Ground Control’s TOUGHSAT XP Series Mobile Satellite Systems are designed for rugged reliability in the most challenging of environments. Quick one-button deployment provides high-speed Internet & phone connectivity in less than 3.5 minutes... Everywhere.

**Manufactured by Ground Control**
The TOUGHSAT XP is our FLAGSHIP Mobile Satellite System built on our years of mobile satellite engineering for 1000’s of clients since 2002.

**Mobile Connectivity**
Both the 1.2 and .98 Meter TOUGHSAT XPs mount on top of any vehicle, truck or command trailer roof. Connecting is as easy as pressing the “Deploy” button on the ACU (Antenna Control Unit). The dish will automatically deploy, lock on satellite and create a high-speed network for any in range computers, smartphones or other wireless devices.

**All Weather - All Conditions**
The TOUGHSAT XP is built for extreme environments. Black anodized aluminum, UV resistant plastics, sealed onboard electronics, a no-backlash braking system and dish-arm shock absorbers for operating in high winds. Even strong magnetic distortions have no effect because the on-board acquisition routine does not require a compass reading. The Toughsat XP has superior IP-66 environmental ratings which means it handles extreme rain, snow and wind.

**Our Record Speaks For Itself**
Ground Control is an industry leader in Mobile Satellite Internet connectivity in all sectors of business including state and local governments, military, emergency services, oil & gas, and mobile retail to list a few. We offer unique add-on services such as VoIP phones and phone service, CIR’s, Cellular-Over-Satellite service, Fax-Over-Satellite, VPN, Point-To-Point Networking, Private Networks, and On-Demand Video Streaming. Our team of experts will help you quickly accomplish your communication goals.

**Premium Satellite Service - Single Source**
Ground Control offers both equipment and premium iDirect satellite communication that delivers high performance, low-latency, commercial grade service. Our iDirect plans also have low contention ratios unlike consumer services that may have a crawling ratio approaching 400:1. Our service global, and always available when and where you need it, so while it may be more expensive, you get what you pay for with us.

**Wireless Hot-Spot with Dual Matrix**
The Toughsat TS2 ACU (Antenna Control Unit) has an integrated router and wireless access point, so any wireless capable device within 100’ from the vehicle may connect. The Dual Matrix service gives you access to a second satellite at the touch of a button. A second satellite means full scale redundancy of communication if one satellite, or teleport has connectivity issues.

**Web Accessible Controller**
Intuitive screens give full control over the mobile dish or router from any connected browser. System status & overrides, firmware auto-upgrades, and multiple preference settings.

**Customer Service and Support**
The most important aspect to any service is the level of support offered. Ground Control provides unsurpassed customer service and support 24 hours-a-day, 7 days-a-week.

GroundControl.com  800-773-7168
GENERAL FEATURES
- Manufactured by Ground Control.
- One-button operation.
- Requires little or no training to operate.
- No certification or licensing to operate.
- Dish peaking accuracy is within 0.1 degrees with near zero play.
- Typical seek time to find and lock on satellite is 3.5 minutes.
- Establishes a self-contained local area network with one button.
- Establishes a wireless access point and wiring to computers is optional.
- System is not affected by magnetic distortions to lock on any satellite.
- Operates globally in both hemispheres.
- 6 watt transmitter with 8 Watt optional.
- Can find any Ku-Band satellite.
- Automatic steering and troubleshooting.
- Intuitive Interface screens controls dish parameters and firmware updates.
- Networking Overides for IP Address, Subnet Gateway address, DNS.

Wireless 1RU ACU (Dish Controller)
- The front of the ACU has buttons for "Deploy, Slow, Stop, Sat 1 and Sat 2".
- Dual Matrix - Redundant satellite service.
- Integrated wireless 4 port router.
- No fan required - Operates silent.
- Browser accessible interface screen.
- Network is not affected by magnetic distortions to lock on any satellite.
- Operates globally in both hemispheres.
- Operational in temperatures of -20° F to 140° F at 100% humidity.
- No software to install.
- Computer control is not required.
- Autostow safety features if rig is moved or dish goes off signal.

Diagnostic & Updating
- Lifetime free firmware upgrading with easy one-button updates with active Ground Control account.
- System provides accurate technical diagnostics without dispatching a technician to rig site.
- Remote access into system from Ground Control for performance tuning and troubleshooting.
- System provides historical log of events for accurate diagnostics and quick correction.

TOUGHSAT XP MOBILE SATELLITE SYSTEM
Simple - Rugged - Reliable - Quick Operation

TOUGHSAT XPs are completely self-contained when power is supplied. There is no external equipment needed for it to deploy, lock on satellite, and create a local area network for high-speed Internet access to multiple computers, smartphones or other devices. Each Toughsat system includes a Mobile Satellite Dish, the XP Wireless ACU (Antenna Control Unit), and the iDirect Satellite Gateway for Ground Control's Premium grade satellite service.

Little or no training is necessary to operate the system. Once the power is on, simply press the "Deploy" button and the dish will deploy automatically, lock on the satellite and create a high-speed network in about 3.5 minutes.

Optional Items
- **Case Based** - The Flyaway Case places a Toughsat mobile system in a reinforced lightweight shippable case. It is designed to be handled and setup by one person.
- **Fly And Drive** - At no additional cost, the flyaway ground mounting brackets will double as a fly-and-drive solution. Ship the flyaway case anywhere, and then mount it on any vehicle roof rack.
- **VoIP Phones & Phone Service** - Standard phone connectivity. $49.95 a month for 1000 minutes out our iDirect satellite network.

TOUGHSAT XP 1.2 & .98 Meter Specifications

### NETWORK (iDirect Services)
- DHCP
- Wireless Security
- NAT
- Firewall
- Port Mapping & Port Triggers
- QoS, ToS, MAC Address Clone, RIP v1 RIP v2
- Networkable client machines
- Wi-Fi
- Download Speed
- Upload Speed
- Public IP Address

### SATELLITE DISH
- Reflector Type
- Mount Geometry
- Deployment Sensors
- Azimuth
- Elevation
- Polarization

### MAXIMUM MOUNT ROTATION
- Azimuth
- Elevation
- Polarization

### RF INTERFACE
- Transmit Power
- Frequency (Ku-Band)

### DIMENSIONS OF DISH
- Stowed Dish Dimensions 1.2 meter
- Stowed Dish Dimensions .98 meter
- Mounting Plate... (Both 1.2 and .98 meter)
- Base Plate (attached to mounting plate)
- Deployed Max Height
- Weight
- Boom Radius Sweep

### ENVIRONMENT
- Wind Deployed
- Wind Slowed
- Max Operational Temperature
- Max Survival Temperature
- Ingress

### POWER DRAW REQUIREMENTS
- Dish Controller & Dish Motors (Via 120 VAC)
- iDirect Modem (via AC120V to DC 24V @ 5 Amp)
- iDirect Modem (via AC120V to DC 24V @ 5 Amp)

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**iDirect Modem (via AC120V to DC 24V @ 5 Amp)**
- 15 watts @ 120V (Max 144 Watt power-on surge)
- 75 watts @ 120V (Max 240 Watt power-on surge)

**Toughsat with Fly-And-Drive Option**

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