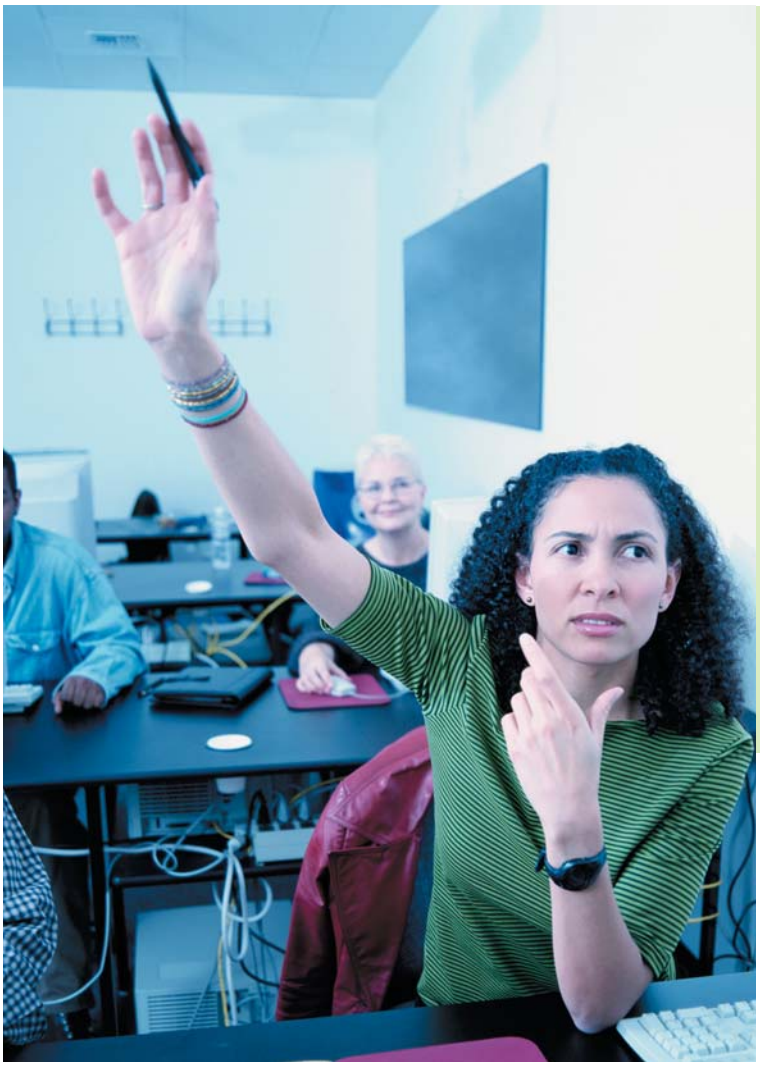
Motorola
Wireless Networking Solutions

Products at a Glance



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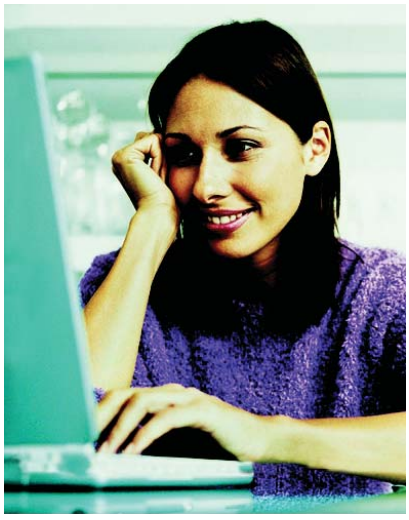

