence across three continents, we excel at supporting the markets we serve. By investing in better training and remote support capabilities, we empower our partners to exceed expectations. By creating an infrastructure for rapid global delivery of products streamlined for quick and easy installation, we have become the most dependable and proactive business enabler in the industry.

Intellian leads in evolving the entire process and experience by which our partners increase the profitability of each and every ship at sea, no matter the challenges.

About Intellian

Global Leader in Stabilized Antenna Technology

35.6% Intellian

A 1%
B 5.2%
C 2.7%
D 7.5%
E 9.6'
F 16.6%
G 21.8%

World Class Customer Experience

24/7
24/7 Global Support Desk

3+2 YEAR YEAR PARTS LABOUR GLOBAL WARRANTY
Industry Defying 3 Year Global Warranty

Aptus
Advanced Remote Management, Control and Support Capability

Invested in Innovation to Drive Industry Growth

70ᵏ Systems Shipped in 10 Years

10% Top Line Revenue Invested in R&D

30% 5-Year CAGR

KOSDAQ

Publicly Listed Company: IPO October, 2016

Intellian Global Xpress

- Intellian is the Worlds only manufacturer to provide the full range of maritime Global Xpress hardware from commercial to military. Standard Maritime applications utilize GX60 & GX100 antennas complete with a fully assembled below deck FX Rack assembly.

- The Intellian GX100PM was specially designed to meet stringent 'MIL SPEC' standards for the toughest of environments required by the worlds military forces.

- Unlike any other manufacturer, all Intellian GX products include a 'BDT' includes the renowned Intellian ACU but combined with an 'inbuilt' & approved Inmarsat Core Module. This unique combination reduces the need for additional cabling and reduces rack space increasing both reliability and valuable equipment space.

- The 'BDT' (below deck terminal) consists of the antenna control unit, GX modem core module, 8 port Ethernet switch all with one AC power supply housed in a 1U size rack mount chassis.

- Intellian GX products are developed to achieve the best RF performance fundamentally. The frequency tuned Radome produces almost zero signal loss so when combined with Intellian's high specification carbon fiber reflector you can be assured to receive the very highest RF efficiency in order to achieve the maximum stability and throughput from your connection.

- This core focus on RF performance ensures you maintain network stability while maintaining a strong signal even in the worst of weather conditions and heavy rain.

- Intellian GX products fully supports both Inmarsat's Hard NSD (Cisco 2911) and Soft NSD (Digital Based Platform). It can be configured with any FleetBroadband terminals including Intellian FB500R and FB250R. These unique rack-mount FB units were specially developed for installation in FX Rack assemblies and for easy retro fitting existing radio-room racks.

MARITIME VSAT NO.1

3+2 YEAR YEAR PARTS LABOUR GLOBAL WARRANTY

Aptus

GX-Series : Unmatched Design and Performance

All Intellian GX-Series systems feature our signature Below Deck Terminal (BDT). Each BDT includes the Antenna Control Unit, embedded GX Modem, AC Power Supply, and 8 Port Ethernet Switch.

Antenna Control Unit ⊕ AC Power Supply ⊕ Integrated GX Modem ⊕ 8-Port Ethernet Switch

All-in-One Below Deck Terminal

99.9% Inmarsat confirms that Intellian's GX terminals deliver the strongest uptime on their network.

Our Fleet Xpress Solution features One Touch Commissioning for quick and easy activation.

Aptus Our advanced Management & Control application enables superior remote support via Web, PC and Mobile.

3 All Intellian products are backed by our industry-defying warranty, covering 3 years on parts and 2 years on labor.

4,000+ Deployed Intellian's 1m antenna platform is the world's most popular maritime VSAT system with over 4000 in service worldwide.

The GX100 is the RF performance leader, delivering faster speeds and better resilience in all conditions.

All-in-One Below Deck Terminal

Easily accessible M&C Ports   2 Line Display   Touchpad

Wi-Fi Enabled for Remote Management via Aptus

Integrated AC Power Supply   8 Port Ethernet Switch

Maritime Connectivity Made Simple

Intellian and Inmarsat have partnered to deliver a high speed connectivity solution as easy to adopt as Fleet Broadband. Pre-integrated satellite terminals. Single global network. Intuitive User Interface.

Enterprise Enabling Speed

The Global Xpress constellation is the world's first global High Through-put Satellite network to come to market. Users will be able to connect at speeds measured in Megabits, as opposed to Kilobits, all at reasonable service rates.

One Touch Commissioning

Goes from power-up to network connectivity in 30 seconds. No calls to the Network Operations Center (NOC) required. No post installation configuration (option file) needed. System is pre-configured for easy, rapid deployment.

All in One Below Deck Terminal

Features a built in GX modem for simplified installation and reduced overall rack space requirements. Wi-Fi enabled for wireless management via Intellian's Aptus PC or Mobile remote management application. Built in 8 Port Ethernet Switch provides VLAN capability, all in a single, 19" rack type 1U case. Integrated AC Power Supply and front panel touch display with easy navigation buttons.

