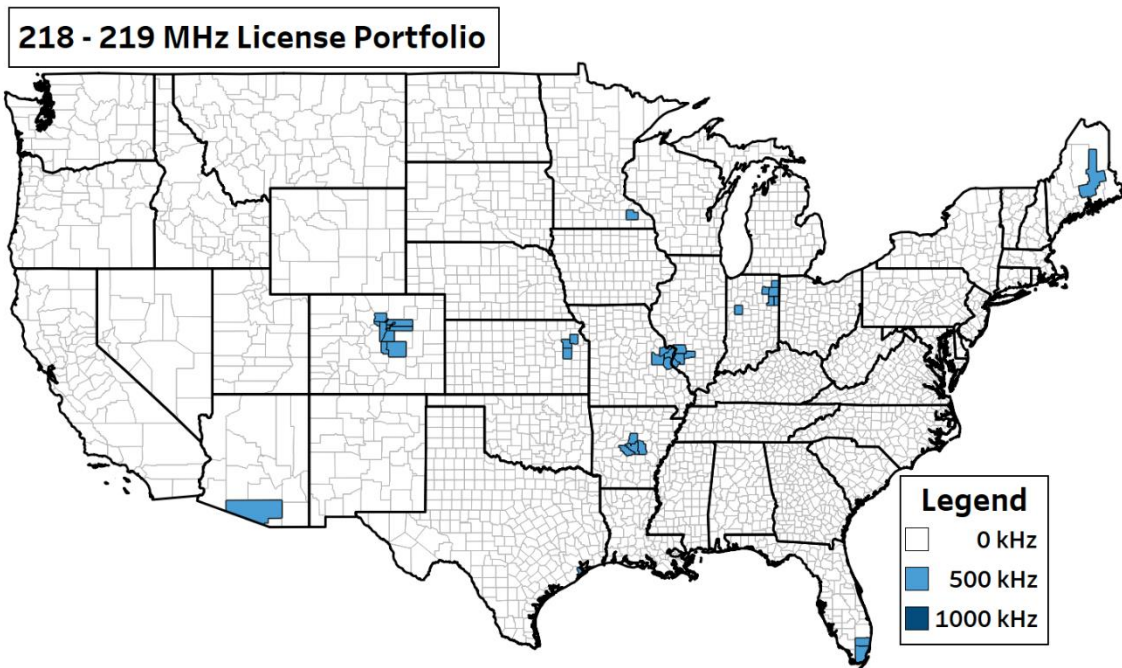




Wireless Spectrum Licenses in the 218-219 MHz Band Ideal for Utility, Critical Infrastructure, IoT, M2M, and Rail Applications Available in Major and Semi-Major U.S. Metropolitan Areas

Select Spectrum is offering twelve **218-219 MHz Service FCC spectrum** licenses across portions of 12 states including California, Illinois, Texas, Colorado, Missouri, and Florida. Major cities covered include Los Angeles, Tucson, Denver, St. Louis, and Miami, providing coverage for a population of approximately 32 million. Each license offers 500 kHz bandwidth and provides excellent propagation with support of throughput of 1 Mbps or more per license per site. With a single license, it is possible to deploy sophisticated, wide-bandwidth networks.

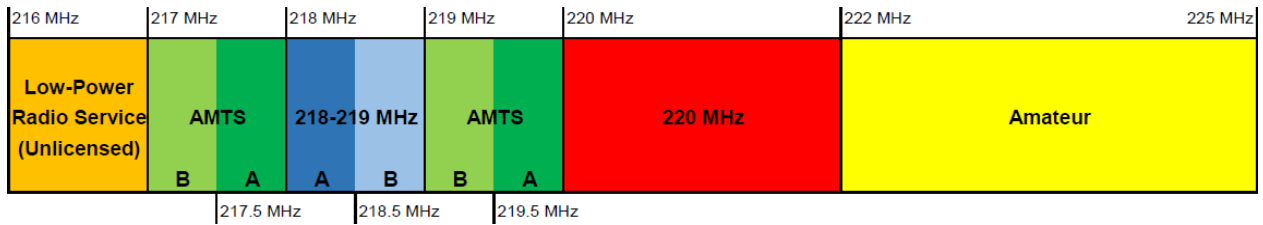
Available markets in this offering are shown in the map below:



218-219 MHz licenses can support a broad range of applications including broadcast or two-way; mobile or fixed; data, voice or video, providing effective performance for SCADA, land mobile radio and communications, smart grid and IoT, machine to machine “M2M”, UAV, Oil & Gas production/pipelines, Positive Train Control “PTC” and Communications-Based Train Control “CBTC” applications. The spectrum is ideal for urban utilities, critical infrastructure networks, Oil & Gas companies, and passenger & freight rail lines.

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The 218-219 MHz Service band is shown with neighboring service groups below:



The 218-219 MHz spectrum can be used for voice or data in 2-way or broadcast modes, including fixed and mobile services. Time division duplex “TDD” operation (synchronized two-way transmissions on the same frequency) is allowed in the band. FCC part 95 service rules provide for a maximum downlink power of 20 Watts ERP and a maximum uplink power is 4 Watts ERP, but the FCC has granted waivers to increase both uplink and downlink power by substantial amounts (see FCC Order DA 14-269). Higher power transmissions are appropriate based on the base station and remote transmit limits of 1000 and 50 Watts ERP respectively in the neighboring AMTS band. Networks may employ point-to-point, point-multipoint (tall site), and/or cellular architectures.

Each 500 kHz license may be divided into narrower channel blocks, such as 6.25 or 12.5 kHz, or may use any bandwidth up to the full 500 kHz. Licenses may be combined for a fully contiguous 1000 kHz block of bandwidth. The large frequency allocation, excellent propagation, and uninterrupted band plan afford great flexibility in network design and use. The FCC has also been supportive of spectrum swaps to expand geographic coverage of licenses at the expense of capacity (see FCC Orders DA 16-906 and DA 17-234). The licenses have met FCC construction requirements and the owners are confident that a sale or lease to a qualified party would be approved by the FCC.

Equipment for this band is made by Meteorcomm <http://meteorcomm.com>, GE Vernova <https://www.gegridsolutions.com>, Ondas Networks <http://ondas.com/>, 4RF www.4rf.com, Alstom www.alstomsignalingsolutions.com, ESTeem www.esteem.com, XetaWave www.xetawave.com, Cambium <http://www.cambiumnetworks.com>, Alligator Communications www.alligatorcom.com, Tait <http://taitradio.com>, and Hytera www.hytera.com. The band is also compatible with the recently approved IEEE wireless standard – 802.16s “GRIDMAN”. This high-reliability standard is intended for use by utilities and other critical infrastructure operators.

Market	500 kHz Blocks Available	Aggregate kHz Available	Market	500 kHz Blocks Available	Aggregate kHz Available
Los Angeles, LA	1	500	Little Rock, AR	1	500
Tucson, AZ	1	500	St. Louis, MO-IL	1	500
Denver, CO	1	500	Lafayette, IN	1	500
Colorado Springs, CO	1	500	Fort Wayne, IN	1	500
Galveston, TX	1	500	Miami, FL	1	500
Rochester, MN	1	500	Bangor, ME	1	500