WAN — Outdoor Products

Product	CANOPY ACCESS POINT	CANOPY ADVANTAGE ACCESS POINT
Motorola Part Number	***DES ONLY*** 2400APBC 2.4 GHz 5200APBC 5.2 GHz 5700APBC 5.7 GHz 9000APBC* 900 MHz 9000APCBC** 900 MHz ***AES (128-BIT ENCRYPTION)[1]*** 2401APBC 2.4 GHz 5201APBC 5.2 GHz 5701APBC 5.7 GHz 9001APBC* 900 MHz 9001APCBC** 900 MHz *Ships standard with integrated antenna. **Available with optional connectorized antenna. [1] All components in the Motorola Canopy System must be AES compatible.	***DES ONLY*** 2450APBC 2.4 GHz, Advantage AP 5250APBC 5.2 GHz, Advantage AP 5750APBC 5.7 GHz, Advantage AP ***WITH AES (128-BIT ENCRYPTION)[1]*** 2451APBC 2.4 GHz Advantage AP 5251APBC 5.2 GHz Advantage AP 5751APBC 5.7 GHz Advantage AP [1] All components in the Motorola Canopy System must be AES compatible.
Features and Benefits	• Affordable high-speed data access • No additional software to install • Upload and download speeds as fast or faster than dial-up, ISDN, DSL, MMDS, cable or satellite access • No need to run overhead and in-ground wire • Easily interfaces with your existing Local Area Network (LAN) • Security with over-the-air encryption scrambles data bits and prevents interception	• Increased throughput, up to 14 Mbps, when used with Advantage SM in point-to-multipoint sectors • Lower latency with Advantage AP, reduced from 20 msec to 6 msec, enables support of VoIP and online gaming • Committed Information Rate (CIR), network operators can meet Service Level Agreements (SLA) and configure minimum throughput to all subscribers in sector • Software Defined Radio not dependent on chip set, upgradeable • Network Operators can extend system life through software enhancements
Applications	For underserved areas or locations where infrastructure is non-existent. **School campuses**—broadband off campus access to university network **Enterprises**—affordable and productive access to corporate campuses **Security**—video camera interface to improve parking lot monitoring **ISPs**—rural service provider can expand internet access with a cost-effective system to meet current and future needs **Healthcare**—manage Digital Imaging and Communications in Medicine (DICOM) applications from image devices, such as ultrasound, nuclear medicine, MRI and others	• Carrier network operators can offer and provide VoIP, video and high throughput services to customers as alternative to DSL or T1/E1 services • Enterprises, Educational Facilities and Healthcare Providers • Private network operators can support distance learning, video conferencing or high speed data transfer on a private, secure network • Fraction of the cost of subscribing to DSL or T1 services
Ships with	Other components may be required, depending upon application and/or configuration **Power supply sold separately**	Other components may be required, depending upon application and/or configuration **Power supply sold separately**
Over the Air Data Rate	10 Mbps at 2.4 GHz, 5.2 GHz, or 5.7 GHz, NA at 900 MHz	10 Mbps or 20 Mbps depending on Line of Site range
Aggregate Throughput	6 Mbps at 2.4 GHz, 5.2 GHz, or 5.7 GHz, 2.2 Mbps at 900 MHz	Up to 14 Mbps
Range	• Up to 40 miles (64.4 km) at 900 MHz, with integrated antenna, clear Line of Site • Up to 15 miles (24 km) at 2.4 GHz, with passive reflector on the Subscriber Module side, clear Line of Site • Up to 10 miles (16 km) at 5.7 GHz, with passive reflector on the Subscriber Module side, clear Line of Site • Up to 5 miles (8 km) at 2.4 GHz, w/integrated antenna, clear Line of Site • Up to 2 miles (3.2 km) at 5.2 GHz, w/integrated antenna, clear Line of Site	• At 5.2 and 5.7 GHz 14 Mbps with Line of Site of 1 mile and 7 Mbps with Line of Site of 2 miles • At 2.4 GHz 14 Mbps with Line of Site of 2 miles and 7Mbps with Line of Site of 5 miles
Frequency	Available in 2.4 GHz, 5.2 GHz, 5.7 GHz or 900 MHz See part numbers listed above	Available in 2.4 GHz, 5.2 GHz and 5.7 GHz See part numbers listed above
Security	Available in Data Encryption Standard (DES) or Advanced Encryption Standard (AES) 128-bit key* See part numbers listed above	Available in Data Encryption Standard (DES) or Advanced Encryption Standard (AES) 128-bit key* See part numbers listed above

