Ruckus
Simply Better Wireless.

data sheet

Ruckus SPoT™
Smart Positioning Technology

Industry's first completely cloud-based Smart Wi-Fi positioning service

Ruckus SPoT™ — based on the company's Smart Wi-Fi technology, is the *industry's first cloud-based location technology suite* that enables carriers, service providers and enterprises to deliver a wide range of location-based services. These value-added services enable them to increase profitability and enhance users' mobile, online experiences.

SPoT™ has a powerful combination of several unique features. It is completely cloud-based – so venues with Ruckus Smart Wi-Fi will not need any additional hardware to become "location intelligent". It is based on Ruckus' Smart Wi-Fi technology – giving it a high degree of accuracy and performance while remaining cost-effective. Businesses can also tap into a vast ecosystem of application developers and providers of third-party analytics to generate additional value from their investment in SPoT.

The Ruckus SPoT™ (Smart Positioning Technology) Location Suite comprises:

- **SPoT™ Positioning Engine** – accurately pinpoints in real time, a user's location in any indoor or dense urban environment
- **SPoT™ Location Analytics Dashboard** – provides real-time tracking of user movement and historical analysis of footfall trends
- **SPoT™ API** – a set of APIs that power a new generation of mobile apps, giving them "Location Intelligent" features such as the ability to locate users and engage or send them highly targeted messages in any venue with Ruckus Smart Wi-Fi installed and Ruckus SPoT™ enabled

How it works

Ruckus BeamFlex™ technology is combined with a variety of advanced location techniques such as RSSI trilateration, RF fingerprinting and techniques that take advantage of the constant travelling speed of radio waves and packets. As a result, Ruckus SPoT™ is capable of better pinpointing the location of users, depending on the number and density of access points used.

BENEFITS

Retail
Analyze marketing and merchandising effectiveness, shopper trending, improve customer engagement, Q buster features such as real-time heat-map views for floor managers.

Hospitality
Improve loyal customers' satisfaction with on-device features such as auto check-in, way-finding, and instant coupons for amenities.

Transportation Hubs
Enhance traveller experience with intuitive on-mobile engagements; improve efficiency of the entire venue or sub-zones with real-time heat maps, statistical footfall and dwell-time data.

Shopping Malls
Identify areas of heavy usage, improve traffic flow, engage customers with way-finding and contextual coupon serving.

Healthcare
Accurate location data provides asset tracking, indoor navigation, and personnel locations.

Education
Tracks assets such as tablets, navigate guests and students around campus.

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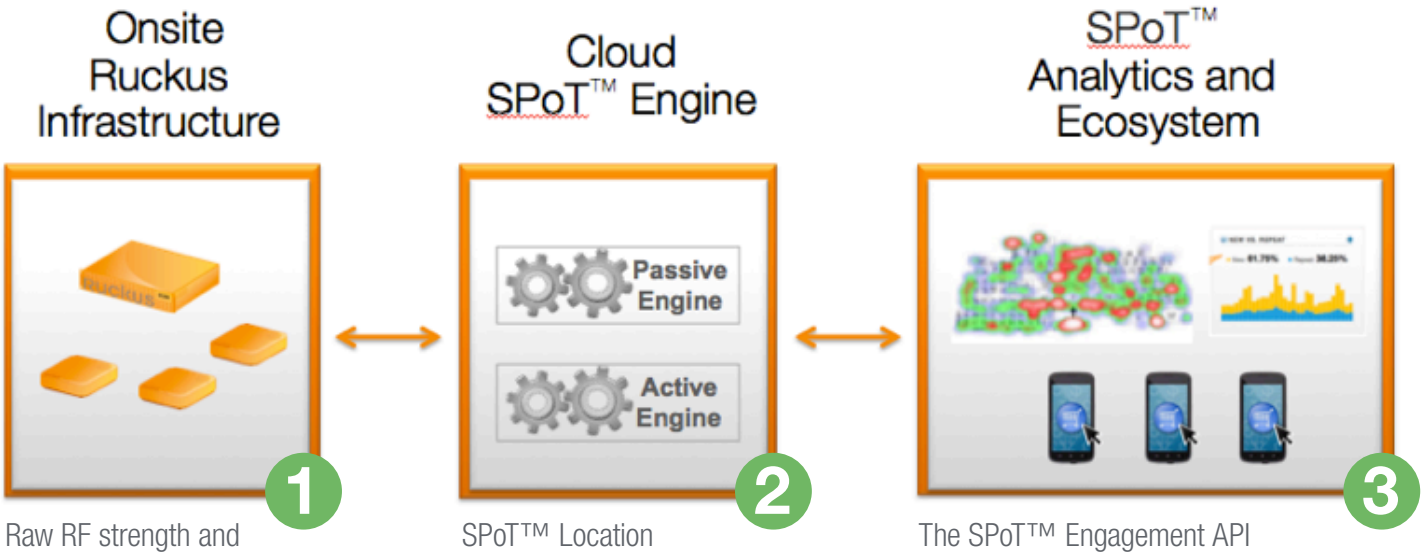
DIAGRAM FLOW OF THE SOLUTION



