

## SOLUTION BRIEF

# TEKTELIC

communications



### HIGHLIGHTS

- Ruckus Networks and TEKTELIC together offer best in class Wi-Fi plus LoRa solutions, enabling service providers, cities, campuses and enterprises to deploy and manage their own LoRaWAN networks over Ruckus broadband infrastructure
- LoRa extends connectivity as far as ten kilometers from a single gateway to enable reliable low-bandwidth connectivity for devices and sensors while enabling battery life of 5-10 years, depending on the application and environment.
- Ruckus and TEKTELIC provide complete infrastructure that can support any LoRaWAN™-certified solution such as streetlight management, environmental sensing, irrigation and leak detection, automated metering, asset tracking and preventive maintenance.
- By deploying their own LoRa network, organizations can streamline, accelerate and cost reduce solution testing and deployment to more rapidly capture 'Smart City' benefits.

### BACKGROUND

Cities, colleges and other organizations are actively evaluating Internet of Things (IoT) solutions to reduce costs, improve performance and enable new services. The success of IoT was recently documented in a McKinsey Global Institute study – 'SMART CITIES: DIGITAL SOLUTIONS FOR A MORE LIVABLE FUTURE.' McKinsey looked at Smart City and IoT initiatives in cities and towns worldwide and found dramatic benefits even though these solutions are still in the very early stages of full deployment.

A major challenge, and significant cost, of IoT deployments is adding the network connectivity to link thousands of devices spread across a city or campus to collect and analyze the data in order to drive improved decisions and efficiency. IoT devices typically require very little bandwidth but may be located in places that don't have easy access to power or traditional networking solutions, such as fiber, LTE or Wi-Fi.

Instead, cities need to use low power, wide area (LPWA) networking solutions such as NB-IOT or LoRa. While both of these offer very broad coverage and extended battery life, NB-IOT runs over LTE networks, so they must be purchased from and operated by mobile operators (MNOs). Other service providers, and cities that want to own and manage their own IoT networks are turning to LoRa.

TEKTELIC is a premier supplier of best-in-class LoRaWAN™ IoT Gateways, Sensors and custom applications. These elements combined provide a powerful end-to-end solution that can be easily, quickly and cost effectively deployed to address the most demanding IoT user requirements. With a growing portfolio of products, TEKTELIC has solutions to address a wide variety of vertical applications ranging from enterprise and commercial deployments to service provider and industrial solutions.

### SOLUTION

Ruckus and TEKTELIC are working together to make it easier for cities and other network operators to acquire, deploy and manage complete Smart City networking capabilities. Together, they provide a platform to deliver:

- Best in class Wi-Fi and broadband networking
- High performance networks
- Comprehensive management of the network, devices
- End to end security

Together, TEKTELIC and Ruckus simplify deployment of Smart City capabilities.

### Full Range of LoRa Gateways

The TEKTELIC LoRaWAN™ IoT Gateways are highly differentiated to optimize RF performance making them an ideal product for large scale industrial, commercial and carrier grade IoT deployments.

To address a broad range of vertical applications they are offered in various form factors supporting many different capabilities that can be matched with various deployment conditions and end user environments. They are offered in most of the major global ISM bands.

### LoRaWAN Sensors

TEKTELIC LoRaWAN™ Sensors are designed to be multifunctional, low cost and extremely battery efficient.

The software can be configured by the end user over-the-air to customize devices behavior, control its functionality and to optimize its battery consumption.

Since the sensors are based on a common hardware and software platform TEKTELIC can easily and quickly introduce new variants to address emerging or custom requirements.

### Ruckus IoT Controller

A virtual controller, deployed in tandem with a Ruckus SmartZone OS-based controller, that performs connectivity, device and security management functions for non-Wi-Fi IoT devices, and facilitates disparate endpoint management coordination and APIs for northbound integration with analytics software and IoT cloud services. For LoRa networks, the Ruckus IoT Controller will serve as the LoRa Network Server, providing an integrated IoT management platform across multiple connectivity options.

### IoT Applications

To rapidly introduce end-to-end IoT solutions TEKTELIC can provide custom applications and widgets to provide data analytics and visualization of the information that is sent by the end devices. This reduces the complexity, cost and time to market of introducing end IoT solutions to the market.

Also, the TEKTELIC solution is LoRa Alliance certified, so any LoRaWAN™ certified application, or application platform, can run over the TEKTELIC platform. The LoRa Alliance includes a large ecosystem of application providers with indoor and outdoor solutions including:

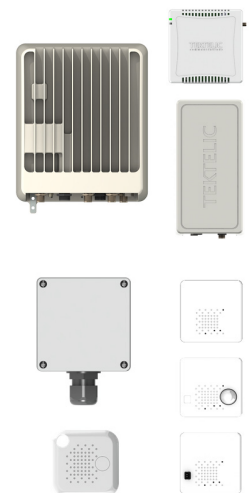
- Smart parking
- Smart Buildings
- Smart meters
- Waste management
- Air, Noise, Water, Environment Sensors
- Traffic Management
- Street lighting
- Flood detection
- Oil and Gas
- Urban Agriculture Management

Ruckus is a leader in Wi-Fi solutions including the #1 provider in both service provider and outdoor Wi-Fi. Cities choose Ruckus for public Wi-Fi due to the scalability of the solution and its patented Beamflex technology that delivers better connectivity and better coverage. In addition, Ruckus provides a complete networking platform including:

- A complete switching platform that provides industry leading scalability and PoE to power the outdoor access points
- A full range of indoor and outdoor Wi-Fi access points that can support video and IoT as well as high density public access
- An IoT gateway with support for multiple IoT protocols including BLE and ZigBee as well as LoRa
- Future proof innovation such as an easy to deploy LTE solution through OpenG

## SUMMARY

IoT has tremendous potential for cities to provide new services or make existing city services more efficient. In addition, cities are deploying public Wi-Fi to connect their city and provide broadband Internet services to citizens and guests. To be more successful in both Wi-Fi and IoT, cities can deploy a cost effective and flexible integrated network infrastructure. Ruckus and TEKTELIC have partnered to provide a Wi-Fi and IoT solution that provides cities with a simplified way to enable public Wi-Fi and new and efficient IoT services.



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