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GCS

# Capabilities





# *Our Company*

SATELLITE COMMUNICATIONS SOLUTIONS

# About us

L3 GCS

Provides satellite communications solutions including man-portable and flyaway VSAT terminals and airtime/network services

Over 12,000 terminals fielded

180 employees across the U.S. and abroad



# Domestic Offices



Victor, New York | Headquarters

Asheville, North Carolina

# International Offices



Abu Dhabi,  
United Arab Emirates

Sydney, Australia

# Our Capabilities

## Complete Satellite Communications Solutions



Worldwide-Networks/Onsite support



Leading manufacturer of Turnkey Satellite Communications solutions from manpack systems to hub terminals



High-level engineering design and custom system integration

# ☰ Turnkey VSAT Solutions



Largest manufacturer of auto-acquire flyaway terminals for DoD remote communications

Worldwide space segment, teleport services, network connectivity and field support for the complete communications solution

# ≡ Services



Custom SATCOM network design and modeling including link budgets, terminal sizing, modem recommendations and bandwidth optimization.

Network Operating Center (NOC) managed 24/7 by cleared, highly-skilled personnel – real time traffic management

Expertly trained, on-site SATCOM field service personnel positioned around the world for quick response for installation, operation and maintenance and training requirements



= field service locations



Panther



Panther II



COTP Solutions



COTM



# Terminals

Hawkeye III Lite

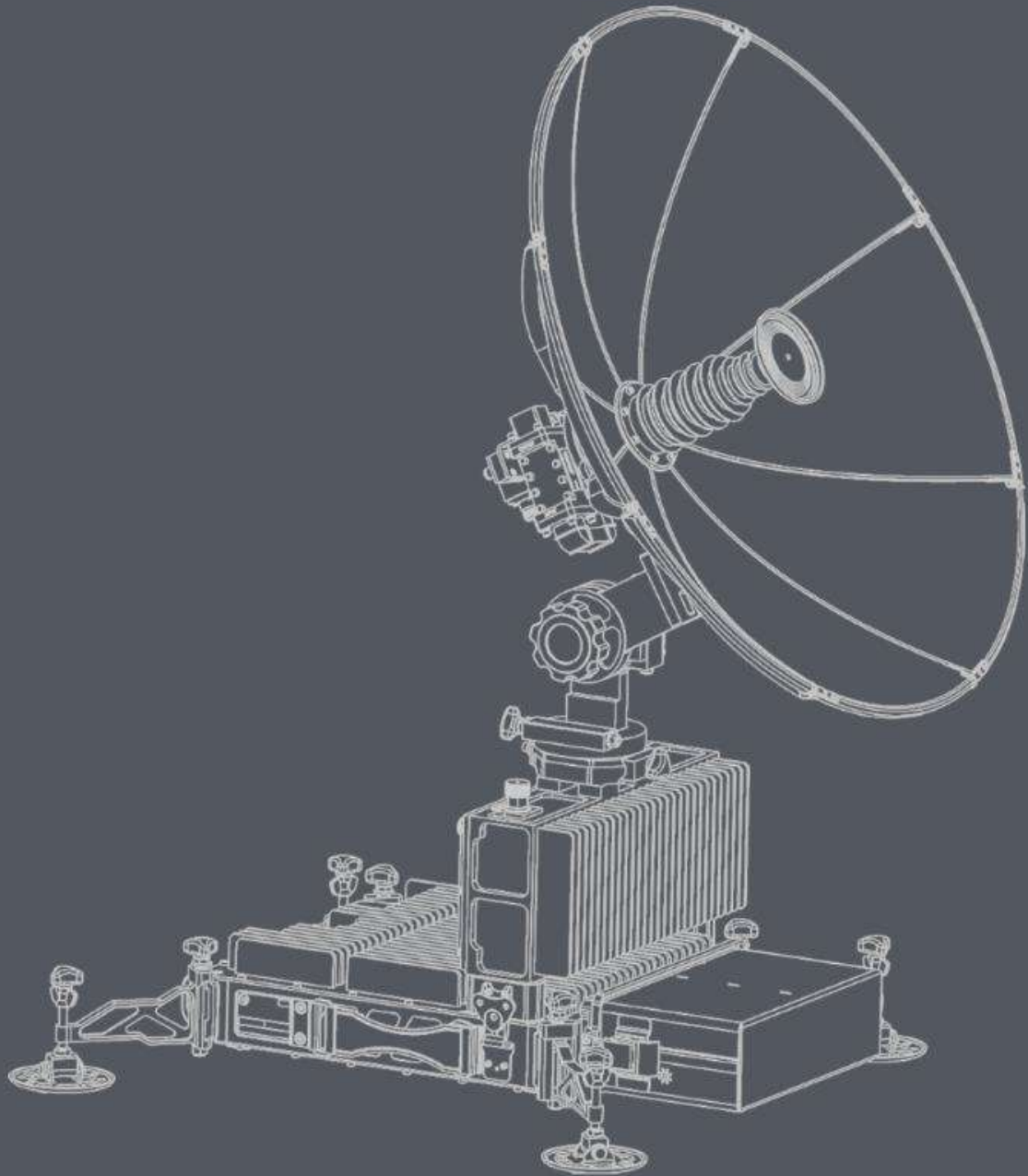


Hawkeye III



Cheetah II





# Panther

MAN-PORTABLE VSAT

# ☰ Panther



Rucksack stow or airline checkable case

60cm carbon fiber reflector

Modem options include:  
iDirect e850, Comtech DMD1050, ViaSat CMB-100, and Linkabit MPM-2500

MIL-STD-810G/ARSTRAT certified (X- and Ka-Band)

Tri-Band terminal:  
(X-, Ku-, and Ka-Bands)

Powered by AC, DC or batteries (BB-390 or BB-2590)

ViewSAT-e™ GUI



# ☰ Panther – Differentiators



- Fine tune articulation
- Silent Operation – No fans
- Modular Design - Easy RF band change



