

# EXPLORER MSAT-G3

Next generation MSAT Push-To-Talk

March 2017 MSAT Comparison Sheet

The most important thing we build is trust

# COBHAM

 **Remote Satellite Systems**  
INTERNATIONAL

## MSAT Communication Evolved

The EXPLORER MSAT-G3 is an IP-based Push-To-Talk (PTT) radio communications system that supports Satellite/LTE/3G/LAN backhaul and Land Mobile Radio (LMR) integration to provide seamless voice communication in any situation. It is the next generation MSAT solution utilizing the power of the Ligado Networks (former LightSquared) SkyTerra 1 satellite and ViaSat's low-latency, IP-based L-band Mobile Satellite Services network.

The collaboration between Cobham, Ligado Networks and ViaSat brings to market the next-generation features that expand upon the legacy of MSAT-G2 while retaining the popular flat-rate service plans.

The EXPLORER MSAT-G3 platform will allow for a broad range of new data-rich applications secured by AES-256 encryption connected to a ruggedized EXPLORER PTT terminal that supports Satellite/3G/LTE/LAN backhaul and Land Mobile Radio integration to provide seamless handover of voice calls.

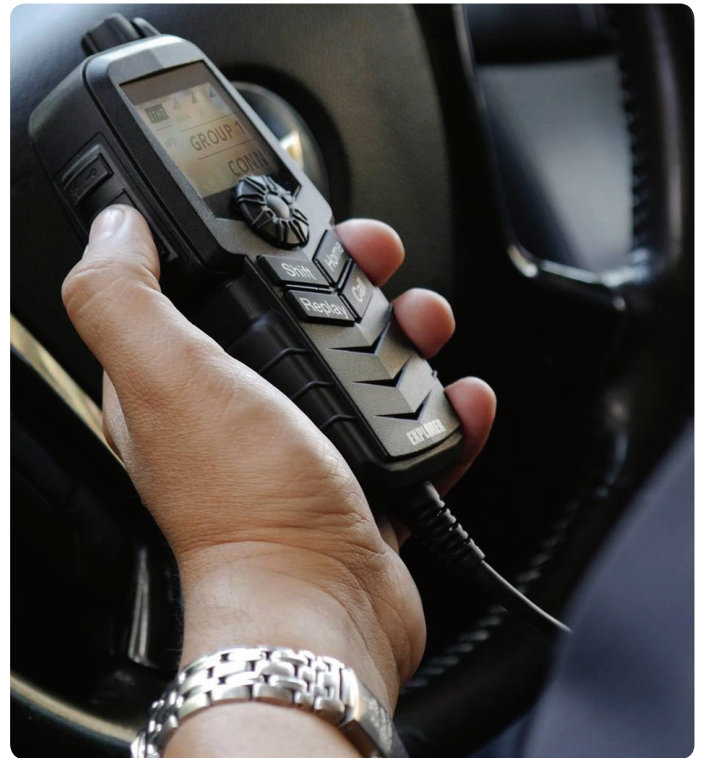
## Enhanced Capabilities

EXPLORER MSAT-G3 looks and feels just like a standard LMR system, utilizing a simple PTT handset. It's just as easy to install as a standard system, too. Uniquely, up to two USB cellular modems (optional) can be connected to the PTT terminal allowing for two independent cellular network connections.

In action, sophisticated routing functionality automatically switches between the available networks, dynamically selecting the most suitable one based on cost, quality and availability at any time. This all happens without user intervention, meaning they can get on and do their job, just like they have always done.

The EXPLORER MSAT-G3 solution solves many challenges faced by traditional LMR system operators:

- Coverage area is extended by combining satellite links and the existing cellular based networks. Automatic switching between satellite, cellular, and LAN connectivity.
- Terrestrial infrastructure costs are reduced, allowing for a higher return on investment.
- Users benefit from constant communications availability in any environment when on the move.
- Scalable from two to thousands of units.
- Compatibility with many different brands of land mobile radios.



## MSAT Interoperability

The MSAT network provides access to national and regional SMART Talk Groups which enable critical interoperable communications among homeland security officials, law enforcement, emergency responders, and public safety officials from various departments and agencies across the United States.

