



8000 Series

Motorola Femtocell Access Point

The Motorola 8000 Series delivers a dedicated coverage solution for indoor and residential situations, providing operators with a complete solution: a family of small, low-cost, low-power, easy-to-install 3G access points that can be integrated and provisioned into existing macro networks very quickly and support existing 3G handsets and devices.

HIGHLIGHTS

- Easy to use and simple to set-up with numerous built-in security features.
- Plug-n-play — plugs into any broadband connection (Cable or DSL).
- Quality-of-Service (QoS) for voice over data prioritization, enabling one to talk on the phone while using the Internet, without a noticeable reduction in voice quality.

3G In-building coverage

The majority of cellular calls occur indoors; however, indoor 3G coverage is generally poor. The Motorola 8000 Series extends 3G coverage indoors, while offloading the macro network.

Remote management

The Motorola 8000 Series is configured to enable automated service provisioning, embedded software updates, and service activation without subscriber intervention or unnecessary truck-rolls for “plug-n-play” deployment and operations.

Leveraging Deep Expertise in Home Networking

Motorola's KeepMeConnected™ Femtocell solutions leverage Motorola's deep expertise in home networking to enable the future of the digital home. Motorola is a global leader in delivering high-volume CPE and in deploying mobile and fixed networks across all technologies that are supported by world-class experience in Operations, Administration, Management, and Provisioning (OAM&P).

The Motorola 8000 Series Femtocell Access Points enhance end-user experiences, thereby limiting churn and increasing Average Revenue Per User (ARPU) through better home coverage and new multimedia applications. Motorola's KeepMeConnected end-to-end Femtocell solutions include a RAN gateway/concentrator, CPE management systems, and services.

Motorola 8000 Series Access Points

The Motorola 8000 Series access points are the ideal choice for cost-effectively connecting residential subscribers to any broadband network for high-speed Internet access. They allow subscribers to connect their 3G mobile phones to their home's LAN network at High-Speed Downlink Packet Access (HSDPA) speeds. Service providers can also offer subscribers Motorola Femtocell Ethernet Gateways (8100 Series), which adds an 802.11b/g Wi-Fi® access point, a four-port Ethernet router, and a voice-over-IP (VoIP) port into one compact unit, eliminating the cost and clutter of multiple units.

DATA SHEET

8000 Series
Motorola Femtocell Access Point

Extending 3G Coverage

The 8000 Series extends 3G coverage indoors via the home broadband connection, while allowing service providers to reduce operational costs by offloading the macro network. Consumers benefit from excellent indoor coverage, high data rates, and the convenience of using their existing 3G handsets inside the home.

Plug and Play Installation with “Phone Home” Provisioning

Featuring Motorola’s legendary ease of use, reliability, and security, the 8000 Series also includes automated provisioning capabilities. Upon first connection to the network, an 8000 Series access point is configured to automatically “phone home” to the service provider, enabling automated service provisioning, embedded software updates and service activation, all without subscriber intervention. They are supported by the Motorola NBBS Device Management System, a world-class leading customer premises equipment service management platform that has been developed to the DSL Forum TR-069 specification. It allows service providers to expand broadband service revenues while reducing operational and support costs through automated service provisioning and comprehensive device management.

Comprehensive Remote Manageability

The 8000 Series is designed for Service Assurance – Quality of Service at the edge of the network. The 8000 Series can be centrally managed by Motorola’s NBBS platform, which provides centralized service and device management and integrates seamlessly with existing operational support and customer relationship management systems.

The 8000 Series unlocks the potential of offering a dedicated coverage solution for indoor/residential situations, providing operators with a complete solution: a family of small, low-cost, low-power, easy-to-install 3G low-power access points that can be integrated and provisioned into existing macro networks very quickly and support existing 3G handsets and devices.

