

Intellian[®]

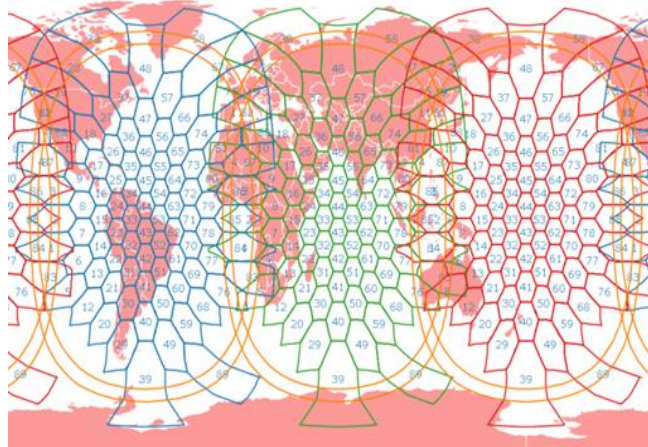
Connect with the best.

Intellian GX60 and GX100 Global Xpress Terminals

Product Overview



- Introduction to Global Xpress
- Unique Selling Points of Intellian's GX60 and GX100 Terminals
- Understanding Fleet Xpress and FleetBroadband Xtra
- GX60 Above Decks
- GX100 Above Decks
- Below Decks Terminal Features
- All About the Interface
- Part Numbers, Pricing & Summary



- Two of three Inmarsat-5 satellites have already launched. Final Launch scheduled for late Q2 2015
- Pioneering high frequency Ka-band for increased throughput to end users.
- 89 Ka-band Spot Beams per satellite
- Each Spot Beam provides up to 50Mbps of throughput
- Standard service plans with both Committed Information Rates and Burst speeds measured in Mbps.
- Steerable capacity to meet regional demand.
- Lifetime of 15 years
- Complements Inmarsat's FleetBroadband service.

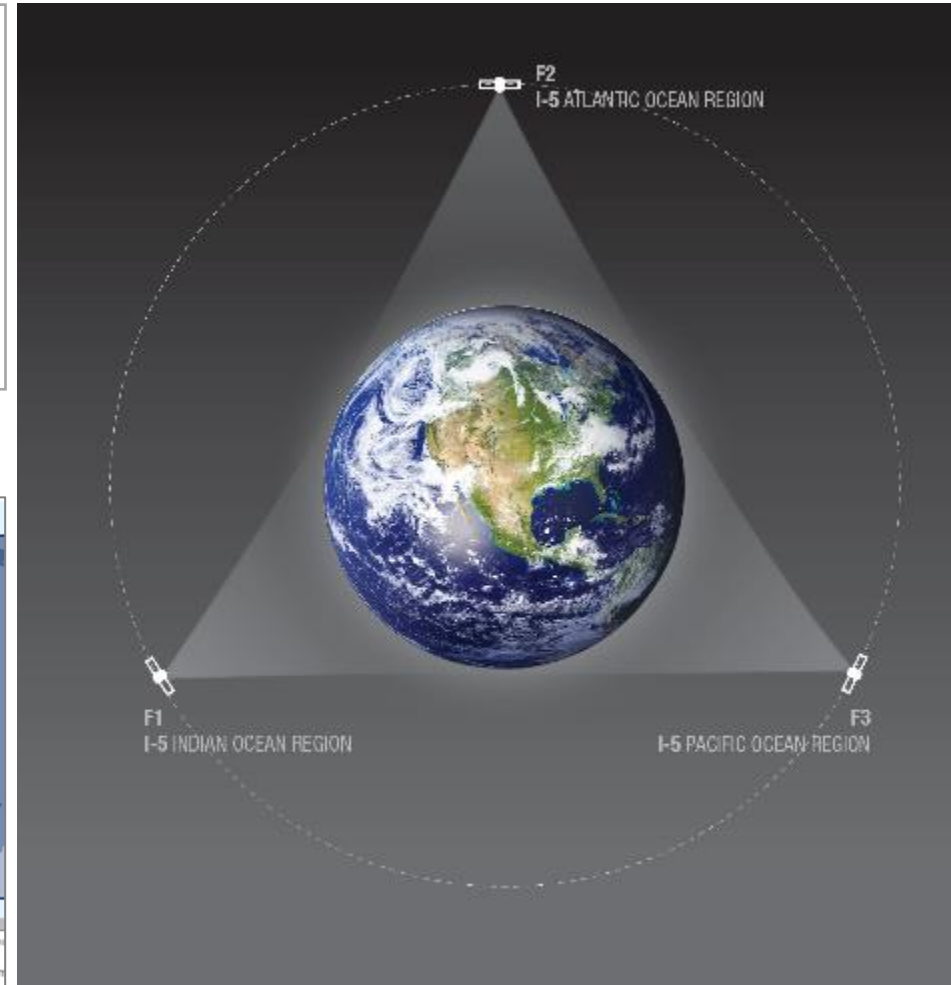
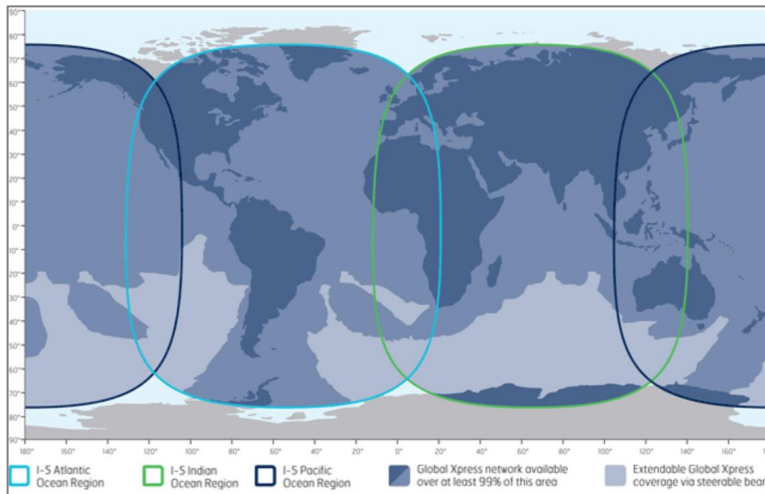
Uninterrupted Global Coverage