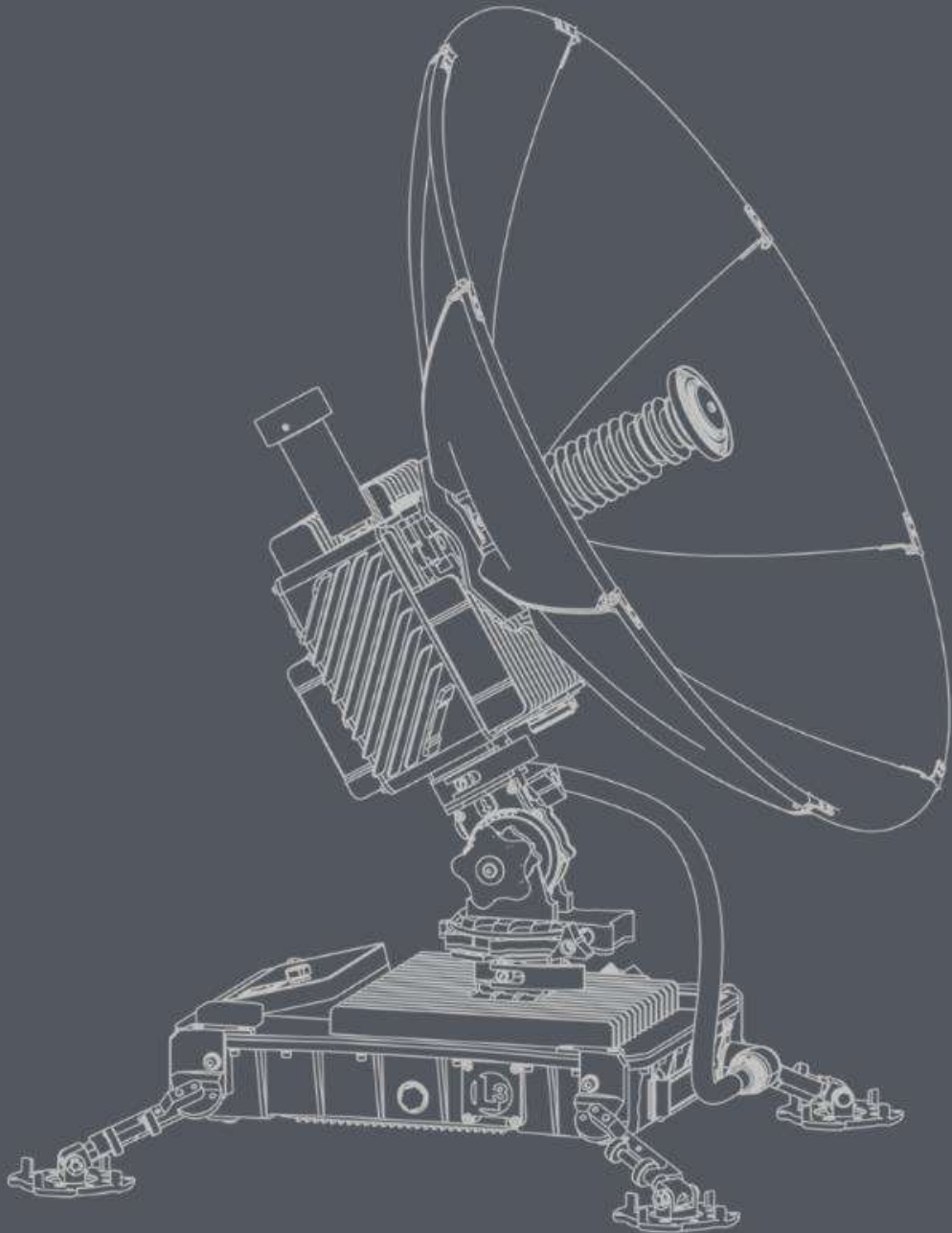
- Outriggers for stabilization
- System weight <43 lbs.
- Supports iDirect keyline – Low power



- Easy setup - “BGAN style” pointing
- Integrated ViewSAT-e™ web-based GUI
- High-gain option - 96cm reflector kit

**Proven Performance**  
Over 1,000 units  
fielded





# Panther II

MAN-PORTABLE VSAT

# ☰ Panther II



Rucksack stow or airline checkable case

60cm carbon fiber reflector

Tri-Band terminal:  
(X-, Ku-, and Ka-Bands)

Larger color display

Powered by AC, DC or battery (BB-2590)

Modem options include:  
iDirect e850, iDirect 950MP,  
Comtech DMD1050T, and  
Linkabit MPM-2500

MIL-STD-810G/ARSTRAT  
certification (X- and Ka-Band in  
process)

Custom composite chassis

Only 1 system interface cable



# ☰ Panther II – Differentiators



- Fine tune articulation
- Silent Operation - No fans
- Modular Design - Easy RF band change



- Outriggers for stabilization
- High-gain option - 96cm reflector kit
- Supports iDirect keyline – Low power



- System weight <29 lbs.
- Integrated ViewSAT-e™ GUI
- Large, glare resistant front panel control display



# ☰ Panther II Accessories



96cm Kit



Band Kits

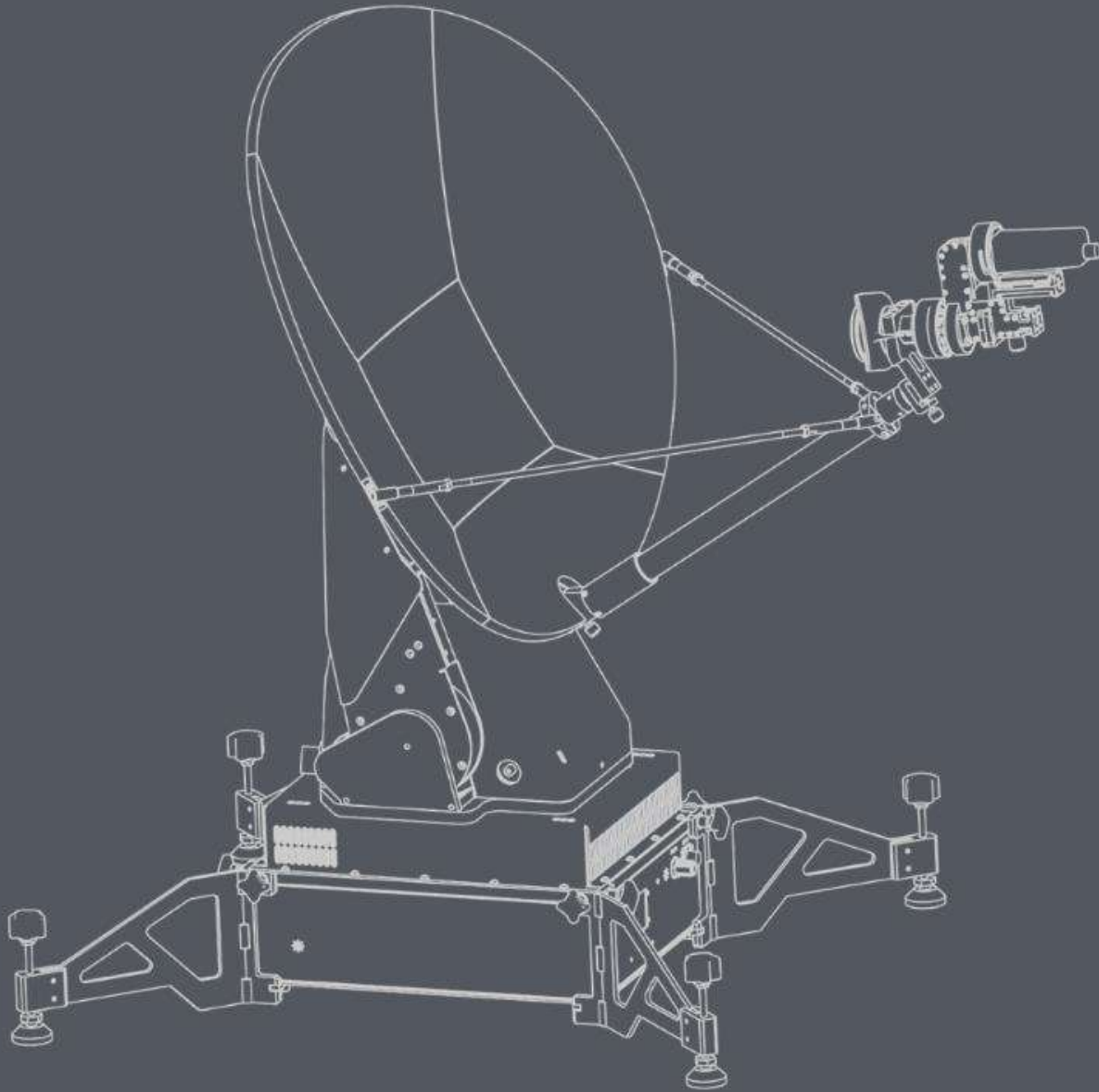
Ku-, X- and WB-Ka



Battery Charger  
Kit



Rucksack



# Cheetah

FLYAWAY KU-BAND VSAT

# ☰ Cheetah



Two airline checkable hard cases, each <75 lbs.