Benefits

Operators: Motorola’s 8000 Series enables operators to provide higher-quality and higher-performance wireless voice and real-time data services to their residential and small home office customers. In addition, they enable a lower cost of delivery of wireless traffic in comparison to the macro cell network. The 8000 Series may be used as part of integrated ‘triple’ or ‘quad play services’, which meet the consumers’ communication needs, increasing competitiveness and customer retention for the operator. The 8000 Series:

- Reduces operational expenses by offloading of cellular macro network, when calls are made via the 8000 access point
- Increases customer satisfaction from improved in-home coverage and reliability, a key user network quality metric
- Improves customer retention through unique value added services
- Enables the operator with the ability to offer QoS for voice over data prioritization

Consumers: For Consumers, the benefits of Motorola’s 8000 Series include a seamless communication experience as they roam from inside to outside their homes; reduced in-home call charges; excellent indoor coverage; and consolidated billing all from their existing handsets. Consumers benefit from the convenience of using their mobile handset with its personal phonebook and other cool handset features, without the concerns of poor call quality or additional cost.



Specifications

STANDARDS/ COMPLIANCE

3GPP Spec Version	3GPP Release 5 2005-06
3G Radio Interface	UMTS WCDMA FDD

USER

Number of Users	Maximum of 20 users in Idle Mode
Cell Radius	200m Maximum (15m – 25m in a typical in-building deployment scenario)
UE Speed	<3.5 miles/hour

TRAFFIC CHANNELS

Signaling	3.4 Kbps and 13.6 Kbps signaling SRBs; 12.2 Kbps AMR voice, bi-directional (four users); 64 Kbps circuit-switched multimedia, bi-directional (four users); 64 Kbps packet-switched data, bi-directional (four users); 128 Kbps downlink packet-switched data, 64 Kbps uplink (four users); 384 Kbps downlink packet-switched data, 128 Kbps uplink (two users)
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HSDPA CHANNELS

Maximum Number of Codes	10
Maximum number of HS-SCCH	2
HS-PDSCH modulation	QPSK, 16QAM
Supported UE categories	1–8, 11, 12
Peak Data Rate	3.6 Mbps (upgradeable to 7.2 Mbps; uplink 128 Kbps and 384 Kbps PS)
HSUPA Channels	Future Support for HSUPA (optional feature delivered by software upgrade)

RADIO ACCESS LAYER

NAS (Non Access Stratum)	SS, SMS, CC, SM, MM, GMM
AS (Access Stratum)	PDCP, RRC, RLC, MAC
Transport Channels	BCH, PCH, RACH, FACH, DCH, HS-DSCH
Physical Channels	SCH, CPICH, P-CCPCH, S-CCPCH, PICH, AICH, DPCH, PRACH, DPDCH, DPCCH, HS-DPCCH, HS-PDSCH, HS-SCCH

PHYSICAL LAYER

Frequency Band	Band 1; Receive 1920 MHz – 1980 MHz; Transmit 2110 MHz – 2170 MHz
Transmit Power	10dBm Maximum
Node B Performance	Compliant to TS25.141 Requirements for Local Area Node B (except max. TX power)
Dynamic Power Control	DPC Modes 0 and 1

NETWORKING LAYER

Security	IPSec ESP, IKEv2 (with NAT traversal), EAP-AKA/SIM
Protocols	IPv4, IPv6, ARP, ICMP, TCP, UDP, SNMP
Voice Gateway	SIP, SDP, RTP, RTCP
Core Network Interface	SIP/SDP Pre-IMS and 3GPP Rel 6 IMS compliant

Logical Interfaces

Radio Network Interface	3G UMA (variant), lub over IP (optional)
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EXTERNAL INTERFACES

SIM card	Push-to-insert, push-to-release type SIM card holder
Number of antennas	1 (internal to the unit)

ENVIRONMENTAL

Operating Temperature	0° C to 40° C (32° F to 104° F)
Storage Temperature	0° C to 70° C (32° F to 158° F)
Relative Humidity	20 – 80% Non-Condensing
External Power	12 VDC, 1000mA
Power	+6 VDC at 2.5A maximum from external power supply adaptor (100 – 240V 50 – 60Hz AC)
Acoustic noise	<25 dB

WEIGHT AND DIMENSIONS

Weight	0.9 lb (408g)
Dimensions	7.9 in L x 4.6 in W x 3.9 in H (200 mm x 118 mm x 98 mm)
Horizontal desktop placement or vertical standing	

All features, functionality, and product specifications are subject to change without notice or obligation.



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