FleetBroadband Coverage



Global Xpress Delivering Seamless Broadband Coverage

Global Xpress Coverage



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Unique Selling Points

Intellian GX60 and GX100

Maritime Connectivity Made Simple

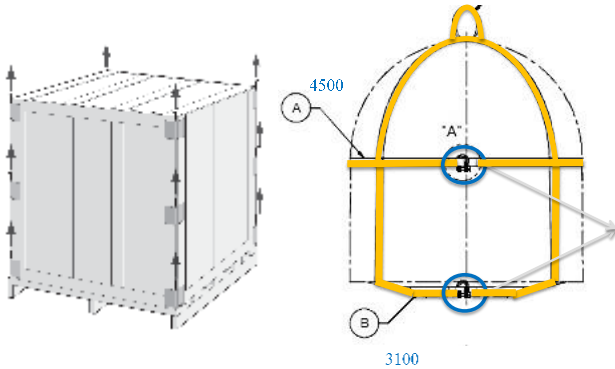


Integrated Terminal approach meets user needs by providing the ultimate ease-of-installation, ease-of-use, and blazing speed



Intellian's Aptus Web, Mobile, and PC application offers an intuitive graphical interface for quick installation and monitoring your GX Terminal

From In Port to Online in Four Hours **Intellian**[®]



Quick Deploy packaging & Pre-Slung Lifting Straps for safe and easy installation of the above decks equipment

No Complex Integration

Single 19" Rack Type 1U Design Below Deck Terminal (BDT) complete with pre-integrated Modem, AC Power Supply & 8 Port Ethernet Switch.



Captains and Fleet Managers can count on quick, **pain-free installation** to minimize down time by getting vessels connected and back out to sea swiftly.

Intellian® All-in-One Below Deck Terminal

Antenna Control Unit
(19" Rack Type 1U)