CANOPY SUBSCRIBER MODULES

DES ONLY

2400SMBC	2.4 GHz
5200SMBC	5.2 GHz
5700SMBC	5.7 GHz
9000SMBC*	900 MHz
9000SMCBC**	900 MHz

AES (128-BIT ENCRYPTION)[1]

2401SMBC	2.4 GHz
5201SMBC	5.2 GHz
5701SMBC	5.7 GHz
9001SMBC*	900 MHz
9001SMCBC**	900 MHz

*Ships standard with integrated antenna.
**Available with optional connectorized antenna.
[1] All components in the Motorola Canopy System must be AES compatible.

- Affordable high-speed data access
- Small and easy-to-install Subscriber Module
- No additional software to install
- Upload and download speeds as fast or faster than dial-up, ISDN, DSL, MMDS, cable or satellite access
- No need to run overhead and in-ground wire
- Easily interfaces with your existing Local Area Network (LAN)
- Security with over-the-air encryption scrambles data bits, preventing interception

For underserved areas or locations where infrastructure is non-existent.

School campuses—broadband off campus access to university network
Enterprises—affordable and productive access to corporate campuses
Security—video camera interface to improve parking lot monitoring
ISPs—rural service provider can expand internet access with a cost-effective system to meet current and future needs
Healthcare—manage Digital Imaging and Communications in Medicine (DICOM) applications from image devices, such as ultrasound, nuclear medicine, MRI and others

Other components may be required,
depending upon application and/or configuration
Power supply sold separately

10 Mbps at 2.4 GHz, 5.2 GHz, or 5.7 GHz, NA at 900 MHz

4 Mbps at 2.4 GHz, 5.2 GHz, or 5.7 GHz, 2.2 Mbps at 900 MHz

- Up to 40 miles (64.4 km) at 900 MHz, with integrated antenna, clear Line of Site
- Up to 15 miles (24 km) at 2.4 GHz, with passive reflector on the Subscriber Module side, clear Line of Site
- Up to 10 miles (16 km) at 5.7 GHz, with passive reflector on the Subscriber Module side, clear Line of Site
- Up to 5 miles (8 km) at 2.4 GHz, with integrated antenna, clear Line of Site
- Up to 2 miles (3.2 km) at 5.2 GHz, with integrated antenna, clear Line of Site

Available in 2.4 GHz, 5.2 GHz, 5.7 GHz or 900 MHz
See part numbers listed above

Available in Data Encryption Standard (DES)
or Advanced Encryption Standard (AES) 128-bit key*
See part numbers listed above

CANOPY ADVANTAGE SUBSCRIBER MODULES

DES ONLY

2450SMBC	2.4 GHz, Advantage SM
5250SMBC	5.2 GHz, Advantage SM
5750SMBC	5.7 GHz, Advantage SM

WITH AES (128-BIT ENCRYPTION)[1]

2451SMBC	2.4 GHz, Advantage SM
5251SMBC	5.2 GHz, Advantage SM
5751SMBC	5.7 GHz, Advantage SM

[1] All components in the Motorola Canopy System must be AES compatible.

- Operators can shape bandwidth offerings and provide up to 14 Mbps sustained aggregate throughput to users located close to the AP
- Operators can offer premium services using advanced bandwidth shaping
- VoIP customers will experience reliable service with (CIF), Video content and Video Surveillance, VLANs conserve bandwidth
- Enables business case to offer broadband services to a community
- Enables operators to offer premium services: VoIP, video, high speed data
- Enables operators to offer high throughput, competing with DSL, cable,T1/E1
- Compatible with existing Canopy SM investments

- Carrier network operators can offer and provide VoIP, video and high throughput services to customers as alternative to DSL or T1/E1 services
- Enterprises, Educational Facilities and Healthcare Providers
- Private network operators can support distance learning, video conferencing or high speed data transfer on a private, secure network
- Fraction of the cost of subscribing to DSL or T1 services

