

Licensed Mid-Band Spectrum Critical to 5G

Ligado Networks plans to deliver 40 MHz of greenfield spectrum in the 1.5-1.6 GHz range. Lower mid-band spectrum (1-2 GHz) is the workhorse of the wireless industry due to its favorable propagation characteristics and versatility as a balanced coverage and capacity solution.

Mid-band spectrum (1-6 GHz) is critical to 5G as it provides both favorable propagation characteristics and wide channel bandwidth. However, mid-band is not simply a catch-all for spectrum between 1 GHz and 6 GHz. There are significant differences that determine how each specific band is deployed in wireless networks.

The higher mid-band (2-6 GHz) has larger blocks of spectrum for super-fast 5G data speeds, but in-building penetration and propagation limitations restrict its broad-based deployment. Conversely, the lower mid-band's (1-2 GHz) superior propagation, in-building penetration characteristics and deployment flexibility provide far-reaching, economical 5G coverage and is an ideal overlay onto existing sub-2 GHz network grids.

In the 5G future, lower mid-band spectrum is the perfect complement to higher mid-band spectrum to broaden network coverage and enhance usability. New 5G technology solutions can extend lower mid-band coverage benefits to higher mid-band deployments for delivery of high-speed throughput over a broader coverage area. Working together, the two spectrum categories will enable a cost-efficient, broad-based, and capacity-rich solution that supports the full suite of 5G services.

Ligado's greenfield spectrum also creates an opportunity for both commercial and technical innovations while avoiding the delay and complexity associated with use of existing spectrum already deployed in 4G networks. With Nokia and Ericsson, Ligado is developing technical and commercial plans to support flexible use of the Ligado band for terrestrial 5G services.

To deliver a full mobile 5G experience—one that combines super-fast download speeds with broad-based coverage in both in-building and outdoor settings—a complete network solution requires the combination of lower mid-band and higher mid-band spectrum to support both capacity and coverage for 5G networks.

