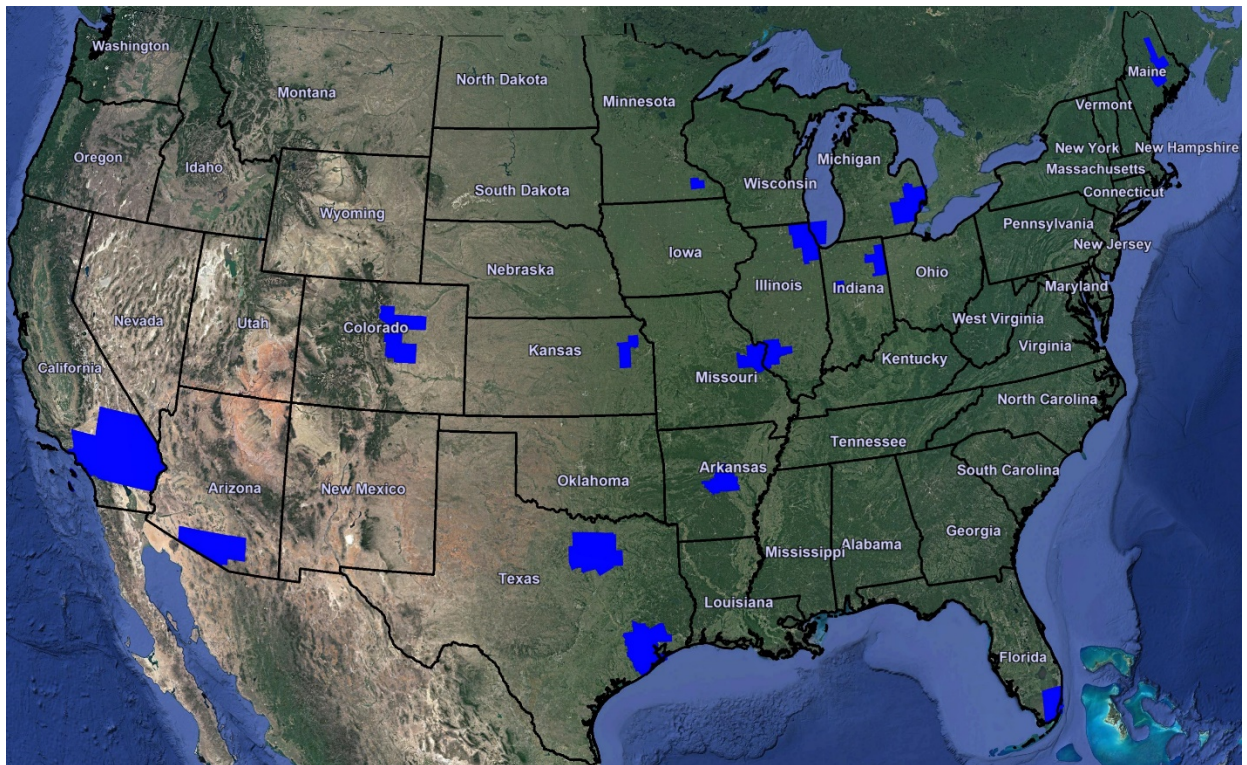


## Wireless Spectrum Licenses in the 218-219 MHz Band Ideal for Passenger Rail Safety and PTC Applications Available in Major and Semi-Major U.S. Metropolitan Areas

Select Spectrum is offering seventeen **218-219 MHz Service FCC spectrum** licenses across portions of 13 states including California, Illinois, Texas, Colorado, Missouri, Michigan and Florida. Major cities covered include Los Angeles, Tucson, Chicago, Dallas, Houston, Denver, St. Louis, Detroit and Miami, providing coverage for over a population of 58 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. In the Dallas market 1000 kHz of contiguous spectrum is available for purchase across the A & B Blocks via two licenses.

The spectrum is ideal for major rail hubs located in urban markets, and the spectrum is currently being deployed by the **Metropolitan Transportation Authority**, **New Jersey Transit** and **Southeastern Pennsylvania Transit Authority** for rail safety applications and Positive Train Control “PTC”.

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

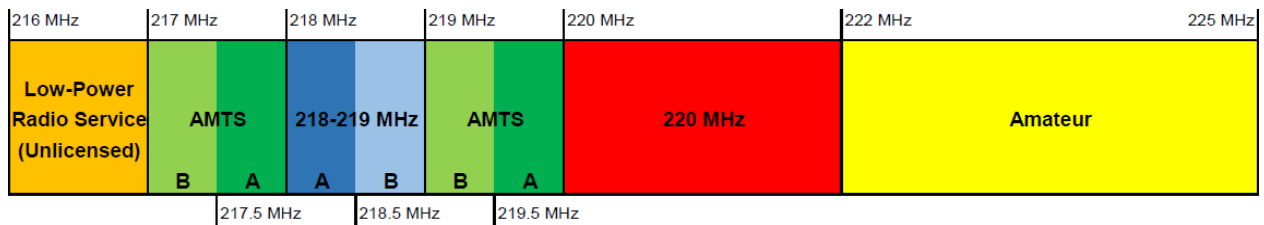


**218-219 MHz licenses can support a broad range of applications including broadcast or two-way; mobile or fixed; data, voice or video, and are ideal for Positive Train Control “PTC” and Communications-Based Train Control “CBTC” applications.**

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

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 maximum downlink power of 20 Watts ERP and 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 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 affords 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 Grid Solutions <https://www.gegridsolutions.com>, Ondas Networks <http://ondas.com/>, 4RF [www.4rf.com](http://www.4rf.com), Alstom [www.alstomsignalingsolutions.com](http://www.alstomsignalingsolutions.com), ESTeem [www.esteem.com](http://www.esteem.com), XetaWave [www.xetawave.com](http://www.xetawave.com), Cambium <http://www.cambiumnetworks.com>, Alligator Communications [www.alligatorcom.com](http://www.alligatorcom.com), Tait <http://taitradio.com>, and Hytera [www.hytera.com](http://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.

Please contact us for additional information regarding these licenses.

Market	500 kHz Blocks Available	Aggregate kHz Available	Market	500 kHz Blocks Available	Aggregate kHz Available
Los Angeles, CA	1	500	Little Rock, AR	1	500
Tucson, AZ	1	500	St. Louis, MO-IL	1	500
Denver, CO	1	500	Chicago, IL	1	500
Colorado Springs, CO	1	500	Lafayette, IN	1	500
Dallas-Ft. Worth, TX	2	1000	Fort Wayne, IN	1	500
Houston, TX	1	500	Detroit, MI	1	500
Topeka, KS	1	500	Miami, FL	1	500
Rochester, MN	1	500	Bangor, ME	1	500