data sheet

Ruckus SPoT™
Smart Positioning Technology

SPoT THE BENEFITS:

Retail
Analyze marketing and merchandising effectiveness, shopper trends, and improve customer engagement.

Hospitality
Improve customer satisfaction with device features such as auto check-in, way-finding, and instant amenity promotions.

Transportation
Hubs Enhance the traveller experience by improving venue efficiency and sub-zones via real-time heat maps, statistical foot-fall and dwell-time data.

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

Education
Track assets such as tablets, laptops, and smart phones. Enhance the student experience by having automated classroom attendance based on location.

INDUSTRY'S MOST FLEXIBLE SMART WI-FI POSITIONING SERVICE

Ruckus Smart Positioning Technology (SPoTTM) combines unique advantages including options for public cloud-based services or a locally hosted VM, and a choice of location metrics that best fits a business' needs. Enterprises or Managed Service Providers can use SPoT APIs to incorporate location data into their own applications. A robust ecosystem of partners provides additional leverage of SPoT for applications in retail, transportation, education, and other vertical markets.

SPoT comes in two levels of service:

- **SPoT Point:** detects client locations in real-time through drop-pin analytics, with a range of 5-10 meters at 80% confidence. SPoT Point is well suited for high-density deployments.SPoT Presence services provide venues with low access point density with footfall analytics and device positioning at proximity accuracies.

- **SPoT Presence:** uses proximity analytics to detect overall number of devices location to the nearest AP. SPoT Presence is a cost-effective solution with location analytics that is ideal for smaller venues with fewer APs.

Both versions of SPoT include Engagement APIs- a set of APIs that enable Ruckus Ecosystem Partners to create a new generation of mobile applications and location intelligent features. Through these joint solutions, enterprises will be able to locate wifi clients, send targeted information, and analyze marketing effectiveness.
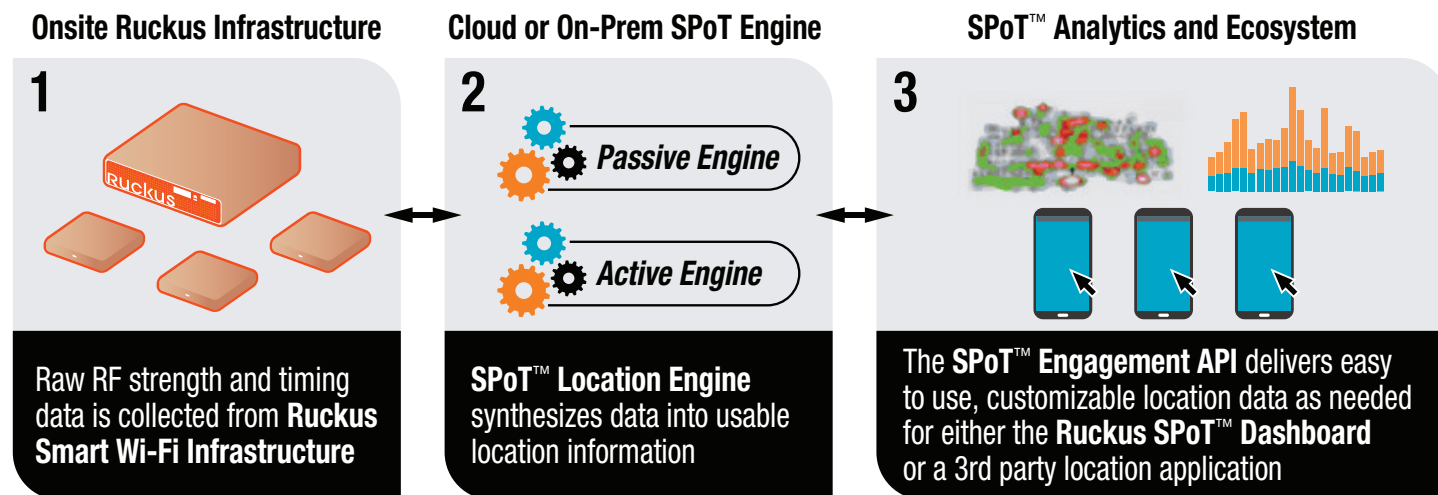
Ruckus SPoT can be purchased as a cloud-based subscription, or as Virtual SPoT, a virtualized instance deployed on-premise with no recurring costs. Virtual SPoT works on VMWare ESXi to deliver Point or Presence location features from Enterprise or Managed Service Provider data centers.

