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White Paper

# Mission-Ready Tactical SATCOM Terminals for Modern Military Operations

Release Date: 9<sup>th</sup> February, 2026

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## Executive Summary

Modern military and government operations depend on tactical satellite communications that can be deployed rapidly, adapt to changing mission requirements, and operate reliably in contested and challenging environments. As missions become more dynamic and satellite capabilities evolve, tactical terminals must deliver flexibility and performance without increasing logistics complexity or operational risk.

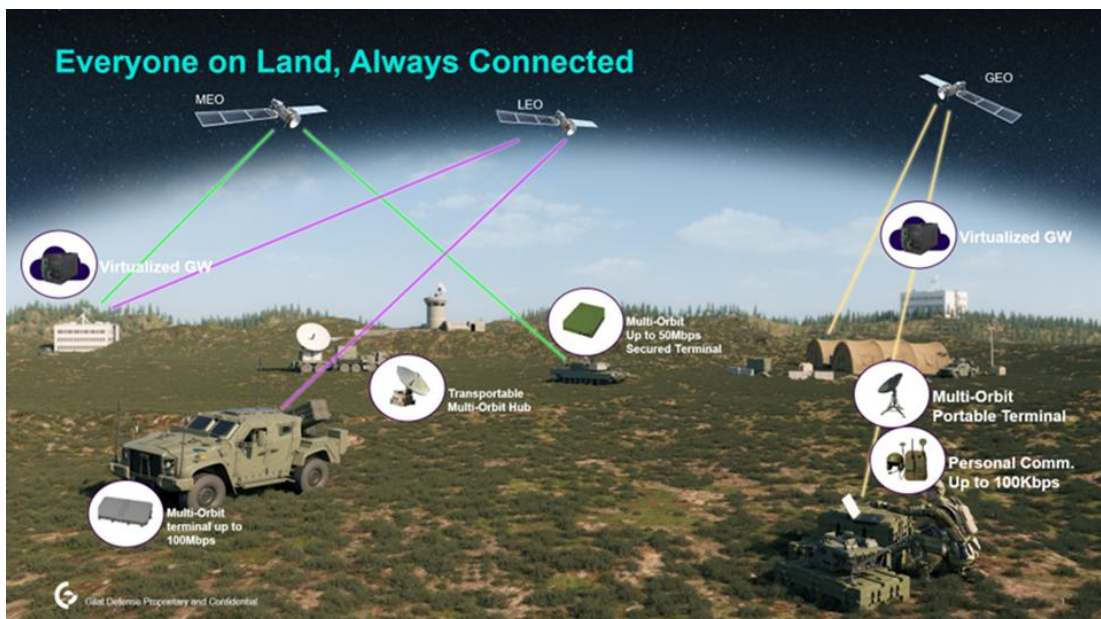
Gilat DataPath addresses this need with a portfolio of mission-ready tactical SATCOM terminals designed for rapid deployment, multi-band operation, and operational resilience. Built on years of field experience and thousands of deployed systems, these terminals enable secure, high-performance connectivity across a wide range of operational scenarios.

**The result is faster deployment, reduced logistics and support, and reliable tactical communications where and when they are needed most.**

## The Operational Challenge

Today's operational defense environment places unprecedented demands on tactical communications. Forces are expected to deploy faster, operate farther forward, and maintain persistent connectivity across dispersed and dynamic battlefields. Satellite access may vary by region, mission phase, or availability of military versus commercial capacity.

Legacy SATCOM terminals often force tradeoffs. Operators may need to choose between portability and performance, or between rapid deployment and network flexibility. Single-band or orbit-specific systems increase the number of terminals required in theater, complicating logistics, training, and sustainment. In contested environments, the inability to adapt quickly can directly impact mission effectiveness.



## Gilat DataPath: A Proven Tactical Terminal Portfolio

Gilat DataPath is a long-standing SATCOM solutions and services provider with a deep heritage in designing, delivering, and sustaining tactical terminals for defense, government, and coalition users. The portfolio spans portable, fly-away, transportable, and multi-orbit tracking terminals, each designed for specific mission needs, deployment concepts, and link performance requirements. This allows forces to select the right terminal for each phase of the mission, from highly portable systems for small teams and expeditionary tasks to transportable earth stations for sustained operations and tracking terminals designed to operate across GEO, MEO, and LEO environments.

*Gilat DataPath has deployed more than 6,000 advanced RF systems and tactical terminals, with systems trusted by the U.S. Department of Defense and NATO allied forces. Across the installed base are more than 1,100 SATCOM Transportable Terminals (STTs), more than 3,000 fly-away systems, and more than 4,000 MaxView monitoring systems supporting millions of endpoints. In addition, Gilat DataPath has fielded more than 170 DKET variants (including UHSTs and MKETs), maintains more than 270 field service representatives (FSRs) in the field, and has achieved WGS certification across 38 SATCOM systems spanning 0.45m to 9m apertures.*

## A Modern Approach to Tactical SATCOM


Tactical terminal requirements vary by unit type, mission duration, mobility concept, and available satellite capacity. Rather than forcing a single form factor, Gilat DataPath provides distinct terminal families optimized for different operational roles, from rapidly deployable portable systems to high-capacity transportable earth stations and fast-tracking terminals for non-GEO constellations.







