



PIONEER120™, *PIONEER150*™ with *IPOINT*™



Features

- 1.2m and 1.5m 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 125W 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 & *PIONEER150*™ 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 125W 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.

Antenna Specifications

	PIONEER120Ku™	PIONEER150Ku™		
Physical				
Antenna Width	123cm	150cm		
Antenna Height	127cm	152cm		
Geometry	Dual Offset, dual optic	Single Offset		
Reflector Material	SMC	Carbon Fibre		
Weight	100kg	100kg		
Range				
Azimuth	+/-220°	+/-220°		
Elevation	10-90°	10-90°		
Polarization	+/-95°	+/-95°		
Feed Interface	WR75	WR75		
Electrical				
Receive				
Polarization	Linear	Linear		
Frequency Band	10.7-12.75 GHz	10.7-12.75 GHz		
Gain @12.5GHz	41.8 dBi	44 dBi		
G/T(30° elevation)@12.5GHz	21dBK	23dBK		
Transmit				
Polarization	Linear Orthogonal	Linear Orthogonal		
Frequency Band	13.75-14.5 GHz	13.75-14.5 GHz		
Gain @14.25GHz	43 dBi	45.7 dBi		
VSWR	1.3:1	1.3:1		
Isolation RX/TX (13.75-14.5 GHz)	40dB	40dB		
Isolation TX/RX (10.75-12.75 GHz)	75dB	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	-20°C to 55°C – Operating -40°C to 85°C - Non Operating (storage)			
Extended Temperature Range Option	-40°C to 55°C – Operating -40°C to 85°C - 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			

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