Ruckus SPoT™
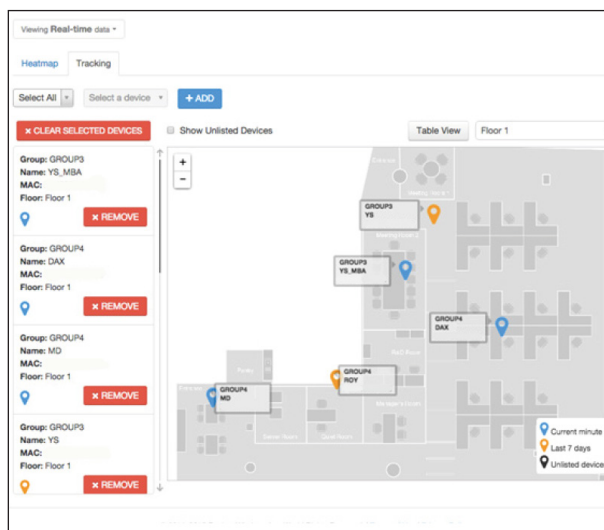Smart Positioning
Technology

HOW IT WORKS

Using RF fingerprinting, Ruckus SPoT is capable of better pinpointing the location of devices, depending on the number and density of access points used.

Onsite Ruckus Infrastructure

1

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

Cloud or On-Prem SPoT Engine

2

Passive Engine

Active Engine

SPoT™ Location Engine synthesizes data into usable location information

SPoT™ Analytics and Ecosystem

3

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

SPoT Key Advantages

- Virtually unlimited scale for device positioning
- Unlimited scale for device positioning
  - True cloud architecture allows large deployment scalability
- True real-time positioning
  - Dynamically select update intervals to allow up to per-second positioning
- Utilizes probe and data packets for more accurate location
- Detect associated and unassociated WiFi devices
- Multi-venue support from a single dashboard
- Easy deployment
  - Built-in mapping, mobile app for on-site provisioning and testing, minimal configuration on the controller
- SPoT Tracker
  - Quickly find the position of your Wi-Fi assets
  - See last known position of Wi-Fi assets up to 7 days back
  - See position of foreign Wi-Fi devices

- Create Your Own Map (CYOM)
  - Simple Mapping tool to create and edit floor plans
- Mac Address Exclusion
  - To exclude resident WiFi devices from Location analytics

Ruckus SPoT™
Smart Positioning Technology

Features and Supported Platforms

Features and Supported Platforms	• All ZoneDirector and SmartZone platforms (SZ100, SCG200, vSZ) • All ZoneFlex 802.11n/ac APs supported • Min OS version Supported: ZoneDirector 9.8 or SmartZone 3.0
SPoT Location Engine (cloud-based)	• Web scale service running in the cloud • Cloud scaled to support limitless venues and client devices • Secure connectivity to downlink ZD/AP • Secure RESTful API support for north-bound and south-bound ecosystem solution integration • Enhanced Accuracy by client RSSI and venue RF fingerprinting • Engine algorithms are enhanced continuously to improve accuracy and efficiency
SPoT Point	• Has 5-10 meter accuracy with 80% confidence
SPoT Presence	• Displays clients positioned to the nearest AP. Heat map will appear as colored spots around the AP.
Virtual SPoT	• Uses VMWare Vsphere version 5.x or higher • Virtual SPoT is dependent on user hardware. It supports multiple venues with one Virtual SPoT instance • Secure connectivity to downlink controller and AP • Secure RESTful API support for north-bound and south-bound ecosystem solution integration • Both SPoT Point and Presence available for user selection
Analytics Features	• Footfall traffic visualization via heat map, by zone, floor, or venue • View hourly, daily, weekly, and monthly data up to 30 days with Presence, 90 days with Point. • Real time heat-map (per-minute, auto-refreshed) and total footfall counter • Real-time Wi-Fi asset tracker • Repeat versus new device counter • Repeat count distribution • Average dwell time and distribution
Supported APIs	• Venue, zones, floors • Wi-Fi client location data, timestamp, client MAC address, zone info, in/out • APIs for all the analytics reports in SPoT Dashboard
Mapping of Venue	• Maps can be created by using any map image (jpg, jpeg, and png format) • Create Your Own Maps allows for simple map creation and map updating. Maps can be created in minutes
Calibration of Venue	• Optional one-time calibration of venue is available to train the location engine for higher location accuracy calculation. This optional process is completed by the free Ruckus SPoT mobile app for Android and iOS devices.
Security and Privacy	• All data is encrypted end-to-end: south-bound between controller/AP and SPoT engine, and also between SPoT engine and analytics/mobile app APIs. • Customer has option to hash the PII data (MAC address). • Cloud Service • Cloud service hosted by world-leading IAAS vendors. • Data center presence across the world.

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