

EXPLORER 7180

1.8 Meter, Auto-Deploy Drive-Away Antenna System

COBHAM

2013 Data Sheet

The most important thing we build is trust



EXPLORER 7180

The EXPLORER 7180 is a 1.8m Ku-band drive-away antenna. This auto-deploy system allows personnel with minimal satellite experience to easily configure and operate this terminal enabling the user to access any broadband application over satellite.

System Features

- Rugged, Reliable 1.8m Ku-band Drive-Away Antenna
- Solid Resin Fiber Composite Reflector: High EIRP, High-Performance
- Mechanical Drive systems including Zero-Backlash Az/EI Cable Drive, and Precision Polarization Drive
- WR-75 Flex WaveGuide to BUC interface
- Inclined orbit satellite tracking
- Manual override capability for emergency use

About EXPLORER Products

Cobham SATCOM Land offers a diverse array of turn-key satellite terminals that fulfill critical communications needs and reduce system configuration requirements for end users. The solutions we provide offer a wide variety of data rates in multiple frequency bands including L, Ku, Ka, and X-bands. Systems are available as manual, or auto-deploy configuration, and are organized in drive-away, fly-away and common-the-move (COTM) families. When traditional communication technologies are unavailable or fail, our products provide high quality VoIP, RoIP, FAX, data, and multimedia communications that work efficiently across satellite links. We specialize in assisting partners with integrated end-to-end solutions for rapid deployment to support disaster recovery, continuity of operations and other mission critical applications.

Markets

- Military
- Homeland Security
- Emergency Response
- Law Enforcement
- Media: Live Streaming Video, TV Broadcasting
- Telemedicine: Critical Medical Information Transmission
- Mobile Insurance Claims & Settlements
- Remote Office Communications
- Energy and Mining

Applications

- Continuity of Business Operations
- Remote Business Videoconferencing
- Internet Cloud Services: Voice, Radio, Data, Fax, Live Broadcast

Reflector

Size	1.8m Resin Fiber Composite
Optics	Offset, Prime Focus, 0.8 F/D
Mount Geometry	3-Axis, Elevation over Azimuth
Polarization	Motorized Rotation of Feed

Mechanical

Positioner	Cable Drive
Travel Velocity	
Azimuth	400° or ± 200°
Elevation	0-90° antenna boresight (mechanical) Standard limits at 5° to 65° (CE Approval) or 5° to 90° (operational)
Polarization	±95°
Slewing & Deploying	2° per second
Manual Jog	1.0° or 0.2° per second

Weights & Measures

Approx. Weight	136 kg (300 lbs) without BUC / LNB
Approx. Length	264.2 cm (104")
Stowed Height	62.2cm (24.5" max)
Deployed Height (with loadframe)	258.6 cm (101.8")
Antenna Control Unit (1RU)	Weight: 4.1 kg (9 lbs.) Size: 48.3 L x 35.6 W x 4.5 H cm (19" x 14 ^{1/2} " x 1 ^{3/4} ") with Power Supply and TraCLR
Handheld Display Unit	Weight: 0.22 kg (0.5 lbs) Size: 14 L x 8.3 W x 3.5 H cm (5 ^{1/2} " x 3 ^{1/4} " x 1 ^{3/8} ")

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Antenna Characteristics	Ku Linear	
	Receive	Transmit
Frequency (GHz)	10.95 -12.75	13.75 -14.5
Antenna Gain (dBi ± 0.2)	45.1	46.7
VSWR	1.3:1	1.3:1
Cross Pol Isolation (dB) On-Axis	35	35
Cross Pol Isolation (dB) Off-Axis	30	30
Feed Port Isolation - Tx to Rx (dB)	35	80 w/filter
Beamwidth (degrees)		
-3dB	1.0	0.8
-10dB	1.8	1.5
Antenna Noise Temperature (°K) at 20° Elevation	50°	
G/T - Comm @ 30° EL, Midband (dB/K)	24.5	
Radiation Pattern Compliance	FCC §25.209, ITU-R S.580	
Polarization	Linear Orthogonal Std Optional Co-pol	
Standard BUC Options	4W, 8W, 16W	

Specifications Subject to Change Without Notice

Environmental

Wind Speed - Operational	72 km/h (45 mph)
- Survival (deployed)	80.5 km/h (50 mph)
- Survival (stowed)	161 km/h (100 mph)
Temperature - Operational	-30° to +51°C (-22° to 125°F)
- Survival	-40° to +60°C (-40° to 140°F)
Rain	<100 mm/hr
Humidity	0 to 100% (condensing)

Electrical

RF	Rx and Tx: Type F (75-ohm) connectors
Interfacility Link	9.14m (30 ft) Dual RG6 Coax, 1 Control Cable
Motors	24VDC Servo w/ Optical Encoder, Constant Torque
Controller (1RU)	90 - 264 VAC, 50/60Hz Single Phase
Power Supply	1000W standard power supply
Power	Motors Active – 450 Watts
Consumption	Motors Idle – 30 Watts
BUC Mounting	Feed Boom (maximum weight 7.3 kg / 16 lbs.)
Waveguide	90° WR75 Waveguide Rotary Joint @ Feed TX Input
Emergency Drive	Handcrank on Az & El; 12V leads on pol

Cobham Antenna Controller

Industry standard setting one-button auto-deploy operation with automatic satellite acquisition and cross-pol adjustment, integrated GPS, GLONASS, Compass, Level Sensors and user configurable satellite selection for primary and secondary satellites.

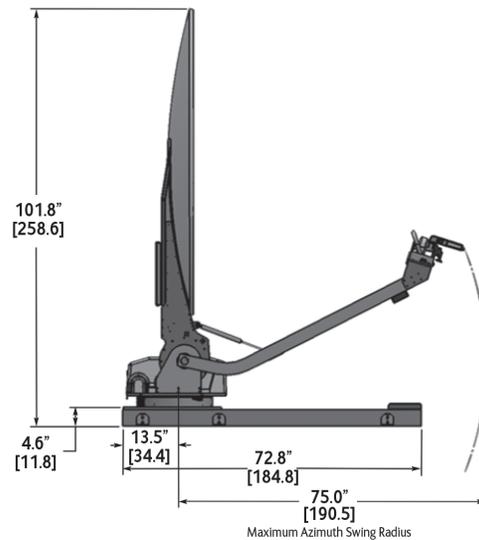


Integrated "TraCLRI" GUI Feature:

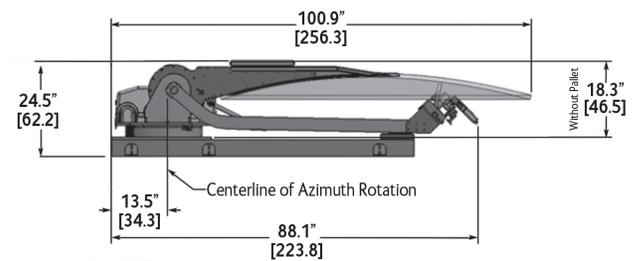
The Live Remote Interface (LRI) is a web-based graphical user interface accessory for EXPLORER satellite antenna terminals. TraCLRI communicates with any Cobham Antenna Controller Unit (ACU) and allows the user to easily configure and remotely monitor satellite auto-acquisition operations using a standard web browser.



Available on a variety of devices such as PCs, tablets and smart phones.



Deployed Position (in inches [cm])



Stowed Position (in inches [cm])

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