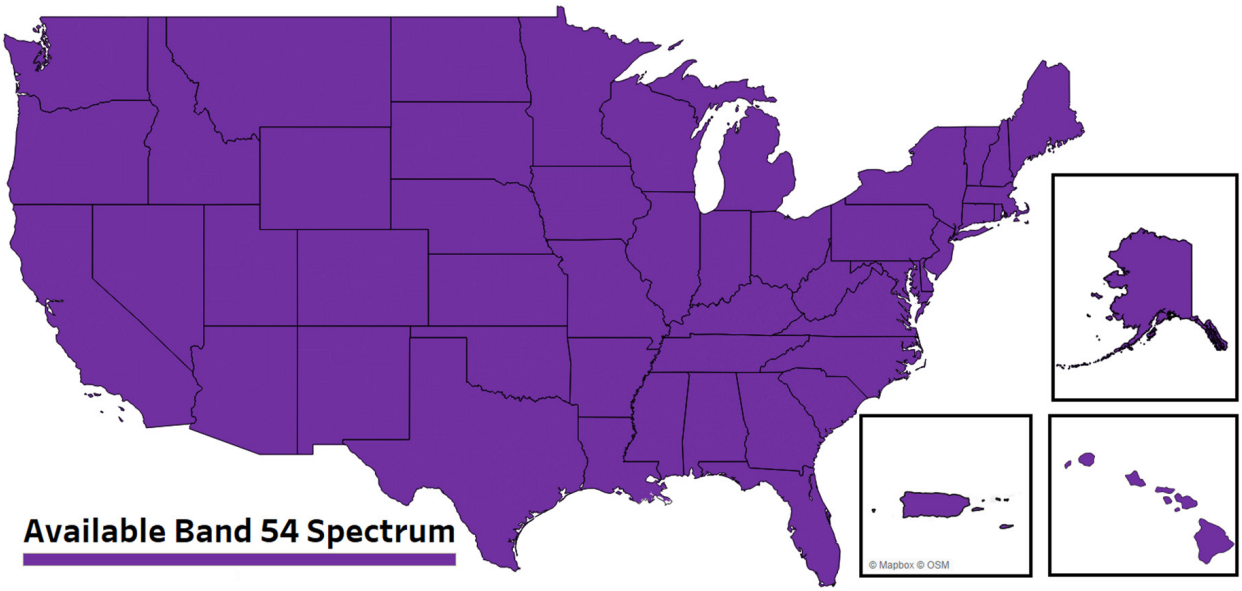
Wireless Spectrum Licenses in Band 54 (1670-1675 MHz)
Ideal for Utility & Critical Infrastructure
Enables Private 4G/5G, NB-IoT & LTE-M Networks

Select Spectrum offers 5 MHz of **contiguous Time-Division Duplex (TDD) FCC licensed broadband spectrum between 1670-1675 MHz, standardized by 3GPP for 4G/5G as Band 54 (b54/n54).** Band 54 spectrum is the ideal choice for companies in the **Utility and Critical Infrastructure Industry (UCII) sector** that are deploying private networks to support applications that leverage 4G-LTE, 5G NR, LTE-M and NB-IoT technologies. Band 54's prime mid-band frequencies are available on a nationwide basis - localized to closely match a UCII organization's operating areas and requirements.

The Band 54 map of immediately available spectrum is shown below:



Band 54 offers users the ideal balance of capacity and coverage characteristics that deliver a low total cost of ownership coupled with superior performance for private 4G-LTE & 5G NR networks. 3GPP standardization enables UCII users to leverage an expanded range of interoperable and compatible device types, along with low latency and high throughput speeds. UCII organizations can utilize Band 54 spectrum for a wide array of power grid modernization projects including Field Area Networks (FANs) Smart Metering/AMI, Smart City and Internet of Things (IoT) initiatives, etc. – all on dedicated, secure licensed spectrum supporting Private 4G and 5G network deployments**.** Moreover, the 1670-1675 MHz frequency range is situated in a "quiet neighborhood" with a low noise floor, ensuring a high effective dynamic range for reliable UCII mission-critical applications.

