

# 11 Meter Transportable Medium Earth Terminal

## Satcom & Antenna Technologies Division



### Overview

The CPI Satcom & Antenna Technologies Inc. (CPI SAT) 11.3-meter mobile antenna system delivers exceptional performance for the rapid-deploy tactical environment. This mobile terminal consists of two rugged dual-axle trailers. When deployed, the first trailer supports the antenna and equipment shelter with deployable outriggers to stabilize the structure for worst-case operating and survival wind conditions. This first trailer converts into a transport package for shipment when readied for transit. The second trailer provides storage for all the reflector components. This mobile terminal can be configured for deployment by air or truck transit. The entire system configured for transit system is designed for transportation by two C130 aircraft.

### FEATURES

- Highly transportable by air or truck and quickly erectable in 48 man-hours
- Bolt-together reflector with no field alignment necessary
- 2-port, CP, low pim, X-band feed; 4-port, LP, Ku-band feed; and 4-port, CP/LP, C-band feed
- Meets ITU-RS-580 for C, X and Ku-bands; meets FCC Regulation 25.09 and INTELSAT for C and Ku-bands
- Receive and/or transmit simultaneously

### OPTIONS

- SSPA, converters and LNA/LNB systems
- RF equipment shelter
- Primary power systems

### BENEFITS:

- High antenna efficiency
- Excellent rejection of noise and microwave interference

### APPLICATIONS:

- Communications, Data transfer, Broadcast

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## Technical Specifications

Electrical	C-Band Feed		X-Band Feed		Ku-Band Feed	
	Receive	Transmit	Receive	Transmit	Receive	Transmit
Frequency (GHz)	3.625 - 4.200	5.850 - 6.425	7.250 - 7.750	7.900 - 8.400	10.950 - 12.750	14.000 - 14.500
Antenna Gain at Midband ( $\pm 0.2$ dB)	52.20 dBi	55.10 dBi	57.20 dBi	57.70 dBi	60.60 dBi	62.00 dBi
VSWR	1.30:1 (17.7 dB)	1.30:1 (17.7 dB)	1.25:1 (19.0 dB)	1.25:1 (19.0 dB)	1.30:1 (17.7 dB)	1.30:1 (17.7 dB)
Sidelobe Performance	Meets FCC 25.209, Intelsat or ITU-RS-580		Meets ITU-RS-580		Meets FCC 25.209, Eutelsat, Intelsat or ITU-RS-580	
Antenna Noise Temperature						
5° Elevation	60 K		67 K		102 K	
10° Elevation	51 K		56 K		89 K	
20° Elevation	45 K		50 K		81 K	
40° Elevation	43 K		48 K		77 K	
Power Handling (total)	5 kW CW		5 kW CW		2 kW CW	
Cross Polarization Isolation						
On Axis (CP Mode)	30.8 dB	30.8 dB	21.3 dB	21.3 dB		
Within 1.0 dB BW (CP Mode)	30.8 dB	30.8 dB	21.3 dB	21.3 dB		
On Axis (LP Mode)	35.0 dB	35.0 dB			35.0 dB	35.0 dB
Within 1.0 dB BW (LP Mode)	30.0 dB	30.0 dB			35.0 dB	35.0 dB
Low PIM			-150 dB			
RF Specification	975-2200		975-1631		975-3049	

Mechanical	
Reflector Diameter	11.3 meters (37.1 ft)
Antenna Travel	
Elevation	5° - 90° continuous
Azimuth	$\pm 15^\circ$ continuous, $\pm 90^\circ$ total
Travel Rate (both axes)	0.1°/second
Weight	
Trailer #1	34,500 lbs. (15,649 kg)
Trailer #2	16,345 lbs. (7,414 kg)
Assembly Time	48 man-hours
Air Transportation	Two C-130 aircraft, per AFSC DH1-11
Ground Transportation	Standard fifth wheel king pin (SAE J848A standard)

Environmental	
Wind Loading	
Operational	40 mph (64 km/h) gusting to 50 mph (80 km/h)
Survival (unanchored)	90 mph stowed (145 km/h), 70 mph (113 km/h) any position
Survival (anchored)	120 mph stowed (193 km/h), 85 mph (137 km/h) any position
Slope Requirements	Up to 10%
Area Requirements	70 ft (21.3 m) diameter circle

Contact us at [CustomerCareSAT@cpii.com](mailto:CustomerCareSAT@cpii.com) or call us at +1 770-689-2040.

The data should be used for basic information only.

Formal, controlled specifications may be obtained from CPI for use in equipment design.



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For more detailed information, please refer to the corresponding CPI technical description if one has been published, or contact CPI. Specifications may change without notice as a result of additional data or product refinement. Please contact CPI before using this information for system design.

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