



MOTOROLA
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*Motorola Wireless
Networking Solutions
Products at a Glance*

2004 Volume 1

WAN — Outdoor Products



Product	WiB-20	WiB-60	
Motorola Part #	RDH4289A	RDH4290A	
Features & Benefits	<ul style="list-style-type: none"> • Superior price-performance solution • Integrated antenna and radio for quick and easy installation • High-capacity connection enables fast network traffic to deliver new service offerings • 40 times the capacity of a T1 with extremely fast payback • Rapid, easy deployment enables quick service activation at reduced costs 	<ul style="list-style-type: none"> • Superior price-performance solution • Integrated antenna and radio for quick and easy installation • High-capacity connection enables fast network traffic to deliver new service offerings • 40 times the capacity of a T1 with extremely fast payback • Rapid, easy deployment enables quick service activation at reduced costs • User selectable throughput 	
Description	OUTDOOR USAGE Point-to-point wireless Ethernet bridge	OUTDOOR USAGE Point-to-point wireless Ethernet bridge	
Applications	<p>Last mile access: provides dedicated bandwidth for service provider's important customers</p> <p>Campus networking: provides dedicated bandwidth to large enterprise facility or branch office</p> <p>Security and surveillance: backhauls digital images from a multipoint network back to a central command center</p>	<p>Last mile access: provides dedicated bandwidth for service provider's important customers</p> <p>Campus networking: provides dedicated bandwidth to large enterprise facility or branch office</p> <p>Security and surveillance: backhauls digital images from a multipoint network back to a central command center</p>	
Ships with	<ul style="list-style-type: none"> • 2 Motorola Wireless Ethernet Bridge Radio Units • 2 sets of mounting hardware • 2 power adapters • 2 sets of 50 meter CAT5 cable • 2 sets of user documentation and utilities on CD-ROM 	<ul style="list-style-type: none"> • 2 Motorola Wireless Ethernet Bridge Radio Units • 2 sets of mounting hardware • 2 power adapters • 2 sets of 50 meter CAT5 cable • 2 sets of user documentation and utilities on CD-ROM 	
Over the Air Data Rate	20 Mbps	Up to 60 Mbps user selectable	
Aggregate Throughput	18 Mbps	Up to 54 Mbps user selectable	
Range	Up to 6 miles (10 km), at 18 Mbps clear line of sight	<ul style="list-style-type: none"> • Up to 2.5 miles (5 km), at 54 Mbps clear line of sight • Up to 4 miles (6 km), at 36 Mbps clear line of sight • Up to 6 miles (10 km), at 18 Mbps clear line of sight 	
Frequency	5.8 GHz	5.8 GHz	
Security	16 character Security ID (Alphanumeric), authentication and PN transmission scrambling	16 character Security ID (Alphanumeric), authentication and PN transmission scrambling	

LAN — Indoor Products



<i>Product</i>	ORINOCO NETWORK INTERFACE CARDS	WiAP-100
<i>Motorola Part #</i>	RDH4294A (802.11 a/b/g) RDH4295A (802.11 b/g)	RDH4291A
<i>Features & Benefits</i>	<ul style="list-style-type: none"> • Fully compliant with all 802.11 standards • Deliver proven high performance for a broad range of applications and host computer systems • Multiple security levels, with encryption up to 152-bit WEP and 802.1x authentication for enterprise-class security • Easy-to-use utility for quick, simple connection • Shipped hardware-ready for upgrade to Wi-Fi 	Enterprise-Class Features at Small Business Prices <ul style="list-style-type: none"> • Best price/performance value • Robust security • Upgradeable to emerging security and radio technologies
<i>Description</i>	INDOOR USAGE Plug the ORINOCO Network Interface Card (NIC) into the Cardbus slot of your notebook computer so you can move easily between 802.11 networks at work, home, and in public spaces	INDOOR USAGE Dual-mode 802.11b/g access point
<i>Applications</i>	<ul style="list-style-type: none"> • Small/medium business, enterprises: improve productivity with mobile network, Internet, and email inside buildings, around campus • Education: flexible, immediate, mobile faculty and student connectivity in dorms, classrooms, offices • Quick network build-out for new employees • Healthcare: hospital-wide transmission of bandwidth-intensive medical data and image files 	<ul style="list-style-type: none"> • Small and medium businesses or government offices • K-12 educational institutions and non-profit organizations that require maximum mobility on a limited budget
<i>Ships with</i>	<ul style="list-style-type: none"> • Network Interface Card (NIC) • Getting Started Guide • CD-ROM with drivers, installation and configuration utility 	<ul style="list-style-type: none"> • WiAP-100 802.11b/g Access Point • External antenna connector • Power supply and cord • Support for 802.3af Power Over Ethernet
<i>Network Supported</i>	802.11b (11 Mbps) 802.11g (54 Mbps) 802.11a (54 Mbps)	802.11b (11 Mbps) 802.11g (54 Mbps)
<i>Compliance</i>	US: FCC, UL, CE, Wi-Fi Canada: Industry Canada	US: FCC, UL, CE, Wi-Fi Canada: Industry Canada
<i>Security</i>	<ul style="list-style-type: none"> • Wired Equivalent Protocol (WEP) • IEEE 802.1x authentication compliant • Wi-Fi Protected Access (WPA) • Meets HIPAA requirements to protect privacy and security of patient data 	<ul style="list-style-type: none"> • Wired Equivalent Protocol (WEP) • IEEE 802.1x authentication compliant • Wi-Fi Protected Access (WPA) • 802.11i, upon ratification • EAP-TLS, EAP-MD5, EAP-TTLS • Packet forwarding to specified MAC address • Auto key rotation • SNMPv2c and SNMPv3 • Static MAC filtering • Protocol filtering • Upgradeable to AES and 802.11i • Rogue Access Point detection • 802.1x support (auto key management, user-based authentication) • Meets HIPAA requirements to protect privacy and security of patient data • 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



