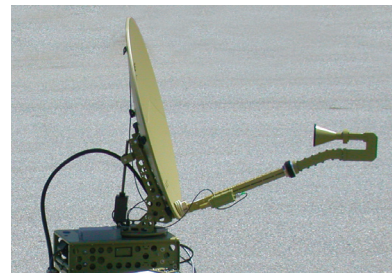
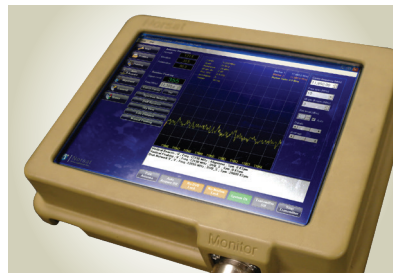




Norsat
International Inc.

GLOBE Trekker™ 2.0

INTELLIGENT.
EASY TO USE.
TOUGH.



The GLOBETrekker™ 2.0 is the world's most intelligent fly-away satellite terminal. With a modular architecture that enables easy component swapping in the field, a simple one touch interface, and intelligent LinkControl software for automatic satellite acquisition, the GLOBETrekker is both powerful and easy to use. Built to military specifications, with a suite of integrated modems or video encoders, and lightweight packaging compact enough for airline check in, operators rely on the GLOBETrekker for mission critical communications virtually anywhere on the planet.

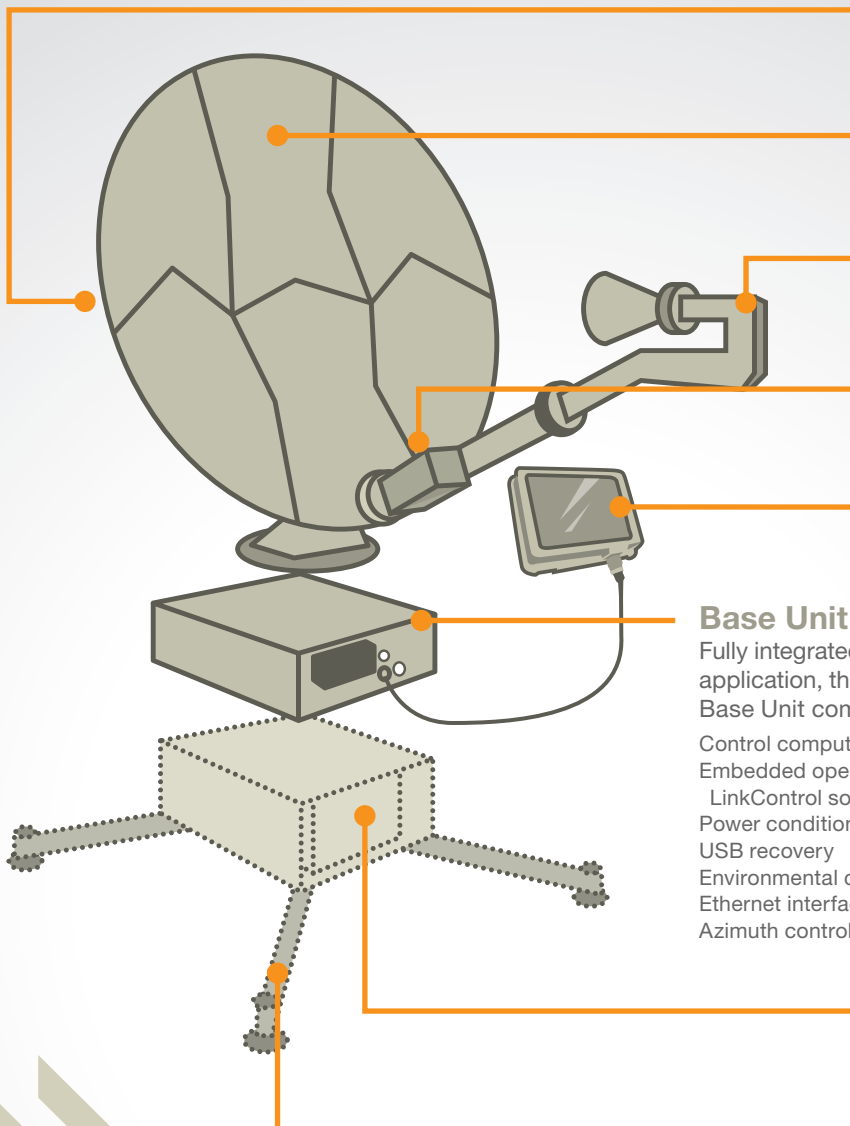
WHAT'S NEW?

The GLOBETrekker™ 2.0 has been re-engineered to better meet your needs and the latest developments include:

- One-touch interface** Easy operation and rapid deployment - acquire a satellite in less than 5 minutes
- Universal LNB** Automated frequency selection for worldwide deployments
- Elevated electronics** Quad-pod legs keep electronics well above any running water, mud or snow
- Built-in troubleshooting** Visible alarms guide users through problem resolution
- Modular architecture** Components are field replaceable for easy maintenance
- USB recovery tool** Rapid save and recovery of system software
- Multi-band capability** Ku, X, and Ka band kits available - field swappable in under 10 minutes



COMPONENTS



BUC

RF package can be field swapped to quickly change the frequency bands and powers.