From In Port to Online in 4 Hours

Quick-Deploy packaging, pre-slung lifting straps, Intellian's Aptus Graphical User Interface and a single, integrated Below Deck Terminal (BDT) enable fast and easy installation of the GX Series. Captains and Fleet managers can count on quick, pain-free installation to get vessels connected and back out to sea swiftly.
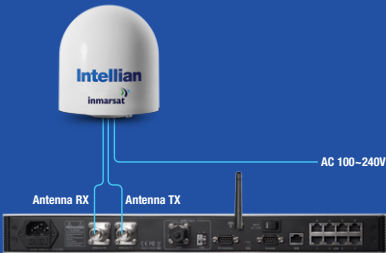
FB250/500 Compatibility

All Intellian systems feature an Intellian LAN function, enabling all on-board devices to be easily networked out of the box with no additional hardware. For the ultimate in service reliability, or for out of band management solutions, the GX Series easily integrates with Intellian's FB250 or 500 terminals.

Industry-leading Standards Compliance

The GX Series meets CE and FCC regulatory compliances as well as EN60945, EN60950, R&TTE and FCC Part 15. They are also designed to meet MIL-STD 167.

Uninterrupted Global Coverage

With the GX Series, users benefit from the reliable, global coverage of traditional Inmarsat Services, with more than twice the speed and performance.

GX100

1m **Global Xpress Terminal**

The GX100 is a 1m Ka-band maritime stabilized terminal, a ready-to-use system for the high speed, Global Xpress(GX) broadband service from Inmarsat. Built and supplied with an integrated Global Xpress modem the GX100 installs easily and delivers high speed connectivity in no time.

- Maritime Connectivity Made Simple
- All in One Below Deck Terminal
- Enterprise Enabling Speed
- Industry-leading Standards Compliance
- From In Port to Online in 4 Hours
- One Touch Commissioning
- FB250/500 Compatibility
- Uninterrupted Global Coverage

GX60

65cm **Global Xpress Terminal**

The GX60 is a compact maritime stabilized terminal ready-to-use on Inmarsat's high speed, Global Xpress (GX) broadband service. Built and supplied with an integrated GX modem the GX60 installs easily and delivers high speed connectivity in no time.

- Maritime Connectivity Made Simple
- All in One Below Deck Terminal
- Enterprise Enabling Speed
- Industry-leading Standards Compliance
- From In Port to Online in 4 Hours
- One Touch Commissioning
- FB250/500 Compatibility
- Uninterrupted Global Coverage

GX100PM

1m Military-Grade **Global Xpress Terminal**

The GX100PM is the world's first and only 1m military grade maritime stabilized communications terminal approved for use on Inmarsat's Global Xpress(GX) network. The system delivers robust performance in an off-the-shelf, turn key package.

- Inmarsat Type Approved
- Designed for Military Applications
- From In Port to Online in 4 Hours
- Operational Intelligence From Anywhere
- Single Network. Global Coverage.
- Operational Flexibility

GX100PM on Stealth ship
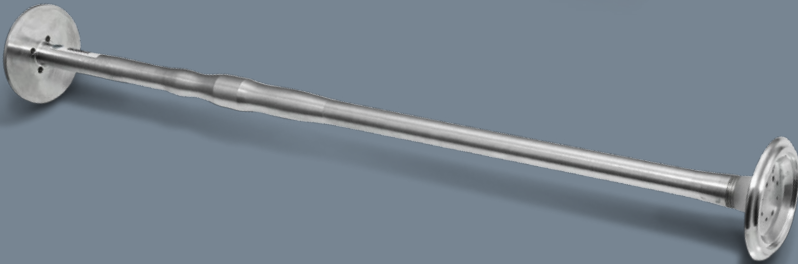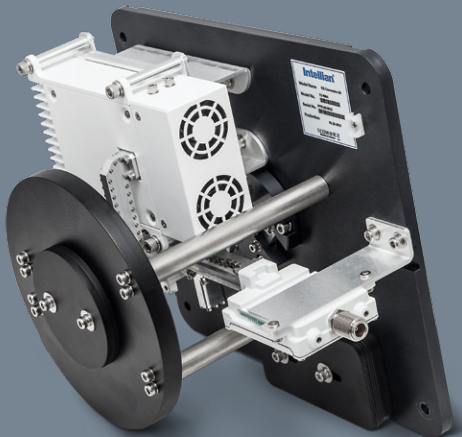
GX-Series Technical Specification