Across the portfolio, designs emphasize field readiness: ruggedization for harsh environments, fast setup and teardown, maintainability in theater, and flexibility to operate on different frequency bands and networks where required. This enables operators to match the terminal to the mission while retaining the confidence that each system is proven, supported, and scalable in operational use.

### Gilat DataPath Satellite Systems

Solutions enable mission-critical remote communications in the most challenging environments and locations

- Multi-Orbit Capable
- Transportable
- Quad Band Configurable
- Quickly Deployable
- WGS/GX Certified

 Gilat Defense Proprietary and Confidential

Tactical Portable Terminals (0.9 to 2.6m)	CCT C Series	Vehicle Mounted
		
Transportable Hubs (4.2 to 6.3m) DKET	Trailer Mounted	
		

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## Portable Tactical Terminals (QCT / CCT)

The QCT and CCT portable terminals are designed for forward-deployed units, disaster response teams, and expeditionary operations. These rugged systems combine precision alignment, durability, and rapid setup in a compact, transportable form factor.

Key capabilities include modular RF support for X-, Ku-, and Ka-band, assisted manual or auto pointing using integrated GNSS, compass, and inclinometer, and tool-free assembly with sub-five-minute deployment. Field-swappable transceiver modules allow fast reconfiguration, reducing downtime and logistics complexity.

Advanced design elements such as dual-offset feed geometry and carbon-fiber reflectors deliver higher gain, improved polarization purity, and Ka-band-ready surface accuracy. These characteristics improve link performance, compliance with military radiation masks, and overall reliability in harsh environments.



## Transportable Earth Stations (DKET)

For missions requiring higher throughput, extended availability, or sustained operations, DKET systems provide a scalable transportable earth station capability. These terminals support X-, Ku-, and Ka-band operation with band swaps achievable in under 90 minutes.

DKET systems are WGS-certified for Ka- and X-band, designed in single-skid configurations, and require no civil works. They can be transported by air, land, or sea using military logistics platforms and operate reliably in all-weather conditions. Interoperability across military and commercial satellite networks enables forces to leverage available capacity without redesigning ground infrastructure.



## Multi-Orbit 1.35 and 2.6m Tactical Terminals

As LEO and MEO constellations become operational realities, tactical terminals must support high-speed tracking while remaining portable. Gilat DataPath offers a new family of terminals to meet these evolving demands.

The DataPath1.35m X/Y is a high-performance full motion antenna designed to track satellites in LEO, MEO and GEO orbits. It packs into 3 cases plus an RF/Integration case and can be assembled in 20 minutes or less. The DataPath 2.6m is designed for LEO, MEO and GEO applications with tracking and high-performance portability in a lightweight package. The terminal features a 9-piece segment carbon fiber composite reflector with an assembly time under 30 minutes. Rugged transport cases compliant to two-man lift requirements are provided to safely transport the terminal until deployment.

For both antennas, precision servo control, optional beacon receivers, and carbon-fiber reflectors optimized for Ka-band enable accurate tracking and high-performance links across GEO, MEO, and LEO environments. Modular RF kits allow rapid changes in frequency band and power level to support evolving mission needs.



## Transportable Optical Gateway Station (TOGS)

As optical satellite communications become part of next-generation military architectures, the Transportable Optical Gateway Station (TOGS) provides a deployable solution for high-throughput, secure space-to-ground connectivity. TOGS integrates an optical communications terminal into Gilat DataPath's combat-proven transportable earth station platform, enabling optical SATCOM capability to be deployed using established field and logistics concepts.

Built on a skid-based architecture meeting MIL-STD requirements, TOGS delivers bidirectional optical connectivity at approximately 10 Gbps with a growth path to higher data rates as optical networks evolve. Laser communications provide inherent resistance to jamming, interception, and exploitation, while integration with existing RF gateway systems allows TOGS to complement traditional satellite links and enhance overall gateway resilience in tactical and operational environments.



## Operational Impact

By consolidating multiple mission requirements into a modular, multi-orbit terminal architecture, Gilat DataPath enables faster deployment, reduced logistics footprint, improved satellite asset utilization, and greater resilience in contested environments. Forces gain the ability to adapt communications architectures as missions evolve without introducing additional complexity.

## Conclusion

As tactical communications evolve toward dynamic, multi-orbit operations, terminal infrastructure must evolve accordingly. Gilat DataPath's tactical terminal portfolio combines combat-proven reliability with modern modular design, enabling defense and government users to deploy faster, operate more flexibly, and maintain communications superiority across any environment and mission profile.

*Gilat DataPath is a wholly owned subsidiary of Gilat Defense, which is dedicated to meeting the specific needs of defense integrators, HLS, military, and government organizations worldwide. As the central address for all Gilat's defense solutions, Gilat Defense offers the full range of capabilities from Gilat Satellite Networks and its subsidiaries, Gilat DataPath and Gilat Wavestream.*

*Gilat Defense delivers secure, rapid-deployment solutions and battlefield connectivity, with support for multi-orbit and multi-constellation networks. These capabilities ensure reliable communications beyond line of sight, in remote locations, on the move, and in the most demanding operational environments.*