CANOPY ACCESS POINT

<i>DES ONLY</i>		<i>AES ONLY (128-bit encryption)¹</i>	
HK1068A	2.4 GHz	HK1074A	2.4 GHz
HK1023A	5.2 GHz	HK1060A	5.2 GHz
HK1025A	5.7 GHz	HK1064A	5.7 GHz
HK1105A*	900 MHz	HK1106A*	900 MHz
HK1107A*	900 MHz	HK1108A**	900 MHz

*Ships standard with integrated antenna.
 **Available with optional connectorized antenna.



CANOPY SUBSCRIBER MODULE

<i>DES ONLY</i>		<i>AES ONLY (128-bit encryption)¹</i>	
HK1067A	2.4 GHz	HK1073A	2.4 GHz
HK1022A	5.2 GHz	HK1059A	5.2 GHz
HK1024A	5.7 GHz	HK1063A	5.7 GHz
HK1028A	5.7 GHz with reflector kit	HK1102A*	900 MHz
HK1101A*	900 MHz	HK1104A**	900 MHz
HK1103A*	900 MHz		

*Ships standard with integrated antenna.
 **Available with optional connectorized antenna.

- 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

- 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 and prevents interception

OUTDOOR USAGE
 Point-to-multipoint wireless Ethernet bridge

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 Point-to-multipoint wireless Ethernet bridge

Great for underserved areas or locations where infrastructure is non-existent
School campuses—provide wireless broadband access to the university network for staff and faculty living off campus
Enterprises—Improve communication and productivity among multiple office locations such as corporate campuses with versatile, easy to use and affordable broadband access
Security—interface with video cameras to streamline and improve monitoring of parking lots
ISPs—Rural internet service provider can expand the area's Internet access with a cost-effective and flexible technology system to meet current and future needs
Healthcare—deploy to various sites to manage Digital Imaging and Communications in Medicine (DICOM) applications from the various image devices, such as ultrasound, nuclear medicine, MRI and others

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

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

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

6 Mbps at 2.4 GHz, 5.2 GHz, or 5.7 GHz
 2.2 Mbps 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 sight
- Up to 15 miles (24 km) at 2.4 GHz, with passive reflector on the Subscriber Module side, clear line of sight
- Up to 10 miles (16 km) at 5.7 GHz, with passive reflector on the Subscriber Module side, clear line of sight
- Up to 5 miles (8 km) at 2.4 GHz, with integrated antenna, clear line of sight
- Up to 2 miles (3.2 km) at 5.2 GHz, with integrated antenna, clear line of sight

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

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

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 See part numbers listed above

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

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

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



CANOPY BACKHAUL MODULE

DES ONLY		AES (128-BIT ENCRYPTION)¹	
HK1069A	2.4 GHz, 10 Mbps	HK1075A	2.4 GHz, 10 Mbps
HK1070A	2.4 GHz, 10 Mbps with reflector kit	HK1076A	2.4 GHz, 10 Mbps with reflector kit
HK1071A	2.4 GHz, 20 Mbps	HK1061A	5.2 GHz, 10 Mbps
HK1072A	2.4 GHz, 20 Mbps, with reflector kit	HK1086A	5.2 GHz, 10 Mbps Extended Range Backhaul with reflector kit
HK1035A	5.2 GHz, 10 Mbps	HK1065A	5.7 GHz, 10 Mbps with reflector kit
HK1085A	5.2 GHz, 10 Mbps Extended Range Backhaul with reflector kit		
HK1087A	5.2 GHz, 20 Mbps Extended Range Backhaul		
HK1026A	5.7 GHz, 10 Mbps with reflector kit		
HK1036A	5.7 GHz, 20 Mbps with reflector kit		
RDH4378A*	5.7 GHz, 45 Mbps		
RDH4393A**	5.7 GHz, 45 Mbps		

* Ships standard with integrated antenna.
 ** Available with optional connectorized antenna.