Other components may be required,
depending upon application and/or configuration
Power supply sold separately

10 Mbps or 20 Mbps depending on Line of Site range

Up to 14 Mbps

- At 5.2 and 5.7 GHz 14 Mbps with Line of Site of 1 mile and 7 Mbps with Line of Site of 2 miles
- At 2.4 GHz 14 Mbps with Line of Site of 2 miles and 7 Mbps with Line of Site of 5 miles

Available in 2.4 GHz, 5.2 GHz and 5.7 GHz
See part numbers listed above

Available in Data Encryption Standard (DES)
or Advanced Encryption Standard (AES) 128-bit key*

CANOPY LITE SUBSCRIBER MODULES

DES ONLY

BP5760SM25BC	5.7 GHz, Canopy Lite SM

Note: Canopy Lite SM requires the Canopy Advantage Access Point function in the network along with PrizmEMS & BAM. SM only available in 25 pack.

- Low Cost
- Proven reliability and interference mitigation for enhanced quality and performance
- Scalability delivered by the Canopy system's GPS synchronization
- Software upgradeable
- Enhanced security: DES encryption and authentication offered as an option via Canopy Bandwidth and Authentication Manager (BAM)

For ISPs and Network Operators

- Enables service providers to increase broadband penetration in markets where high cost is a major barrier
- Allows for simple, quick and profitable conversion of dial-up subscribers to broadband

For Emerging Markets

- Residential Broadband Services

Other components may be required, depending upon application and/or configuration
Power supply sold separately

512 Kbps

512 kbps throughput with 768 kbps burst and a maximum of 100 kbps full duplex Committed Information Rate (CIR)

2 Miles Line of Site

Available in 5.7 GHz with eventual full range of frequencies supported by Canopy platform

Available in Data Encryption Standard (DES)

CANOPY BACKHAUL MODULE

DES ONLY

2400BHBC	2.4 GHz, 10 Mbps
2400BHRFBC	2.4 GHz, 10 Mbps with Reflector Kit
2400BH20BC	2.4 GHz, 20 Mbps
2400BHRF20BC	2.4 GHz, 20 Mbps with Reflector Kit
5200BHBC	5.2 GHz, 10 Mbps
5210BHRFBC	5.2 GHz, 10 Mbps Extended Range with Reflector Kit
5210BHRF20BC	5.2 GHz, 20 Mbps Extended Range with Reflector Kit
5700BHRFBC	5.7 GHz, 10 Mbps with Reflector Kit
5700BHRF20BC	5.7 GHz, 20 Mbps with Reflector Kit
BP5730BH20-2BB*	5.7 GHz, 30 Mbps
BP5730BHC20-2BB**	5.7 GHz, 30 Mbps
BP5730BH-2BB*	5.7 GHz, 60 Mbps
BP5730BHC-2BB**	5.7 GHz, 60 Mbps
BP5830BH15-2*	5.7 GHz, 150 Mbps
BP5830BHC15-2**	5.7 GHz, 150 Mbps
BP5830BH-2AA*	5.7 GHz, 300 Mbps
BP5830BHC-2AA**	5.7 GHz, 300 Mbps

AES (128-BIT ENCRYPTION)[1]

2401BHBC	2.4 GHz, 10 Mbps
2401BHRFBC	2.4 GHz, 10 Mbps with Reflector Kit
5201BHBC	5.2 GHz, 10 Mbps
5211BHRFBC	5.2 GHz, 10 Mbps Extended Range Backhaul with Reflector Kit
5701BHBC	5.7 GHz, 10 Mbps
5701BHRFBC	5.7 GHz, 10 Mbps with Reflector Kit

* Ships standard with integrated antenna.
** Available with optional connectorized antenna.
Note: The 30, 60, 150 and 300 Mbps BH units ship in pairs unless otherwise noted.
[1] All components in the Motorola Canopy System must be AES compatible.