Band 54 is the *only* option available to UCII entities that provides a premium constellation of benefits that include: a suite of 3GPP standardized compatibility (4G-LTE, 5G NR, LTE-M and NB-IoT), optimal capacity/propagation via its location in the lower mid-band 1-2 GHz range, spectrally efficient TDD operations, and immediate access with nationwide availability, all over a 5 MHz wide carrier. The FCC, NTIA and WTB are evaluating issuing spectrum between 1675-1680 MHz, providing a potential future opportunity for utilities to deploy on a 10 MHz wide carrier.

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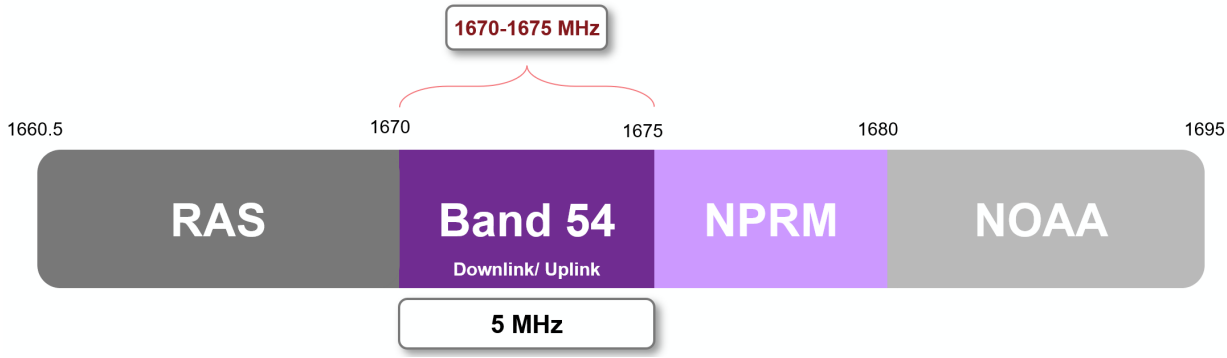
Visit our website at http://selectspectrum.com to learn more

Band 54 Technical Overview

Band 54 frequencies are utilized in a TDD mode, providing users with significant flexibility to apportion the bandwidth between Uplink and Downlink according to their applications' requirements. TDD mode is more spectrally efficient and allows for higher throughput for applications with asymmetric network traffic as compared to Frequency Division Duplex (FDD) where the ratio between uplink and downlink capacity is fixed.



Governed by Part 27 "cellular" rules, Band 54 spectrum has authorized power of 2000 Watts EIRP for base stations and fixed devices, providing unparalleled flexibility and performance for fixed deployments. Consistent with typical vehicular radios, the band has an authorized power limit of 4 Watts EIRP for mobile devices.

Key applications for UCII's supported by Band 54 spectrum include Field Area Network (FAN), Mobile or Fixed Data Services, Internet of Things (IoT) / Sensors, Demand Response (DR), Distributed Energy Resources (DER), Advanced Metering Infrastructure (AMI) 2.0, 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), Distribution Automation (DA), Video Monitoring, Volt VAR (Advanced Voltage Control), VoLTE / Push-to-Talk (PTT), and Smart Grid monitoring and control.

Band 54 Equipment Ecosystem

Chipset/Modules: GCT Semiconductor provides LTE cat4 and cat12 chip/module solutions, as well as 5G chips and modules..

Base Stations: Ubiik's goRAN™ pLTE base station is commercially available to users. GE Vernova is prepared to support Band 54 with its LTE Base Station and Orbit/Orbit X router.

Devices/UEs: Ubiik's Pyxis Duo LTE router, BEC Technologies LTE router (MX-260L), Easymetering NIC and Flexsource CPE device are all available. Telewave.io has also announced plans for a comprehensive PTT solution for Band 54. Aviat is prepared to support Band 54 with its Aprisa Routers upon receipt of a qualifying order.

Continued Developments: **Band 54's ecosystem of compatible equipment solutions is rapidly expanding, with continued development expected throughout 2026**. Advanced discussions continue with additional major chip, module, base station and core manufacturers to expand the range of options for constructing private 4G-LTE/ 5G NR networks supporting UCII applications using Band 54 spectrum.

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