MIL-STD-810F Tested



90x66m carbon fiber antenna



Ku-Band, with integrated 40W SSPA



Fully auto-acquire



ViewSAT™ GUI

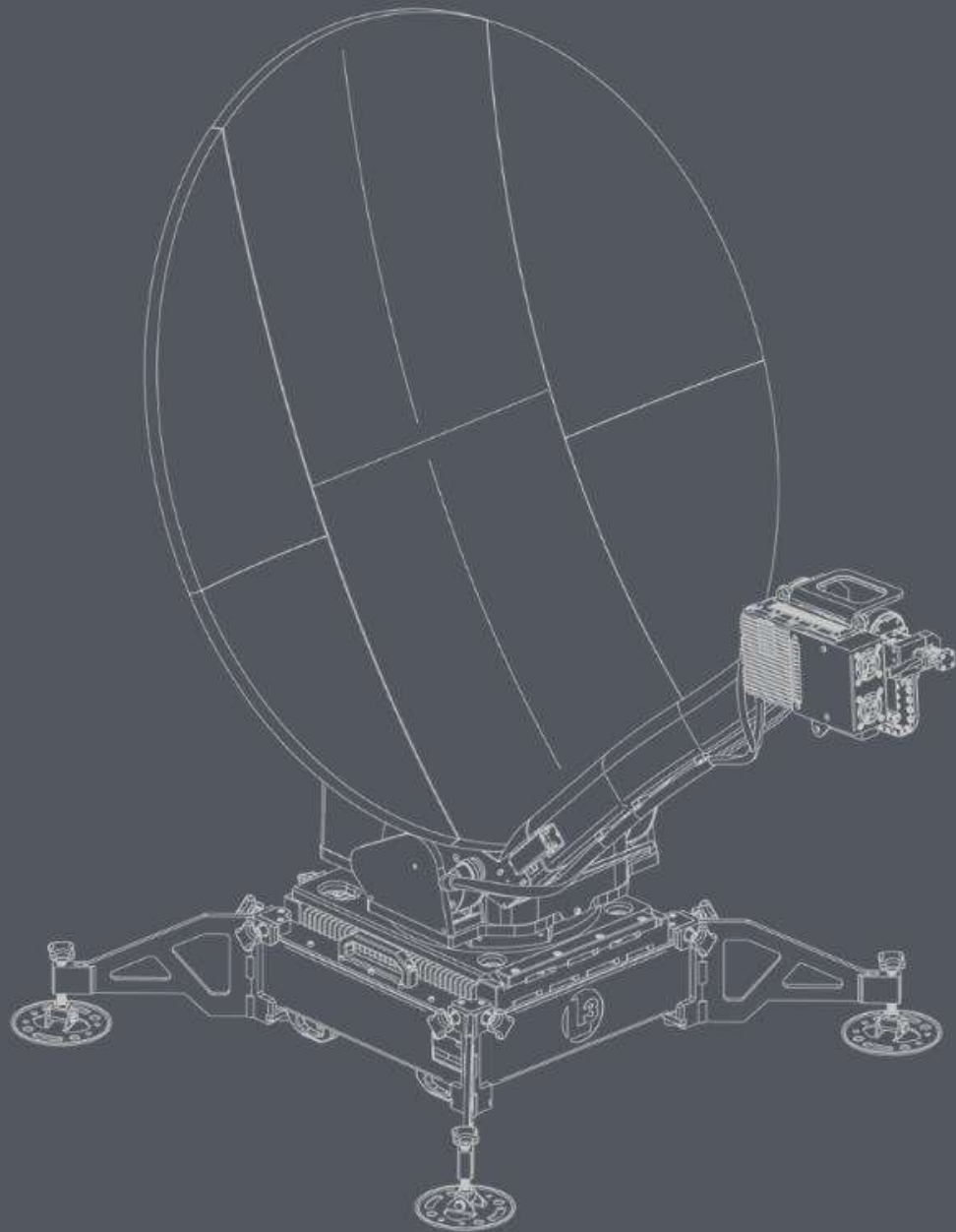


iDirect e800 modem





**Proven Performance**  
Over 2,000 units  
fielded



# Cheetah II

COMMERCIAL KA-BAND VSAT

# ☰ Cheetah II



Two airline checkable hard cases, each <70 lbs.