6-Segment Carbon Fibre Antenna

Lightweight, portable and easy to assemble. Available in 1.0 or 1.2m.

2-Segment Boom Arm

Fits into compact packaging. Patented integrated filters are included for X-band systems.

Universal LNB

Functional in multiple frequency bands for easy frequency switching in the field

Sunlight Readable Display

8.4" TFT LCD screen, 1600 NITS, & SVGA (800 x 600)

Base Unit

Fully integrated with the modem or encoder/modulator appropriate for your application, the Base Unit can also be easily removed from the System.

Base Unit components include:

Control computer	Motorized Positioner
Embedded operating system with LinkControl software	DVB receiver
Power conditioning	LNB controller
USB recovery	Spectrum analyzer
Environmental control unit	Compass
Ethernet interface	GPS
Azimuth controller unit	Inclinometer

Components Chassis (optional)

Houses Power Amplifiers up to 400W and other large components

Quad-pod Legs

Keep equipment well above running water, snow & mud

SPECS

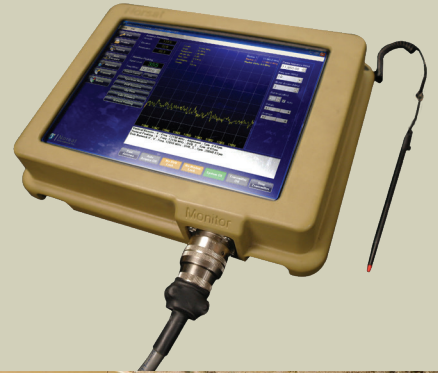
	X-Band (60W BUC*)		Ku-Band (40W BUC*)		Ka-Band (4W BUC*)	
	1.0m antenna	1.2m antenna	1.0m antenna	1.2m antenna	1.0m antenna	1.2m antenna
G/T	14.7 dB/K	17.0 dB/K	17.6 dB/K	20.2 dB/K	20.8 dB/K	21.5 dB/K
EIRP*	53.3 dBW	55.1 dBW	55.4 dBW	57.6 dBW	53.5 dBW	55.2 dBW
Tx Gain (mid band)	>36.5 dBi	>38.3 dBi	>41 dBi	>43.0 dBi	>48.0 dBi	>49.7 dBi
Rx Gain (mid band)	>36.0 dBi	>37.6 dBi	>39 dBi	>41.0 dBi	>44.0 dBi	>46.0 dBi
Polarization	Circular		Linear Cross-Pol		Circular / Linear	
Cross pol isolation	N/A		30 dB on axis		Circular: 35dB on axis	
Axial Ratio	<1.2 dB in Tx Band		N/A		<1.0 dB in Tx band (military) <1.5 dB in Tx band (commercial)	
Elevation adj	5° to 90°, Motorized, (resolution <0.1°)					
Azimuth adj	>±160°, Motorized, (resolution <0.1°)					
Transmit frequency	7.9 - 8.4 GHz		13.75 GHz - 14.5 GHz		30 - 31 GHz (military) 29.5 - 30 GHz (commercial)	
Receive frequency	7.25 - 7.75 GHz		10.7 - 12.75 GHz		18.2 - 21.2 GHz	
Input frequency	950 - 1450 MHz		950 - 1700 MHz		950 - 1950 MHz	
Operating Temp	-30°C to +55°C, meets MIL-STD- 810G					
Rainfall	102 mm/h Operational, 360 mm/h Survival, meets MIL-STD- 810G					
Windspeed	50 km/h Operational, 100 km/h Survival					

* Other power options available

LinkControl Software

Installed on every GLOBETrekker system, LinkControl™ software is the industry's most intuitive and powerful suite of satellite pointing tools. With an intuitive GUI, LinkControl seamlessly integrates the various hardware components and automates the process of satellite acquisition. Users have full control of all integrated components including BUC, LNB, modem, or encoder modulators. Through user configured LinkProfiles and a customizable satellite almanac, LinkControl enables users to plan operations, rapidly deploy systems and conduct remote diagnostics. Features include:

- Auto-acquire of satellite through a one-button software interface
- Remote access from anywhere in the world via TCP/IP
- Built In troubleshooting and resolution system
- Closed loop power control to account for environmental variation



RUGGED. RELIABLE. TOUGH.

The GLOBETrekker™ 2.0 is a battle tested fly-away terminal with unmatched durability. Currently deployed by militaries around the world, the GLOBETrekker includes all weather equipment enclosures (IP66 compliant) and for rapid deployment in uneven terrain. Tested to meet MIL-STD 810G standards, and packaged in IATA compliant airline cases, the GLOBETrekker is ideal for short notice military and commercial deployments, anywhere in the world.