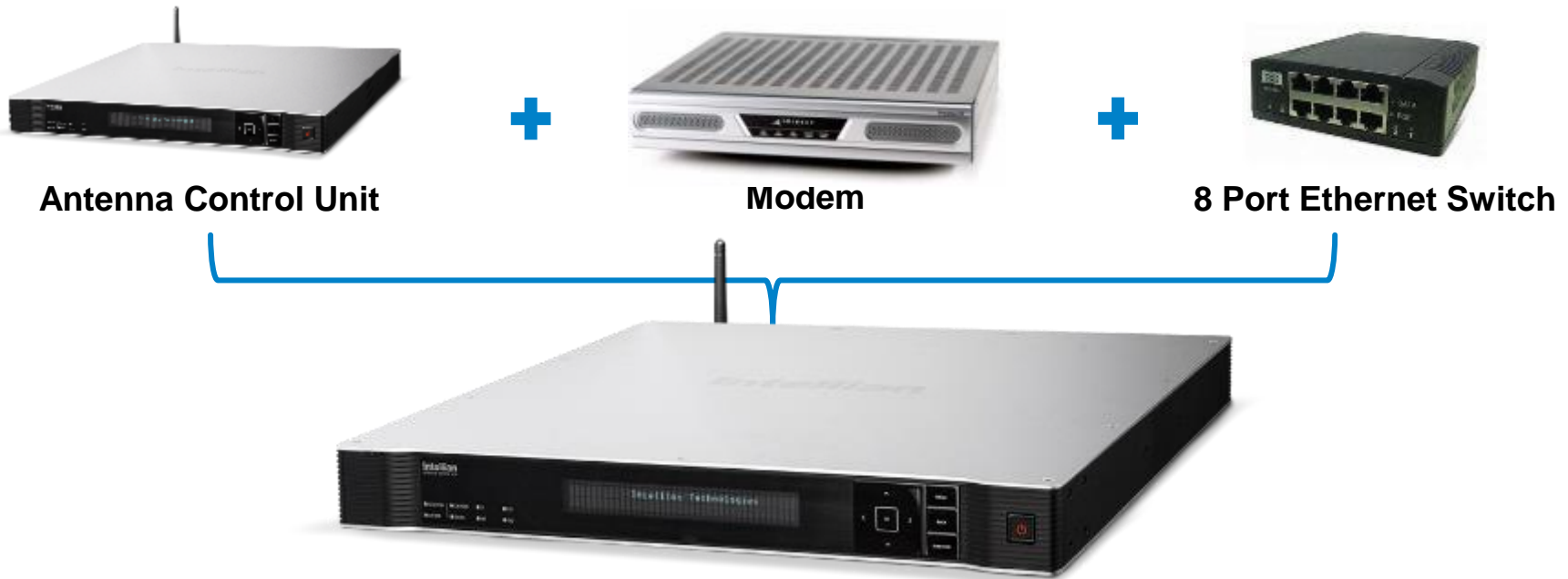
8 Port Ethernet Switch



Integrated GX Modem



All-in-One Below Deck Terminal



Single Integrated Below Decks Terminal (BDT)

- Replaces complex integration with simple, repeatable process.
- Reduced space requirements below decks.

All-in-One Below Deck Terminal

- **Front**



- 19" Rack Type 1U Design –**Intellian Only**
- 2 Line 40 Characters Display –**Intellian Only**
- Easily accessible M&C Ports –**Intellian Only**

All-in-One Below Deck Terminal

- Rear



- Wi-Fi Enabled for Wireless Management via Aptus – **Intellian Only**
- 8 Port Ethernet Switch provides easy path to instant connectivity – **Intellian Only**
- Integrated AC power supply – **Intellian Only**
 - No additional components to purchase

One Touch Commissioning



- From Power Up to Network Connection in 30 Seconds or Less
- No need to execute any commissioning tests or contact the Network Operation Center
- No post installation configuration (Option File) required. System is pre-configured to get online quickly.

FB250/500 Compatibility



- All Intellian antenna systems feature an Intellian LAN function, enabling all onboard devices to be easily networked out of the box
- Enables a simple out-of-band management solution
- Easy integration with Inmarsat's Network Switching Device

Spare Part Kits – Second to None

- Shipped in a Secure, Compact Case
- 3 Kits Available, Level 1, Level 2 and Level 3
- Professional Presentation to Customer
- Quick GRAB & GO Kit



Exceptional Quality of Design

Intellian®



Reliability. Proven.



World Class Standards

- ✓ EN60945
- ✓ EN60950



- ✓ Designed to meet MIL-STD 167



- ✓ R&TTE Certified



- ✓ FCC25.222
- ✓ FCC25.209

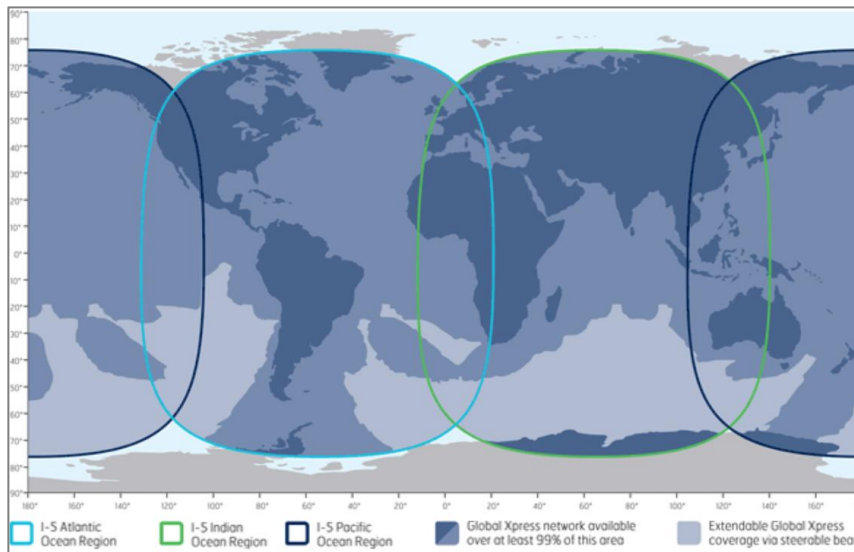
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Introduction to GX Maritime Services

Global Xpress Services Explained

- Inmarsat's Global Xpress (GX) Constellation will serve market segments across all three major verticals:
 - Land Mobile
 - Maritime
 - Aviation
- IOR region is active. AOR is in orbital testing. POR will launch in Q2



Fleet Xpress

- Inmarsat's name for Maritime GX Service
- Global high speed service plans with speeds measured in Mbps.
- Can use GX60 or GX100 in combination with FB250 or FB500 for ultimate reliability



FleetBroadband Xtra:

- Hybrid GX/FBB Service
- GX coverage in IOR only at present. AOR within 30-60 days.
- GX Service as primary when in the footprint. FleetBroadband coverage in all other areas

