



data sheet

BENEFITS

Integrated support for Wi-Fi and small cell radios

Enables a more complete macro cellular underlay in dense urban areas

Compact form factor for ease of deployment on light poles

Ability to integrate a Wi-Fi AP and a small cell into one compact node makes site acquisition much easier

SmartMesh for wireless backhaul

Is essential in backhauling traffic from light poles and other types of street furniture

Integrated GPS receiver

Enables location-based services

Spectrum analysis

Automatically scans all available channels for RF activity. Can be used for dynamic frequency selection (DFS) and for reporting purposes

AC power and power-over-Ethernet

AC power is required on most light pole deployments and power-over-Ethernet on most stadium/arena deployments

Adaptive antenna technology

BeamFlex technology increases gain by up to 6 dB and interference mitigation by up to 15 dB which greatly improves the user experience in high-density environments

Polarization diversity with maximal ratio combining

Enables a superior user experience regardless of the physical orientation of the mobile device

SmartCell™ 8800

SMART WI-FI DUAL-BAND OUTDOOR AP WITH INTEGRATED SMALL CELL OPTION

The First Multi-Function Small Cell Node Purpose Built to Meet Deployment Challenges of Real-World Urban HetNets

The Ruckus SmartCell 8800 Series represents a completely new class of outdoor access point (AP) technology designed specifically to address the capacity and siting challenges mobile operators face in deploying heterogeneous networks in dense urban environments. It is the first high-performance dual-band 802.11n outdoor AP with integrated LTE (or 3G) small cell support. By integrating this capability into the SC 8800, the mobile operator can provide both a Wi-Fi and LTE (or 3G) underlay to offload heavily congested macro cellular networks in dense urban environments.

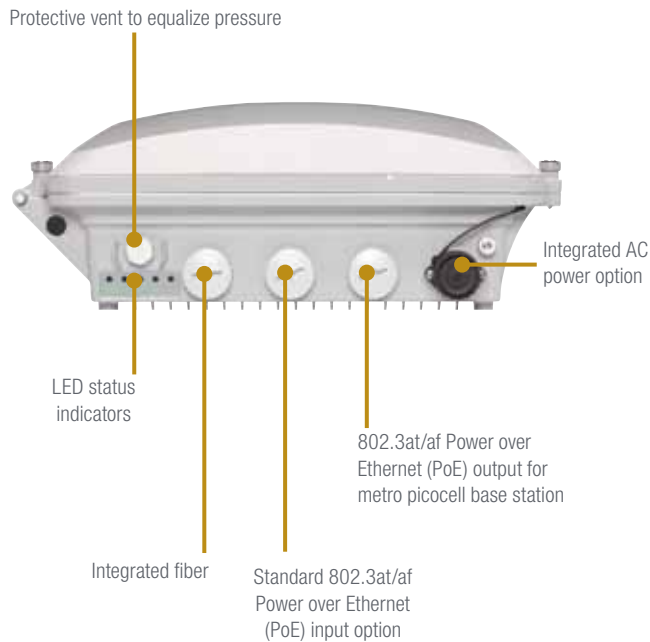
Site acquisition is always an issue when deploying small cells, and this is made much easier by integrating a small cell into a Wi-Fi access point as the latter is an operator neutral solution that is preferred by most site owners. The SC 8800 can also provide wireless backhaul using Wi-Fi technology in the 5 GHz band. Other capabilities include support for AC power, power-over-Ethernet, integrated GPS receiver, integrated spectrum analysis, BeamFlex adaptive antenna technology, and much more.

A key part of the Ruckus value proposition is our BeamFlex technology with integrated antennas, which steers RF energy toward the user that it is communicating with and away from all other AP's in close proximity. This increases the gain by as much as 6 dB and the interference mitigation by as much as 15 dB. The latter is essential in most high-density deployments where interference is almost always the limiting factor.

The SmartCell 8800 AP can be centrally managed from the mobile packet core using the SmartCell Gateway 200, the industry's most scalable and versatile 3GPP compatible WLAN Gateway. The SCG 200 also supports capabilities like Hotspot 2.0 which will be essential in the rollout of carrier-class Wi-Fi solutions.

