AST SpaceMobile

Transforming how the world connects

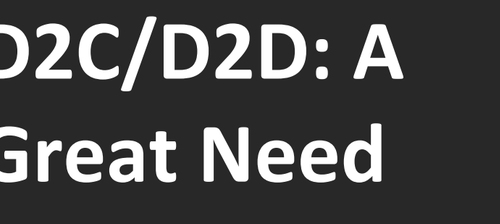
AST SpaceMobile Systems and SCS for D2C

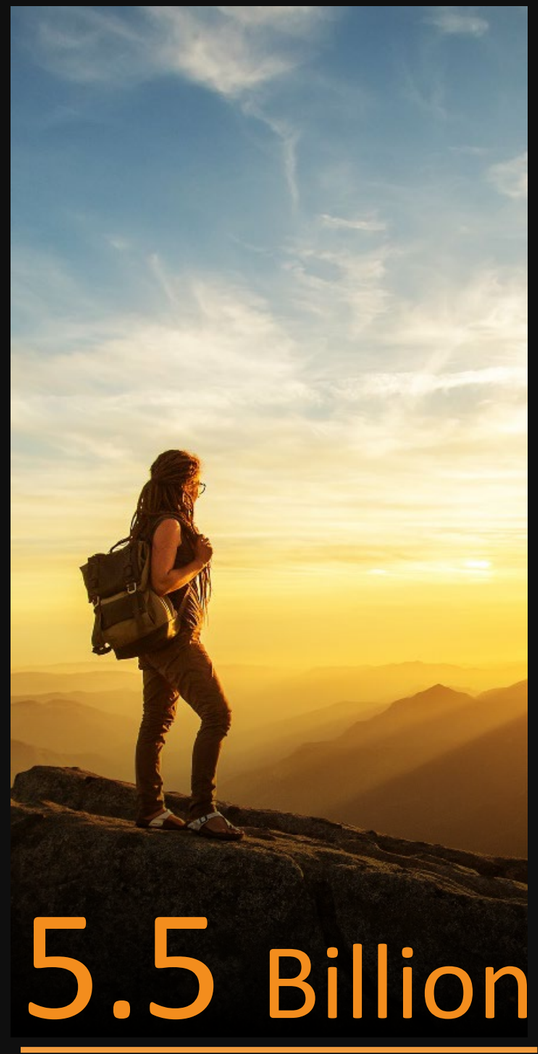
6G@UT Forum

April 2025

D2C/D2D: A Great Need Worldwide

CONNECTING THE UNCONNECTED





5.5 Billion

Cell phone subscribers moving in and out of coverage as they live, work and travel

3.5 Billion

Global population not subscribed to cellular broadband

Multiple

Use cases including emergency, disaster recovery, and defense

Source: GSMA

Building the first and only space-based cellular broadband network, designed for both commercial and government use

