



The Future of Hyper Connectivity



The Market Needs a Bigger Data Pipe that is Faster and More Secure

Our need for speed is quickly **outpacing the limits** of existing 2G/3G/4G networks

Consumer behavior is driving an **exponential increase** in fixed & mobile data usage

Trust in secure connectivity of our systems is **crucial**



Radio Frequency has been the wireless solution of choice to date...

It's always been point to multipoint capable
...but it now has challenges in speed

Wireless Optical Communications can bridge the gap of current and future demands for speed and capacity...

...but current optical technology misses a critical point to address the broader market demand

The ability to service multiple users. That's point to multipoint communications.

Only BridgeComm has this capability in optical communications

Solution Offerings

BridgeComm focuses on Optical Wireless Communications in two forms:

- Point to Point
- Point to Multipoint

Common features:

- Very high-speed communications; challenging in RF to consider 100+ Gbps rates
- Very high capacity with no spectrum constraints as in RF
- Very secure communications – challenging to detect signal or intercept signal
- Supported on the ground, in the air, and in space

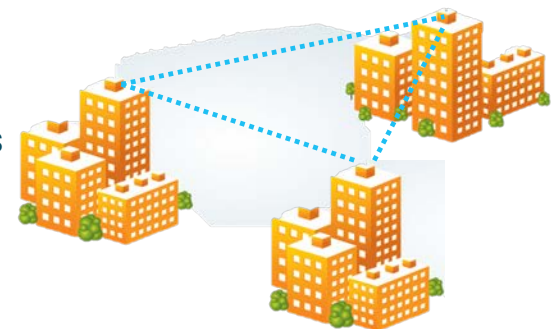
Point to Point

- 10 to 100+ gigabits
- Non-mechanical pointing and stabilizing devices
- Infrastructure backhaul



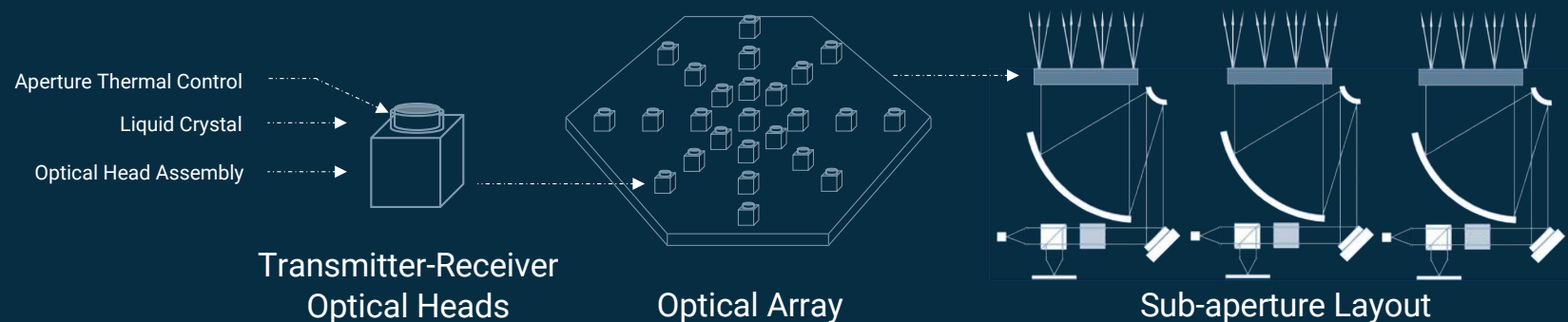
Point to Multipoint

- 25 to 100+ gigabits
- Fixed Wireless Access
- Mesh networking
- Tracking/mobility
- Operates like a RF phased array



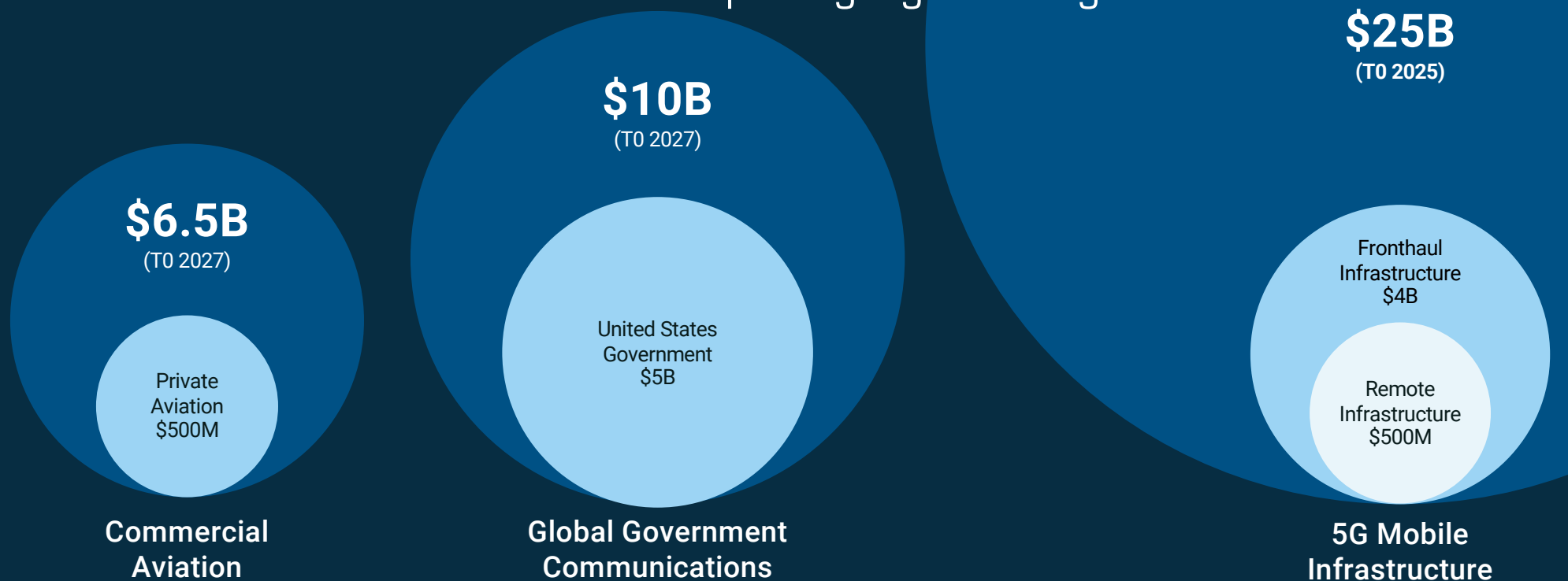
MOCA is our proprietary invention to unlock the point to multipoint capability for optical networks

