

EXPLORER 7120

1.2 Meter, Auto-Deploy Drive-Away Antenna System

2013 Data Sheet

The most important thing we build is trust

COBHAM



EXPLORER 7120

The EXPLORER 7120 is a 1.2m 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 1.2m 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 comm-on-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 | 1.2m 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 | 52.2 kg (115 lbs) without BUC / LNB |
| Approx. Length | 175.3 cm (69") |
| Stowed Height Deployed Height (with loadframe) | 48.2 cm (19") 182.9 cm (72") |
| Antenna Control Unit (1RU) | Weight: 2 kg (4.5 lbs.) Size: 22.9 L x 26 W x 6.4 H cm (9"x 10.3"x 2.5") 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) | 42.0 | 43.0 |
| 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 | 75 w/filter |
| Beamwidth (degrees) | | |
| -3dB | 1.4 | 1.2 |
| -10dB | 2.5 | 2.1 |
| Antenna Noise Temperature (°K) at 30° Elevation | 54° | |
| G/T - Comm @ 30° EL, Midband (dB/K) | 21.5 | |
| 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 | 300W standard; 1000W option available |
| Power | Motors Active – 250 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; Knob 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.

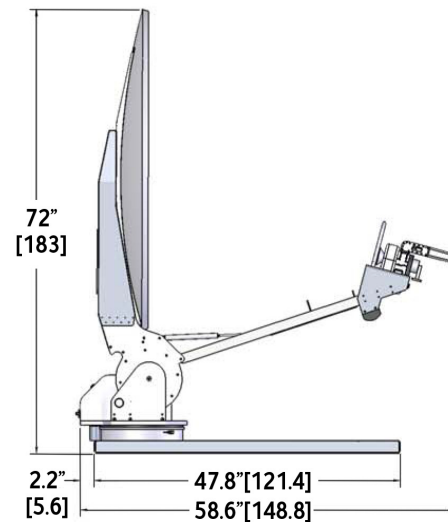


Integrated "TracLRI" GUI Feature:

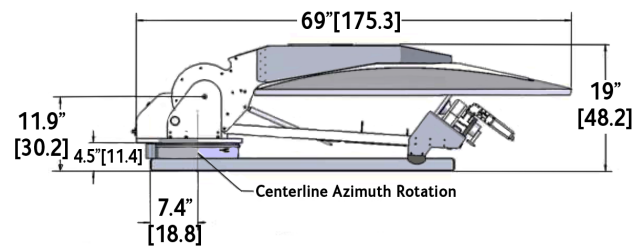
The Live Remote Interface (LRI) is a web-based graphical user interface accessory for EXPLORER satellite antenna terminals. TracLRI communicates with any Cobham Antenna Controller Unit (ACU) and allows the user to easily configure and remotely monitor satellite auto-acquisition operations using a standard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



Available on a variety of devices such as PC's, tablets and smart phones.



Deployed Position (in inches [cm])



Stowed Position (in inches [cm])

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