

THE SYSTEM SHOWN HERE FEATURES A 16-PANEL 5.4 METER REFLECTOR, A HIGH PERFORMANCE AUTOTRACKING X-BAND FEED, AS WELL AS Y- OVER X-AXIS PEDESTAL CONFIGURATION.



The mobilizer concept is totally self-contained and provides a stable operating platform when fully deployed. The reflector uses a quick-latching mechanism to permit rapid assembly and disassembly of the reflector. These panels are then stored within racks on the trailer deck during transport. Designed for transport by a C-130 or similar aircraft, the system also meets all specifications for road transport.

Set up consists of leveling the trailer with the included corner jacks and erecting the monopod autotracking feed in preparation for reflector assembly. The sixteen reflector panels are then lifted into position, one at a time, and attached by captive quick latching devices on each panel (no hardware to locate, no tools to drop). The pedestal, with antenna and feed, is then raised into position using a self-contained mechanism on the trailer.

The Operator Control System (OCS) allows for multi-satellite pre-mission planning, automated pre-pass system set up and alignment, system performance integrity analysis, signal routing assignments, remote system control, and programming for post mission analysis and maintenance.

The station includes a GPS-based timing subsystem that supplies precision time determination for satellite track scheduling.

### 5.4 METER MOBILE AT-A-GLANCE

- » Sized for C-130 transport
- » Rapid set up and tear down (3 persons, 1 day)
- » Unique monopod feed design for precision alignment and high efficiency
- » High G/T using dual shaped optics
- » Automated operation and diagnostics
- » X/Y pedestal axis layout eliminates overhead pass “keyhole”
- » Dual polarization feed with high polarization isolation
- » Trailer design accommodates a wide range of tow vehicles and contains special features unique to C-130 aircraft loading

### “EAGLE VISION” REMOTE SENSING GROUND TERMINAL



## 5.4 Meter Mobile X-band Tracking System

### SPECIFICATIONS

#### RF SYSTEM SPECIFICATIONS

<b>Reflector</b>	5.4 meter 16 panel segmented aluminum reflector
<b>Feed Type</b>	Monopod cassegrain autotrack
<b>RF Range</b>	8.025 to 8.5 GHz
<b>G/T</b>	
» <b>Elevation</b>	
» <b>31.00 dB/K Typical</b>	8.025 GHz @ 5°
» <b>31.50 dB/K Typical</b>	8.025 GHz @ 10°
<b>Polarization</b>	Simultaneous RHC and LHC
<b>Beamwidth at 8.025 GHz</b>	0.45° (nominal)
<b>Axial Ratio</b>	0.5 dB max

#### SERVO CONTROL PERFORMANCE

<b>Track Accuracy</b>	<0.05° BRE one sigma
<b>Pointing Accuracy</b>	0.089° BRE one sigma at 45° elevation angle
<b>Pedestal Position Feedback Control System</b>	Dual speed resolvers Station Control Computer (SCC) which allows: <ul style="list-style-type: none"><li>» Automated ephemeris data updates</li><li>» Satellite pre-mission planning and scheduling</li><li>» Automated pre-pass testing</li><li>» Automated system performance integrity analysis</li><li>» Signal routing</li><li>» Satellite acquisition and autotrack</li><li>» Program track back up</li><li>» Complete antenna subsystem control</li></ul>
<b>Servo Controller Modes</b>	Manual, slave, scan, autotrack, and program track
<b>GPS Subsystem Accuracy</b>	» 5 m (CEP) when selective availability is disabled » 100 m (2d rms) when selective availability is enabled
<b>GPS Time Mark</b>	Synchronized to UTC within 1 µs

#### MECHANICAL/ENVIRONMENTAL

<b>Travel Limits (each axis)</b>	
» <b>Electrical</b>	±90°
» <b>Mechanical</b>	±91°
<b>Acceleration (each axis)</b>	5°/s <sup>2</sup>
<b>Velocity (each axis)</b>	5°/s
<b>Operating Temperature Range</b>	
» <b>Outdoor Equipment</b>	-40° to +55° C
» <b>Indoor Equipment</b>	15° to 30° C
<b>Humidity</b>	
» <b>Outdoor</b>	100% condensing
» <b>Indoor</b>	85% noncondensing
<b>Operational Wind</b>	72 km/h gusting to 85 km/h
<b>Survival Wind</b>	180 km/h stowed at zenith

#### MOBILIZER/TRAILER

<b>Overall Dimensions In Transport Configuration (WxHxL)</b>	2.54 x 2.73 x 6 m
<b>Maximum Towing Speed</b>	110 km/h
<b>Tow Attachment Type</b>	Pintle hook
<b>Deployment Time</b>	3 persons, 1 day
<b>Options</b>	» S-band prime focus transmit only feed » L/S-band prime focus TX/RX feed » Redundant LNAs » Software modules for customer specific hardware » Customer-tailored training and instruction services » Fiber optic inter-facility links » Automated signal routing matrix » Depot and/or contract maintenance plans



### CONTACT

#### SALES

TEL 888 842 7281 (US Toll Free) or +1 760 476 4755   EMAIL [insidesales@viasat.com](mailto:insidesales@viasat.com)   WEB [www.viasat.com](http://www.viasat.com)

