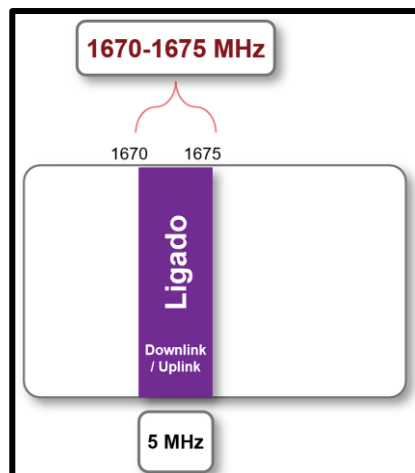




Wireless Spectrum Licenses in the 1670-1675 MHz Band Ideal for Private 4G and 5G Networks Utility and Critical Infrastructure Applications 5 MHz of Broadband Capacity Available Nationwide

On behalf of Ligado Networks, Select Spectrum offers 5 MHz of **FCC licensed broadband spectrum in the 1670-1675 MHz band being standardized in 3GPP**. These prime mid-band frequencies are ideal for companies in the **Utility and Critical Infrastructure Industry (UCII) sector** for a range of applications that can benefit from **4G LTE and next-generation 5G technology capabilities**. Ligado's spectrum is available nationwide for localized leasing to match UCII organization operator areas and requirements.



1670-1675 MHz spectrum offers the ideal combination of capacity and coverage characteristics that deliver cost-effective and superior performance for 4G and 5G service deployments, creating the opportunity to decrease OPEX without sacrificing bandwidth due to enhanced propagation.

UCII organizations can leverage 1670-1675 MHz spectrum for a wide array of power grid modernization projects including Smart City and Internet of Things (IoT) initiatives, business operations, monitoring and control requirements cases – all on dedicated, secure licensed spectrum supporting Private 4G and 5G network deployments. **Ligado's terrestrial spectrum in the 1670-1675 MHz range is the only option available to UCII entities that provides unique benefits including private lease access, 5G compatibility, optimal capacity/propagation via its location in the lower mid-band 1-2 GHz range, ubiquitous geographic coverage, and 5 MHz wide carrier.**

Overview

Ligado has initiated the process to standardize the 1670-1675 MHz band in 3GPP for 4G/5G and anticipates 4G LTE approval in 2022. Ligado also plans to seek 5G and LTE-M plus NB-IoT approval.

#	Description	Technology	Status
1	Band Introduction	LTE	Standardization underway
2	IoT Support	LTE-M/NB-IoT	Planned
3	5G	5G-NR	Future

1670-1675 MHz frequencies are utilized in a Time Division Duplex (TDD) mode. TDD mode provides UCII users with significant flexibility to apportion the available capacity between Uplink and Downlink according to their applications' requirements. This makes the frequencies ideal for UCII applications that are Uplink-centric.

Governed by Part 27 cellular rules, 1670-1675 MHz spectrum has authorized power of 2000 Watts peak EIRP for base stations and fixed devices. Within 30 CMAs (Cellular Market Areas), this authorized power limit is raised to 4000 Watts/MHz in non-rural and 8000 Watts/MHz in rural areas. The spectrum has authorized power of 4 Watts peak EIRP for mobile devices.

Key applications for UCII's supported by 1670-1675 MHz spectrum include Mobile or Fixed Data Services (4G LTE & 5G NR), Field Area Network (FAN), Distribution Automation (DA), Advanced Metering Infrastructure (AMI), Video Monitoring, Internet of Things (IoT) / Sensors, Broadband Internet Services, Demand Response (DR), Distributed Energy Resources (DER), Emergency Management & Service Restoration, Electric Vehicle (EV) Charging Stations, Workforce Mobility, Direct Transfer Trip, Line Fault / Falling Conductor Protection, Supervisory Control and Data Acquisition (SCADA), Volt VAR (Advanced Voltage Control), VoLTE / Push-to-Talk (PTT), and Smart Grid monitoring and control.

Ligado is working with ecosystem vendors to develop support for 1670-1675 MHz frequencies in their products. Vendors interested in discussing incorporating the band into existing or new solutions should contact Select Spectrum.

Please contact Select Spectrum today to learn more about 1670-1675 MHz spectrum opportunities for your organization.