Network Service Device (NSD)

- NSD Lite for initial service with follow on NSD Full to be released later
- Automated Band Switching between GX and FBB
- Voice Service
- Optimized Browsing & Firewall



NSD Benefits

NSD Lite will provide:

FBB  GX

Frequency Switching



Voice Service



Optimized Browsing +
Firewall

Full NSD will enable:



Dynamic bandwidth



Content prepositioning



Multicast Services



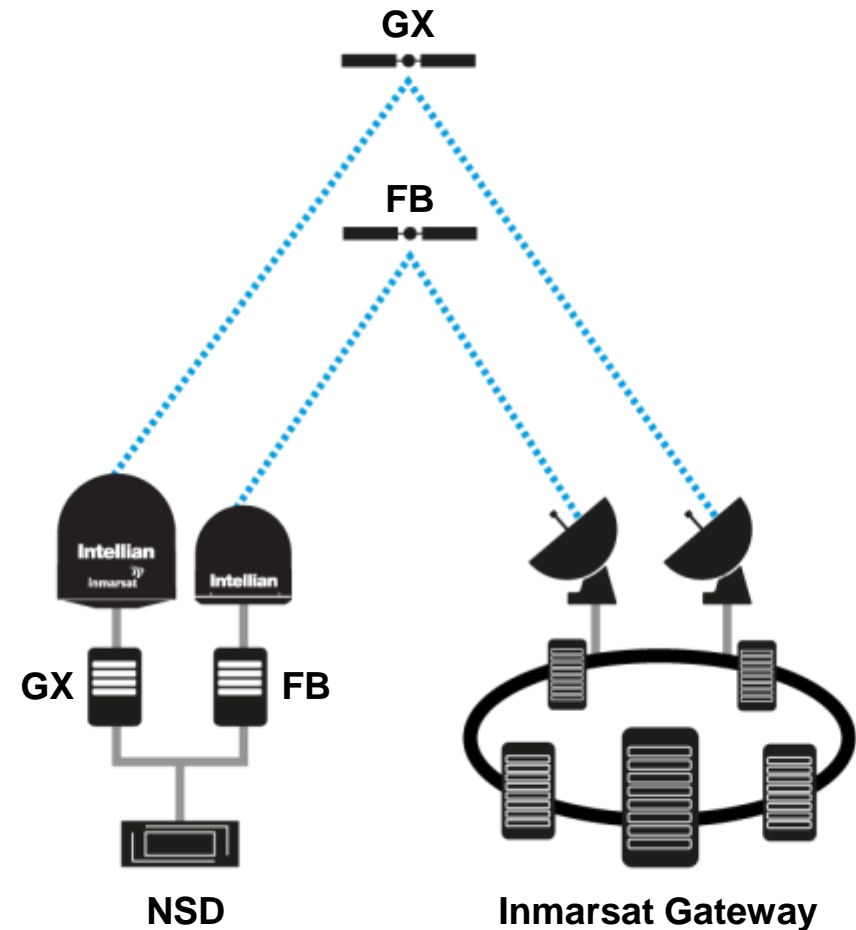
Application catalogue
(Inmarsat "App Store")

■ System Components

- ✓ GX Terminal
 - GX Modem included
- ✓ FB Terminal
- ✓ Hard Cisco 2911 NSD
- ✓ Value Added Services per VAR

■ Network elements

- ✓ Global GX Coverage
- ✓ Utilizes Inmarsat's Service Enablement Platform (ISEP)
 - Including activations and billing
- ✓ Utilizes NSD feature set



Product

- ISEP will replace Business Support Service
- NSD is a shipboard device provided by Inmarsat
- Fleet Xpress – Full NSD for global service
 - ✓ Hard configuration in Cisco 2911



- ✓ Soft NSD configuration 5921 - **Future Release**
 - System integrators use the Cisco 5921 to build a complete product offering that includes “Cisco Inside” software.



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Intellian GX60 Above Decks

	GX60
	
Radome Size	90cm (D) X 103cm(H)
Reflector Size	65cm
Weight	60kg
TX Frequency	29.0 ~ 30.0GHz Ka-Band
RX Frequency	19.2 ~ 20.2GHz Ka-Band
BUC Output Power	5W
Data Speed	Up to 50Mbps
Power	AC 100 ~ 240V, 300W (Max)
ACU	19" 1U Rack Type

- 65cm Inmarsat GX Terminal
- Next Generation pedestal design
 - ✓ New PCU board, STBL board, and Comm. Board
- Frequency tuned Radome
- Remote Management & Control + Self Diagnostics
- Direct cable connection at the bottom of the Radome



GX60: Above Deck Unit

- Clean, Sleek Design
- Modular System Approach
 - ✓ Swap out w/o tools
- Carbon Reflector
- Safe Motor Brake
- Gyro Search Algorithm
- Auto Diagnostic Function
- Auto Satellite Search
- Power on Self Test

