ara-inc.com

Saterra

The Saterra is a flexible, resilient, reliable Tri-Band VSAT terminal system. It meets the Government's (DoD and Civilian) and commercial market's need for improved resiliency, Size, Weight, and Power (SWaP), and cost for transportable SATCOM Terminals. Saterra's ruggedized form factor ensures reliable operation in harsh environments. It is the perfect solution to deliver high-speed data, audio, and video communications services to deployed personnel.

The Saterra offers 12 different configurations in an easily transportable package. It operates in X-band, Ku-band, and Ka-bands. It comprises four reflectors (0.6 m, 0.8 m, 1.0 m, and 1.3 m), modular feeds, integrated RF components, and an AutoAQYR (acquire) positioner. The terminal is modem agnostic as it supports any L-band modem via an integrated receiver. It also supports all modems that follow the Open Antenna Modem Interface Protocol (OpenAMIP) protocol.

The tool-free assembly allows setup in less than 10 minutes. A push-button initiates the improved AutoAQYR acquisition algorithm to obtain satellite lock in less than three minutes. A change of band or aperture size is achievable in five minutes or less. The optional automatic re-peaking configuration ensures signal lock. The intuitive Graphical User Interface (GUI) facilitates remote operation of the SATCOM terminal. Several integrated safety features available on Saterra are accessible through the GUI. The terminal is also compliant with MIL-STD-188-164 Rev C RF and MIL-STD-810G environmental specifications. Every unit goes through a series of rigorous tests at our in-house facility to ensure quality and performance. Based on the user's needs, the Saterra is configured as a one-person lift, airline-checkable, ruggedized, single case or dual-case configuration.
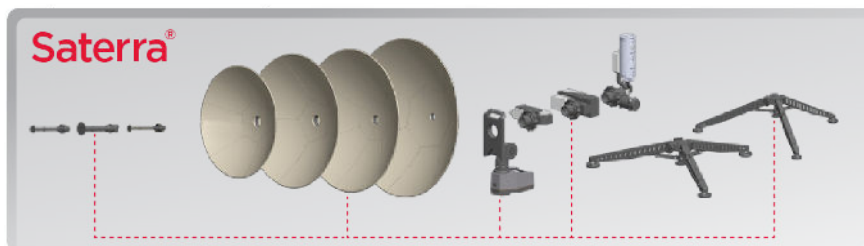
*Optimization for Every Mission*

FEATURES

- Tri-band capable terminal with 12 possible configurations
- Rugged, lightweight, portable, and modular design
- Tool-free assembly
- Faster user onboarding
- Quick satellite acquisition using AutoAQYR acquisition algorithm
- User-configurable satellite settings
- Modem agnostic
- Utilizes OpenAMIP protocol
- Simple, intuitive, and integrated user interface
- Remote GUI available
- Available in single or dual IATA compliant cases

Saterra

Optimization for Every Mission
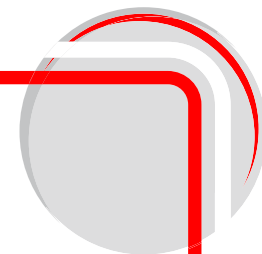
Antenna Control	Automated
Azimuth Range	±30°
Elevation Range	0° to 90°
Pointing Accuracy	< 0.1°

Environmental	
Operating Temp.	-30° C to +60° C
Storage Temp.	-40° C to +85° C
IP Rating	IP65
MIL-STD 810G	Rain, Dust, Sand, Solar Radiation, Vibration, Altitude, Humidity
Wind Load	30mph sustained with gusts to 45mph

Electrical / RF	
Power Input	90-305 VAC, 10-30 VDC (< 40W)
Transmit Frequency	Ka: Commercial: 29.0 - 30.0 GHz, Military: 30.0 - 31.0 GHz Ku: 13.75 - 14.50 GHz X: 7.90 - 8.40 GHz
Receive Frequency	Ka: Commercial: 19.2 - 20.2 GHz, Military: 20.2 - 21.2 GHz Ku: 10.70 - 12.75 GHz X: 7.25 - 7.75 GHz
Polarization	Ka: Circular: Tx-RHCP, Rx-LHCP (Switchable) Ku: Linear, ±90° Skew X: Circular - Tx-RHCP, Rx-LHCP (Switchable)
Compliance Certificates	MIL-STD-188-164C, FCC 25.209
Modem Compatibility	OpenAMIP, Modem Agnostic

	60 cm	80 cm	100 cm	130 cm
Tx Gain	43.5 dBi	46.0 dBi	47.9 dBi	50.2 dBi
Rx Gain	40.1 dBi	42.6 dBi	44.5 dBi	46.8 dBi
G/T	16.6 dB/K	19.1 dB/K	21.0 dB/K	23.3 dB/K
BUC Size Options (W)	6, 10, 12, 20, 25, 40, 50			
Ku				
Tx Gain	36.8 dBi	39.3 dBi	41.2 dBi	43.5 dBi
Rx Gain	35.8 dBi	38.3 dBi	40.2 dBi	42.5 dBi
G/T	15.3 dB/K	17.8 dB/K	19.7 dB/K	22.0 dB/K
BUC Size Options (W)	4, 6, 8, 16, 25, 30, 40, 55			
Tx Gain	32.0 dBi	34.5 dBi	36.4 dBi	38.7 dBi
Rx Gain	31.3 dBi	33.8 dBi	35.7 dBi	38.0 dBi
G/T	10.6 dB/K	13.0 dB/K	15.0 dB/K	17.2 dB/K
BUC Size Options (W)	40, 50, 80, 100			