- 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

OUTDOOR USAGE

Point-to-point wireless Ethernet bridge

Great for underserved areas or locations where infrastructure is non-existent

School campuses—provide wireless broadband access to the university network for staff and faculty living off campus

Enterprises—Improve communication and productivity among multiple office locations such as corporate campuses with versatile, easy to use and affordable broadband access

Security—interface with video cameras to streamline and improve monitoring of parking lots

ISPs—Rural internet service provider can expand the area's Internet access with a cost-effective and flexible technology system to meet current and future needs

Healthcare—deploy to various sites to manage Digital Imaging and Communications in Medicine (DICOM) applications from the various image devices, such as ultrasound, nuclear medicine, MRI and others

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

10 Mbps, 20 Mbps, or 45 Mbps available
 see part numbers listed above

7.5 Mbps, 14 Mbps, 27 Mbps, or 33.6 Mbps

- Up to 80 miles (128.8 km) at 5.7 GHz at 27 Mbps, clear line of sight
- Up to 40 miles (64.4 km) at 5.7 GHz at 33.6 Mbps, clear line of sight
- Up to 35 miles (56 km), at 2.4 GHz/5.7 GHz, at 10/20 Mbps, with passive reflector on both sides, clear line of sight
- Up to 10 miles (16 km) at 5.2 GHz/10 Mbps, with passive reflector on both sides, clear line of sight
- Up to 5 miles (8 km) at 2.4 GHz/10 Mbps or 5.2 GHz/20 Mbps, with integrated antenna, clear line of sight
- Up to 3 miles (4.8 km) at 2.4 GHz/20 Mbps with integrated antenna, clear line of sight
- Up to 2 miles (3.2 km) at 5.2 GHz/5.7 GHz at 10 Mbps, with integrated antenna, clear line of sight
- Up to 1 mile (1.6 km) at 5.2 GHz/5.7 GHz at 20 Mbps, with integrated antenna, clear line of sight

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 key¹
 See part numbers listed above



WiAP-200

RDH4293A

- 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

INDOOR USAGE

Pre-configured tri-mode access point (802.11a/b/g)

- **Enterprise**—Mobile user productivity
- **Healthcare**—Real-time patient charting
- **Education**—Mobile faculty and student connectivity
- **Government**—Remote access to constituency information
- **Public Hot Spots**—Wi-Fi connectivity

- 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

802.11b (11 Mbps)
802.11g (54 Mbps)
802.11a (54 Mbps)

US: FCC, UL, CE, Wi-Fi
Canada: Industry Canada

- Wired Equivalent Protocol (WEP)
- IEEE 802.1x authentication compliant
- Wi-Fi Protected Access (WPA) including 802.1x and dynamic TKIP encryption
- Meets HIPAA requirements to protect privacy and security 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



WiAP-220

RDH4292A

- All-in-one wireless access point and access gateway
- Specifically designed for public hotspot providers and enterprises
- Eliminates the need to purchase separate gateways and access points
- Significantly cuts hardware and installation costs
- Allows for seamless roaming between hot spots.
- Easily tie into billing systems, allow on-the-spot customer acquisition, and support varied service offerings, such as pay-per-use or fixed fee subscriptions.
- Various levels of security, helps prevent eavesdropping between stations
- Allow subscribers to set up secure Virtual Private Network (VPN) connections.

INDOOR USAGE

Dual mode, dual slot access point

- **Enterprises**: offer visitors immediate wireless access to their own VPN and the Internet
- **Public hot spots**: delivers seamless connectivity, high security, flexibility and standards-based authentication and billing systems support
- **Carriers and Internet Service Providers**: expand customer base, extend network reach, penetrate new markets, increase Average Revenue Per User (ARPU)
- **Public venues** (restaurants, hotels, chain stores, etc.): increase revenues, capitalize on unique selling proposition of diversified WLAN services

- WiAP-220 802.11b Access Point

802.11b (11 Mbps)

US: FCC, UL, CE, Wi-Fi
Canada: Industry Canada

- Wired Equivalent Protocol (WEP)
- IEEE 802.1x authentication compliant
- SMTP redirect
- Intracel traffic blocking
- Closed system
- VPN Passthrough for IP Sec & PPTP
- Transparent HTTP Proxy
- PPTP Support
- IP Sec Shared Key Authentication
- E-mail redirection
- DNS redirection
- Microsoft Netmeeting Support

For more information, contact:

