Drive-Away Satellite Communication Antenna – PIONEER Class

PIONEER120™ with IPOINT™

Features

- 1.2m Ku-Band Reflector options
- Compact and Robust
- Auto-Pointing IPOINT™ Controller
- Can be Operated by Anyone
- Acquires in < 3 minutes
- Available with integrated Tx Power up to 300W Ku-Band
- 1:1 redundant system
- Simple Operation – Requires no Satellite Communication Expertise
- Acquires the satellite within minutes
- Completely automatic one button acquisition of required satellite
- Low cost, high performance and reliable satellite acquisition
- Ultra-Compact
- Aerodynamic Antenna Enclosure

Overview

The PIONEER120™ Ku antennas are ultra-compact roof mounted systems. The antennas encompass the drive control, positioning hardware and BUC into the aerodynamic antenna enclosure, making the system a robust standalone sub-assembly ready to install onto almost any vehicle.

The versatile power-payload of the Ku-Band PIONEER Class antennas has been designed to house SSPAs with power levels up to 300W Ku-Band or Extended Ku-Band in single thread or 1:1 redundant configurations.

The system is simple to install, set up and use. Following relocation of the antenna, the system will reliably and accurately locate and lock on to the designated traffic satellite rapidly within minutes. The IPOINT™ Auto Acquisition Controller uses industry standard position transducers and a sophisticated pattern recognition algorithm to confirm and refine its heading information using visible satellites. The controller is mounted on the antenna structure with a separate control panel with integral power supply in a rack mount unit for mounting within the equipment area.

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Antenna Specifications				
PIONEER120Ku™				
Physical				
Antenna Width	123cm			
Antenna Height	127cm			
Geometry	Dual Offset, dual optic			
Reflector Material	SMC			
Weight	100kg			
Azimuth Elevation Polarization	+/-220° 10-90° +/-95°			
Feed Interface	WR75			
Electrical				
Receive				
Polarization	Linear			
Frequency Band	10.7-12.75 GHz			
Gain @12.5GHz	41.8 dBi			
G/T(30 °elevation)@12.5GHz	21dBK			
Transmit				
Polarization	Linear Orthogonal			
Frequency Band	13.75-14.5 GHz			
Gain @14.25GHz	43 dBi			
VSWR	1.3:1			
Isolation RX/TX (13.75-14.5 GHz)	40dB			
Isolation TX/RX (10.75-12.75 GHz)	75dB			
Wind Speed	Operational up to 45 mph (72 kph)		Survival up to 100 mph stowed (161 kph)	
IPOINT™ Specifications				
Operational modes	Auto-acquire	Unstow	Stow	Configure
LNB Power supply	Can provide 13/18VDC switchable at up to 600mA on RF cable to power LNB and diseq tones.			
RF Signal Input	L-band signal from LNB Level -70 to -20 dBm			
Display	2 line LCD display giving Mode, Signal Level Indication and Position Information			
Motor Drive	Can drive all motors at 24VDC up to 12A. Pulse width modulation from 10% to 100%.			
Limit Switches	Stow Azimuth and Elevation switches			
Options				
Hand Held Controller	Hand Held Controller with LCD display			
Physical				
Temperature Range	-20ºC to 55ºC – Operating -40ºC to 85ºC - Non Operating (storage)			
Extended Temperature Range Option	-40ºC to 55ºC – Operating -40ºC to 85ºC - Non Operating (storage)			
Humidity	5% to 95% RH non condensing – Operating 0% to 99% RH non condensing - Non Operating (storage)			
Altitude	10,000 feet max			
Input Power	110 or 230V, single phase, 50/60Hz, 500W			
Dimensions	Antenna mounted controller 10.8" (275mm) x 10.3" (262mm) x 2.7" (69mm) Rack mounted Control panel containing PSU: 19" (483mm) x 1.75" (44mm) x 16"(406mm)			
Mounting	Antenna mounted controller: Antenna specific mounting brackets Rack mounted Control panel containing PSU: Standard 1U rack mount			
Standards				
Designed to meet	EN55022 and EN50082-1			

NORTH AMERICA

USA
info.usa@advantechwireless.com

CANADA
Info.canada@advantechwireless.com

EUROPE

UNITED KINGDOM
info.uk@advantechwireless.com

RUSSIA & CIS
info.russia@advantechwireless.com

SOUTH AMERICA

info.latam@advantechwireless.com

BRAZIL
info.brazil@advantechwireless.com

ASIA

info.asia@advantechwireless.com

INDIA
info.india@advantechwireless.com