	GX60	**GX100**	**GX100PM**
PART NUMBER	GX1-62-111	V3-11G-311	V3-11PA-311
Radome / WxH	90 cm x 103cm / 35.5" x 40.5"	138cm x 151.4cm / 54.33" x 59.63"	138cm x 151.4cm / 54.33" x 59.63"
Reflector Diameter	65cm / 25.6"	103cm / 41"	103cm / 41"
Weight	60kg / 132 lbs	128kg / 282 lbs	113.3 kg / 249.78 lbs
STABILIZED PEDESTAL ASSEMBLY			
Platform	3-axis / Azimuth, Elevation, Cross-level	3-axis / Azimuth, Elevation, Cross-level	3-axis / Azimuth, Elevation, Cross-level
Azimuth Range	Unlimited	Unlimited	Unlimited
Elevation Range	-20° to +115°	-20° to +115°	-20° to +115°
Cross-level Range	Up to ± 37°	Up to ± 37°	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
Motor Brake System	Elevation, Cross-Level	Azimuth, Elevation, Cross-Level	Azimuth, Elevation, Cross-Level
REFLECTOR AND FEED ASSEMBLY			
TX Frequency	29.00~30.0 GHz (Ka-band)	29.0 ~ 30.0 GHz (Ka-band)	29.0 ~ 30.0 GHz (Ka-band)
RX Frequency	19.2~20.2 GHz (Ka-band)	19.2 ~ 20.2 GHz (Ka-band)	19.2 ~ 20.2 GHz (Ka-band)
TX Gain	43.75 dBi @ mid band	47.7 dBi @ mid band	47.7 dBi @ mid band
RX Gain	40.0 dBi @ mid band	43.7 dBi @ mid band	43.7 dBi @ mid band
EIRP	49 dBW(min.)	52.2 dBW(min.)	52.2 dBW(min.)
G/T	> 16.2 dB/K (min.)	> 20.3 dB/K(min.)	> 20.3 dB/K(min.)
Cross-pol Isolation	Tx: 25 dB(min.) / Rx: 20 dB(min.)	Tx: 25 dB(min.) / Rx: 20 dB(min.)	Tx: 25 dB(min.) / Rx: 20 dB(min.)
BUC Power	5W Ka-band BUC	5W Ka-band BUC	5W Ka-band BUC
LNB	Ka-band LNB (L.O. 18.25GHz)	Ka-band LNB (L.O. 18.25GHz)	Ka-band LNB (L.O. 18.25GHz)
Polarization	Circular, Tx: RHCP, Rx: LHCP	Circular, Tx: RHCP, Rx: LHCP	Circular, Tx: RHCP, Rx: LHCP
BELOW DECK TERMINAL			
Dimensions / WxDxH	43.1cm x 44.1cm x 4.4cm / 17" x 17.3" x 1.7"	43.1cm x 44.1cm x 4.4cm / 17" x 17.3" x 1.7"	43.1cm x 44.1cm x 4.4cm / 17" x 17.3" x 1.7"
Weight	4kg / 8.8lbs	4kg / 8.8lbs	4kg / 8.8lbs
Display	2 line 40 character graphic VFD module	2 line 40 character graphic VFD module	2 line 40 character graphic VFD module
Gyrocompass Interface	NMEA 2000 / NMEA 0183	NMEA 2000 / NMEA 0183	NMEA 2000 / NMEA 0183
8 Port Ethernet Switch	Yes	Yes	Yes
Modem Interface	Integrated Global Express core module	Integrated Global Express core module	Integrated Global Express core module
Modem Protocol	iDirect	iDirect	iDirect
Remote Management	Yes	Yes	Yes
Wi-Fi Operation	Yes	Yes	Yes
Management Port	Ethernet / USB / Serial	Ethernet / USB / Serial	Ethernet / USB / Serial
Power Requirement	100~240V AC, 50~60Hz, 1A	100~240V AC, 50~60Hz, 1A	100~240V AC, 50~60Hz, 1A

Accessories

Ku-to-Ka GX Upgrade Kit

Easily and quickly convert from a Ku-band system to a Ka-band GX system in under 10min without removing the radome. All RF components are mounted on a single chassis to form an integrated RF module consisting of the BUC and the Intellian Global PLL LNB.

By removing only four bolts the whole module can be detached and taken out of the radome through the access hatch. The new BUC & LNB module fit right back into the same space with no need to rebalance the system. Finally, the Ku-band feed is easily replaced with the Ka-band feed.

Contents of Upgrade Kit

- 19" 1U rack mountable Below Deck Terminal (BDT) with Alphanumeric display
- Integrated Global Xpress modem within BDT
- Ka-band RF module including 5W BUC and LNB
- Ka-band feed
- GX Upgrade Kit manual

Intellian 1m Ku-band

- Intellian's 1m VSAT product has become the industry standard and most popular in the 1 meter class product for the maritime communications. Since 2011 launch, over 4,000 units have been installed and qualified on more vessels than any other 1m antenna today.

- Convert your GX antenna between Ku & Ka -band using one of Intellian's signature on-board conversion kits. This change-over can be completed in as little as 10 minutes to move from one frequency to another, delivering maximum performance in any geographic location and ensuring a future proof communication solution for end users all over the world.

- For fast installation, pre-installed lifting straps are included. The certified secure basket-weave webbing strap ensures your system gets on deck quickly and safely. Experienced partners average total installation times of less than four hours, ensuring your vessel gets back out to sea swiftly.

- With three stocked logistics centers across three continents, all Intellian GX products including FX Rack are delivered globally at the fixed hardware price. Regional shipping controls costs and saves times.

MARITIME VSAT NO. 1

3+2 YEAR YEAR PARTS LABOUR GLOBAL WARRANTY

Aptus

v100

1m Ku to Ka Convertible **Marine Stabilized Communications Antenna System**

Intellian's v100 is the most popular 1m antenna in the business. The world's leading satellite communications integrators rely on the v100's superior RF performance, its modular, configurable design and its overall ease of use.

- 1m Ku-to-Ka(GX) Convertible Antenna
- Convertible to GX100 or v100Ka with Conversion Kit
- Dual Band Reflector / Frequency Tuned radome
- Antenna pattern compliance
- FCC 25.222, FCC 25.209
- Eutelsat EESS502
- National radio/EMC/safety type approval
- ANATEL(Brazil), TELEC(Japan), SRRC(China)

v100Ka

1m Ku-band **Marine Stabilized Communications Antenna System**

Ready for service on Telenor's High Throughput Thor-7 network, the v100Ka builds on the success of Intellian's v100 Platform, the most popular 1m antenna available today. Industry leading communications integrators, global fleets, and the world's leading Ministries of Defense rely on the v100's outstanding RF performance, integrated modular approach and overall ease of use.

