

# EXPLORER 8100

1.0m Stabilized, Auto-Acquire, Drive-Away Antenna System

# COBHAM

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The most important thing we build is trust

## Uninterrupted 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 8100 isn't a traditional VSAT antenna.

With EXPLORER 8100 you can enjoy continuous connectivity services even if the vehicle rocks thanks to a new and unique 'Dynamic Pointing Correction' system. Using lessons learned from Cobham SATCOM's maritime stabilized VSAT antennas, EXPLORER 8100 offers the most reliable connectivity available in its class.

## Reliably EXPLORER

EXPLORER 8100 is developed completely in-house by Cobham SATCOM. It features genuine 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 8100 to provide you with vital communications whatever the conditions.

## Industry Best

EXPLORER 8100 features industry-leading fast satellite acquisition with pointing achieved automatically in less than two minutes, making getting connected to a satellite a quick and easy process.

The system is available in both Ka- and Ku-band configurations and works with all major satellite networks. A swappable feed system allows users to change frequency bands, ensuring they have full choice of what services to use throughout the lifetime of the antenna.

## SYSTEM FEATURES

- A genuine EXPLORER Design
- Rugged, Reliable 1.0m Drive-Away Antenna available as a multi-band (Ku/Ka) solution
- Single Piece 1.0m Offset Feed Carbon Fiber Reflector for Multi-Band Operation
- Eutelsat Ka-band configuration includes 4W transmit and receive integrated assembly (ViaSat eTRIA)
- Precision Polarization Drive in Ku-band configuration
- Harmonic Drive systems
- Inclined orbit satellite tracking option
- Built-in Wifi and a Webbased User Interface for easy PC and Smartphone Configuration



## MECHANICAL

Positioner	Harmonic Drive
Azimuth	$\pm 195^\circ$
Elevation	0-100° antenna boresight (mechanical)
Polarization	$\pm 100^\circ$ (Ku-band)
Satellite Inclination	$\pm 15^\circ$
Slewing & Deploying	9° per second
Acquisition time (typical)	<120 seconds from cold start

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ANTENNA CHARACTERISTICS	Ku-Band		Ka-band	
	Receive	Transmit	Receive	Transmit
Frequency (GHz)	10.7 -12.75	13.75 -14.5	19.2 - 21.2	29.0 - 31.0
Antenna Gain (dBi ± 0.2)	39.9	41.9	43.9	48.2
Cross Pol Isolation (dB) within 1dB beamwidth	>26	>28	>20	>25
Cross Pol Isolation (dB) On-Axis	>30	>35	-	-
Feed Port Isolation - Tx to Rx (dB)	35	80 w/filter	-	-
Beamwidth (degrees) at -3dB	1.8	1.5	1.1	0.7
Beamwidth (degrees) at -10dB	3.2	2.8	1.9	1.3
Antenna Noise Temp. (°K) at 20° Elevation	55°		107°	
VSWR	1.3:1			
G/T - Comm (dB/K)	18.3 @ 30° EL Midband		19.5 @ 20° EL 19.95 GHz	
Radiation Pattern Compliance	FCC §25.209, ITU-R S.580		ITU-R S.580	
Polarization	Linear Orthogonal Std Optional Co-pol		RHCP or LHCP (eTRIA auto selectable)	
Standard BUC Options	8 Watt extended Band Contact sales for other feed-horn/OMT/BUC config. options		4W eTRIA Contact sales for other feed-horn/OMT/BUC config. options	
EIRP with Standard BUC Options (dBw)	50 dBw		54 dBw	

## ENVIRONMENTAL

Wind Speed	
Operational (anchored)	72 km/h / 45 mph
Survival, deployed	118 km/h / 73 mph
Survival, stowed	161 km/h / 100 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)

## ELECTRICAL

RF	Rx and Tx: Type F (75-ohm) connectors on ACU for modem interface
LNB (Ku)	Multi-band for international use included. (10.7 - 12.75 GHz)
Motors	Noiseless, brushless, DC
Antenne Controller (1RU) Power Supply	90 - 264 VAC, 50/60Hz Single Phase 540W
Power Consumption	Motors Active – 290 Watts Motors Idle – 55 Watts
BUC Mounting (Ku)	8 watt extended range BUC included, up to 16 watt available (13.75 - 14.5 GHz)

## REFLECTOR

Size	1.0m single piece carbon fiber RTM reflector
Optics	Offset, Prime Focus
Mount Geometry	3-Axis, Elevation over Azimuth
Polarization	Ku-band: Linear with Motorized Rotation Ka-band: RHCP or LHCP

## WEIGHT & MEASURES

Approx. Weight	63 kg / 138 lbs with BUC / LNB
Approx. Length	156 cm / 61"
Stowed	
- Height	35 cm / 15"
- Weight	100 cm / 39"
Antenna Control Unit (1RU)	
- Weight	4.5 kg / 9.9 lbs.
- Dimensions	4.4 x 48 x 33 cm / 1.75" x 19" x 13"
Shipping Crate Dimensions	TBD

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Subject to change without notice.