Fully auto-acquire

85cm carbon fiber antenna

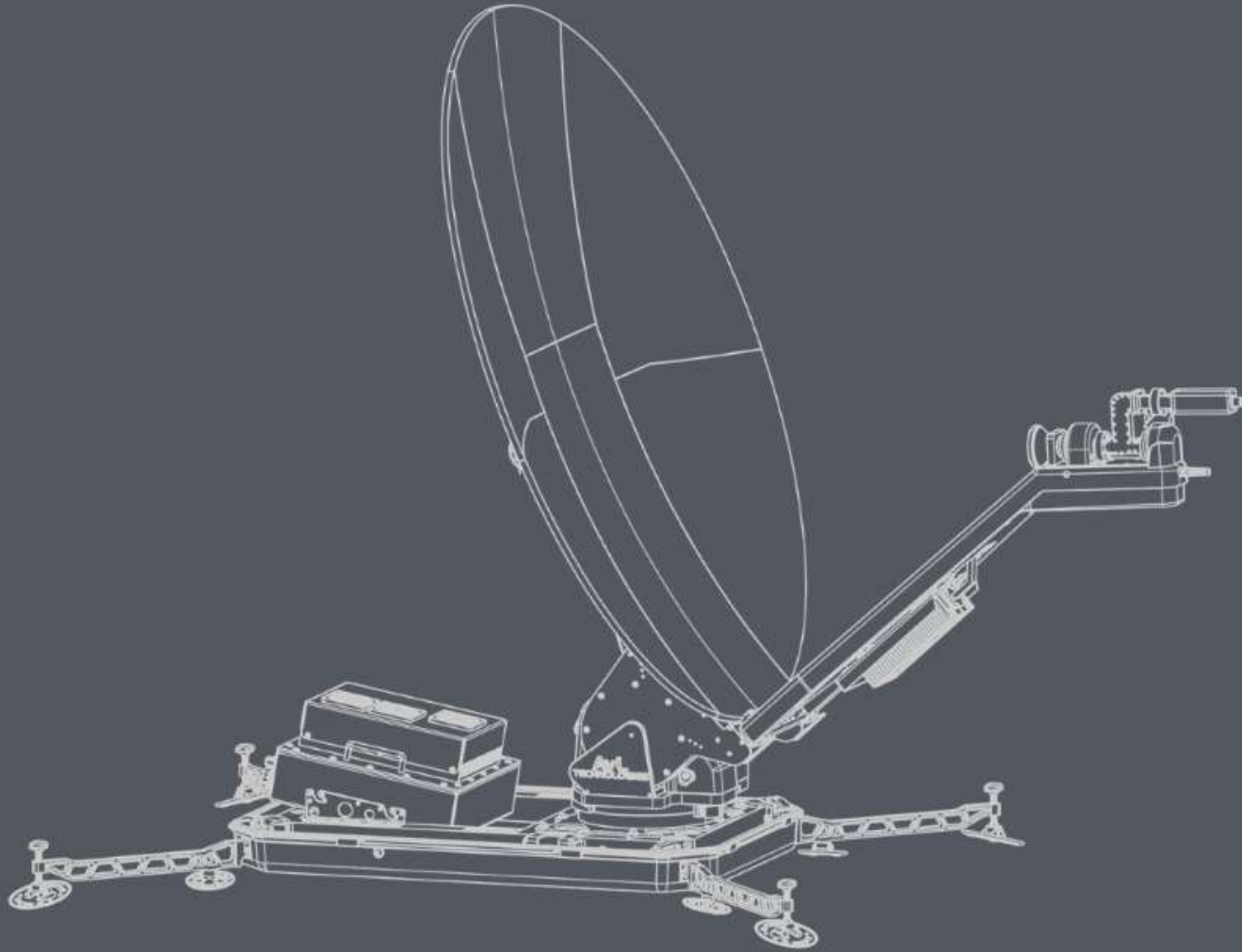
Commercial Ka-Band

5W, boom mounted SSPA/BUC

iDirect e850 or CX-751 modem

ViewSAT-e™ web-based GUI





# Hawkeye III Lite

FLYAWAY TRI-BAND VSAT

# ☰ Hawkeye III Lite



Two case option, each case < 100 lbs.  
Three case option, each case < 70 lbs.

Inmarsat Global Xpress capable

MIL-STD-810G/ARTSRAT certified (X- and Ka-Bands)

1.2M auto-acquire Tri-Band terminal  
(Ku-, Ku 30b, X- and Ka-Bands)

Modem options include:  
iDirect e800, iDirect 900,  
UHP-1100, Comtech DMD1050T

Modular design allows for  
easy RF Band changes

Common ODU to all Hawkeye  
III systems

ViewSAT-e™ web-based GUI





# ☰ Hawkeye III Lite Accessories



## Band Kits

Ku-, X- and WB-Ka

Quick change feed boom – all that is needed for band change!