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MODULAR, DUAL-BAND 802.11N
OUTDOOR AP WITH INTEGRATED
SMALL CELL OPTION



FEATURES

- Concurrent dual-band (2.4/5 GHz) support
- Adaptive antenna technology and advanced RF management
- Up to 6 dB signal gain / 15 dB interference mitigation
- Chip based transmit beamforming increasing signal gain up to 3 dB when used with supported clients
- Automatic interference mitigation, optimized for high-density environments
- PoE output supports up to 25 Watts to power small cells and surveillance cameras
- Polarization diversity for optimal mobile device performance
- Integrated AC power
- IP-67 rated, -40°C to +65°C
- Integrated GPS for location-based services
- Wall or pole mountable
- Small, lightweight, and sleek form factor
- 2 to 4 times extended range and coverage
- Multicast IP video streaming
- 900 Mbps of user throughput (450 Mbps/radio)
- 3x3:3 radio support with a 120° beam width
- 32 BSSIDs with unique QoS and security policies
- Auto packet classification and priority for latency-sensitive traffic
- Standalone or centrally managed by ZoneDirector, SCG 200, or FlexMaster
- Spectrum analysis
- Dynamic, per-user rate-limiting for hotspot WLANs
- WEP, WPA-PSK (AES), 802.1X support for RADIUS and Active Directory*
- SmartMesh Networking*
- Zero-IT and Dynamic PSK*
- Admission control/load balancing*
- Band steering and airtime fairness support
- Captive portal and guest accounts *

*When used with Ruckus ZoneDirector controller

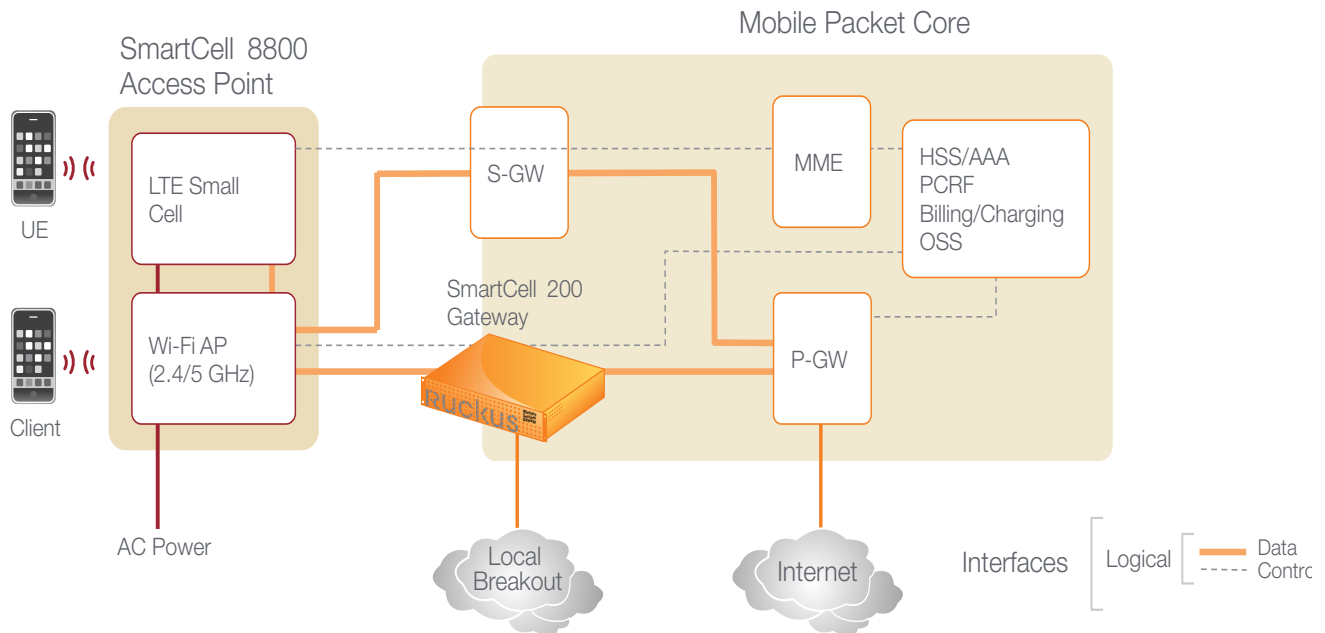
SmartCell™ 8800

**MODULAR, DUAL-BAND 802.11N
OUTDOOR AP WITH INTEGRATED
SMALL CELL OPTION**



ESSENTIAL INGREDIENT FOR DENSE URBAN SMALL-CELL NETWORKS

SmartCell 8800 enables a new class of easy-to-deploy truly heterogeneous networks with unprecedented capacity density from multiple technologies



Specifications

PHYSICAL CHARACTERISTICS

POWER	<p>AC Input</p> <ul style="list-style-type: none"> Idle: 8W Typical: 10W Peak: 18W (PoE output off) Peak: 50W (PoE output 25W) <p>PoE Input</p> <ul style="list-style-type: none"> Idle: 6W Typical: 8W IEEE 802.3af/at
PHYSICAL SIZE	<ul style="list-style-type: none"> 38 cm (L), 31 cm (W), 13 cm (H)
WEIGHT	<ul style="list-style-type: none"> 10 Kg (22 Lbs.)
ETHERNET PORTS	<p>PoE Input</p> <ul style="list-style-type: none"> 10/100/1000Base-T 802.3, 802.3u, 802.3ab, 802.3at/af PoE PD Input up to 44W with high power PoE injector Jumbo frame support* (2000 byte MTU) <p>PoE Output:</p> <ul style="list-style-type: none"> 10/100/1000Base-T 802.3,802.3u, 802.3ab, 802.3at/af PoE PSE Output up to 25W Jumbo frame support (2000 byte MTU) PoE power out powered with AC in or 60W PoE injector

