

Traditional Broadband Technologies Fall Short

The digital divide still leaves too many disconnected from the benefits of modern communications. Significant and stubborn challenges have left 2.6 billion people globally either underserved or totally unserved by traditional broadband options, including high deployment costs, supply chain disruptions, labor shortages, funding gaps and lengthy permitting processes.

And even in areas that are served by traditional ground-based broadband infrastructure, emergency situations such as power outages or extreme weather can render those options **unusable**.

There is a clear need to continue adding new technologies into our broadband mix — particularly LEO satellite broadband, which has unique potential to help connect everyone, everywhere.

How LEO Satellites Are Different

- Less reliant on terrestrial infrastructure: **Anyone on the planet with the right terminal** – a small receiver about the size of a plate – and the ability to power it **can connect to satellite broadband**.
- **Operate at much lower altitudes** than older satellites **and in greater numbers** enabling them to **deliver faster, lower latency connectivity** with fewer signal interruptions.
- **Quicker and less expensive to deploy** than other satellite types.
- **Cutting-edge on-board systems** maximize coverage and connectivity, including **phased array antennas** that dynamically **direct bandwidth where it's needed most**.
- Constellations work in concert, creating a **resilient, interconnected network** with built-in redundancy if one satellite goes offline.

How LEO Broadband Fills the Gap

- LEO systems deliver broadband to **rural, tribal and geographically isolated areas** where building traditional networks is not feasible.
- In areas where other technologies may eventually reach after new infrastructure can be constructed, LEO broadband can **get customers online today**.
- Whether a passenger is traveling by **car, plane, ship or train**, LEO satellites bring **streaming-speed**, even in the world's most **remote locations**.
- LEO satellites can rapidly restore communications **when terrestrial networks are damaged or overloaded** due to **hurricanes, wildfires, tornadoes, floods, avalanches, storms at sea, earthquakes** or other natural disasters, **supporting first responders** and communities in crisis situations.



How LEO Broadband is transforming Education, Healthcare, Agriculture and the Workforce

- Students in rural and underserved regions can **access remote learning, digital resources and online assessments**, helping close **achievement gaps** in unserved and underserved communities.
- Telehealth and remote care **depend** on fast, stable internet. **LEO satellites connect hospitals, clinics and homes in medically underserved areas**, making virtual health care visits and digital records available for everyone.
- Smart farming using connected sensors, precision seeding and autonomous vehicles is revolutionizing agriculture, increasing crop yields and decreasing **food scarcity**.
- Research links broadband access to **reductions in poverty** and unemployment. By **powering small businesses, remote work and skill-building**, LEO broadband strengthens communities once excluded from the digital economy.