

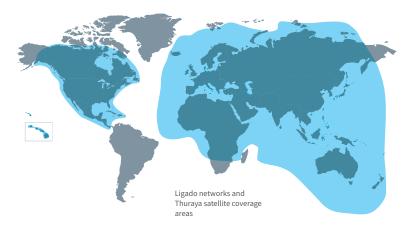
# L-band Managed Services

### Real-time fixed and mobile IP satellite communications

The Internet of Things connects local and remote areas, through fixed and mobile platforms, enabling operational efficiencies for critical applications. IP-based services extend or augment cellular and fixed Wi-Fi coverage to improve the quality of communication between people and between machines. Meshing communication technologies with embedded monitoring sensors optimizes production or delivery efficiencies by increasing equipment uptime.

Viasat L-band Managed Services meet the need for real-time position tracking, managing remote assets and operations, and visibility into critical areas of the supply chain. Use our high-performance M2M terminals for a broad range of applications including emergency response, oil and gas pipeline monitoring, mobile fleet management, and high-value asset tracking.

## High-capacity worldwide packet switch network



- Affordable
- > Real-time
- Multicast
- > Scalable
- > IP connectivity
- > Small form factor
- > Plug and Play
- > Security
- Netted voice

#### **USER TERMINALS**





#### SERVICES MANAGED

- > Homeland Security
- > Law enforcement
- > Border Patrol
- > First responders
- Utilities
- Vehicle monitoring
- > Rail Oil & gas
- > Fire
- > Tsunami warning
- > Power distrubution

# Improve connections for many applications

#### Healthcare

> While en route, helicopter and ground ambulances can send patient details over the satellite channel, securely transmitting information to hospital IT systems, applications, and databases.

#### **SCADA**

> Low-profile plug-and-play devices offer utility operators and customers monitoring and command and control messages through a secure network infrastructure.

#### Law enforcement

Patrol officers outside their vehicles can use a tablet running a computer-aided dispatch application to connect wirelessly to access information in the headquarters' database or receive updates on a suspect.

#### **Aeronautical**

> While in flight, a helicopter pilot can receive weather data while talking to the control center.

#### Fleet management

> Provide runtime telematics for a vehicle, locomotive or electric motor powering a drilling site to a monitoring crew, or the manufacturer, to improve maintenance programs by increasing equipment uptime.

#### Wi-Fi-enabled applications

> Use wireless devices such as tablets and smartphones to access corporate intranets and databases, or receive other information that helps you perform more effectively remotely.

Our network design enables you to install a new system or augment your communications network. The combined dimensions of value of the Viasat L-band Managed Services allow for optimization of total cost of ownership and make it the network of choice.

## L-band Managed Services

Our L-band Managed Services use high-performance Ligado Networks and Thuraya satellite capacity where one terminal can be used for seamless roaming between satellite systems.

The network integrates advancements in waveform, terminal, and network designs to shatter myths about the reliability, cost, and latency of satellite communications:



99.9% network availability



Real-time messaging with latency less than 800 milliseconds



Protects against cybersecurity threats with embedded AES256 encryption



Extend and enhance terrestrial and cellular services



Static IP addressing to eliminate polling delays



Cost to communicate is greatly reduced through multicast and broadcast

# Clear and secure voice capabilities

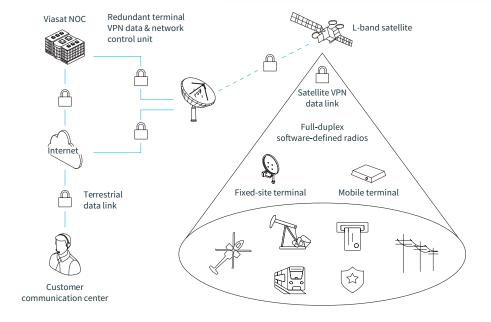
The push-to-talk voice service capitalizes on the network security and low latency to provide excellent voice quality, particularly in noisy environments. The codec was designed for voice recognition in diverse noise environments, including where heavy machinery or helicopters operate, or when satellite link conditions are poor, due to a partial blockage.

Call groups in the voice service allow netted communications to designated users. Public safety officials or border patrols operating outside cellular coverage or requiring cellular augmentation can communicate with each other and their command centers more simply by selecting the appropriate call group number. Remote users can join an ongoing call to more effectively focus their activities. Internet users with secure connections to the corporate intranet can be included in the call group, enabling closer access to front-line status and tighter command and control.

# Secure, encrypted communications

The network uses the same encryption, AES256, as commercial Virtual Private Network (VPN) routers, providing a more secure connection than cellular networks. Your network becomes an extension of terrestrial VPN tunnels through the satellite channel, enabling secure endto-end connections between remote platforms and corporate intranets.

The network security design also mitigates denial of service attacks and includes public key infrastructure, trust anchors, and authentication certificates, to ensure messages are delivered to the intended recipients.



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