- Affordable high-speed data access
- No additional software to install
- Upload and download speeds as fast or faster than dial-up, ISDN, DSL, MMDS, cable or satellite access
- No need to run overhead and in-ground wire
- Easily interfaces with your existing Local Area Network (LAN)
- Security with over-the-air encryption scrambles data bits and prevents interception

For underserved areas or locations where infrastructure is non-existent.

School campuses—broadband off campus access to university network
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Security—video camera interface to improve parking lot monitoring
ISPs—rural service provider can expand internet access with a cost-effective system to meet current and future needs
Healthcare—manage Digital Imaging and Communications in Medicine (DICOM) applications from image devices, like ultrasound, nuclear medicine, MRI and others

Other components may be required, depending upon application and/or configuration
Power supply included for the 30, 60, 150 and 300 Backhaul Module
Power supply sold separately for all other models

10 Mbps, 20 Mbps, 30 Mbps, 60 Mbps, 150 Mbps, or 300 Mbps available

7.5 Mbps, 14 Mbps, 21 Mbps, 43 Mbps, 150 Mbps or 300 Mbps

- Up to 6 miles non-LoS, up to 25 near LoS, up to 40 miles LoS with 5.7 GHz, 30, 60 or 300 Mbps
- Up to 6 miles non-LoS, up to 25 near LoS, up to 124 miles LoS with 5.7 GHz 150 Mbps Backhaul
- Up to 35 miles (56 km), at 2.4/5.7 GHz, at 10/20 Mbps, with passive reflector both sides, clear LoS
- Up to 10 miles (16 km) at 5.2 GHz/10 Mbps, with passive reflector both sides, clear LoS
- Up to 5 miles (8 km) at 2.4 GHz/10 Mbps or 5.2 GHz/20 Mbps, with integrated antenna, clear LoS
- Up to 3 miles (4.8 km) at 2.4 GHz/20 Mbps with integrated antenna, clear LoS
- Up to 2 miles (3.2 km) at 5.2/5.7 GHz at 10 Mbps, with integrated antenna, clear LoS
- Up to 1 mile (1.6 km) at 5.2/5.7 GHz at 20 Mbps, with integrated antenna, clear LoS

Available in 2.4 GHz or 5.2 GHz or 5.7 GHz
See part numbers listed above

Available in Data Encryption Standard (DES) or Advanced Encryption Standard (AES) 128-bit key[1]