- 1m Ka-band terminal
- OpenAMIP Protocol enables seamless handoff between THOR-7's 24 spot beams
- OpenBMIP Protocol enables modem controlled BUC power calibration, which significantly shortens the installation and commissioning process
- Fully iDirect Compliant
- Quick Deploy Packaging

v100PM

1m Ku to Ka Convertible **Military Grade Terminal**

The v100PM is specifically designed for use in military applications and provides an easy upgrade path from Ku-band to Ka-band system.

- 1m Military Grade Ku-to-GX Convertible Antenna
- Convertible to GX100PM with Conversion Kit
- Dual Band Reflector / Frequency Tuned radome
- Lighter Form Factor than commercial GX Terminal
- Designed for Military Applications
- Military Performance Standards

  - MIL-STD-167-1A / MIL-STD-461-F
  - MIL-STD-810-G
- Special Gray Dome Supported (Military Favored)

v100PM on damen stan patrol

VSAT Technical Specification

	v100	**v100Ka**	**v100PM**
PART NUMBER	V3-11B-PJW	V3-11F-STC	V3-11P-PJW
Radome / WxH	138cm x 151.4cm / 54.33" x 59.63"	138cm x 151.4cm / 54.33" x 59.63"	138cm x 151.4cm / 54.33" x 59.63"
Reflector Diameter	103cm / 41"	103cm / 41"	103cm / 41"
Weight	Approx. 128kg / 282lbs	Approx. 128kg / 282lbs	Approx. 113.3kg / 249.78lbs
STABILIZED PEDESTAL ASSEMBLY			
Platform	3-axis : Azimuth, Elevation, Cross-level	3-axis : Azimuth, Elevation, Cross-level	3-axis : Azimuth, Elevation, Cross-level
Azimuth Range	Unlimited	Unlimited	Unlimited
Elevation Range	-20° to +115°	-20° to +115°	-20° to +115°
Cross-level Range	Up to ±37°	Up to ±37°	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
Motor Brake System	Elevation, Cross-level	Elevation, Cross-level	Elevation, Cross-level
REFLECTOR AND FEED ASSEMBLY			
TX Frequency	13.75~14.5GHz Ku-band	29.00~30GHz Ka-band	13.75~14.5GHz Ku-band
RX Frequency	10.7~12.75GHz Ku-band	19.2~20.2GHz Ka-band	10.7~12.75GHz Ku-band
TX Gain	41.6 dBi @ mid band	47.7 dBi @ 29.5GHz (with Radome)	41.6 dBi @ mid band
RX Gain	39.4 dBi @ mid band	43.7 dBi @ 19.7GHz (with Radome)	39.4 dBi @ mid band
G/T	> 19.6dB/K (Clear Sky, 30° Elevation)	> 20 dB/K (Clear Sky, 30° Elevation)	> 19.6dB/K (Clear Sky, 30° Elevation)
BUC	8W, 16W (optional)	5W Ka-band BUC	8W, 16W (optional)
LNB	Intellian PLL LNB	Ka-band LNB (L.O. 18.25GHz)	Intellian PLL LNB
Polarization	Linear, Cross-pol and Co-pol	Circular, Tx:RHCP / Rx:LHCP	Cross-pol and Co-pol
ANTENNA CONTROL UNIT			
Dimensions / WxDxH	43.1cm x 38.1cm x 4.4cm / 17" x 15" x 1.7"	43.1cm x 38.1cm x 4.4cm / 17" x 15" x 1.7"	43.1cm x 38.1cm x 4.4cm / 17" x 15" x 1.7"
Weight	3.5kg / 7.7 lbs	3.5kg / 7.7lbs	3.5kg / 7.7 lbs
Display	2 line 40 character graphic VFD module	2 line 40 character graphic VFD module	2 line 40 character graphic VFD module
Gyrocompass Interface	NMEA / NMEA 2000	NMEA / NMEA 2000	NMEA / NMEA 2000
Modem Interface	Ethernet port / RS-232C / I/O ports	Ethernet port / RS-232C / I/O ports	Ethernet port / RS-232C / I/O ports
Modem Protocol	iDirect, Comtech, SatLink, Hughes, GILAT	iDirect, Comtech, SatLink, Hughes, GILAT	iDirect, Comtech, SatLink, Hughes, GILAT
Remote Management	Yes	Yes	Yes
Wi-Fi Operation	Yes	Yes	Yes
Management Port	Yes	Yes	Yes
Intellian LAN Port	Yes	Yes	Yes
Power Requirement	100~240V AC, 50~60Hz, 1A	100~240V AC, 50~60Hz, 4A	100~240V AC, 50~60Hz, 1A

Accessories

Dual VSAT Mediator

To ensure seamless connectivity, some vessels require dual VSAT antennas to counter onboard blockage created by masts, cranes, and other portions of the superstructure.

Intellian's Dual VSAT Mediator communicates with both Antenna Control Units, automatically switching signal feeds from one to the other within milliseconds when an antenna enters blockage zone.

