BLACK BOX®

Revolutionizing Wireless Connectivity: The Power of Private LTE/5G

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What is Private LTE/5G?

In the fast-paced world of technology, businesses are constantly seeking ways to stay ahead of the curve, and one area that is poised to revolutionize wireless connectivity is Private LTE/5G. This cutting-edge technology refers to the deployment of 5G and LTE (Long-Term Evolution) networks on a private and dedicated basis for specific organizations or enterprises. Unlike traditional public networks, private networks provide businesses with greater control, security, and customization over their wireless infrastructure. This transformative capability has the potential to reshape industries by offering low-latency, high-speed, and reliable wireless connectivity tailored to the unique needs of individual enterprises.

FCC Spectrum Review

The Federal Communications Commission (FCC) plays a crucial role in shaping the landscape of wireless communication, and the spectrum is at the heart of this transformation. The FCC Spectrum Review is a meticulous examination of the available radio frequencies, ensuring efficient and fair allocation to different services. For Private LTE/5G, this means identifying and designating spectrum bands that businesses can use exclusively for their networks, paving the way for enhanced performance and security.

FCC Identifies Private Wireless Spectrum

Recent FCC initiatives have identified specific spectrum bands suitable for private wireless networks. These bands include the Citizens Broadband Radio Service (CBRS), which has gained significant attention for its potential in enabling private LTE networks. The availability of dedicated spectrum ensures that businesses can deploy their 5G/LTE networks without interference, providing a reliable and secure foundation for a wide range of applications.

CBRS OnGo™ Certification

The CBRS Alliance's OnGo™ certification program is a pivotal development in the Private LTE/5G landscape. OnGo™ certification ensures that devices and networks operating in the CBRS spectrum adhere to industry standards, promoting interoperability and a seamless user experience. This certification empowers businesses to confidently deploy Private LTE/5G networks, knowing that their devices will work seamlessly within the designated spectrum.

Statistics and Emerging Trends in Private LTE/5G Connectivity

The adoption of Private LTE/5G networks is already underway, with businesses recognizing the potential for transformative impact. According to recent industry reports, the market for private wireless solutions is expected to grow exponentially in the coming years, reaching billions of dollars in value. This growth is driven by the increasing demand for secure and high-performance connectivity in industries such as manufacturing, healthcare, logistics, and more.

Looking ahead, future trends indicate a continued surge in the deployment of Private LTE/5G networks. The integration of advanced technologies, such as edge computing and the Internet of Things (IoT), will further enhance the capabilities of these networks, unlocking new possibilities for innovation and efficiency. As businesses embrace this evolution in wireless connectivity, they position themselves at the forefront of a digital revolution, ready to leverage the full potential of Private LTE/5G for years to come.

ABOUT BLACK BOX

Elevate your enterprise with Black Box®, a leading IT solutions provider that goes beyond traditional limits. Our expertise lies in delivering state-of-the-art technology products and top-tier consulting services across the globe in every industry. Pioneering innovation, Black Box is positioned to drive your success, especially in the dynamic arena of Private LTE/5G solutions.

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Understanding Private LTE/5G

	Mobility	Private LTE/5G	WLAN
FCC Assigned Name	600, 700, Cellular, PCS, AWS, WCS, EBRS	CBRS, 3.5 GHz Band	ISM, UNII-1, UNII-2, UNII-2e, UNII-3
Frequency Band MHz	600, 700, 850, 1900, 2100, 2300, 2600	3500	2400, 5500
Standards Organization	3GPP	CBRS Alliance, 3GPP	IEEE
Specifications	3GPP Rel 8 thru 14	3GPP Rel 13+	802.11, currently 'ax' or Wi-Fi 6
Certifications	By OEM and MNO	Private LTE certified	Wi-Fi certified
License Requirements	MNO per FCC Auctions	MNO per FCC Auction (PAL 7 @ 10 MHz each), Enterprise per FCC 'registration' (GAA 8 @ 10 MHz each)	Unlicensed
Previous Users	Relocated to other Spectrum	Remain with 'protection' from interference via SAS	Remain, All users must accept interference
Technologies	LTE, TD-LTE; Transition to 5G-NR (3GPP Rel 15+)	TD-LTE; Transition to 5G-NR (3GPP Rel 15+)	Wi-Fi, LTE-LAA, ZigBee, UWB, DECT, proprietary, microwave ovens, etc.
KPI Issues	NA: deterministic control of all OTA functions	NA: deterministic control of all OTA functions	Latency, jitter, capacity, QoS, security/privacy, roaming/ handoff/mobility, device driver SW
Ownership	MNO owned WWAN	MNO owned WWAN, MNO owned WLAN, Enterprise owned WWAN, or Enterprise owned WLAN (all permutations)	Enterprise owned WLAN
Installation	Certified/professional only	Certified/professional only	Self install allowed
Administration	MNO Only	Enterprise and professional (SAS)	Typically enterprise