

1.3M X, Ka, Ku-Band Satellite Terminal

Communications Capabilities for the First Responder in any Environment.

Tampa Microwave's 1.3m terminal was specifically designed for maximum capabilities in the smallest and lightest satellite terminal of its size. It is designed to be carried into any environment and then quickly installed and ready to operate within minutes. The 1.3m terminal offers several operational and logistical advantages over its competition. The compact design and intelligent packaging concept facilitate one-person setup and operation. The 1.3m system packs up in 2 hard transit cases that can be checked as baggage (IATA <70 lbs each) on commercial airline flights..

All the electronic modules for this terminal are used across the entire Tampa Microwave product line. The transceivers, modem assembly and power supply modules are interchangeable (without any tools) among our entire family of terminals with aperture sizes from the 1.3m to the 45cm ManPack. This architecture simplifies sparing and maintenance at all organizational levels. It further facilitates dual band operation in the smallest packaged terminal size and weight. These features significantly reduce system life cycle costs and logistics footprints.

Operating without fans, the 1.3m Satellite Terminal is both rugged and quiet. The easy to use auto-assist pointing enables fast satellite acquisition by minimally trained personnel. The absence of automated mechanical/electrical pointing and tracking mechanisms increases reliability and ensures that there is no single point of failure that would compromise the mission.

Key Terminal Features:

- Supports X, Ku, and Ka-Bands (military and commercial)
- No Fans - high reliability design that eliminates cooling fans and motors
- Auto Assist Pointing - simple front panel display instructions assist satellite acquisition
- High Performance - low loss
- One-person setup in under 10 minutes, without tools
- The center-fed antenna enables simple frequency / feed swaps and also aids in maintaining antenna / pedestal stability in windy conditions
- Multiple embedded modem choices available or use any external L-Band modem
- Internal GPS
- NVG Compatible



High Performance

The 1.3m antenna preserves satellite bandwidth, power and eliminates ESD spreading

Battery Saving Mode

Transmitter Keyline control more than doubles battery operation time

Multi-Band

Quick change between X, Ka and Ku bands (both Global Express and WGS frequencies supported)

Simple to Operate

Auto-assist display provides "BGAN" like setup (that an unskilled operator can use to point at the satellite)

MIL-SPEC Reliability

Purpose-built for tactical military environment

Lightweight

Monolithic RF design requires no cooling fans resulting in the smallest, lightest, most reliable terminal available



System Features

- Azimuth range: $\pm 90^\circ$
- Elevation range: 5-90°
- Leveling capability: $\pm 5^\circ$
- Power supply inputs are 85-265 VAC, 47-440 Hz 12-36 VDC
- Battery Run-time 2 hours using one (1) BB-2590 Greater than 2.5 hours when using keyline feature (Optional BB-2590 battery available)
- RF modules use Monolithic RF design which requires no cooling fans providing the smallest, lightest, most reliable terminal available



Environmental

- Temperature: Operating -20°C to 55°C
- Wind: Operating 25 mph without anchors
- Transport: 2 Hard Transit Cases
- Setup and tear-down times: <10 minutes with one person

Options

- BB-2590 battery recharger/UPS
- Multi-enclave networking devices with embedded Cisco© routing
- Thales PRC-154 radio integration for IP/Voice gateway operation

System Parameters:

Parameter	X	Ku	Ka
Low Power EIRP	48.5 dBW	54.3 dBW	56.5 dBW
Enhanced Power EIRP	52.4 dBW	57.9 dBW	59.9 dBW
G/T	16.6 db/K	20.6 db/K	22.7 db/K

- Note: X and Ka EIRP's are at Plinear and Ku EIRP is at P1dB.

Receive/Transmit Parameters:

Parameter	X-Band	Ku-Band	Ka-Band
Frequency Band RX 1/LO	7.25-7.75 GHz 6.3 GHz	10.95-11.75 GHz 10.0 GHz	19.2-20.2 GHz 18.2 GHz
Frequency Band RX 2/LO	N/A	11.75-12.75 GHz 10.8 GHz	20.2-21.2 GHz 19.2 GHz
Frequency Band TX1/LO	7.9-8.4 GHz 6.95 GHz	13.75-14.5 GHz 12.8 GHz	29-30 GHz 28 GHz
Frequency Band TX2/LO	N/A	N/A	30-31 GHz 29 GHz
RX 1 IF-Frequency	950-1450 MHz	950-1750 MHz	1-2 GHz
RX 2 IF-Frequency	N/A	950-1950 MHz	1-2 GHz
Polarization	RCP/LCP Reversible	Linear V/H Cross/Co Pole	RCP/LCP
Certifications	Pending	FCC, Intelsat, Eutelsat	Pending

Packaging:

- Case 1 = Pedestal and antenna petals = 70lbs maximum
- Case 2 = Electronics = 35lbs maximum
- IATA compliant for checked baggage
- Available in black, desert tan or OD green

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