- • Compatibility : v-Series
- • Part Number : M3-TV03

VSAT Modem Mediator

Intellian VSAT Modem Mediator utilizes the industry leading technology to control two separate satellite modems with a single box. It is an optional accessory for the v240M, Intellian's multi-band antenna operating in C- and Ku-band satellite network, supporting convenient band switch-over without the need to swap modem cables whenever required.
The Modem Mediator can also be used with all v-Series antenna systems.

- • Compatibility : All v-Series
- • Part Number : M3-TE03

VSAT Fiber Link Module

A simple connection between the antenna and below deck unit, combining the TX and RX signals into one high speed fiber optic cable.

- • Compatibility : v100, v100GX, v240C, v240K, v240M
- • Part Number : FO-1V10

VSAT Fiber Link ACU

VSAT Fiber Link Module integrated directly into the antenna control unit for added ease of installation.

- • Compatibility : v100, v100GX, v240C, v240K, v240M
- • Part Number : FO-1V40

Intellian 60, 80, 130cm

- Intellian produces a large product line up from 60cm class to 2.4m class antennas to satisfy wide range of customers' needs. This is to ensure we have right antenna for your vessel to best suit your requirements & budget in a preconfigured format ready for quick installation.

- Intellian Aptus software is the intuitive and user-friendly antenna control software making the system operation & configuration both easy and accessible. Aptus enables users to monitor and control the antenna either directly or via network or web interface any time any where as Intellian Aptus supports all kinds of platform - PC, web, and mobile.

- Fully integrated solution for combining VSAT and TVRO systems is presented with SNMP monitoring and Intellian LAN features. Users can consolidate the management of multiple antennas by simply accessing only one system.

- Exceptional Quality of Design enables Intellian to provide 3 year part warranty and 2 year factory labor warranty globally. Also, 24/7/365 global support desk manned by Intellian Field Service Technicians gives you technical support whenever and whatever you need.

v60G

60cm Ku-band Marine Stabilized Communications Antenna System

Featuring a compact size and lightweight design, the Intellian v60 is a 60cm Ku-band maritime VSAT antenna system ideal for smaller vessels with space constraints. With its 3-axis stabilization platform, the v60 offers superior tracking performance and can be configured for broadband, SCPC or hybrid satellite networks so that users can pair the right service with the best hardware.

- Gyro-free satellite search capability
- Aptus remote management
- Save installation and maintenance time
- Dual VSAT mediator
- Combined BUC power and TX signal
- Wireless & Networking connectivity

v65

65cm Ku to ka-band Convertible
Marine Stabilized Communications Antenna System

The world's first and only 60cm class antenna capable of top RF performance in either Ku-band or Ka-band.

- Frequency Mobility Delivered
- Superior RF performance
- Get the power you need
- Quick and easy installation
- Reliability enhanced
- Aptus remote management
- Intellian LAN Capability

v80G

83cm Ku-band Marine Stabilized Communications Antenna System

The Intellian v80G is the smallest antenna that works without the need for a spread spectrum satellite network. This provides a compact system capable of operating in either TDMA or SCPC networks

- Gyro-free satellite search capability
- Aptus remote management
- Save installation and maintenance time
- Wide elevation angle
- Combined BUC power and TX signal
- Wireless & Networking connectivity
- Modem Formats

v130G

1.25m Ku-band Marine Stabilized Communications Antenna System

The v130G offers superior RF performance with its simple yet sophisticated design that reduces installation time and total cost of ownership.

- Gyro-free satellite search capability
- Aptus remote management
- Save installation and maintenance time
- Wide elevation angle
- Combined BUC power and TX signal
- Wireless & Networking connectivity
- Open platform compatibility