RF	
ANTENNA	<ul style="list-style-type: none"> >16 patterns
MAXIMUM EIRP**	<ul style="list-style-type: none"> 41 dBm (2.4 GHz); 43 dBm (5 GHz)
PHYSICAL ANTENNA GAIN	<ul style="list-style-type: none"> 11 dBi (2.4 GHz); 13 dBi (5 GHz)
BEAMFLEX* SINR TX GAIN	<ul style="list-style-type: none"> Up to 6 dB
BEAMFLEX* SINR RX GAIN	<ul style="list-style-type: none"> Up to 4 dB
INTERFERENCE MITIGATION	<ul style="list-style-type: none"> 15 dB
MINIMUM RX SENSITIVITY	<ul style="list-style-type: none"> -101 dBm (2.4GHz); -97 dBm (5 GHz)

NOTE: BeamFlex gains are statistical system level effects translated to enhanced SINR based on observations over time in real-world conditions with multiple APs and many clients

PERFORMANCE AND CAPACITY

MAX THROUGHPUT	<ul style="list-style-type: none"> 900 Mbps
CONCURRENT STATIONS	<ul style="list-style-type: none"> 500
SIMULTANEOUS VoIP CLIENTS	<ul style="list-style-type: none"> Up to 30

MANAGEMENT

DEPLOYMENT OPTIONS	<ul style="list-style-type: none"> Standalone (individually managed) Managed by ZoneDirector Managed by FlexMaster Managed by SmartCell™ Gateway (SCG 200)
CONFIGURATION	<ul style="list-style-type: none"> Web User Interface (HTTP/S) CLI (Telnet/SSH), SNMP v1, 2, 3 TR-069 vis FlexMaster

WI-FI

STANDARDS	<ul style="list-style-type: none"> IEEE 802.11a/b/g/n 2.4GHz and 5GHz concurrent operation
DATA RATES	<ul style="list-style-type: none"> 802.11n: 802.11n: 6.5 Mbps – 216.7 Mbps (20MHz); 13.5 Mbps – 450 Mbps (40MHz) 802.11a: 54, 48, 36, 24, 18, 12, 9 and 6 Mbps 802.11g: 54, 48, 36, 24, 18, 12, 9 and 6 Mbps
RADIO CHAINS	<ul style="list-style-type: none"> 3x3:3
FREQUENCY BAND	<ul style="list-style-type: none"> IEEE 802.11n: 2.4 – 2.484 GHz and 5.15 – 5.85 GHz IEEE 802.11a: 5.15 – 5.875 GHz IEEE 802.11g: 2.4 – 2.484 GHz
BSSID	<ul style="list-style-type: none"> 32 per radio (64 per AP)
ADVANCED RADIO FEATURES	<ul style="list-style-type: none"> BeamFlex Adaptive Antenna Technology TxBF, LDPC, and ML receiver GPS Spectrum Analysis
WIRELESS SECURITY	<ul style="list-style-type: none"> WEP, WPA-PSK, WPA-TKIP, WPA2 AES, 802.11i Authentication via 802.1X, local authentication database, support for RADIUS and ActiveDirectory
CERTIFICATIONS	<ul style="list-style-type: none"> U.S., Canada, Europe, Argentina, Australia, Brazil, Chili, China, Columbia, Costa Rica, Hong Kong, India, Indonesia, Israel, Japan, Korea, Malaysia, Mexico, New Zealand, Philippines, Peru, Singapore, South Africa, Taiwan, Thailand, UAE, Vietnam WEEE/RoHS compliance Wi-Fi Alliance Certification (Wi-Fi Certified™)

** Maximum power varies by country

Product Ordering Information

MODEL DESCRIPTION

SmartCell™ Outdoor Access Point	
901-8800-XX01	SmartCell™ 802.11n Outdoor Wireless Access Point, 2.4 GHz/5 GHz antenna. Includes mounting kit, 1 year warranty. Does not include PoE Injector. Does not include AC Power Cord.

Optional Accessories

902-0180-XX00	60W Power over Ethernet (PoE) Injector (10/100/1000 Mbps) quantity of 1 unit US Plug
902-0113-0000	SC 8800 Fiber interface kit. (SPF optics not included)
902-0183-0000	Spare Data Connector for contains 1 weatherizing data cable gland
902-0185-0000	Spare Weatherized AC Connector ; 4-pin AC connector

PLEASE NOTE: When ordering you must specify the destination region by indicating -US, -WW, -IL instead of -XX.