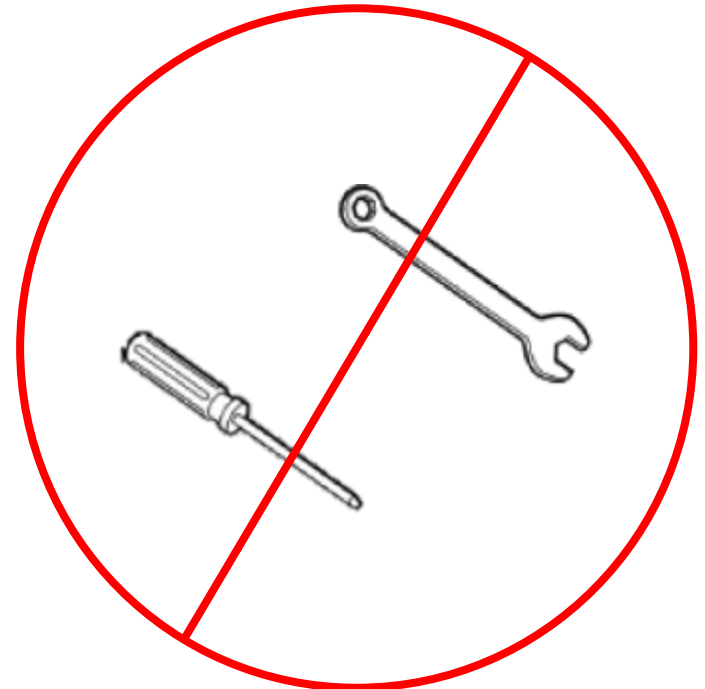
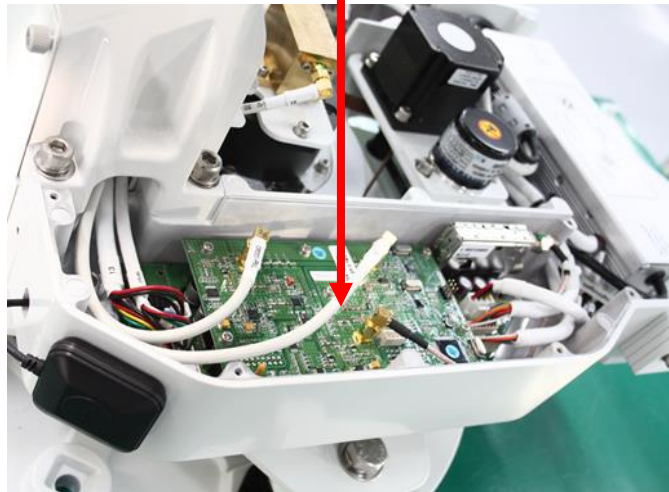


GX60: Easy Service

PCU Board & Comm. Board



All boards mounted with thumb screws to eliminate any need for tools



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Intellian GX100 Above Decks

	GX100
	
Radome Size	138cm (D) X 151.4cm(H)
Reflector Size	103cm
Weight	127.4kg
TX Frequency	29.0 ~ 30.0GHz Ka-Band
RX Frequency	19.2 ~ 20.2GHz Ka-Band
BUC Output Power	5W
Data Speed	Up to 50Mbps
Power	AC 100 ~ 240V, 300W (Max)
ACU	19" 1U Rack Type

- 1m Inmarsat GX Terminal
- Common pedestal & spares as the industry standard v100GX
- v100GX can now be field upgraded to GX100 (GX Conversion Kit) in 10 minutes
- Best RF performance of any GX system tested by Inmarsat
- Remote Management & Control + Self Diagnostics



GX100: Key Features

- Rear mounted RF Module
- Carbon Fiber Reflector
- Frequency Tuned Radome
- BUC M&C Capability
- Dual Dampening Structure
- Safe Motor Brakes
- Optional Gyro Interface
- Auto Diagnostic Function
- Auto Satellite Search
- Power on Self Test



Best Performing GX Terminal

	Intellian GX100	Sailor 100GX
TX	47.7 dBi (Incl. Radome)	47.5 dBi (excl. Radome)
RX	43.7 dBi (Incl. Radome)	44.0 dBi (excl. Radome)

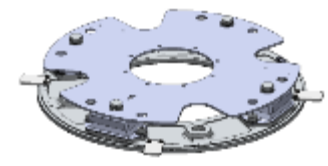
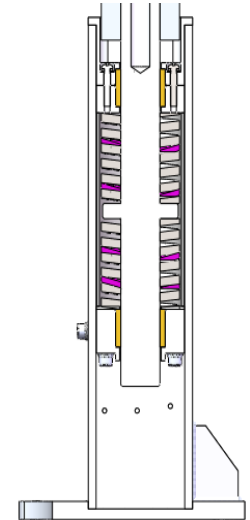
Why Does Gain Still Matter in a Standardized Network?