Raw RF strength and timing data is collected from Ruckus Smart Wi-Fi Infrastructure.

SPoT™ Location Engine synthesizes data into usable location information.

The SPoT™ Engagement API delivers easy to use, customizable location data as needed for either the Ruckus SPoT™ Dashboard or a 3rd party location application.

A "Location Intelligent" SPoT™Location Ecosystem

The SPoT™ Location Ecosystem is a Ruckus program for third-party mobile and analytics application developers. These developers create business and consumer applications for carriers, service providers, enterprises, schools and other businesses and organisations. Through the program, Ruckus provides an open API set for the delivery of comprehensive, accurate and near-real-time location information — powering services such as Location Analytics for better customer insights, and enhanced user engagement and experiences on mobile apps.

The first Ruckus SPoT™ Location Ecosystem partners include location analytic companies like Euclid and SkyRove, and mobile application development partners including FrontPorch, Sanginfo, PurpleWi-Fi, TechStudio and ITC Infotech.

Features and Technical Details

ZD and AP support	• All ZD1K, 3K and 5K platforms supported • All 11n APs supported (for LBS footfall analytics solution. For real-time tracking service, a limited set of APs will be supported. Contact Ruckus for more details) • Min ZoneFlex OS version supported: 9.8
Positioning Engine	• Software running in the cloud • Cloud scaled to support virtually limitless venues and customers • Secure connectivity to downlink ZD/AP • Secure RESTful API support for north-bound eco-system solution integration • Map input function to place wifi client on the map • Accuracy enhanced by client RSSI and venue RF fingerprinting methodology • Engine algorithms are enhanced continuously to improve accuracy and efficiency
Location Analytics Dashboard	• Footfall traffic visualization via heat-map, by zone, by floor, by venue • View hourly, daily, weekly and monthly views • View historical data up to 2yrs • Instant heat-map (per-minute, auto-refreshed) • Total footfall counter • Repeat vs. new counter • Repeat count distribution • Average dwell time and dwell time distribution
API	• Venue, zones, floors information access • WiFi client location data timestamp, zone-info, in/out
Venue Mapping	• Customer sourced maps are converted to vectorized maps with enhanced details, multi-zones
Venue Calibration	• A one-time calibration of the venue is required to train the location engine for higher accuracy location calculation • Calibration is done via freely distributed location calibration mobile app running on android or iOS device
SPoT™ Ecosystem	• SPoT API based ecosystem partnership solutions include advanced analytics solutions, custom business integration processes, and mobile app solutions for enhanced customer engagement
Cloud Service	• Cloud service hosted by world-leading IAAS vendors • Data center presence around the world
Security and Privacy	• All data is encrypted end-to-end: south-bound between ZD/AP and SPoT™ Positioning Engine, and also between SPoT™ Positioning Engine and analytics/mobile app APIs • PII data (MAC address) is hashed before storage

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