## Uninterruptible Power Supply (UPS)

Multiple sizes available for mission requirements



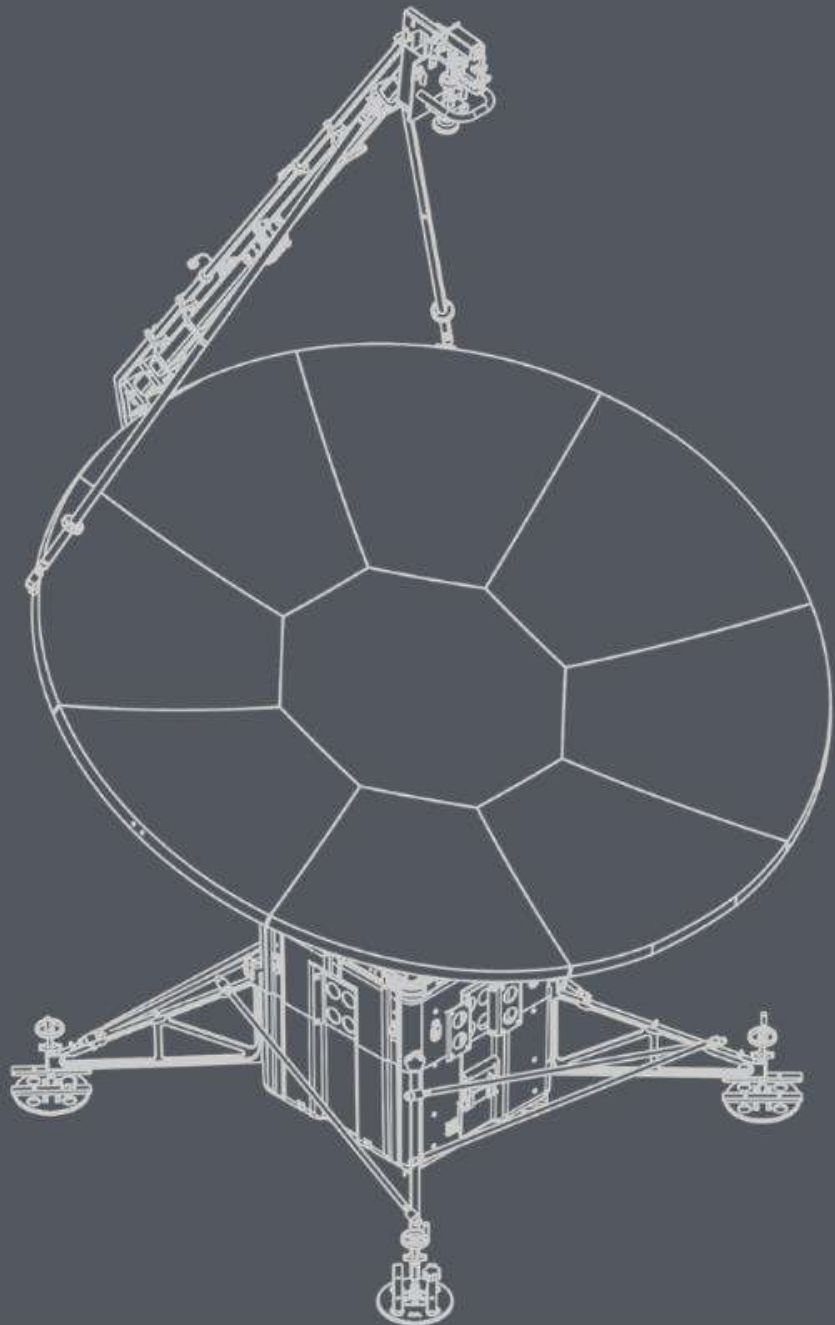
## External Modem Kits

EBEM  
Linkabit  
ViaSat  
Comtech  
Other options available



## Baseband Kits

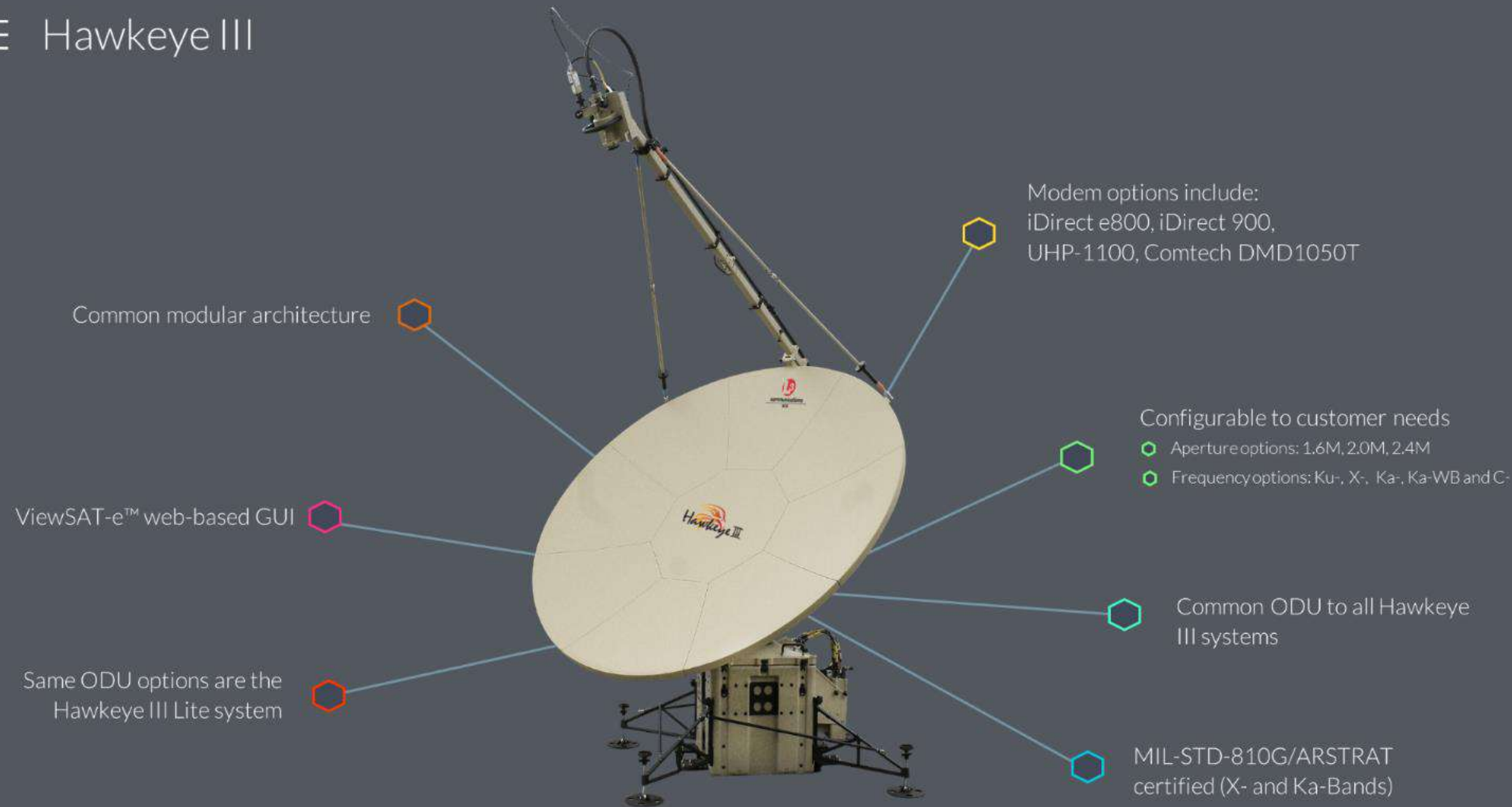
Custom designed solutions



# Hawkeye III

FLYAWAY QUAD-BAND VSAT

# ☰ Hawkeye III

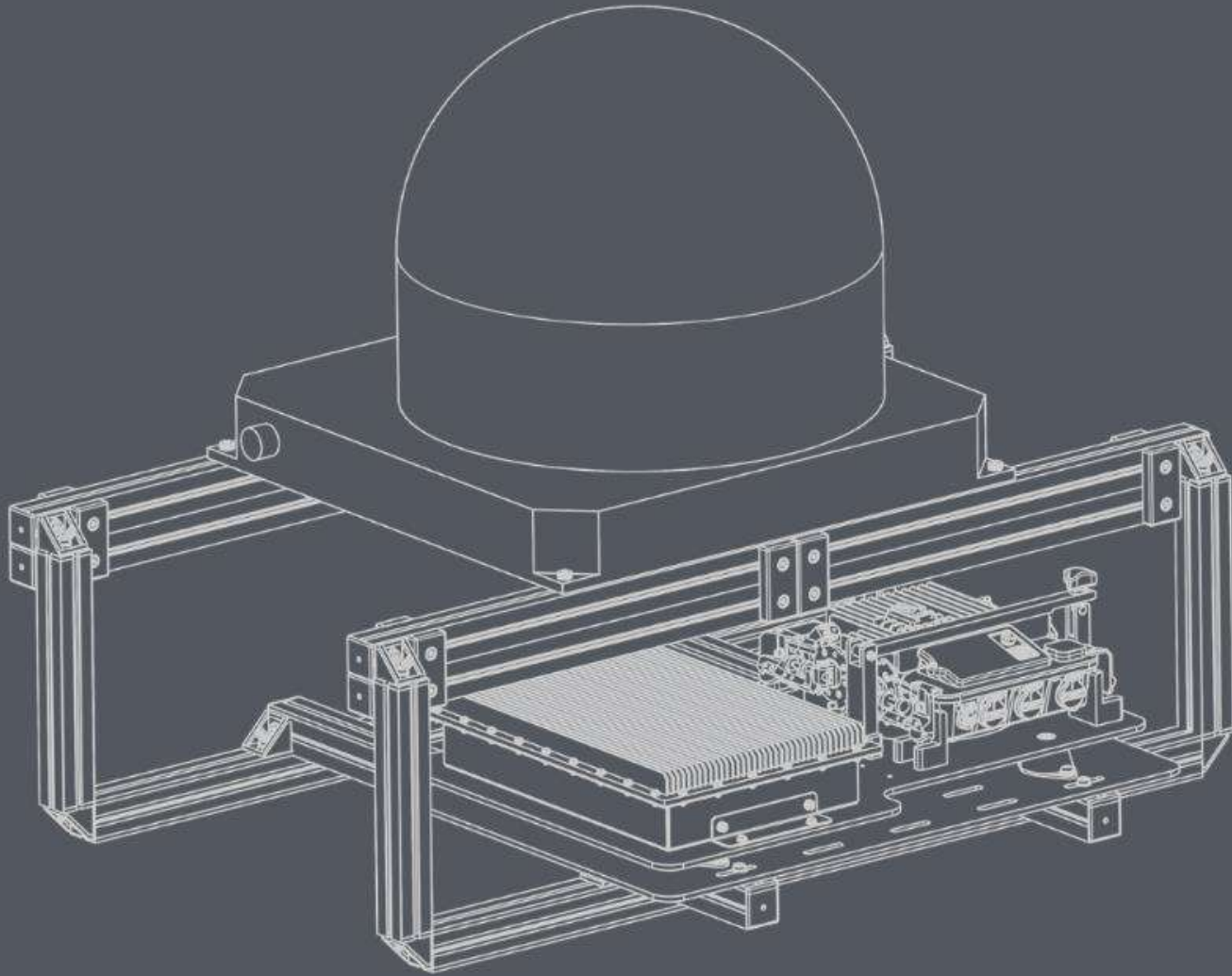


# Hawkeye Family of Terminals

## Proven Performance

Over 7,500 units  
fielded

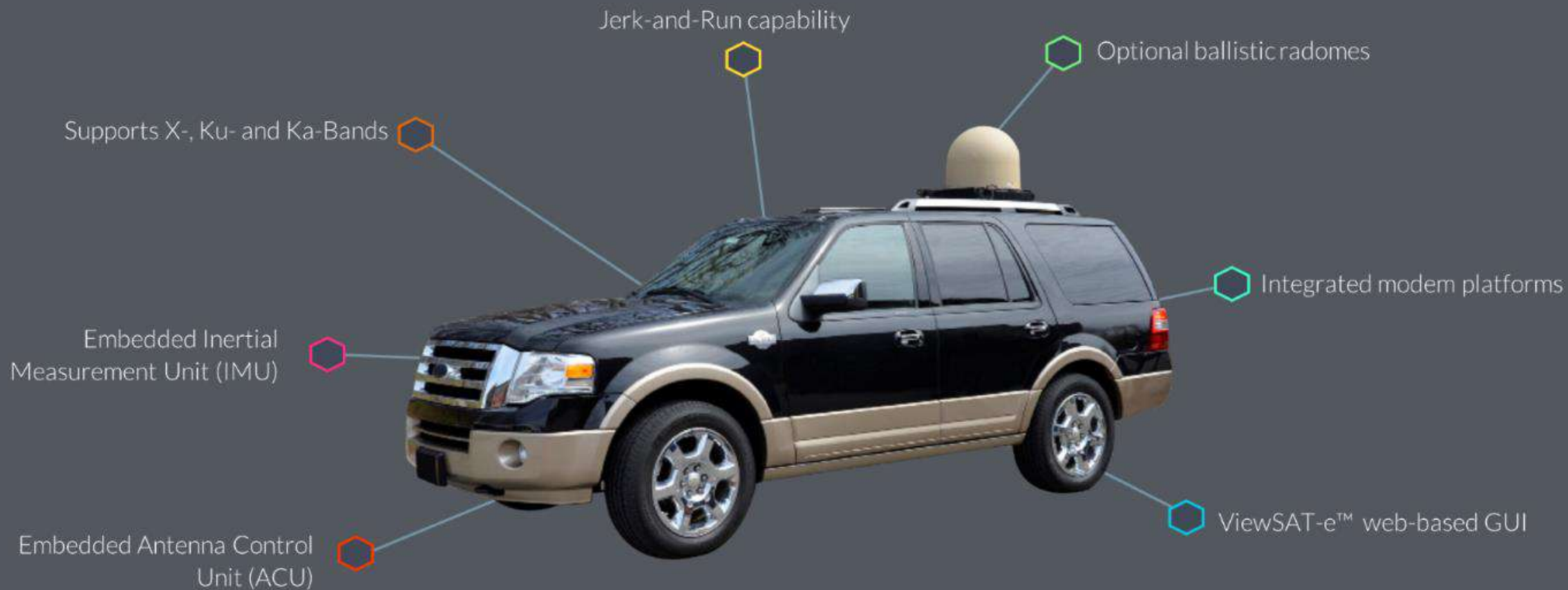


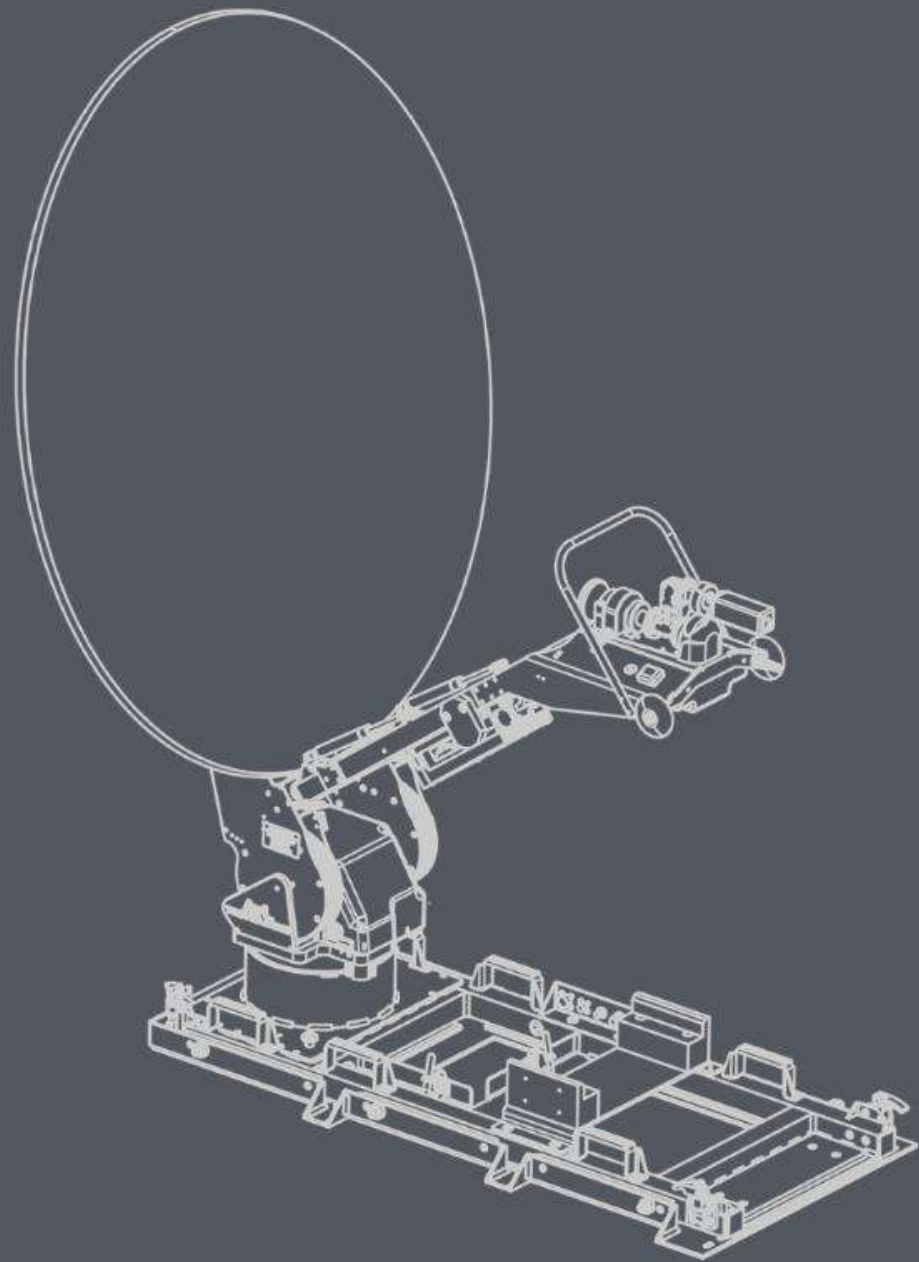


# COTM Solutions

STABILIZED VEHICULAR SYSTEMS

# ☰ COTM Solutions

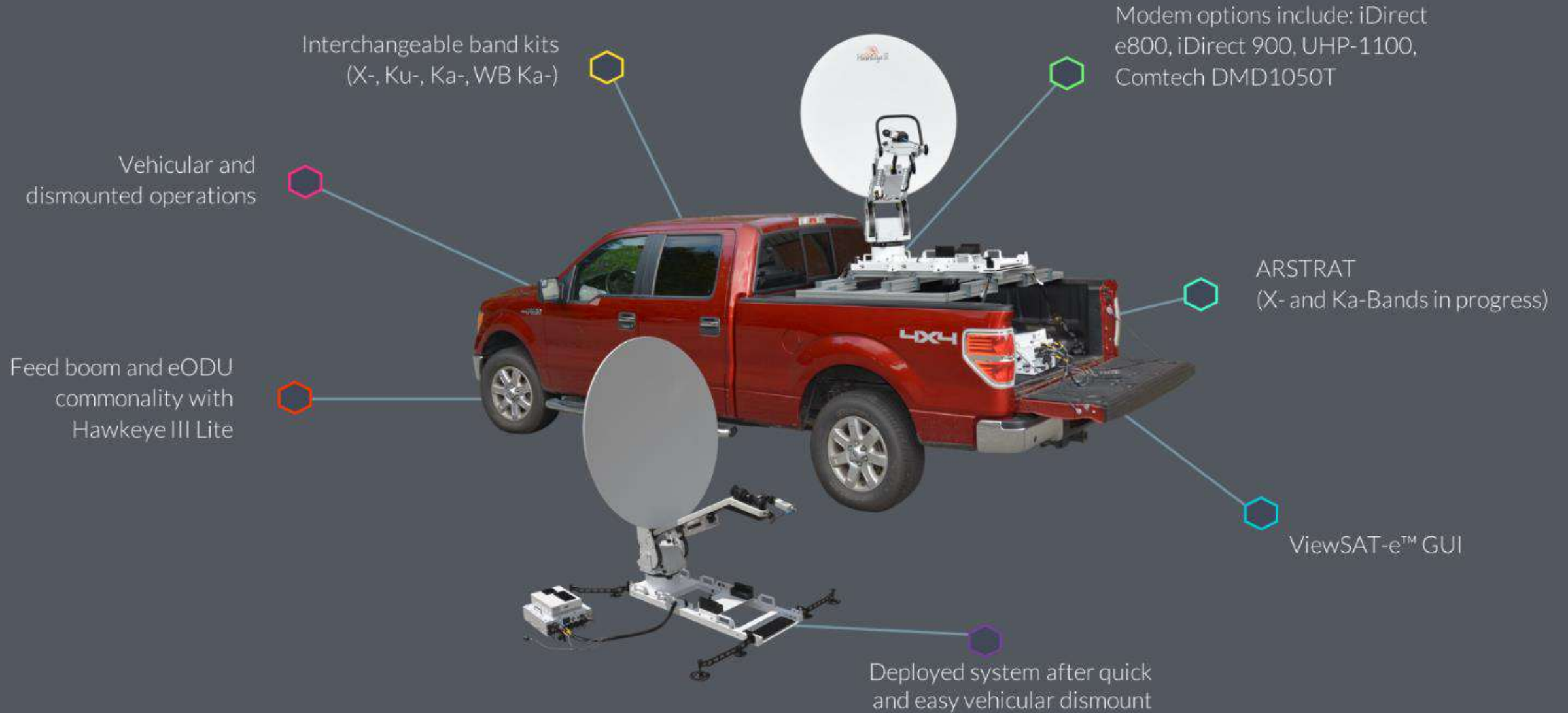




