

X150D

KU/KA ELECTRONICALLY SWITCHABLE DUAL-BAND MULTI-ORBIT VSAT



FEATURES

KU/KA ELECTRONICALLY SWITCHABLE SYSTEM

The Intellian X150D is a dual-band VSAT solution that electronically switches between Ku-band and Ka-band operation with a single command. It provides customers with the highest performance, versatility, and high bandwidth demand access to a wide range of service options. This dual band antenna offers seamless connectivity by eliminating the need for conversion kits, or hardware modifications required by conventional terminals.

2.5GHZ WIDE KA-BAND SUPPORT

The X150D has a full range-optimized reflector and radome supporting high speed Ka-band services, which covers the entire commercial 2.5GHz Ka-band frequency range. X150D supports dual-polarization and can transmit and receive both LHCP and RHCP Ka-band circular polarization.

HIGH POWER UPGRADABLE

The X150D provides a wide range of options in terms of BUC power, supporting up to 250W Ku-band, and 100W Ka-band. This high-power support capability allows X150D to be integrated with diverse use cases.

EMBEDDED MEDIATOR

The X150D is equipped with an embedded mediator in the ACU that enables simultaneous dual modem configurations and dual antenna configurations for blockage mitigation and make-before-break applications. No external mediator is needed for connecting to maximum of 2 antennas and 2 modems.

GEO/MEO/LEO TRACKING CAPABILITY

Based on proven antenna design and multi-orbit tracking capabilities, the X150D is future proof, providing optimal performance on both existing and new NGSO constellations. The X150D can operate on both SES Classic O3b constellation and their new mPOWER constellation. The X150D is designed to be ready for all GEO, MEO, and LEO constellations.

FIBER OPTIC SOLUTION

Fiber optic solution for the X150D is based on our extensive fiber optic experience, resulting in minimal signal loss regardless of cable length. It enables greater bandwidth capability compared to a coaxial cable connection between the ADU and the BDU. The Fiber optic solution is ideal for high throughput installations and allows for quicker and easier installations.

IFL SWITCH FOR DUAL-DATACENTER

Integrated with IFL Switch, the X150D is ready for Dual-Datacenter setup on vessel for failover redundancy. When one of the data centers fails due to unfavorable environmental conditions, power outages, technical issues or blocked by obstacles, the DDC system can be easily switched to the other data center by using the Intelligent Mediator to maintain the antenna operation and the network continuously.

ANTENNA MANAGEMENT PLATFORM

Intellian's integrated M&C platform provides responsive web user interface to manage and control the antenna system regardless of device types. AptusNX includes an intelligent installation Wizard to simplify system configuration so that users can become connected faster than ever before. The platform also includes diagnosis function which enables accurate and enhanced antenna performance checks both on-board and remotely.

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TECHNICAL SPECIFICATIONS

ABOVE DECK UNIT

Radome Height x Diameter	197.0 cm / 77.56" x 190.0 cm / 74.80"	
Reflector Diameter	150 cm / 59.06"	
Weight	365 kg / 804.7 lbs.	
Azimuth Range	Unlimited	
Elevation Range	-10° to 110°	
Cross-level Range	± 30°	
Stabilization Accuracy	0.2° peak miss-pointing @max ship motion condition	
	Ku	Ka
Tx Frequency	13.75~14.5 GHz	27.5~30.0 GHz
Tx Gain	44.3 dBi @14.0 GHz	50 dBi @ 28.8 GHz
Rx Frequency	10.7~12.75 GHz	17.7~20.2 GHz
Rx Gain	43.0 dBi @11.85 GHz	46.8 dBi @19.0 GHz
G/T	21.7 dB/K (@11.85 GHz, 30°EL)	22.2 dB/K (@19.0 GHz, 20°EL)
RF Power	40/50/100/125/200/250W BUC	40/50/100W BUC
Polarization	Linear (Cross & Co Pol)	Circular (RHCP & LHCP)
Antenna Cable	Fiber Link	

ENVIRONMENTAL SPECIFICATION

Temperature	Operational	-25 °C to +55 °C, Power On (IEC-60945)
	Survival	-40 °C to +80 °C, Powered On and a non-functional state (IEC-60945)
Vibration	Operational	IEC-60945
	Survival	IEC-60721-3-6 Class 6M3
Shock	Operational	IEC-60068-2-27 Method Ea 20 g, 7 ms
	Survival (Transient)	IEC-60721-3-6 Class 6M3 type II 30 g, 6 ms
	Survival (Bump)	IEC-60721-3-6 Class 6M3 25g/6 ms
Salt Mist	Saline solution : 5 ±1 % NaCl , PH6.5 to 7.2 Storage period: 7 Days (IEC-60945)	
Water Proofing	IPX6 (IEC-60529)	

BELOW DECK TERMINAL

Dimensions (WxDxH)	43.1 cm x 39.0 cm x 4.4 cm / 16.97" x 15.35" x 1.73"
Weight	6.0 kg / 13.23 lbs
Display	OLED Display
Gyrocompass Interface	NMEA 2000, NMEA 0183
Mediator Interface	Ethernet port / RS-232C / I/O Console
Remote Management	Yes
Wi-Fi Operation	Yes (w/ Wi-Fi dongle)
Management Port	Yes
Intellian LAN Port	Yes
Power Requirement	200 ~240 VAC, 50/60Hz, 3A

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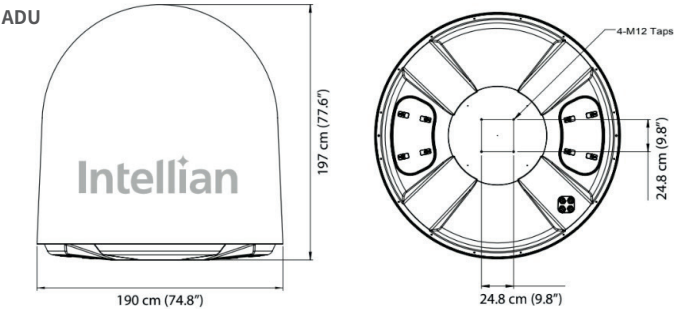
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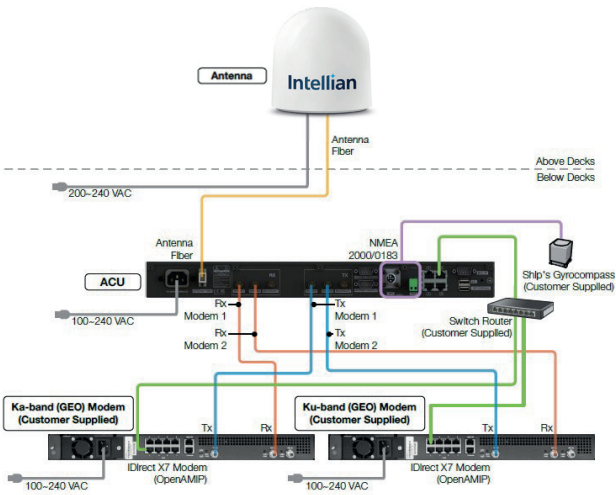
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SYSTEM DIMENSION



SYSTEM DIAGRAM (GEO KU-KA SOLUTION)



SYSTEM DIAGRAM (NGSO SOLUTION)

