



# Top 5 reasons state and local governments should migrate to Wi-Fi 7 now

Regardless of whether your wireless network spans a building, city, county or the entire state, only Wi-Fi® 7 can deliver reliable, seamless connectivity that future-proofs your communications for years to come. With Wi-Fi 7, state and local government agencies can deploy an always-on network that's faster, more secure and sustainable.

## 1 Unmatched speed and performance

Wi-Fi 7 offers the fastest throughput ever seen in wireless networks. Peak rates can exceed 40 Gbps, which is four times greater than Wi-Fi 6. From cloud-supported applications and real-time data programs to video conferences and emergency public services, operating a faster network can make a dramatic difference in department efficiency, effectiveness and safety.

With the newest standard also comes Preamble Puncturing, which allows the network to utilize portions of channels that were previously unusable. Today, Wi-Fi 7 access points (APs) can overcome interference by transmitting a "punctured" portion of a channel, allowing the network to maximize the usage of every possible channel.

## 2 Enhanced security features

With advanced security protocols, Wi-Fi 7 protects sensitive government data and offers compliance to stringent regulatory standards. Due to the Wi-Fi Protected Access® 3 (WPA3™) data encryption security, private citizen information, law enforcement communications, and public infrastructure systems are safeguarded from cyber threats. This Wi-Fi 7 feature helps fight against offline dictionary attacks—making it more resistant to brute-force attempts to crack passwords.

Plus, all RUCKUS® Wi-Fi 7 APs support a multi-layer security model that includes secure boot, TPM (Trusted Platform Module) 2.0, and the exclusive DPSK3™. Secure boot and TPM 2.0 offer hardware-level protection against malware and sophisticated cyberattacks so that only trusted software can be executed on the AP. DPSK3 adds the power of

Dynamic PSK™ technology to WPA3—creating robust security with the flexibility and ease of use of dynamic passphrase to secure network access.

### 3 Greater capacity and lower latency

Wi-Fi 7's multi-link operation (MLO) enables data transmission over three bands at once, reducing congestion and supporting more users simultaneously. Whether it's a concert in the park, a town hall meeting or a state capital joint-session hearing, it can transmit and receive more messages per second than ever before.

It also offers lower latency, which is vital for real-time applications like emergency services, smart traffic systems, and remote operations. With faster response times for mission-critical operations, state and local governments can improve overall service efficiency and the safety of their employees and citizens.

### 4 Optimized for IoT and smart city infrastructure

With the capacity to manage hundreds of IoT devices, Wi-Fi 7 is ideal for smart city applications, including public transportation, environmental monitoring, and connected public utilities. By utilizing the 6 GHz band, Wi-Fi 7 can provide more reliable connections and reduce network strain in densely populated areas.

By utilizing the three available bands and the largest channel bandwidth (up to 320 MHz wide), Wi-Fi 7 can enable IoT management for the efficient

operation of smart government solutions. Plus, the capability of up to 4096 Quadrature Amplitude Modulation (4K QAM) allows Wi-Fi 7 to transmit the greatest number of simultaneous signals without stalling or buffering.

### 5 Future-proof your network

With the never-ending emergence of new technologies and Wi-Fi standards, IT departments may have reasons to wait. But with the Wi-Fi 8 standards not expected until 2028 and the typical lag in chip manufacturing and devices, waiting for many more years may cause more issues than it solves.

By investing in a scalable, future-ready Wi-Fi 7 network today, government departments and agencies can support the:

- Billions of Wi-Fi 6E devices that currently utilize the 6 GHz spectrum
- 233 million Wi-Fi 7 devices expected to enter the market in 2024\*
- More than 2 billion Wi-Fi 7 devices expected to be online by 2028\*

Migrating to Wi-Fi 7 now also allows you to incorporate next-gen tech products like AR/VR and 8K video streaming that aren't supported by older standards. It also makes you more sustainable by helping all devices perform optimally, which preserves device battery life. In addition, Wi-Fi 7 significantly outperforms 5G/IMT in energy efficiency through low-power, cognitive radio techniques.

\* Source: Wi-Fi Alliance <https://www.wi-fi.org/wi-fi-macphy>

## About RUCKUS Networks

RUCKUS Networks builds and delivers purpose-driven networks that perform in the demanding environments of the industries we serve. Together with our network of trusted go-to-market partners, we empower our customers to deliver exceptional experiences to the guests, students, residents, citizens and employees who count on them.

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