- Managed Optical Communications Array (MOCA) supports multiple transmitter-receiver optical heads in one slim & compact (<10 cm thick) terminal
- Conducts optical beam steering with no unreliable mechanical platforms
- Combines optical beams for variable throughput for each receiver
- Uses standard components available for 1550nm used in fiber optic cable



All markets are starving for a new & reliable high-speed communication network solution

- BridgeComm's unique products addresses each of these markets with a small share equalling significant growth





Use Case: Remote Connectivity

RF networks cannot reliably support commercial or industrial applications with their limited bandwidth

Fiber optical cable installation in such destinations, especially over bodies of water or compromised terrestrial regions are difficult and costly

BridgeComm optical solutions

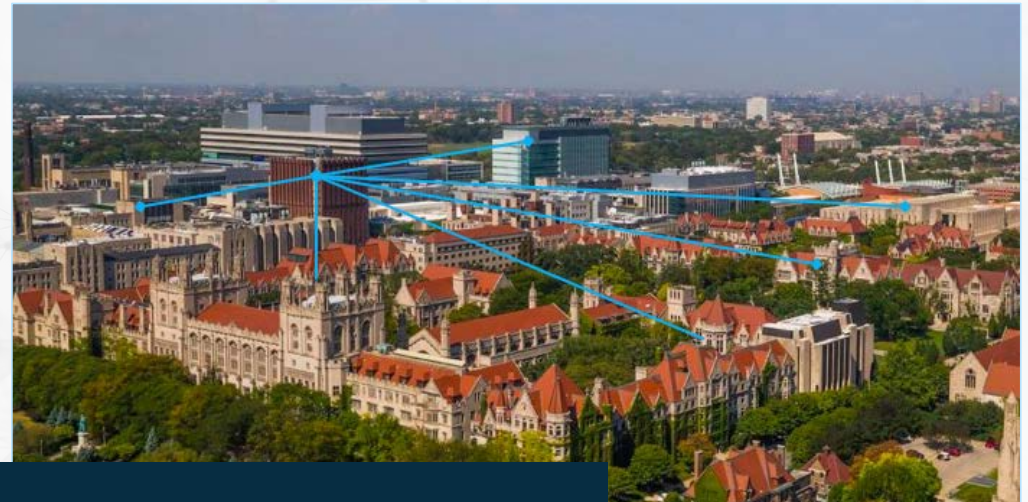
- Supports 10-100+ Gbps long-distance coverages (15+ miles)
- Cost competitive to RF and fiber-based solutions
- Secure optical signal

Use Case: Fixed Wireless Access

Last mile access for enterprises needing high speed campus wide accessibility as high-speed data access limited in some regions

For certain applications, security an important requirement

RF based solutions cannot meet speed demands



BridgeComm point to multipoint solutions addresses the challenges

- 100+ gigabits required
- Support multiple buildings/sites
- Secure optical signal

BridgeComm Accomplishments

- Developed and delivered space terminals to customers
- Existing programs for space and ground applications with commercial and the US Government customers
- Partnerships with Boeing on joint projects
- Operating an optical communications ground network
- Partnering with Nokia and others to further applications of optical comms for very high speed communications

Continued Progress

- Supporting customers for point to point optical comms
- Developing point to multipoint commercial products with multiple demonstrations to raise product maturity



BridgeComm's Product Plan



Space Domain

- AstroBridge
- Applications from LEO to GEO



Air Domain

- AeroBridge for space to air, air to ground and Air to Air Applications



Land Domain

- AgileBridge for mobile comms from space and airborne assets
- TerraBridge for ground comms



Sea Domain

- SeaBridge for surface comms from space and airborne Assets

Supporting High Speed and Cyber Security

The Opportunity for Optical Wireless Communications is Through BridgeComm

Fundamentally, speeds in the 10s to 100+ gigabits can only only be done through optical comms

But...

Point-to-multipoint capability resides exclusively in BridgeComm's MOCA technology

Thank you!