EASY TO USE

With an intelligent, integrated design, the GLOBETrekker™ 2.0 is powerful and easy to use for operators of all experience levels. The system can be completely assembled without tools in mere minutes, and a one touch interface enables rapid, easy deployment. Auto-acquisition technology ensures accurate, consistent satellite acquisition and LinkControl's software provides an intuitive user interface for setting up LinkProfiles and monitoring operation. Easy to set up and deploy, the GLOBETrekker leaves you free to focus on your mission.

P1dB	X-Band Power Options:	Ku-Band Power Options:	Ka-Band Power Options:
4W		✓	✓
6W		✓	
8W		✓	
10W	✓		✓
16W		✓	
20W	✓	✓	✓
25W			✓
40W	✓	✓	
50W			✓
60W	✓		
80W		✓	
100W	✓		
125W	✓		
150W	✓		
175W	✓		

Antenna	X-Band	Ku-Band	Ka-Band
Antenna Platform	Motorized Elevation over Azimuth Mounted on Base Unit	Motorized Elevation over Azimuth Mounted on Base Unit	Motorized Elevation over Azimuth Mounted on Base Unit
Overrides	Manual (Az/EI)	Manual (Az/EI/Pol)	Manual (Az/EI) Pol Optional
Transmit	X-Band	Ku-Band	Ka-Band
Reference Signal Frequency	external 10 MHz -5 to +5 dBm (supplied by Base Unit)	external 10 MHz -5 to +5 dBm (supplied by Base Unit)	external 10 MHz -5 to +5 dBm (supplied by Base Unit)
Rated Power (1dB C.P.)	60W (other options available)	40W (other options available)	4W (other options available)
Power Control	0.1 dB res, 1 dB accuracy modem dependent	0.1 dB res, 1 dB accuracy modem dependent	0.1 dB res, 0.6 dB accuracy modem dependent
Max. SSG Variation over any narrow band	±1 dB per 54 MHz	±1 dB per 54 MHz	±1 dB per 54 MHz
Spectral Regrowth at rated pwr.	-26 dBc	-26 dBc	-26 dBc
Receive	X-Band	Ku-Band	Ka-Band
LNB Noise Figure (typical)	0.7 dB	0.8 dB	1.3 dB
LO Stability Maximum (over temp)	±10 KHz or ext. ref.	±10 KHz or ext. ref.	±40 kHz or ext. ref.
Phase noise (SSB maximum) (SSB maximum)	-75 dBc/Hz at 1 kHz -85 dBc/Hz at 10 kHz -95 dBc/Hz at 100 kHz	-70 dBc/Hz at 1 kHz -80 dBc/Hz at 10 kHz -85 dBc/Hz at 100 kHz	-75 dBc/Hz at 1 kHz -80 dBc/Hz at 10 kHz -100 dBc/Hz at 100 kHz
Output P1dB	10 dBm	5 dBm	3.1 dBm

Modem & HD Encoder/Modulator Options

GLOBETrekker 2.0 is compatible with a variety of modems and encoders, including those made by the following manufacturers:

Comtech
iDirect
Hughes
Radyne
Norsat MPEG 2/4 HD/SD Encoders Available

Accessories Options

30 meter IFL cable
2 kVa Generator
Lightning protection kit
Anti icing kit
3RU rackmount fibre optic base
Fibre optics package
Vehicle power kit (MIL-STD 1275B)
Ruggedized Laptop Controller with Integrated Linkcontrol Software

Ruggedized Sunlight Readable Display

800 x 600 SVGA resolution
LED Backlight
High Shock & Vibration Resistance
Low Power Consumption
High Uniformity
Low EMI Noise
Wide Dimming
1600 NITS

Environmental

Temperature		
Operational	-30°C to +55°C	MIL-STD-810G
Survival	-40 to +70°C	MIL-STD-810G
Rainfall		
Operational	102 mm/h	MIL-STD-810G
Survival	360mm/h	MIL-STD-810G
Storage Temp	-40°C to +70°C	
Weatherproofing		MIL-STD-810G
Windspeed		
Operational	50 km/h	MIL-STD-810G
Survival	100 km/h	MIL-STD-810G
Humidity	5-95% condensing	IEC 60068 2-78
Vibration		MIL-STD-810G
Loose Cargo Vibration		MIL-STD-810G
Transit Drop		MIL-STD-810G
Blowing Dust & Sand		MIL-STD-810G
Blowing wind & rain		MIL-STD-810G
Random vibration		MIL-STD-810F
Shock		MIL-STD-810G
Drop & topple		MIL-STD-810G
Free fall		MIL-STD-810G
Salt mist		MIL-STD-810G

Power Supply

Prime Power 24V DC
AC 110/220 VAC
50 / 60 Hz (Stable to 90 VAC)

Packaging

Ruggedized hardcase available. Most system configurations are available with IATA Compliant packaging (cases ≤32 kg each)

Packaging options available in as few as 2 cases.



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