**TELESAT LIGHTSPEED NETWORK**

- 298 satellites in a combination of polar and inclined orbits, optimized for complete global coverage and capacity
  - Polar Orbit
    - 78 satellites: 6 planes, 13 satellites per plane
    - 1,015 km altitude
  - Inclined Orbit
    - 220 satellites: 20 planes, 11 satellites per plane
    - 1,325 km altitude

**NETWORK CAPACITY**
- The combined capacity of the 298 satellite network is 15 Tbps

**MAXIMUM DATA RATES**
- Up to 7.5 Gbps can be offered to a single terminal
- Up to 20 Gbps can be offered to a single “hotspot” site, such as remote communities, airport hubs and sea ports

**DESIGN LIFE**
- 10 year operational life
- 12 years in orbit, including orbit raising, orbit storage and end of life de-orbit

**SATELLITE MANUFACTURER**
- Thales Alenia Space

**SATELLITE SIZE**
- 700 kilos each
- Prime power of ~4 kW

**SATELLITE FUEL AND ORBIT RAISING**
- Krypton gas and electric thrusters

**SPECTRUM**
- Telesat Lightspeed has global priority Ka-band spectrum rights

**TELESAT LIGHTSPEED LEADING-EDGE TECHNOLOGIES:**
- Sophisticated phased array antennas on each satellite are combined with beam hopping technology to activate ~ 135,000 beams that can dynamically focus multiple Gbps of capacity into demand hot spots like large airports or major sea ports
- Nearly 1,200 high capacity optical links interconnect the satellites with multiple, highly resilient transport paths, creating a first-ever, lightening-fast data superhighway in space
- Data processing in space, including full digital modulation and demodulation on the satellite, coupled with a revolutionary end-to-end network operating system, gives customers unprecedented flexibility and options for routing traffic across the globe and eliminates gateway hops for the fastest, secure end-to-end delivery of data

**TELESAT LIGHTSPEED**

www.telesat.com