VSAT Technical Specification

PART NUMBER	v60G VG-60-BUW	v65 V4-650-CJW	v80G V2-81-CJW	v130G V2-131-CDW
Radome / WxH	78cm x 84.5cm / 30.7" x 33.3"	90cm x 104cm / 35.5" x 40.9"	113.3cm x 120.5cm / 44.6" x 47.5"	165.2cm x 168.9cm / 65" x 66.5"
Reflector Diameter	60cm / 23.6"	65cm / 25.6"	83cm / 32.7"	1.25m / 50"
Weight	59.5kg / 131.2lbs	60 Kg / 132 lbs	89.1kg / 196.4lbs	146.8kg / 323lbs
STABILIZED PEDESTAL ASSEMBLY				
Platform	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	Unlimited	Unlimited	Unlimited
Elevation Range	-10° to +100°	-20° to 115°	-10° to +110°	-20° to +120°
Cross-level Range	±30°	±37°	±30°	Up to ±37°
Stabilization Accuracy	0.2° peak mis-pointing at max ship motion conditon	0.2° peak mis-pointing @ max ship motion condition	0.2° peak mis-pointing at max ship motion conditon	0.2° peak mis-pointing at max ship motion conditon
Motor Brake System	Elevation, Cross-level	Elevation, Cross-level	Elevation, Cross-level	Elevation, Cross-level
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	10.7~12.75GHz Ku-band	10.7~12.75GHz Ku-band	10.95~12.75GHz Ku-band
TX Gain	37 dBi @ mid band	37.7 dBi @ mid band	40 dBi @ mid band	43.2dBi @ mid band
RX Gain	35.6 dBi @ mid band	36.3 dBi @ mid band	37.6 dBi @ mid band	42.1dBi @ mid band
G/T	> 15.0 dB/K (Clear Sky, 30° Elevation)	> 15.7 dB/K (Clear sky, 30° Elevation.)	> 17.7dB/K (Clear Sky, 30° Elevation)	> 20.4dB/K (Clear Sky, 30° Elevation)
BUC	4W, 8W, 16W (optional)	4W, 8W, 16W (Optional)	4W, 8W, 16W (optional)	8W, 16W (optional)
LNB	Intellian PLL LNB	Intellian PLL LNB	Intellian PLL LNB	Intellian PLL LNB
Polarization	Linear, Cross-pol and Co-pol as standard	Linear, Cross-pol only	Linear, Cross-pol and Co-pol as standard	Linear, Cross-pol and Co-pol as standard
ANTENNA CONTROL UNIT				
Dimensions / WxDxH	43.1cm x 38.1cm x 4.4cm / 17" x 15" x 1.7"	43.1cm x 38.1cm x 4.4cm / 17" x 15" x 1.7"	43.1cm x 38.1cm x 4.4cm / 17" x 15" x 1.7"	43.1cm x 38.1cm x 4.4cm / 17" x 15" x 1.7"
Weight	3.5kg / 7.7 lbs	3.5kg / 7.7 lbs	3.5kg / 7.7 lbs	3.5kg / 7.7lbs
Display	2 line 40 character graphic VFD module	2 line 40 character graphic VFD module	2 line 40 character graphic VFD module	2 line 40 character graphic VFD module
Gyrocompass Interface	NMEA / NMEA 2000	NMEA / NMEA 2000	NMEA / NMEA 2000	NMEA / NMEA 2000
Modem Interface	Ethernet port / RS-232C / I/O ports	Ethernet port / RS-232C / I/O ports	Ethernet port / RS-232C / I/O ports	Ethernet port / RS-232C / I/O ports
Modem Protocol	iDirect, Comtech, SatLink, Hughes, GILAT	iDirect, Comtech, SatLink, Hughes, GILAT	iDirect, Comtech, SatLink, Hughes, GILAT	iDirect, Comtech, SatLink, Hughes, GILAT
Remote Management	Yes	Yes	Yes	Yes
Wi-Fi Operation	Yes	Yes	Yes	Yes
Management Port	Yes	Yes	Yes	Yes
Intellian LAN Port	Yes	Yes	Yes	Yes
Power Requirement	100~240V AC, 50~60Hz, 4A	100~240V AC, 50~60Hz, 4A	100~240V AC, 50~60Hz, 4A	100~240V AC, 50~60Hz, 4A

Accessories

Dual VSAT Mediator

To ensure seamless connectivity, some vessels require dual VSAT antennas to counter onboard blockage created by masts, cranes, and other portions of the superstructure.

Intellian's Dual VSAT Mediator communicates with both Antenna Control Units, automatically switching signal feeds from one to the other within milliseconds when an antenna enters blockage zone.

- Compatibility : v-Series
- Part Number : M3-TV03

VSAT Modem Mediator

Intellian VSAT Modem Mediator utilizes the industry leading technology to control two separate satellite modems with a single box. It is an optional accessory for the v240M, Intellian's multi-band antenna operating in C- and Ku-band satellite network, supporting convenient band switch-over without the need to swap modem cables whenever required.
The Modem Mediator can also be used with all v-Series antenna systems.

- Compatibility : All v-Series
- Part Number : M3-TE03

v65 Upgrade Kit

The v65 can be converted from Ku-band operation to Ka-band in as little as 10 minutes through use of a compact, intuitive conversion kit (sold separately).

- Compatibility : v65
- Part Number : V4-9006

Intellian 2.4m

- For high-throughput requirements, Intellian designed and certified v240M, 2.4m multiband VSAT antenna system considering several kinds of the customized BUC. In addition to delivering extreme internet access speeds and increased offshore coverage you enjoy much faster communication during a voyage.

- The Intellian v240M enables effortless and automatic switching between C-band and Ku-band while delivering outstanding 2.4m performance in both frequency ranges. This industry leading innovation gives you the ability to quickly traverse the global satellite footprints keeping you connected.

- Intellian carries out extensive hardware configuration and system testing prior to shipping to help ensure your v240 system is deployed efficiently and effectively ensuring your activation is on time and ready for use.

- Intellian have developed a range of integration equipment to enable installation is the most diverse of environments and vessel layouts. Intellian's Dual VSAT Mediator ensures seamless connectivity between two systems to help overcome satellite blockages caused by masts, wheelhouses or funnels for example.

- For those installations demanding high signal loss, long cable runs, the Intellian Fiber Link solution enables a simple connection between the antenna and below deck unit, combining the Tx and Rx signals into one high speed fiber optic cable.

MARITIME VSAT NO. 1

3+2 YEAR YEAR PARTS LABOUR GLOBAL WARRANTY

Aptus

v240C

2.4m C-band Circular and Linear Polarization
Marine VSAT Antenna System

The v240 platform is ideal for mission critical communications, and can be tailored to meet operational requirements in all conditions.