The EXPLORER MSAT-G3 solution meets the needs of:

- Emergency first responders and law enforcement agencies during emergencies and in disaster recovery situations.
- Mobile workers who require voice connectivity outside terrestrial network coverage for safety purposes and efficiency of operation.

The EXPLORER MSAT-G3 solution will be able to interoperate with the legacy MSAT hardware. This new EXPLORER PTT hardware will be able to work in the same SMART Talk Groups as MSAT-G2 terminals.

This feature and the completed server infrastructure is ready in April 2017.

*Subject to change without further notice.*



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# EXPLORER MSAT-G3



Next generation MSAT Push-To-Talk

EXPLORER MSAT-G3 is the next generation MSAT and offers a long range of new features. From sophisticated routing between terrestrial and satellite networks to Land Mobile Radio integration. Below table shows a comparison between EXPLORER MSAT-G3 and the legacy MSAT-G2 solution from Ligado.

	MSAT-G2	EXPLORER MSAT-G3
MSAT Terminal Types		
Size (H / W / L) & Weight	Antenna: 3.9 / 9.8 inches (diameter) / 4.6 lbs Transceiver Unit: 1.1 / 6.5 / 5.6 inches	Antenna: 2.4 / 5.9 / 9.8 inches / 4.4 lbs Terminal: 1.6 / 9.1 / 10.9 inches
Handset	DT-200 Series	EXPLORER 6205 Control Speaker Microphone
Talk Groups	SMART Talk Groups Up to 15 Standard Talk Groups	SMART Talk Groups Unlimited Standard Talk Groups Private Talk Groups supported
On-The-Fly Talk Groups	Not supported	Talk Groups can be added for immediate use by an administrator or service provider
Talk Group Prioritization	Supported via monitor codes	Supported
IP Data Capabilities	4.8kbps Circuit Switched	Packet Switched. Tx: 10 kbps / Rx: Up to 1 Mbps
Telephony Calls (PSTN In/Out)	Supported	Available in H1 2017
Failover between Networks	Not Supported	Automatic failover between satellite and terrestrial
Security	-	AES 256 Encryption
WLAN	Not Supported	IEEE 802.11 b/g
Ports and Connectors	RJ-45 Port for SW upgrades External Speaker Port RJ-45 Handset Port Power Connector	RJ-45 Connector for Ethernet 15 pin D-Sub I/O Connector 2 USB Host Ports for Cellular Modems Power Connector with 5 I/O Pins
Call Logs	Not Supported	Supported
Radio Integration	Non Standard external solutions	Supports LMR integration via 15 pin D-SUB i/o connector
GNSS	Device Readable. Add-on service for ext. viewing (GPS only)	Standard GNSS (GPS or GLONASS) mapping included
Over the air Programming	Supported	Supported

## The EXPLORER Push-To-Talk hardware

- Solution based on the EXPLORER 122 L-Band satellite terminal combined with the advanced EXPLORER PTT system.
- A rugged and easy to use digital PTT communication solution.
- Expands LMR system with built-in support for LMR devices to ensure over-the-horizon radio communication.
- Voice-over-IP technologies optimized for use under difficult satellite or terrestrial link conditions.
- Redundant connectivity by automatic and seamless routing between cellular LTE/3G/2G networks and SkyTerra 1.

Integrated seamlessly, these proven Cobham technologies create an advanced and highly reliable hardware platform that enables emergency services to harness the power of the MSAT network to communicate effectively in any environment.

## Mobile Satellite Service from ViaSat

ViaSat's Mobile Satellite Service (MSS) enables affordable, mission critical voice and data where you need it, augmenting cellular and Land Mobile Radio networks over our highly available, multicast network with low latency and AES256 encryption.

## Ligado SkyTerra 1

Ligado provides coverage throughout North America over one of the most powerful L-band commercial satellites ever built.

Ligado's high-powered SkyTerra 1 satellite enables transmissions to small fixed and mobile devices by using a 22-meter reflector-based antenna - the largest satellite reflector on a commercial satellite - bringing more data to smaller devices.

Ligado SkyTerra 1 Satellite Coverage



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