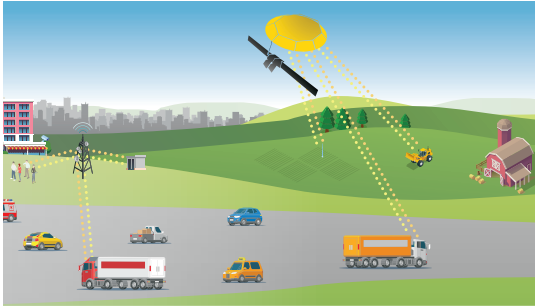# Meeting Next-Generation Requirements for Highly Reliable and Critical IoT

CREATING A "NETWORK OF NETWORKS"

To fulfill the 5G promise of highly-reliable IoT, Ligado Networks is adapting 3GPP standard NB-IoT and LTE-M technologies to enable functional and economical 5G IoT service and device operation on both satellite and terrestrial networks.
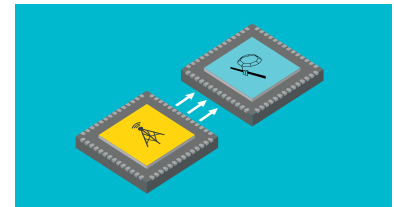
The Ligado SkyTerra 1 satellite was specifically designed to provide robust mobile connectivity to small low-power devices throughout North America. Now Ligado and leading mobile industry suppliers are adapting the standard IoT protocols used in today's terrestrial wireless networks to deeply integrate 3GPP technology within our satellite platform. This advancement will enable service to devices with mainstream, low-cost chipsets and support emerging IoT uses that require network redundancy and full coverage.

FULFILLING 3GPP OBJECTIVES

Ligado's satellite IoT development effort fully embraces 3GPP objectives for satellite and terrestrial wireless connectivity to work in harmony. Leveraging the most powerful L-Band commercial satellite ever built, our use of standards-based IoT technology allows satellite devices to access the massive scale of the terrestrial wireless ecosystem, making satellite connectivity a viable choice for high-scale, mainstream IoT applications for the first time. This ecosystem and economic alignment enables Ligado to deliver on the 3GPP satellite network objectives of service ubiquity, service continuity and service scalability, particularly for mobile IoT applications.

5G IoT Connectivity is enabled when devices – using low-power, low-cost chipsets – can be served by both terrestrial and satellite networks.

- Ligado's mobile satellite network provides **ubiquitous** coverage throughout North America, enabling the operations of widely-distributed fleets and critical infrastructure to support IoT end points beyond the limitations of terrestrial networks.

- Adaptation of 3GPP IoT technology allows Ligado's mobile satellite network to speak the same language as terrestrial wireless networks, ensuring **continuous** service for mobile devices across diverse environments where a single network can't always do the job. Because satellite networks provide ubiquitous coverage and maintain service continuity, critical IoT end points are assured always-on connectivity nearly anywhere in North America.

- The unique, wide-area, but small spotbeam broadcast capabilities of the Ligado SkyTerra 1 satellite support service **scalability.** Ligado IoT broadcast connectivity will complement the unicast services of terrestrial networks, more efficiently delivering commonly-required data to very large numbers of devices and freeing unicast capacity.

Ligado's open and flexible partnership model leverages our standards-based technology, enabling partners to incorporate satellite technology as a seamless part of their offerings.

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