LAN — Indoor Products

Product	WiAP-110	WiAP-200
Motorola Part Number	HK1134A	RDH4293A
Features and Benefits	Next generation Access Point brings QoS and performance to mid-size enterprises. • New level of intelligent rogue Access Point and client detection • Sophisticated hotspot interfaces with Radius integration • Pre-standard IEEE 802.11e Quality of Service support for latency sensitive applications • Plenum rating • Supports latest security standards including IEEE 802.11i and AES encryption	• Highest performance enterprise-class access point (AP) pre-configured with tri-mode (simultaneous 802.11b/g/a operation) for comprehensive 2.4 and 5 GHz rogue AP detection and automatic support of all Wi-Fi client types • Automatic, universal Wi-Fi client interoperability • 40 Mbps throughput with 802.11g and 802.11a simultaneous operation • Built-in rogue AP detection for both 802.11b/g and 802.11a access points • AP-to-AP communication for reaching areas without Ethernet wiring • Unique 802.11a scalability - external antenna connector for increased transmit distance • Twice the memory of competing APs, ensuring software upgrade capacity • Tools to speed installation and optimization: automatic channel selection, adjustable transmit power, external antenna connectors • Extensive RADIUS accounting support
Applications	• **Small and medium businesses or government offices** • **Education:** K-12 educational institutions, non-profit organizations needing maximum mobility on a budget • **Universities:** provide flexible, immediate mobile faculty and student connectivity in dorms, classrooms, libraries and campus quads • **Hospital and Medical clinics:** real time information system wide for better patient care and reduced errors • **Local, State and Federal agencies:** fast access to information to serve constituencies better	• **Enterprise**–Mobile user productivity • **Healthcare**–Real-time patient charting • **Education**–Mobile faculty and student connectivity • **Government**–Remote access to constituency information
Ships with	• WiAP-110 802.11a, b or g Access Point • External antenna connector • Power supply and cord • Support for 802.3af Power Over Ethernet	• WiAP-200 802.11a/b/g Access Point • Power supply and support for Active Ethernet and IEEE 802.3af • Software and documentation • Cable cover and mounting bracket
Network Supported	802.11b (11 Mbps) 802.11g (54 Mbps) 802.11a (54 Mbps)	802.11b (11 Mbps) 802.11g (54 Mbps) 802.11a (54 Mbps)
Compliance	US: FCC, UL, CE, Wi-Fi Canada: Industry Canada	US: FCC, UL, CE, Wi-Fi Canada: Industry Canada
Security	• IEEE 802.1x mutual authentication • Dynamic per user per session rotating keys • 802.11i and AES • SNMPv, SNMPv2c and secure SNMPv3 management • Intra-cell blocking to prevent client to client snooping • Rogue Access Point detection, notification • 802.1x support (auto key management, user-based authentication) • Meets HIPAA requirements of privacy and security protection of patient data • Secure Management Interfaces SNMPv3 SSL, and SSH protect against unauthorized Access Point changes via the management interface • Multiple VLAN Support – Up to 16 separate VLANs per radio each able to support a different security setting • Auto configuration via DHCP Ensures new Access Points automatically receive correct configuration and prevents security vulnerabilities with deliberate resets	• Wired Equivalent Protocol (WEP) • IEEE 802.1x authentication compliant • Wi-Fi Protected Access (WPA) including 802.1x and dynamic TKIP encryption • Meets HIPAA requirements of privacy and security protection of patient data • Upgradeable to AES and 802.11i • Rogue Access Point detection • Secure Management Interfaces SNMPv3 and SSL protect against unauthorized Access Point changes via the management interface • Multiple VLAN Support–Up to 16 separate VLANs per radio each able to support a different security setting • Auto configuration via DHCP ensures new Access Points automatically receive correct configuration and prevents security vulnerabilities with deliberate resets

Product	**WiAP-200M**
Motorola Part Number	RLN6274A
Features and Benefits	• With the addition of Mesh, it enables mesh backhaul and Wi-Fi coverage on the same radio, while the second radio is used exclusively for Wi-Fi coverage • Twice the memory of competing APs, ensuring software upgrade capacity • Industry-leading throughput with 802.11g and 802.11a simultaneous operation • Super Mode allows Super Mode-capable clients to get double the data rate as standard clients while simultaneously allowing standard Wi-Fi clients to communicate with the access points • Robust RADIUS accounting and authorization interface enables detailed subscriber usage tracking • WMM/802.11e quality of service support for data, voice and video • Proactive security measures to protect your network- Intra cell blocking and traffic redirection to prevent subscriber-to-subscriber attacks • Self-forming and self-healing Mesh Creation Protocol automatically routes traffic through the best path as the units are added or removed from the network
Applications	• **Local, State, Federal and Public Works Agencies (non mission critical):** Remote access to constituency information • **Healthcare:** Real-time patient charting • **Small and Medium Businesses:** Lowers infrastructure costs by not requiring Ethernet Cabling to every access point. • **Warehouse and Service Businesses**
Ships with	Other components may be required depending upon application and/or configuration
Network Supported	802.11b (11 Mbps), 802.11g (54 Mbps), and 802.11a (11 Mbps)
Compliance	US: FCC, UL, CE, Wi-Fi Canada: Industry Canada
Security	• Intra-cell blocking and traffic redirection to prevent subscriber-to-subscriber attacks • Broadcast bandwidth throttling prevents broadcast attacks • Spanning tree protocol prevents network loops caused by subscribers connecting two or more CPE devices together. • IEEE 802.1x mutual authentication • Dynamic per-user, per-session rotating keys • Rogue access point detection and notification • Secure management interfaces: SNMPv3, SSL and SSH

For more information contact:

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