

## CASE STUDY



**citybeacon**  
hyperconnected



### OVERVIEW

CityBeacon kiosks equipped with Ruckus Wireless provide a smart hub for the city of tomorrow. CityBeacon supplies multifunctional intelligent street objects and sensors in combination with an open (cloud) platform—Smartcity OMS<sup>™</sup>. Ruckus is the global leader in service provider and outdoor Wi-Fi and is already connecting cities globally with its Smart Wi-Fi technology.

### THE COMBINED CITYBEACON AND RUCKUS SOLUTION DELIVERS

- CityBeacon kiosk—platform for multiple Smart City capabilities coupled with large digital displays that can deliver community messaging and paid advertising to fund broader Smart City applications
- Ruckus Smart Wi-Fi Technology—ultra-fast and secure Wi-Fi with carrier-class reliability and simple management to enable Smart City applications and deliver public internet access

### KEY BENEFITS

- Communications platform for the city staff, residents and visitors with opportunities for new revenue streams
- Smart hub with future capabilities to deliver wide range of services across the city in public locations
- Ultra-fast public Wi-Fi that includes comprehensive security and policy management for simple and secure public connectivity
- Intergrated IP Video and IoT sensors to enhance security and additional community services and applications

### THE CHALLENGE

There is a significant interest in cities worldwide on how they can leverage technology to increase overall efficiencies, deliver new services and improve the overall lives of their citizens.

While each city has their own unique challenges, offering public Wi-Fi is one service that virtually every city is interested in pursuing. There are multiple reasons for this including the fact that today many cities have 25-40% of their overall population that still don't have in-home broadband Internet access. This creates a digital divide that Cities can bridge if they are able to provide a public Wi-Fi Internet solution. Bridging this digital divide enables a more level playing field for students and adults to be able to research and leverage the vast amount of information available online, including basic homework requirements as well as job searches. In addition, city Wi-Fi has the potential to enable a variety of other applications that can be used to enhance the quality of life for citizens and visitors including public safety, gaining operational efficiencies, traffic monitoring and parking applications.

Even with these benefits, many cities are having challenges coming up with ways to fund public Wi-Fi. Ultimately, each city has different needs but it's clear they all need pre-integrated solutions that help drive sustainable business models. These business models can't require a large upfront financial or resource commitment since most cities aren't able to support these commitments.

### THE SOLUTION

The combined CityBeacon SmartCity OMS kiosk equipped with the Ruckus Smart Wi-Fi solution provides a fully integrated kiosk solution that can anchor and help fund city-wide public Wi-Fi along with a variety of applications. The CityBeacon is an ultramodern smart platform that can deliver relevant, current, visual and interactive city information. It has a unique and elegant design that includes a self-healing nano-tech shell. Key functionality provided includes:

- **Safety:** CityBeacon offers features for optimum city safety such as cameras, surveillance, management and emergency service features.
- **Communication:** CityBeacon is a unique, multifunctional and interactive platform for all physical, online and mobile communication, including Ruckus Smart Wi-Fi.
- **Mobility:** CityBeacon supplies smart applications for mobility such as parking and charging solutions, bicycle rental and public transport as well as IoT sensors to enable IoT-based applications



City Beacon kiosk



### RUCKUS T710 ACCESS POINT

Inside the CityBeacon kiosks is the Ruckus Smart Wi-Fi solution that includes carrier-class outdoor Access Points and a fully integrated switching platform. Ruckus Smart Wi-Fi features BeamFlex high-performance adaptive antenna technology that is designed to handle the densest urban areas. It combines a compact internal antenna array with sophisticated control software to continuously optimize the connection for each user. This highly efficient antenna technology enables better overall coverage so more devices can be connected across a larger area, reducing the number of Access Points needed. This enables easier, lower cost deployments and a solution that is easier and less complex to manage.

Ruckus Cloudpath software is a security and policy management solution that is ideally suited for municipal and community Wi-Fi and IoT applications. Cloudpath enables cities to provide each Wi-Fi user with a secure connection and apply custom network policies to each user and device based on unique and highly secure PKI certificates – the gold standard for network security. It includes a very simple portal that cities can customize to onboard the first-time users to the network. After the initial onboarding, Cloudpath provides simple and fully encrypted connections with no passwords to remember, change or replace. Cloudpath supports nearly all devices, including IoT sensors and IP video cameras as well as most phones, tablets and laptops.

Data collection and analytics including user foot traffic can provide cities with valuable data that can be used for planning purposes and potentially monetization. Ruckus Smart Cell insight is a highly scalable network analytics platform that provides detailed network usage and performance reporting. Ruckus Spot technology provides user foot traffic location analytics that highlight user density, traffic patterns, wait times and other metrics that can provide unique insight to city staff as well as local merchants.

The CityBeacons come with a complete solution to support project planning and design including location scouting, permits, installation, connectivity and linking your content (partners) and ecosystem of partners. In addition, a full content management system enables customized content based on your city dynamic and needs. This enables additional applications and can provide funding to offset cost of new applications or network expansion to under- or un-served areas. For example, in larger cities or high traffic areas like subway stations or a central business district, the CityBeacon kiosks can generate enough advertising revenue to fund their own deployment as well as large areas of free public Wi-Fi coverage.

With CityBeacon and Ruckus Smart City Wi-Fi, you can:

- Deploy a smart hub platform to enable applications for public safety, communications and other smart applications
- Provide secure, public Wi-Fi to all citizens to help eliminate the digital divide and create a thriving city environment
- Collect valuable data and user foot traffic to better understand the footfall traffic to support improved city planning and merchant marketing activities

Copyright © 2018 Ruckus Networks, an ARRIS company. All rights reserved. No part of this content may be reproduced in any form or by any means or used to make any derivative work (such as translation, transformation, or adaptation) without written permission from Ruckus Networks ("Ruckus"). Ruckus reserves the right to revise or change this content from time to time without obligation on the part of Ruckus to provide notification of such revision or change.

The Ruckus, Ruckus Wireless, Ruckus logo, Big Dog design, BeamFlex, ChannelFly, Edgelron, Fastron, HyperEdge, ICX, IronPoint, OPENG, Xclaim trademarks are registered in the U.S. and other countries. Ruckus Networks, Dynamic PSK, MediaFlex, Simply Better Wireless, SmartCast, SmartCell, SmartMesh, SpeedFlex, Unleashed and Ruckus Controller are Ruckus trademarks worldwide. Other names and brands mentioned in these materials may be claimed as the property of others.

Ruckus provides this content without warranty of any kind, implied or expressed, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Ruckus may make improvements or changes in the products or services described in this content at any time. The capabilities, system requirements and/or compatibility with third-party products described herein are subject to change without notice.



350 West Java Dr., Sunnyvale, CA 94089 USA

[www.ruckusnetworks.com](http://www.ruckusnetworks.com)