- ✓ Margin
- ✓ Margin
- ✓ Margin
- ✓ **Greater Resilience During Rain**



Dual Dampening Structure

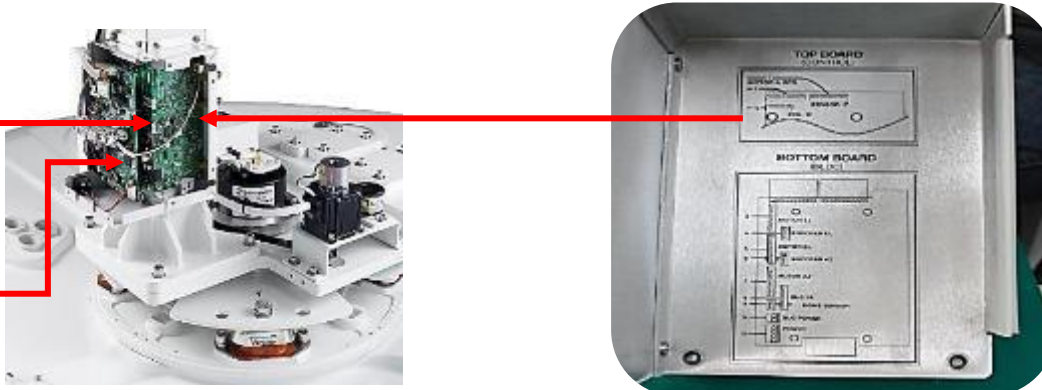
- Vertical dampening : 2 x dual springs endure weight loads up to maximum 355kg (only GX100)
- Base dampening: 4 x stable mounts absorb shock loads up to 80kgf/mm



Easy to Service & Support

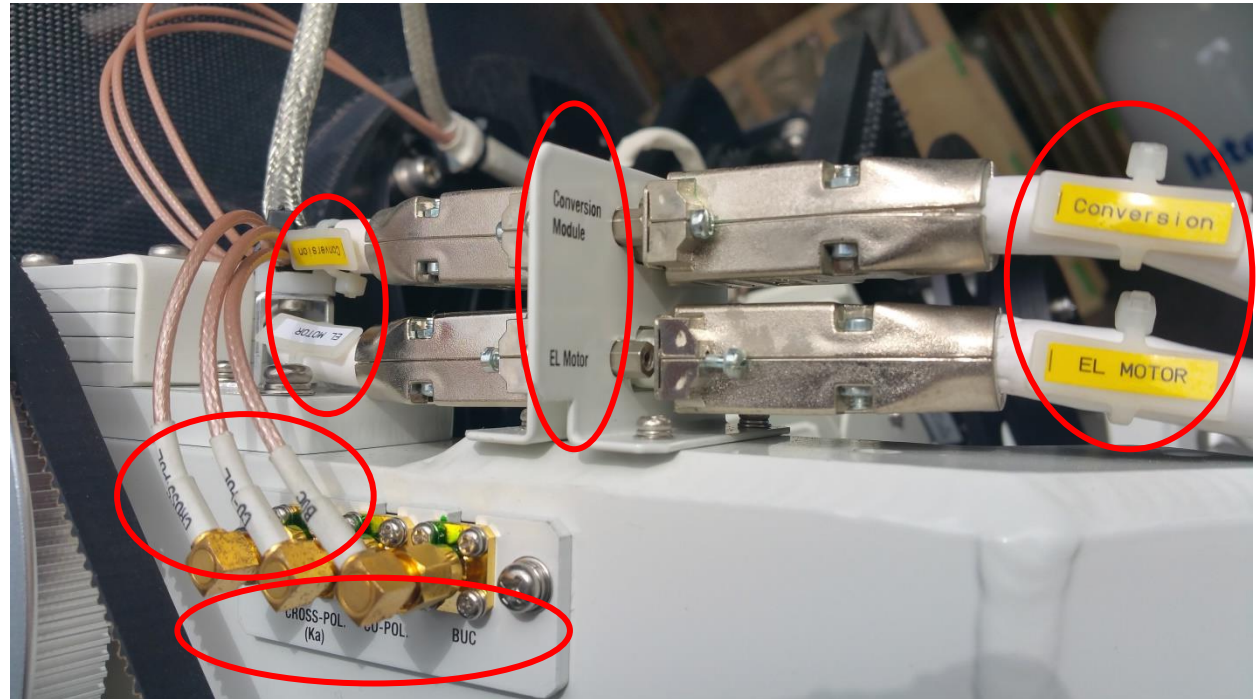
FSK Modem
NBD

Main Control
Board



Clear, convenient
guide for connectors

- All connectors, cables and components are clearly labeled to facilitate easy onboard service and over-the-phone support



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Below Decks Terminal Features

- 19" Rack-mount Type 1U Size
- Integrated GX Modem
- Wireless connectivity
- Front Management Ports (USB/LAN)
- 8 User Ports – VLAN Capable
- Supports NMEA 2000 / 0183
- PC Interface (Serial/USB)
- VFD Display
- Touch Pad



Front



Rear

Front View

- Intellian Design Identity
- 2 Line Display & Keypad
- Easily accessible M&C Ports
- Convenient LED Indicator Lights



Rear View

- 8 Port Ethernet User Interface (LAN)
- Wi-Fi Connection for M&C
 - ✓ Supports Aptus Mobile, PC and Web
- Integrated AC Power Supply
 - ✓ No additional components to purchase