- Automatic polarization switching
- Easy installation, setup and operation
- Antenna dome features
- Wide elevation angle
- Motor brakes

v240K

2.4m Ku-band Marine VSAT Antenna System

The v240 platform is ideal for mission critical communications, and can be tailored to meet operational requirements in all conditions.

- Easy installation, setup and operation
- Antenna dome features
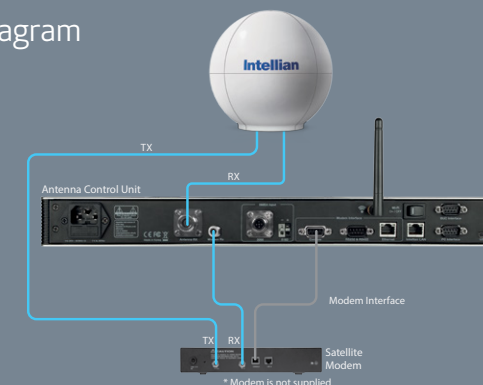- Wide elevation angle
- Motor brakes

v240M

2.4m MultiBand (C/Ku) Automatic Polarization and Band Switching
Marine VSAT Antenna System

The v240M is the world's first antenna to provide auto-switching 2.4m performance in both C- and Ku-band on a single reflector.

- RF Switch Enabled Modem Mediator
- Remote Management using Aptus Web.
- Auto-switching between C- and Ku-band within seconds
- Supports extremely high and low elevation angles (-20° to +120°)
- Wi-Fi enabled ACU for local control using Aptus Mobile or PC.
- Gyro-Free Satellite Search Capability without input from a ships compass
- Auto-switching between circular and linear polarization when operating in Ku-band
- Dual VSAT Mediator integrates two VSAT antennas to combat onboard blockage zones.
- Save installation and maintenance time with automated diagnostics and built in Spectrum Analyzer feature

Diagram

TX
RX
Antenna Control Unit
Modem Interface
TX   RX
Satellite Modem
* Modem is not supplied

Superior Flexibility

Today's vessels must operate globally and relocate from one ocean to another without delay. Having flexibility to use different frequency bands or to choose between different satellites within a region or when in port is a compelling advantage.

The Intellian v240M delivers these advantages with its patented automatic switching between C- and Ku-band service, ensuring reliable connectivity anywhere on the world's oceans.

The antenna's high efficiency, offset fed reflector, and an ultra-wide elevation angle enable superb connectivity virtually anywhere you go, even in extremely high latitudes.

True 2.4m MultiBand Performance

Conventional MultiBand solutions have only partially addressed market needs by mounting a 2.4m C-band reflector and a 1.2m Ku-band reflector inside a single radome. The benefit of only installing one antenna is clear. The limitation, however, is lower performance in Ku-band and much slower switching time between C- and Ku-band.

Intellian's v240M provides outstanding 2.4m performance in both frequency bands, delivering faster download speeds, increased offshore coverage in Ku-band and significant improvements in link budget to both the end user and service provider. Furthermore, switching time is reduced from minutes to mere seconds.

One antenna. Two frequency bands. 2.4m performance.

2.4m VSAT Technical Specification

	v240C	**v240K**	**v240M**
PART NUMBER	VC1-241-P	VK1-242-P	VM2-241-P
Radome / WxH	330cm x 410cm / 130" x 161.4"	330cm x 410cm / 130" x 161.4"	390cm x 410cm / 153.5" x 161.4"
Reflector Diameter	240cm / 94.5"	240cm / 94.5"	240cm / 94.5"
Weight	670kg / 1477lbs	670kg / 1477lbs	880kg / 1940lbs (variable w/ RF components)
STABILIZED PEDESTAL ASSEMBLY			
Platform	3-axis : Azimuth, Elevation, Cross-level	3-axis : Azimuth, Elevation, Cross-level	3-axis : Azimuth, Elevation, Cross-level
Azimuth Range	Unlimited	Unlimited	Unlimited
Elevation Range	-15° to +120°	-15° to +120°	-15° to +120°wv
Cross-level Range	±30°	±30°	±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
Motor Brake System	Elevation, Cross-level	Elevation, Cross-level	Elevation, Cross level
REFLECTOR AND FEED ASSEMBLY			
TX Frequency	5.85GHz~6.425GHz	13.75~14.5GHz Ku-band	5.85GHz~6.425GHz / 13.75GHz~14.5GHz
RX Frequency	3.625GHz~4.2GHz	10.95~12.75GHz Ku-band	3.625GHz~4.2GHz / 10.95GHz~12.75GHz
TX Gain	41.7dBi @ mid band	48.0dBi @ mid band	C-band: 41.9dBi @ mid band / Ku-band: 49dBi @ mid band
RX Gain	37.7dBi @ mid band	37.7dBi @ mid band / v240K: 46.6dBi @ mid band	C-band: 38.6dBi @ mid band / Ku-band: 48dBi @ mid band
G/T	> 20.0dB/K (Clear Sky, 30° Elevation)	> 27.6dB/K (Clear Sky, 30° Elevation)	> C-Band: 20.3 dB/K / > Ku-Band: 28.2 dB/K (Clear Sky, 30˚ Elevation)
BUC	25W~200W (optional)	16W	C-band 40~200W, Ku-band 8~40W
LNB	C-band LNB	Intellian PLL LNB	C-band LNB / Intellian PLL LNB
Polarization	Circular Polarization & Linear Polarization, Auto Switching	Linear, Cross-pol only	C-band Circular or Circular and Linear / Ku-band Linear Only (Co & Cross Pol)
ANTENNA CONTROL UNIT			
Dimensions / WxDxH	43.1cm x 38.1cm x 4.4cm / 17" x 15" x 1.7"	43.1cm x 38.1cm x 4.4cm / 17" x 15" x 1.7"	43.1cm x 38.1cm x 4.4cm / 17" x 15" x 1.7"
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Gyrocompass Interface	NMEA / NMEA 2000	NMEA / NMEA 2000	NMEA / NMEA 2000
8 Port Ethernet Switch	Ethernet port / RS-232C / I/O ports	Ethernet port / RS-232C / I/O ports	Ethernet port / RS-232C / I/O ports
Modem Interface	iDirect, Comtech, SatLink, Hughes, GILAT	iDirect, Comtech, SatLink, Hughes, GILAT	iDirect, Comtech, SatLink, Hughes, GILAT
Modem Protocol	Yes	Yes	Yes
Remote Management	Yes	Yes	Yes
Wi-Fi Operation	Yes	Yes	Yes
Management Port	Yes	Yes	Yes
Power Requirement	100~240V AC, 50~60Hz, 1A	100~240V AC, 50~60Hz, 1A	100~240V AC, 50~60Hz, 1A