AST SpaceMobile

Coverage everywhere
Eliminates cellular coverage gaps and dropped connections

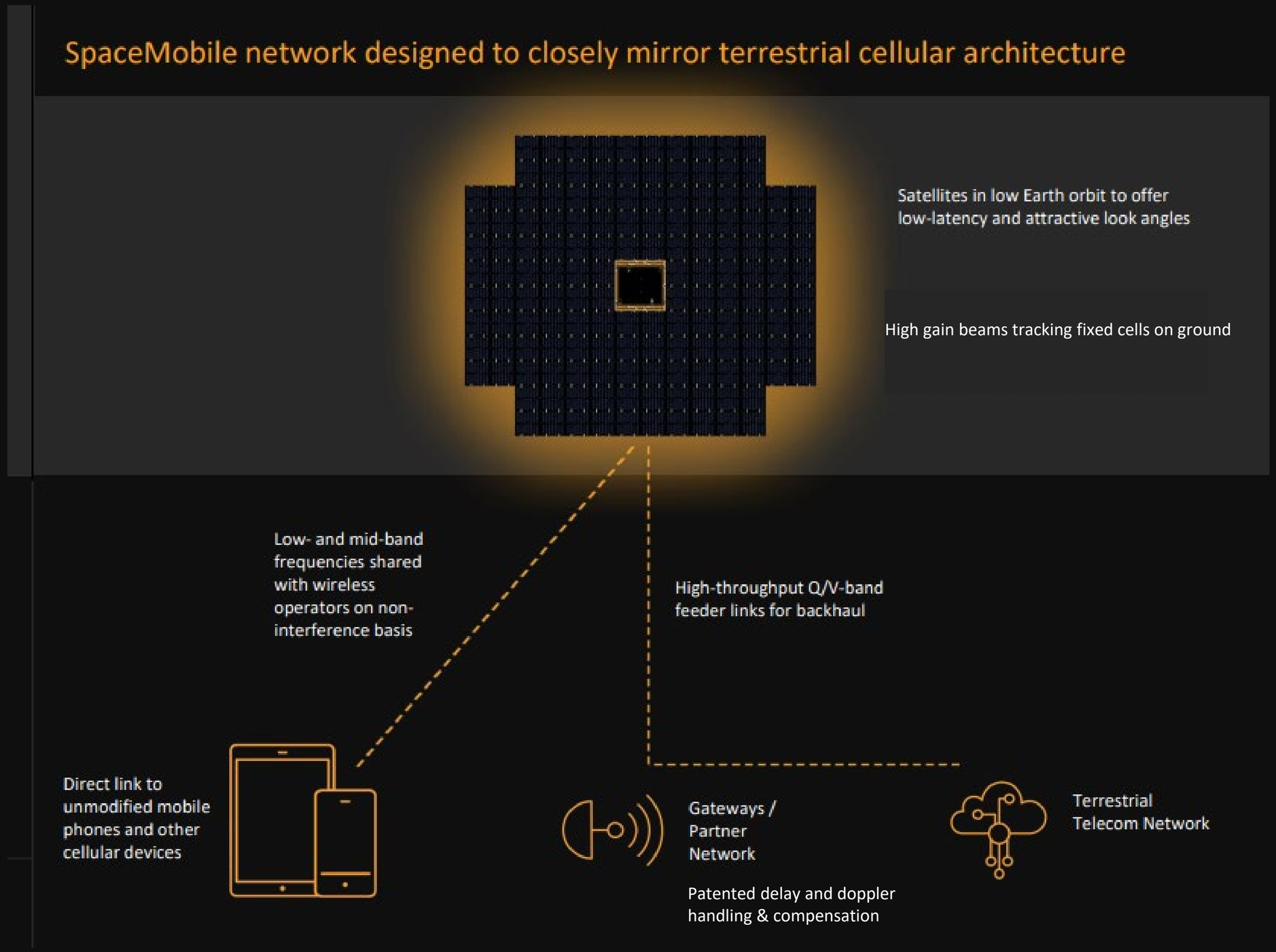
Compatible with existing devices
Seamless service with no modifications required to consumer devices

Cellular broadband
5G / LTE data rates with low latency and cellular-quality service levels

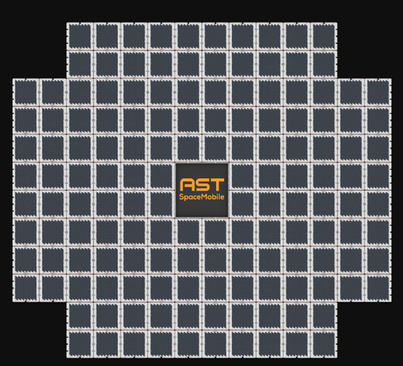
Spectrum usage
Sharing TN spectrums with MNOs and Long term access of 45 MHz L-band spectrum