# Hawkeye III Lite Mobile VSAT

COTP SOLUTIONS

# ☰ Hawkeye III Drive-Away





# ViewSat-e Web-based GUI



Commonality across all GCS VSAT terminals

**Panther II** System Monitor

**System:** Location Source: Int GPS, Location Lock:

**Modem:** Signal: 2.1 dB, Status: RX: TX: Net: Encrypt:

**Xcvr:** TX Power: 40.0 dBm, TX State: Enabled

**Network:** IP Address: 166.20.86.1, Subnet Mask: 255.255.255.0

**System Diagram:** Shows ODU, Modem, Xcvr, Sensor, System, Ext GPS, and XPS components.



Simple remote terminal control

**Cheek II** System Monitor

**System:** Location Source: ACU GPS, Location Lock:

**Modem:** Signal: 13.5 dB, Status: RX1: RX2: TX: Net:

**ACU:** Command: Stop, Info: Locked And Acquired, Data Sat: -55.0°

**PA:** TX State: Enabled

**Beacon Recv:** System IP: 1457.000 MHz, Received Signal: -58.3 dBm, Satellite RF: 19707.000 MHz, Calibrated SNR: 17.00 dB, Reported Level: -0.04 V

**System Diagram:** Shows ODU, Modem, PA, LNB, ACU, Beacon Recv, and System components.



Intuitive status indicators

**HawkEye II** System Monitor

**System:** Location Source: ACU GPS, Location Lock:

**Modem:** Signal: 17.5 dB, Status: RX: TX: Net: Encrypt:

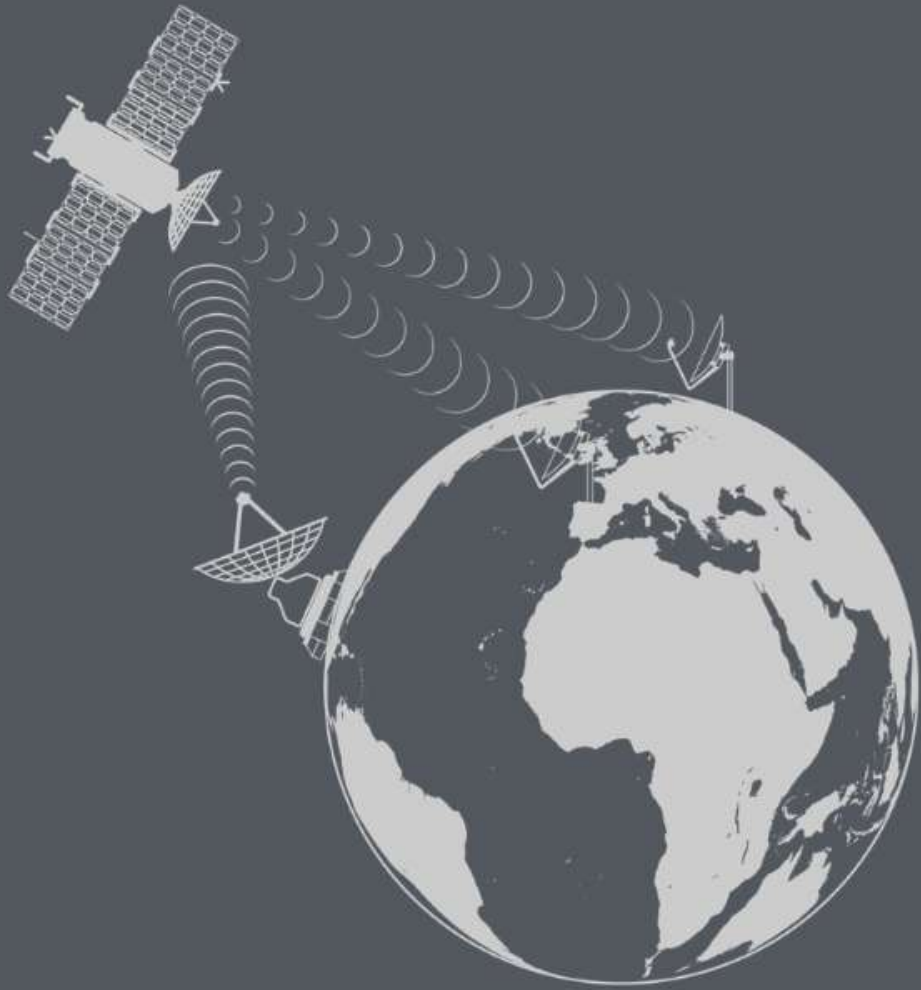
**ACU:** Datalog: READY, Encoder: [1234 5678 9101], Date Sat: -61.0°, State: Idle, RX Band: Ku, Reqs: 0 min, RX Pwr: Var