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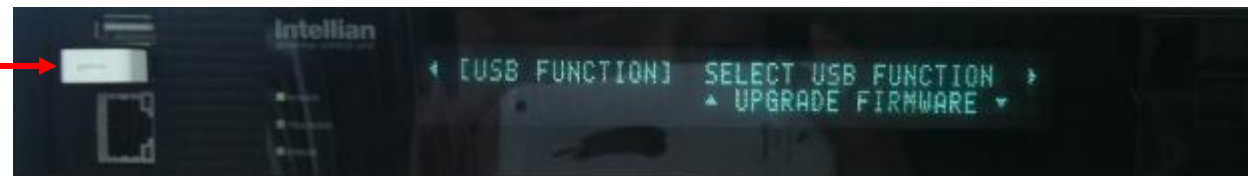
All About the Interface

- Wi-Fi connectivity for easy remote PC connection
- Includes Optional NMEA 2000 Gyro-Interface
- Includes 8 LAN ports – VLAN capable

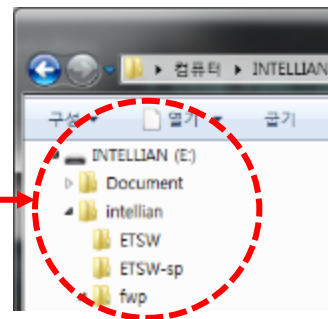


- USB firmware upgrade and history log recorder available.
 - ✓ Just plug in your USB Drive. The system does the rest.
 - ✓ Sailor-Proof

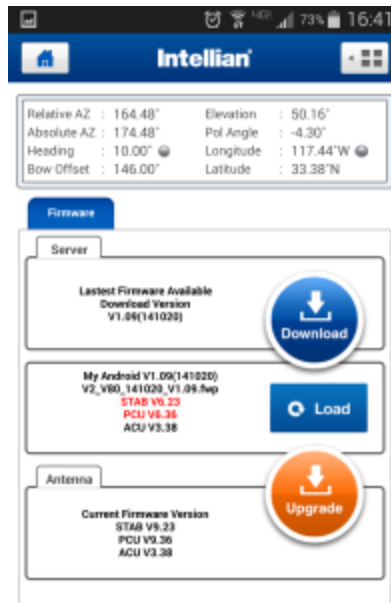
DN port



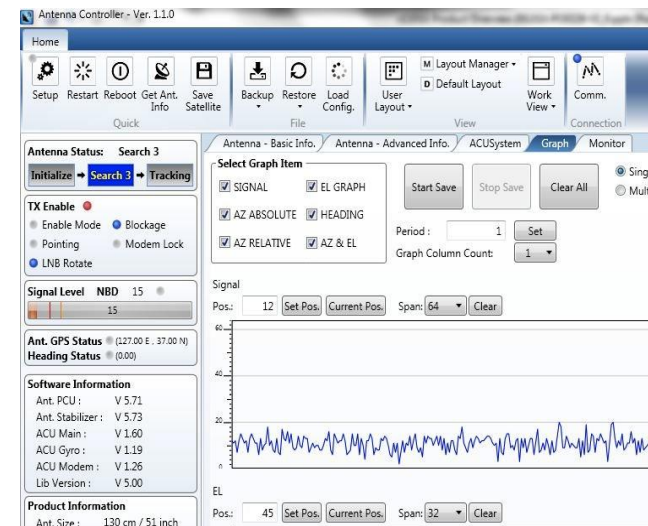
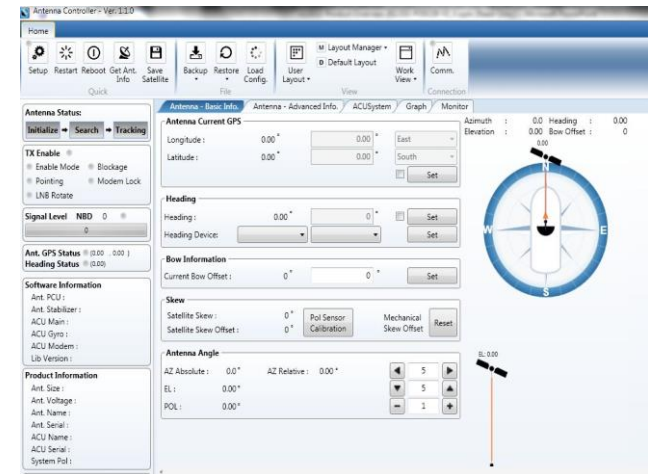
USB directory



- Graphical User Interface (GUI) antenna software
- IP connectivity, LAN and Wi-Fi supported
- Wireless antenna management available onboard
- Remote Management & Control available via Aptus Web
- Aptus[®] and Aptus Mobile
 - ✓ Instant Firmware Upgrade



- Remote IP Connection over SSL
- Serial Connection
- Antenna Status Monitoring
- Antenna Control
- Back-up and Restore
- Antenna Debugging
- Graphical Antenna Position & Easy Blockage Zone Setup
- Auto Diagnostic Function
- Intellian API
- Web M&C