Satellite-to-cellular architecture is transparent to end-user

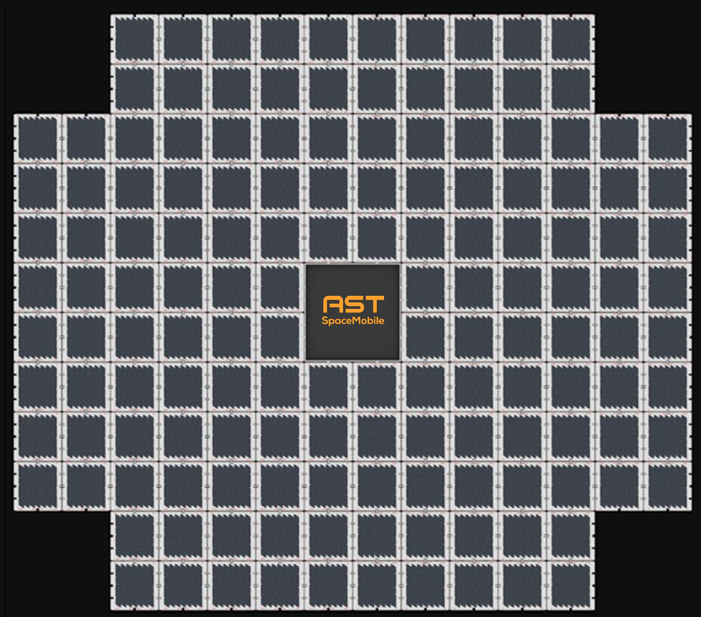
- **Distributed beamforming supporting thousands of simultaneous narrow beamwidth Tx & Rx beams**
- **Beams are tracking fixed cells on ground**
- **Patented delay & doppler handling & compensation**
- **Transparent to xG technology with “Smart on-ground”**



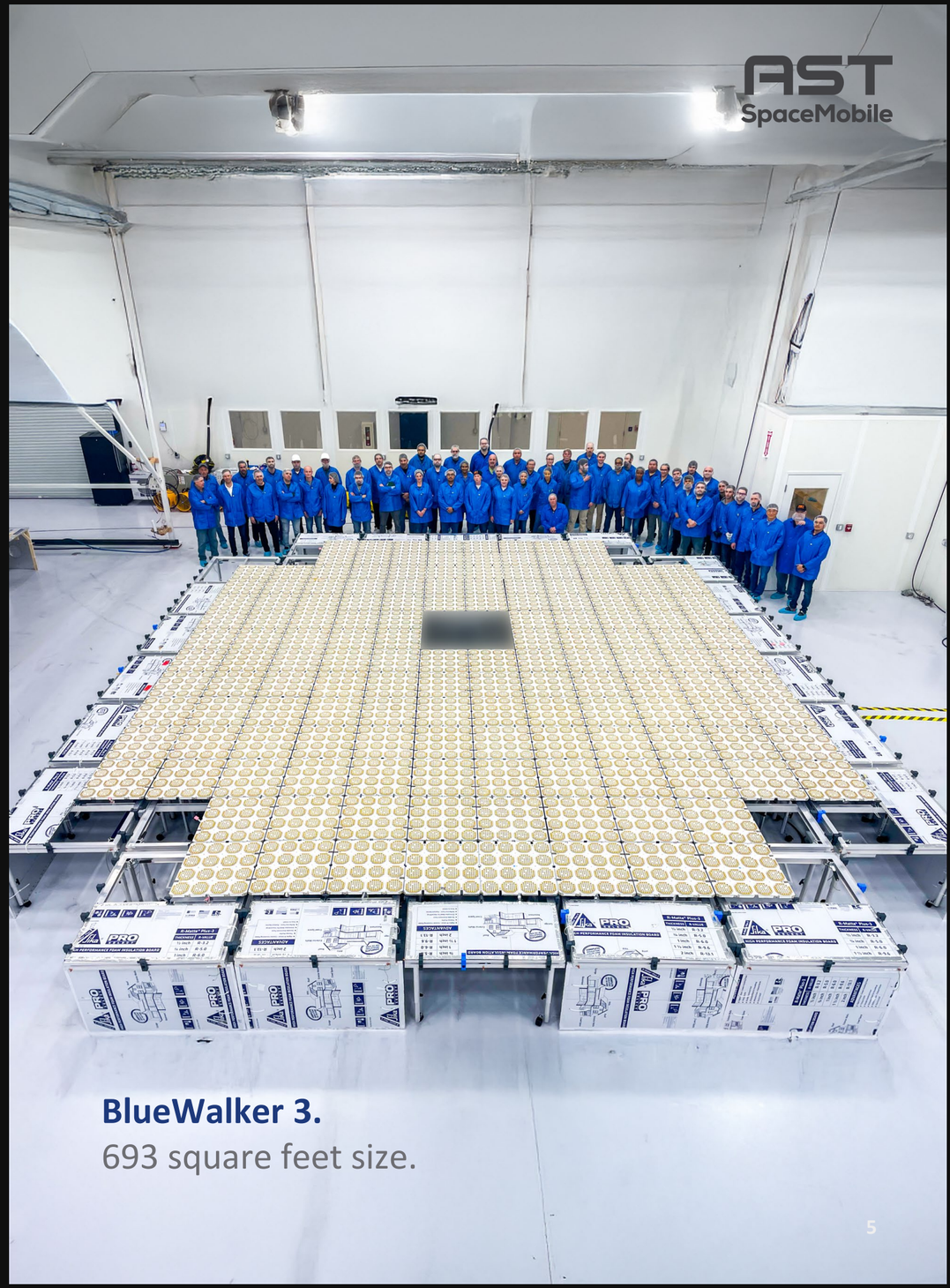
THE LARGEST-EVER PHASE ARRAY IN LOW EARTH ORBIT (LEO)



