EXPLORER 8120

1.2m Stabilized, Auto-Acquire, Drive-Away Antenna System

February 2017 Product Sheet

IPaccess international

Introducing the all-new EXPLORER 8120 VSAT

EXPLORER 8120 is the newest member of the EXPLORER 8000 family of VSAT terminals. A unique Dynamic Pointing Correction technology and an advanced carbon fiber reflector makes the EXPLORER 8100 (1m) and EXPLORER 8120 (1.2m) the most advanced Auto-Acquire Drive-Away VSAT antennas available.

Uninterupted Communication

Traditional vehicle mounted 'Comms-On-The-Pause' VSAT antennas can lose connection to the satellite with even the slightest movement of the vehicle on its suspension caused by high winds or people getting in and out. EXPLORER 8120 isn't a traditional VSAT antenna.

With EXPLORER 8120 you can enjoy continuous connectivity services even if the vehicle rocks thanks to the unique 'Dynamic Pointing Correction' system. Using lessons learned from Cobham SATCOM's maritime stabilized VSAT antennas, EXPLORER 8120 offers the most reliable connectivity available in its class.

Reliable EXPLORER

EXPLORER 8120 is developed completely in-house by Cobham SATCOM. It features genuine and rugged EXPLORER design, which is already established and proven with Cobham SATCOM's highly regarded EXPLORER BGAN and GX terminals.

It is designed to offer unparalleled Comms-On-The-Pause performance, ensuring high-quality connectivity that is available even when other antennas would have lost their connection to the satellite. In the field, this means you can count on EXPLORER 8120 to provide you with vital communications whatever the conditions.

Industry-Leading

EXPLORER 8120 features industry-leading fast satellite acquisition with pointing achieved in less than four minutes, making getting connected to a satellite a quick and easy process.

The system is available in Ku-band configuration and works with most major satellite networks.

SYSTEM FEATURES

- Genuine EXPLORER Design
- Rugged, Reliable 1.2m Auto-Acquire Drive-Away Antenna
- Single Piece 1.2m Offset Feed Carbon Fiber Reflector for exceptional performance
- Built-in Wifi and a Web-based User Interface for easy PC and Smartphone Configuration
- Precision Polarization Drive
- Harmonic Drive Gear systems
- Dynamic Pointing Correction technology and inclined orbit satellite tracking
- Available in an 8W BUC, 20W BUC, and a no BUC option
- Advanced Blocking Zone Functionality

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ANTENNA CHARACTERISTICS	Ku-Band	
	Receive	Transmit
Frequency (GHz)	10.7 -12.75	13.75 -14.5
Antenna Gain (dBi ± 0.2)	40.7-42.2	43.3-44
Cross Pol Isolation (dB) within 1dB beamwidth	26	26
Cross Pol Isolation (dB) On-Axis	>30	>35
Feed Port Isolation - Tx to Rx (dB)	35	80 w/filter
Beamwidth (degrees) at -3dB	1.4 - 1.6	1.2 - 1.3
Beamwidth (degrees) at -10dB	2.4 - 2.8	2.1 - 2.2
Antenna Noise Temp. (°K) at 30° Elevation	55°	
G/T - Comm (dB/°K)	21.3 @ 30° EL Midband	
Radiation Pattern Compliance	FCC §25.209, ITU-R S.580, EESS 502	
Polarization	Linear Orthogonal Std	
Standard BUC Options	8W / 20W	
EIRP with 8W / 20W BUC Options (dBW)	52.8 dBW / 56.8 dBW nom @ midband	

MECHANICAL	
Positioner	Harmonic Drive
Azimuth	± 195°
Elevation	0-100° antenna boresight (mechanical)
Polarization	±95°
Satellite Inclination	±15°
Stowing & Deploying	9° per second
Acquisition time (typical)	<4 minutes from cold start

REFLECTOR	
Size	1.2m single piece carbon fiber RTM reflector
Optics	Offset, Prime Focus
Mount Geometry	2-Axis, Elevation over Azimuth
Polarization	Linear with Motorized Rotation

ELECTRICAL	
RF	Rx and Tx: Type F (75-ohm) connectors on ACU for modem interface
LNB	Multi-band for international use included. (10.7 - 12.75 GHz)
Motors	Low noise, brushless, DC
Antenna Controller (1RU) Power Supply	100 - 240 VAC, 50/60Hz Nom. Single Phase 500W or 1000W option available. BUC Voltage Nom. 48VDC
ACU to antenna cable	10m cable harness, incl. Rx, Tx, BUC power and control, antenna power and control
Power Consumption	Motors Active (8W BUC) – 360 Watts Motors Idle (8W BUC) – 180 Watts
BUC Mounting	8 Watt or 20 Watt BUC mount included. The option without BUC (No BUC) includes flexible waveguide termination and a dual-band LNB.

ENVIRONMENTAL	
Wind Speed:	
Operational (anchored)	61 km/h / 38 mph
Survival, deployed	97 km/h / 60 mph
Survival, stowed	151 km/h / 94 mph
Temperature:	
Operational	-33° to +55°C / -27° to 131°F
Survival	-40° to +80°C / -40° to 176°F
Rain	<100 mm/hr
Humidity	0 to 100% (condensing)
IP Rating: Antenna	IP-55
Antenna Control Unit	IP-30

WEIGHT & MEASURES	
Weight	71.6 kg / 158 lbs with 8W BUC / LNB 68.7 kg / 151.5 lbs with no BUC / LNB
Length	177 cm / 69.7"
Stowed: Height / Width	36 cm / 14.6" / 120 cm / 47"
Antenna Control Unit (1RU) - Weight (500W / 1000W) - Dimensions	 4.5 kg / 9.9 lbs. / 5.3 kg / 11.6 lbs. 4.4 x 48 x 33 cm / 1.75" x 19" x 13"

PRODUCTS	
408158A-50013	EXPLORER 8120 Ku No BUC / 1000W ACU
408158A-50211	EXPLORER 8120 Ku 8W BUC / 500W ACU
408158A-50313	EXPLORER 8120 Ku 20W BUC / 1000W ACU

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71-147718-A02 02.17 LMBU