Accessories

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- Compatibility : v-Series
- Part Number : M3-TV03

VSAT Modem Mediator

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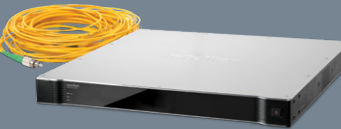The Modem Mediator can also be used with all v-Series antenna systems.

- Compatibility : All v-Series
- Part Number : M3-TE03

VSAT Fiber Link Module

A simple connection between the antenna and below deck unit, combining the TX and RX signals into one high speed fiber optic cable.

- Compatibility : v100, v100GX, v240C, v240K, v240M
- Part Number : FO-1V10

VSAT Fiber Link ACU

VSAT Fiber Link Module integrated directly into the antenna control unit for added ease of installation.

- Compatibility : v100, v100GX, v240C, v240K, v240M
- Part Number : FO-1V40

Aptus Remote Management

Intellian's Aptus software is compatible with all Intellian VSAT and TVRO antennas and can be connected via the onboard network or direct to the ACU by serial, USB, or Wi-Fi (mobile app) through a simple one-click installation. Straightforward remote IP connection and set-up, coupled with antenna status reporting helps increase the performance of the antenna as well as debug the system.

The software displays a simple to understand dashboard that allows logging, recording and fine-tuning of the antenna for optimum performance. Through logging the antenna's parameters, the user and integrator can monitor the system and see performance data in real-time.

Aptus features a dashboard with three main views to monitor and control the antenna. The views provide varying levels of information, such as antenna position, set-up data including sensor inputs, satellite information including tracking frequency and LNB setting, graphs illustrating the signal, heading and elevation angles, and a monitor listing all data that is being received by the ACU.

When installing an Intellian VSAT antenna, Aptus can also help with the initial set-up and automatically sets the appropriate Bow, Cross Level and Elevation offsets, saving time during the installation.

- **TVRO & VSAT Antennas**
- **Software & Integration**
- **Stand-alone, Web & SDK**
- **Supporting PC & Mobile Devices**
- **Back-up & Restore**
- **Antenna Debugging**
- **Auto Diagnostic Function**
- **Antenna Status Monitoring**
- **Spectrum Analyzer**
- **Serial Connection**
- **Remote IP Connection Over SSL**
- **Graphic Antenna Position & Status**

Support Global Support Desk

Demands for flawless always-on connectivity from the market are significantly higher then perhaps in the past. The Intellian Global support desk is a dedicated team of professionals, on-hand to react quickly and effectively to the round the clock demands from you and your customers.

- **24/7 Technical Support**
- **Global Force of Intellian Trained Service Engineers**
- **Spare Parts Depots Around the Globe**
- **3 Year Parts 2 Year Labour**

3+2
YEAR YEAR
PARTS LABOUR
GLOBAL WARRANTY

General Statement

This product is warranted by Intellian Technologies Inc. to be free from defects in materials and workmanship for a period of THREE (3) YEARS on parts and a TWO (2) YEAR on labor from the purchased date of the product. Travel, shipping or other incurred expenses are not covered by this warranty, Intellian is not responsible for any Direct, indirect, special, incidental, or consequential damages or liabilities that may arise from any warranty event.

Intellian Technologies warranty does not apply to product that has been damaged and subjected to accident, abuse, misuse, non-authorized modification, incorrect and/or non-authorized service, or to a product on which the serial number has been altered, mutilated or removed.

Proof of purchase or installation date is required within 6 months from date of antenna shipment from Intellian Technologies.

Intellian Technologies, will (at its sole discretion) repair or replace during the warranty period any product which is proven to be defective in materials or workmanship, in accordance with the relevant product warranty policy. All products returned to Intellian Technologies, during the warranty period must be accompanied by a Service Case reference number issued by the dealer/distributor from Intellian Technologies, and (where applicable) a copy of the purchase receipt as a proof of purchase date, prior to shipment. Alternatively, you may bring the product to an authorized Intellian Technologies, dealer/distributor for repair.