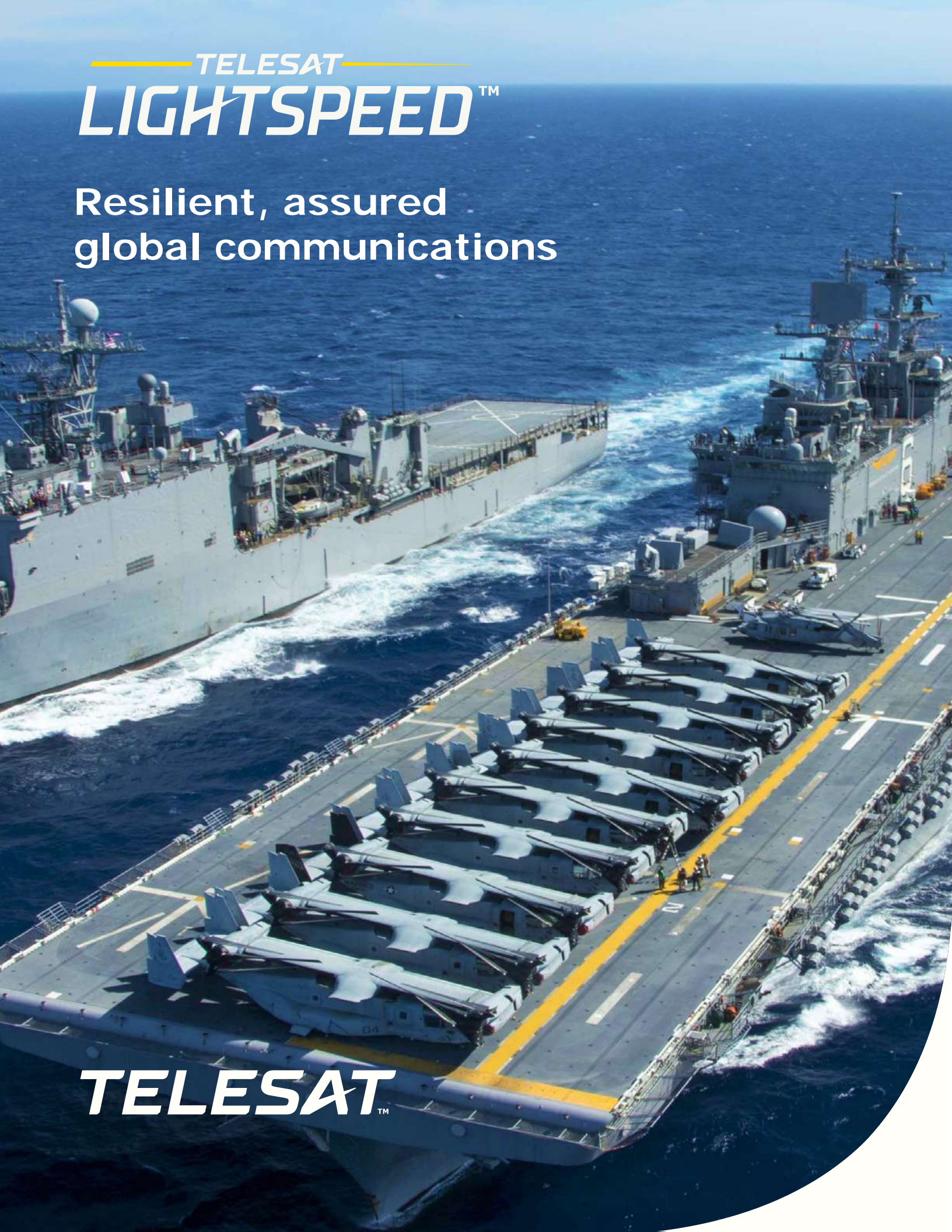


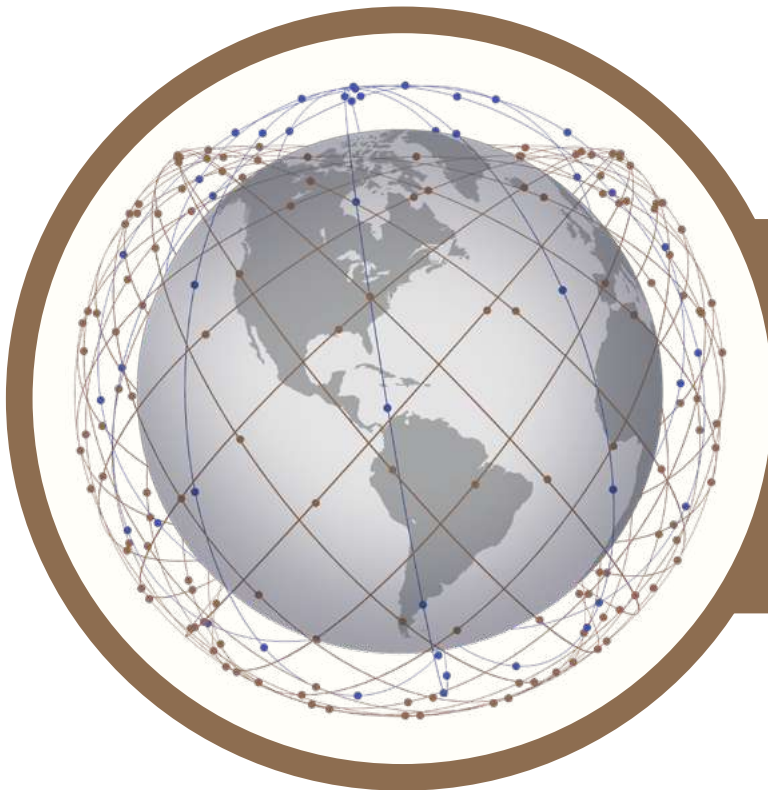
TELESAT  
**LIGHTSPEED™**

Resilient, assured  
global communications

**TELESAT™**



# The Telesat Lightspeed Network

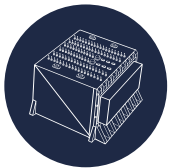


Telesat has developed a highly innovative global network composed of 188 state-of-the-art Low Earth Orbit (LEO) satellites, seamlessly integrated with on-ground data networks.

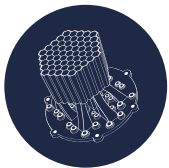
## The Telesat Lightspeed Network incorporates next-generation technology including:



**Data Processing in Space:** Full digital modulation, demodulation, and data routing occurs in space, resulting in higher capacity and flexibility.



**Phased Array Antennas:** Sophisticated antennas on each satellite with hopping beams scan the earth to provide full coverage and can dynamically focus additional capacity to high-demand theaters of operation.



**Optical Inter-Satellite Links:** Data can travel at the speed of light from one satellite to another, resulting in a fully interconnected global mesh network and ability to bypass terrestrial infrastructure.



**Hybrid orbits:** Satellites fly in a combination of polar and inclined orbits, resulting in complete global coverage, including polar areas, with higher capacity in high density populated areas.



### High Throughput

Gigabits per second speeds to a remote, and multiple Tbps of capacity in the network ensures enterprise-class secure connectivity for unconstrained full motion HD video dissemination, multi-spectral imagery, and command and control links.



### Low Latency

The Telesat Lightspeed Network is about 20-times more responsive than today's geosynchronous satellites and on par with fiber networks. Government users can be confident that encrypted web pages and enterprise cloud applications will work seamlessly.



### Assured Access

Highly resilient, secure network with multiple interconnected satellites and multiple ground nodes without any single point of failure ensures networks always stay connected.



