L&T Technology Services

SERCOM

5G FWA, Engineered for Enterprise

Fiber-class speed. No fiber in the ground.



CASE STUDY



Sercomm's radio. LTTS's engineering. Your spectrum.

THE PROBLEM

For an engineering enterprise, the network isn't plumbing but the substrate for simulation, cloud engineering, collaboration and AI. Across distributed campuses, demand was outgrowing it. The obvious fix - more fiber, meant trenching, permits and months of lead time; cost that scales with every metre. **The client needed fiber-class capacity with wireless agility, delivered as a service on their operator's licensed spectrum; a platform ready for edge and AI, without owning a network.**

Three roles: the operator's spectrum, Sercomm's radio, LTTS' engineering that makes mmWave hold.

WHY IT WAS HARD: THE PHYSICS

Millimeter-wave rivals fiber for capacity. Sercomm's radios run in the 28 GHz band; the same physics, and the same engineering, applied at 26 GHz (n258) - the mmWave band Indian operators hold:

01 **Path loss.** signal fades far faster than at the sub-6 GHz bands enterprises know.

02 **Blockage.** a wall, a truck, even a person can break a 28 GHz link. It's line-of-sight.

03 **Weather.** rain and atmospheric absorption add fade that lower bands ignore.

04 **Penetration.** glass and masonry that sub-6 GHz passes through can stop mmWave at the façade.

So you can't just install a radio. A link that looks fine on a coverage map can drop the moment a van parks in its path. **Making 28 GHz hold across a live campus is an RF-engineering problem first, and that's where this work lived.**

THE ENGINEERING: TWO DISCIPLINES, ONE SYSTEM

SERCOMM - The radio layer

AirBroadband is a 5G network-in-a-box: radio access plus an integrated 5G core in one deployable system.

- 28 GHz mmWave small cells; gigabit-class throughput via 4× carrier aggregation (up to 100 MHz each).
- Standalone and non-standalone 5G; TR-069/369 management; FCC Part 30 certified (US).
- Indoor, outdoor and CPE units: one platform, whole campus.

LTTS - The system layer, where physics becomes a network

LTTS owned the engineering that turns capable hardware into a dependable network.

- **RF design & predictive site survey.** modelling propagation, line-of-sight and Fresnel clearance to place radios where the link budget holds.
- **Architecture & planning.** spending mmWave's capacity where it pays, engineering around its limits, with redundancy where it matters.
- **Integration & validation.** radio, core, transport and enterprise IT/security as one validated system, proven under real load.
- **Operations & monitoring.** a visibility layer that keeps the network observable and optimisable after go-live.
- **Scalable FWA framework.** a design the operator repeats circle by circle: not a one-off link.

The feat: mmWave made dependable. Fiber-class capacity across a distributed campus, no trenching, and links engineered to hold through blockage, weather and load.

BUSINESS OUTCOMES

Modelled projections from the business cases: what the operator can put in front of an enterprise customer. Each traces to an engineering reason, not optimism.

Dimension	Projected impact	Why it's credible - the engineering driver
Connectivity performance	**~10–15x**	Wide multi-carrier mmWave spectrum vs. the legacy links.
Infrastructure cost	**~85–90% lower**	No trenching, civil works or right-of-way.
Time to deploy	**>90% faster**	Radios and CPE in days, not excavation months.
Operational responsiveness	**up to ~8x**	Centralised monitoring and operational readiness.
3-year ROI	**~3–4x**	Capex avoided, plus an AI-ready platform.

Projections vary by site, spectrum and load.

WHAT IT UNLOCKS

The real value isn't the link but the platform it creates. Because the service runs on the operator's licensed 5G network, one connection can carry what an engineering campus is moving toward next: robotics, AR/VR design review, dense sensors, and AI that processes data on-site in real time; each on its own slice, safely separated. For the operator, that is an FWA line that becomes a managed enterprise service.

And the model travels. The same engineered-mmWave approach works wherever fiber can't reach: industrial estates, SEZs, older plants, enterprise parks where fiber is slow or uneconomic to trench. A blueprint LTTS and Sercomm can repeat with the operator, circle by circle.

ENGINEERING INTELLIGENCE IN ACTION

That's Engineering Intelligence in practice: turning demanding physics into a dependable, lasting network - and making connectivity a foundation the business builds on, not just a utility it consumes.

Put EI to work on your network.
Talk to LTTS about engineering 5G FWA on your spectrum.

This collateral includes AI-enhanced imagery

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