Auto Diagnostic

- Self In-Service Test
- Alert the Operator Feature
- Drive Motors, Sensors, Cables, LNB,

The screenshot displays the Intellian diagnostic software interface. The top toolbar includes icons for Setup, Restart, Reboot, Get Ant. Info, Save Satellite, Backup, Restore, Load Config., Layout Manager, Work View, Comm., FW Uploader, File Manager, Acu Log Manager, Spectrum, Setting, and Help. The main interface is divided into several sections:

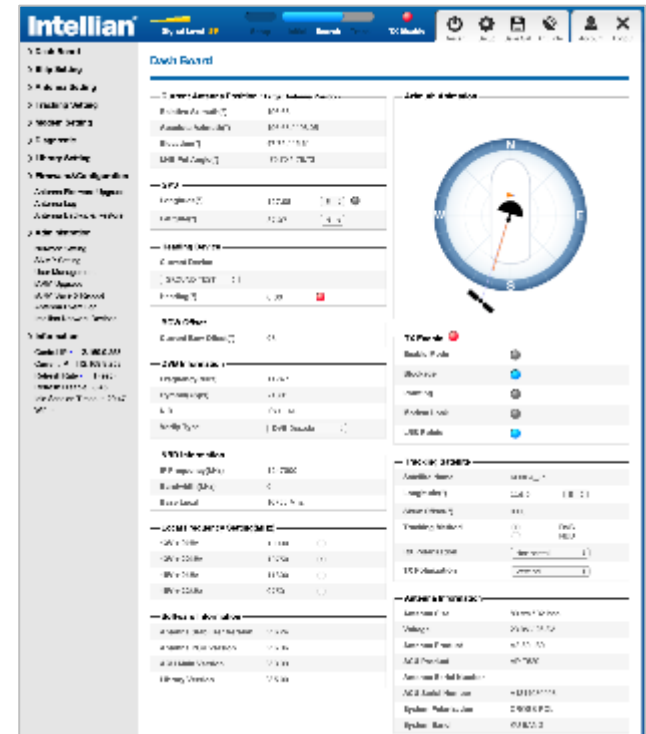
- Antenna Status: Diagnostic** (with a 'Diagnostic' button)
- TX Mute** (with radio buttons for Enable Mode, Blockage, Pointing, Modem Lock, LNB Rotate)
- Signal Level** (NBD 0)
- GPS** (Heading 10.00)
- Voltage** (Antenna: 26.5V, ACU: 27.1V)
- Software Information** (Ant. PCU: V 9.36, Ant. Stabilizer: V 9.23, ACU Main: V 3.38, Lib Version: V 5.00)
- Product Information** (System Model: V80, Ant. Name: V2-81-J3W, Ant. Serial: V811100035, ACU Name: VP-T529, ACU Serial: V80G_iARM, System Pol: Cross, System Band: Ku Band)
- Diagnostic Error Report** (with a red error indicator)
- Diagnostic Control Panel** (with 'Start', 'Save Result', 'Select All', 'ALL Clear' buttons and a vertical sequence of component control buttons: Serial Comm., Motor AZ, Motor EL, Motor CL, Encoder AZ, Encoder CL, Rate Sensor, Home Sensor, ACU Power, Antenna Power, SKEW, LNB/NBD, Sensor Stop Limit, Tilt Sensor)
- Modem Configuration Panel** (with dropdowns for Use Mediator, Select Modem, Modem Port, Modem Protocol, GPS Out Protocol, and radio buttons for Use TX Mute, Use Modem Lock, TX Mute, and Modem Lock)

A **Diagnostic Report** window is open, displaying the following log:

```
11:16 LNB Diagnostic error
11:16 LNB Diagnostic error
11:17 LNB Diagnostic error
11:17 LNB Diagnostic error
11:17 LNB Diagnostic error
11:17 LNB Diagnostic error
11:18 LNB Diagnostic error
```

The window includes 'Clear' and 'Close' buttons.

- Embedded Web Server inside ACU
- User Friendly Dashboard
- Able to access ACU remotely through IP network.
- Easy antenna control and monitoring via Web Browser.
- Provides a secure IP connection.
- Provides an easy path for remote firmware upgrade and retrieval of system logs.



Part Numbers, Pricing & Summary



INTELLIAN GX60 – GX1-62-111

List Price: USD\$34,000



INTELLIAN GX100 – V3-11G-311

List Price: USD\$56,000



INTELLIAN v100GX Conversion Kit – V3-9004

List Price: USD\$11,000

Why Intellian?

- ✓ Maritime Communications made simple
- ✓ From In Port to Online in 4 hours
- ✓ All-in-one Below Decks Terminal
- ✓ One Touch Commissioning
- ✓ FB250/500 Compatibility
- ✓ Quality of Design
- ✓ Best RF Performance
- ✓ Easy Remote Management & Control
- ✓ Simple Graphical User Interface



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