BW3 & Block 1 satellites
693 square feet size.

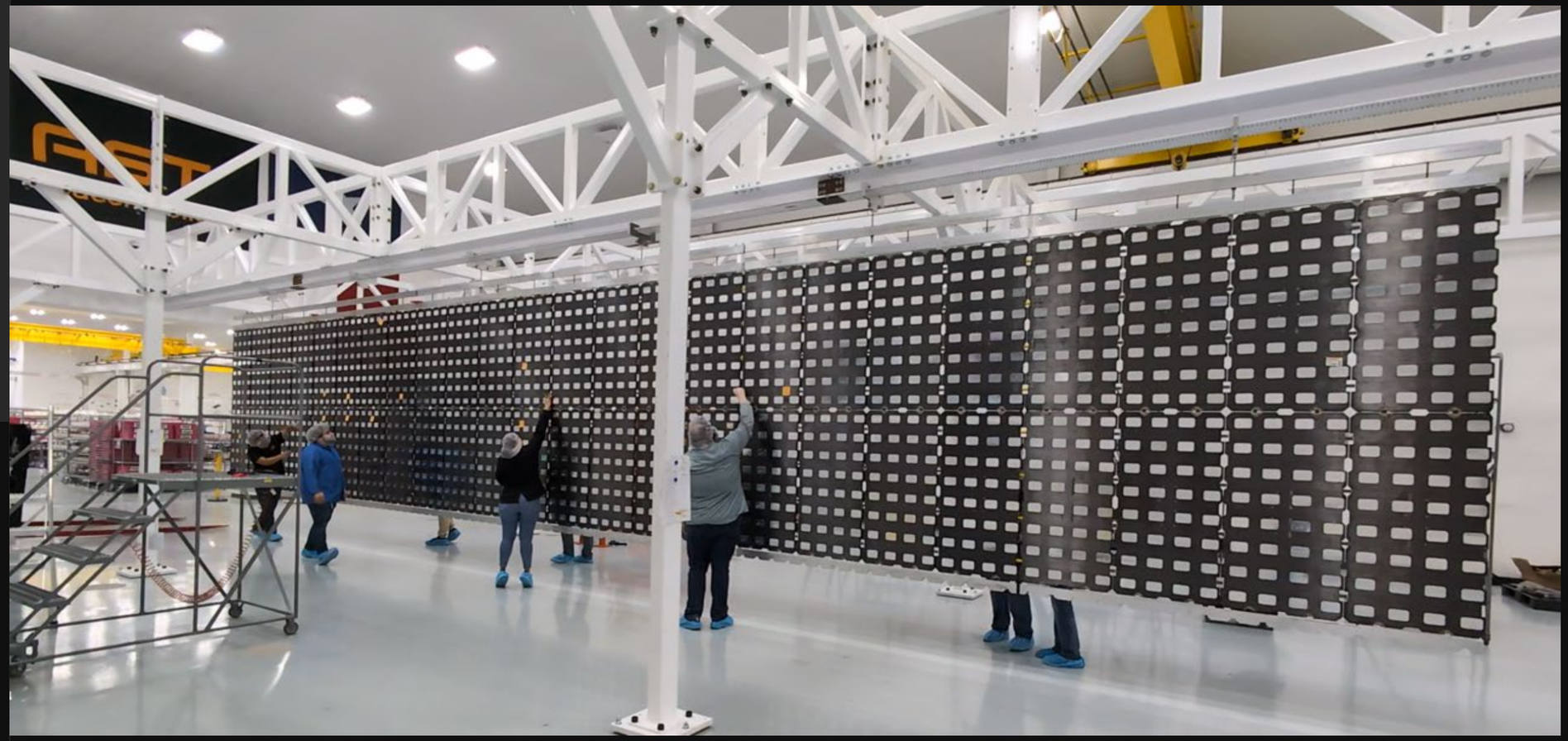


Block 2 satellites
2,400 square feet size.



BlueWalker 3.
693 square feet size.

PHASED ARRAY ASSEMBLY for Block 2



- Modular design for mass production
- Vertical manufacturing, integration, and testing
- Low cost and high production rate

SOLID FOUNDATION to build the future of mobile communications

Manufacturing
95% vertically integrated.

Ramping production for
Block 2 sats in Midland-TX.