**PA:** TX Power: < 6.50 W, TX State: Enabled

**Beacon Recv:** Freq ID: 940.4 MHz, Input Signal: -80.26 dBm, RF: 11710.400 MHz, SNR: 4.74 dB, Output Voltage: -5.13 V

**System Diagram:** Shows ODU, Modem, PA, LNB, ACU, Beacon Recv, and System components.





# Managed Services

END-TO-END CONNECTIVITY



## Solutions Through Strategic Relationships

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### Multi-Band Offerings

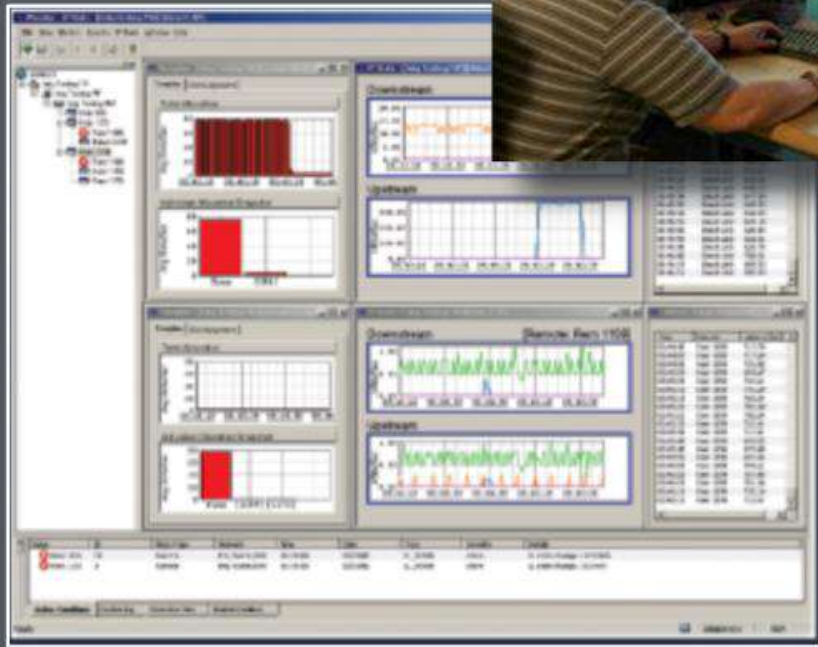
- C, X, Ku and Ka-Bands

### New High Throughput Satellite (HTS) Constellations

- Inmarsat, Intelsat, Eutelsat, SES
- Fixed and steerable beams
- Inmarsat Global Xpress VAR Status

### Flexible Networks for Dynamic Requirements

- Beam-to-Beam Capability
- Satellite-to-Satellite Capability
- Band-to-Band Capability



## Managed Networks

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### Customer-Driven Networks

- Shared & Private Networks
- Star, Mesh and Point-to-Point
- iDirect, ViaSat and Comtech modem technologies

### On-Demand Support

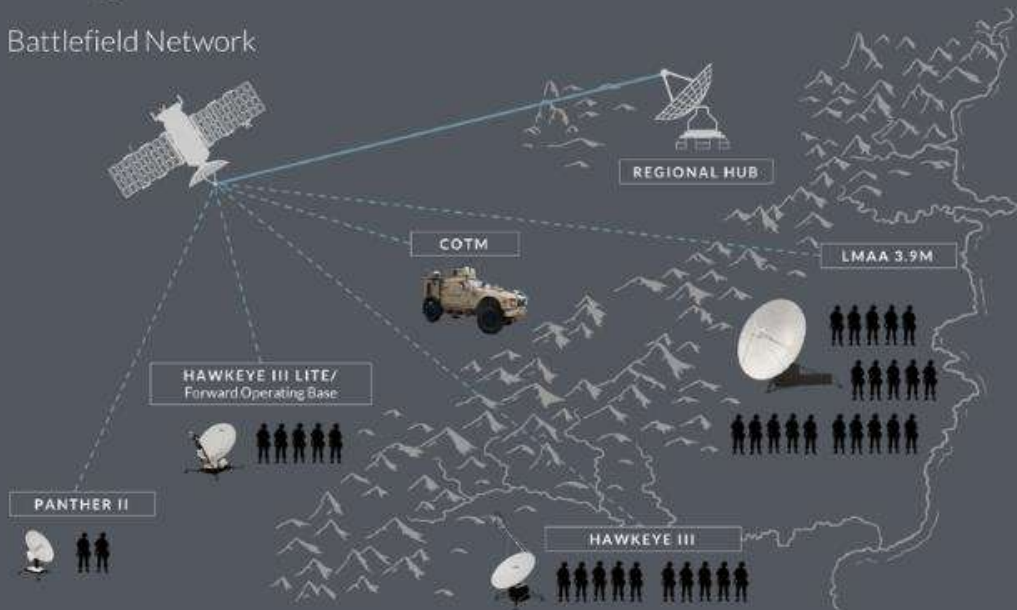
- 24x7x365 Manned Coverage – Victor, NY, USA
- Help Desk Assistance
- Continuous Network Monitoring

### Unique Services

- Information Assurance - DoD DIACAP Accreditation
- Web filtering
- IP acceleration and packet shaping

# Design Services

≡ Battlefield Network



## Custom Solutions for Unique Applications

### SATCOM Network Design & Modeling

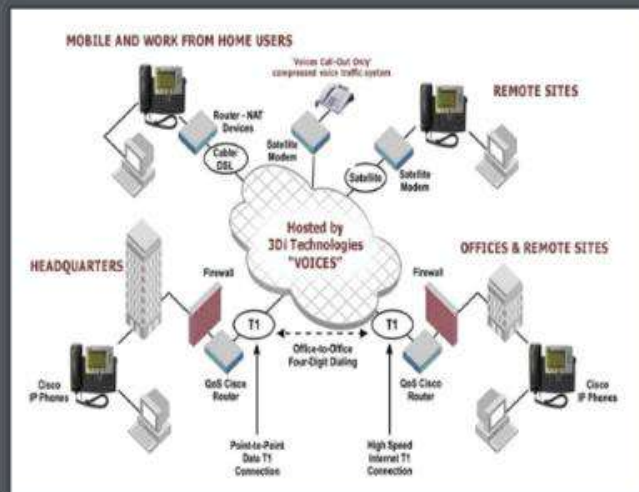
- Link Budgets
- Terminal Sizing and Modem Recommendations
- Bandwidth Optimization

### Mixed Technology Integration

- Satellite: VSAT, BGAN
- LMR: HF, VHF, UHF
- IP Networking: Leased Lines, WiFi, LTE
- Encryption & Cyber Security

### Platform Integration

- Shelters, Vehicles, Field Sites





## Full-Service Provider

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### Installation Services

- Program Management
- Project Engineering
- Civil Works and Site Preparation
- Equipment Setup & Commissioning

### Operations & Maintenance

- Inspections and Preventative Maintenance
- Repairs and Upgrades

### Value-Add Services

- User Training
- Maintenance Training
- Logistics

# ☰ Current Customers

**Raytheon**

**NORTHROP GRUMMAN**



16<sup>th</sup> Special Operations Wing AFSOC



AFSOC



NAVAIR



CECOM



CENTCOM



JCSE



DISA



DoD



Department of Homeland Security



FBI



MARCORSYSCOM



NYS Police



RDECOM



SDDC



Northcom



NAVSPECWAR



WHCA



AIR FORCE



ARMY



COAST GUARD



Department of State



MARINES



NAVY



**FEMA**



USSOCOM



SOCCENT



USASOC



20<sup>th</sup> Support Command



AFCENT



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**GCS**

[www.L3T.com/gcs](http://www.L3T.com/gcs)