### Global Coverage

Every point on Earth is covered, including polar regions.



### High Capacity for Hot Spots

Our intelligent network can dynamically allocate bandwidth to theaters of operations with high traffic demand.

## Unsurpassed performance at transformative economics

## Telesat Lightspeed Verified Performance

Telesat has conducted several testing campaigns with leading maritime, aero and enterprise service providers, demonstrating industry-leading high throughput and quality. Learn more at <https://www.telesat.com/lightspeed>



# Telesat Lightspeed and the DARPA Blackjack Program

DARPA (DoD's Defense Advanced Research Projects Agency) has awarded Telesat Phase 1 and Phase 2 Track B contracts under the Blackjack Program to assess the advantages of the DoD using the same spacecraft buses that Telesat will use in its Telesat Lightspeed constellation, and having their future DoD spacecraft link to the Telesat Lightspeed constellation via optical-based communications. The result of these investigations could lead to the DoD using the Telesat Lightspeed system for its global broadband connectivity needs.

The Telesat Lightspeed system is being designed with a number of capabilities that military customers are seeking including:

- High reliability and resiliency
- Global persistence
- Optical Inter-Satellite Links
- Transformative economics

Through the collaborative process underway with DARPA, additional performance, features and capabilities may be incorporated into Telesat Lightspeed satellites to better serve the DoD's global broadband connectivity needs. To learn more, visit [www.telesat.com/lightspeed](http://www.telesat.com/lightspeed)



Artist's Concept

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Leveraging over 50 years of technical expertise and leadership as a global satellite operator, we are redefining space-based connectivity with our innovative Telesat Lightspeed constellation. Telesat is uniquely positioned to deliver this transformative, disruptive service to the world.