Bridge the Digital Divide with Ruckus CBRS LTE

Superior wireless connectivity

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REQUIREMENTS

- Provide best possible range of coverage including non-line of sight situations
- Low cost deployment and operation
- Reliably deliver adequate bandwidth to support homework needs
- Strongest possible security
- Broad device support

RUCKUS CBRS LTE BENEFITS

- Up to 5x coverage radius vs Wi-Fi
- Can penetrate foliage and outer walls
- 200 Mbps total throughput per AP
- Proven end to end security
- School district control of the network and network data
- Ability to support new and expanded use cases
- Complete end to end solution including SIM and subscriber management
- Future proof solution with path to 5G

OVERVIEW

FCC E-Rate programs have successfully driven widespread adoption of in-school wireless broadband networks, and schools are becoming increasingly adept at leveraging online resources to enhance and expand the learning experience. However, as more schoolwork moves online, districts and cities are becoming acutely aware of a new challenge. Many school children, especially from lower income families, do not have broadband services at home, so they face additional obstacles to complete their schoolwork.

Several solutions are available, including FCC lifeline services, distributing Mi-Fi devices to deliver broadband over mobile operator LTE services, or deploying public Wi-Fi in areas where families lack affordable or available broadband. However, none of these is ideal due to either availability or cost, and districts often need to pursue multiple options to deliver the best possible services to the most households at the least cost.

One new solution that districts should consider is CBRS LTE. Using new spectrum rules that assign spectrum at the local level, districts or local communities can deploy Private LTE networks. LTE offers much better coverage and penetration than Wi-Fi, so it is a better solution for delivering broadband into households. And new enterprise-class LTE solutions are easy to deploy and manage and much less costly than comparable operator services.

New Ruckus CBRS LTE solutions allow districts to deploy LTE technology, which is ideal for broadband services to bridge the digital divide. Designed to be as easy as Wi-Fi, Ruckus LTE provides superior connectivity for important wireless applications.

THE SOLUTION: RUCKUS CBRS PRIVATE LTE

Ruckus CBRS Private LTE provides outstanding coverage, QoS, security and mobility to cover larger areas. Ruckus CBRS uses standard LTE protocols in dedicated spectrum reserved specifically for your campus or neighborhood to deliver fast and ubiquitous coverage. Since the spectrum is individually allocated to your network, it is always working at peak performance and can penetrate foliage and outside walls to deliver in-home broadband services. It can also support other district functions such as push to talk communications, IP Video camera backhaul, IoT gateways and temporary connections for special events.

RUCKUS®

CBRS offers unique advantages over Wi-Fi or mobile operator LTE services.

- 2-3x longer coverage radius per access point as compared to Wi-Fi.   It can reach as much as 5x Wi-Fi in clear line of sight environments

- Superior foliage and building penetration due to LTE's high receive sensitivity and clear spectrum

- Highest possible quality of service

- Proven LTE security

- No monthly charges for service

- Ability to deploy wherever coverage is needed and to minimize latency or reduce bandwidth costs if needed via an optional local EPC

These features are critical to districts that need to ensure all children have the broadband access needed to keep up with their school work. Ruckus CBRS Private LTE also offers seamless mobility – even at high speeds – so shuttles or buses can stay connected. Roaming is controlled by the Ruckus CBRS LTE core network (EPC) which automatically ensures devices are always connected to the most optimal access point. There is no need for re-authentication on each AP, and there is no risk of infrastructure 'hanging-on' to an access point that is no longer in range.

Moreover, Ruckus CBRS Private LTE integrates the highest level of airlink security. Security protocols are built-in to Ruckus CBRS Private LTE, so security is consistent and comprehensive across every LTE deployment.

COMPREHENSIVE CBRS DEVICE ECOSYSTEM

Since CBRS operates in newly available 3.5 GHz spectrum, it requires devices or routers that can also operate in that spectrum. The good news is that, thanks to broad industry support led by the CBRS Alliance, there is a wide range of available solutions, and most new LTE-capable devices are likely to also support the CBRS band.

CBRS (B48) Device Ecosystem

For school districts, CBRS LTE gateways such as the Arris NVG558 are ideal in-home devices that will connect to the CBRS LTE network and then extend Wi-Fi or Ethernet service inside houses.   Other products such as a CBRS LTE bridge can be used to connect devices such as IP Video cameras. There is also a growing list of CBRS capable phones, tablets, and other connected devices.

A NEW WIRELESS PLATFORM TO HELP BRIDGE THE DIGITAL DIVIDE

CBRS LTE can be an ideal solution to help school districts extend broadband connectivity to un-served households. It is easy to deploy and manage, typically less expensive than Wi-Fi, and provides superior coverage and penetration. School districts of all sizes can utilize CBRS LTE networks to initiate or enhance their efforts to ensure in-home connectivity for all students.

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