Constellation & Service Deployment

Strong cash position to support
the system deployment

Launches
Launch agreements secured.

Launch agreements secured with
BlueOrigin, SpaceX and ISRO.

Spectrum
45MHz on L-band spectrum.

Long-term access to MSS
spectrum in the U.S. and Canada.

Government Clients
Dual - use.

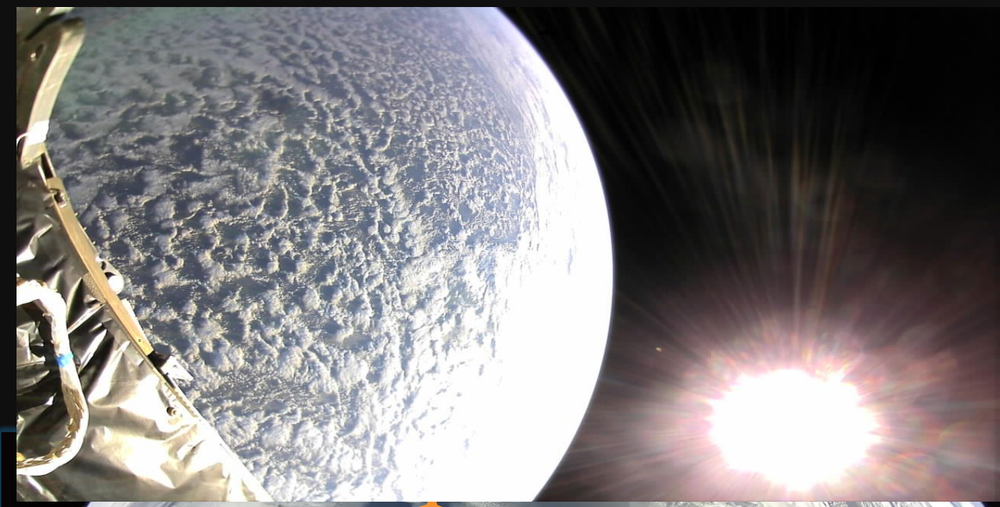
Multiple Government
contracts

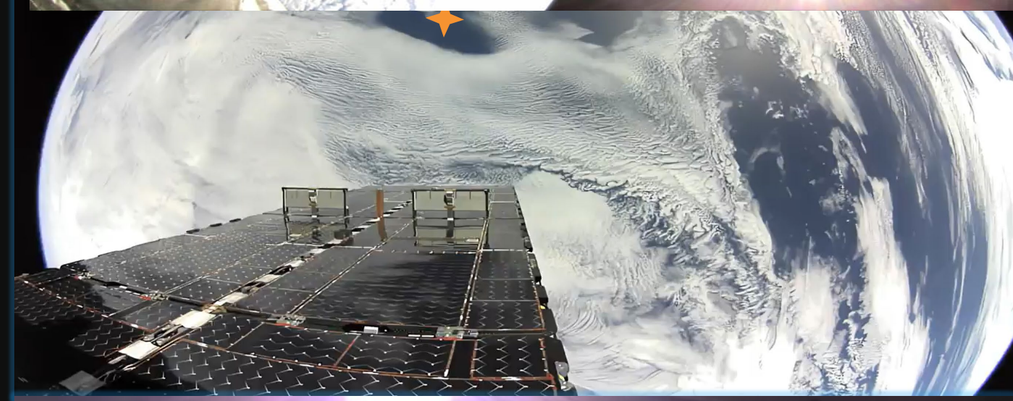
Technology
Largest phase arrays in LEO
Advanced ASIC for BF

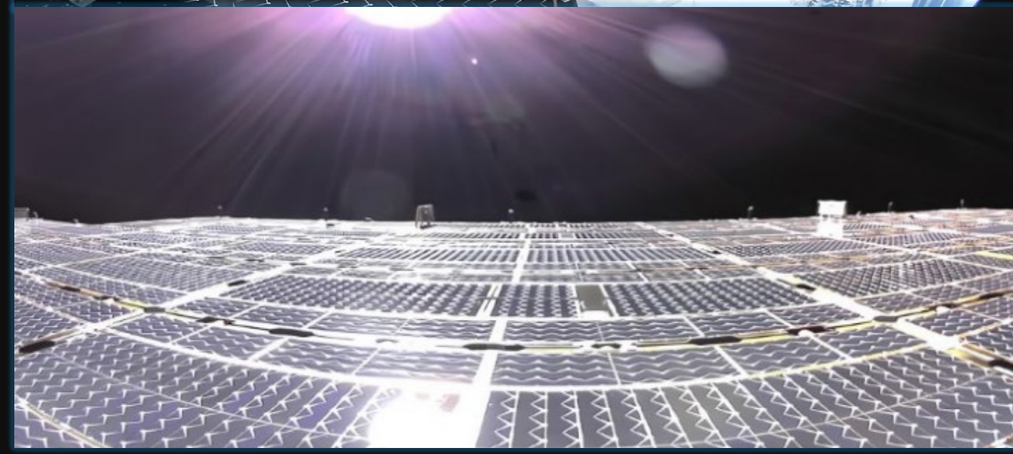
Only proven space-based cellular
broadband technology

ON-ORBIT DEPLOYMENT OF BW3 & BB1

- Largest ever Active Phased Array deployed in LEO for commercial application
- Forming large number of Tx/Rx beams with narrow beamwidth and sharp roll-off for broadband connection to UEs and easier interference management





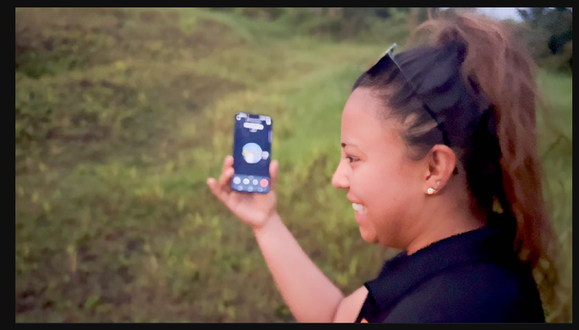


Demonstrated Broadband Capability & System Flexibility

September 2023

5G Voice Call
Broadband connection with 14 Mbps
(per 5MHz)

In a 5G first ever, demonstrated space-based 5G connectivity by placing a call from Maui, Hawaii, USA, to a Vodafone engineer in Madrid, Spain, using AT&T spectrum



June 2023

4G LTE Voice Call
10 Mbps Data rate
(per 5 MHz)

In an LTE first ever, using AT&T cellular spectrum, we again connected everyday smartphones BW3

April 2023

2G Voice Call

The first voice call was made from the Midland, Texas area to Rakuten in Japan over AT&T spectrum using a Samsung Galaxy S22 smartphone

2024 to Now

- **Worldwide testing of broadband connections using BB1 satellites with partner MNOs**
- **Testing capabilities for government applications**

A Bright Future Ahead for Global Broadband Communications

- ✓ THE RIGHT TECHNOLOGY
- ✓ THE RIGHT STRATEGY
- ✓ THE RIGHT TEAM
- ✓ THE PARTNER ECOSYSTEM