



BWA5.8-240 and BWA5.8-100 POINT TO MULTIPOINT WIRELESS SYSTEM FOR THE LICENSE-FREE 5.8 GHZ BAND

- **Provides Simultaneous Wireless Internet Access to over 100 subscribers per base station**
- **Throughput from 100 to 240 Mbps**
- **Distance of up to 30 Kilometers**
- **Operates in License-Free band 4.900-5.925 GHz**
- **Base Station sector coverage of 90 and 120 degrees**
- **Dynamic Channel Selection to avoid in-band Interference**

PRODUCT APPLICATION:

The BWA5.8 family of Broadband Wireless Access (BWA) Systems are two-way, high-capacity wireless Internet systems designed to provide “last mile” Internet simultaneously to commercial and residential subscribers within the coverage area of a base station.

The point-to-multipoint system provides a competitive alternative to wired systems such as fiber, cable or DSL .

Operating in the license-free frequency bands from 4.9 to 5.9 GHz (depending on country regulations), the system provides reliable wireless broadband multipoint connectivity without the high cost of licensed spectrum.

Designed for professionals, the BWA5.8 system is available in two versions depending on traffic volume requirements.

The system features dynamic bandwidth allocation with 5, 10, 20 and 40 MHz channels.

It also features dynamic channel selection to minimize vulnerability to interference from other users of the band.

Advanced encryption protects over-the-air transmission via AES-128 and IP address packet filtering is also provided.

Quality of Service is service-flow based with advanced packet recognition (layer 2, 3 or 4). The system is multi-cast traffic compliant and features built in IGMP snooping.

The base Station is available with advanced 2x2 and/or 3x3 MIMO capability and with a choice of sector antennas to maximize system capacity for any given cell with optimum frequency-reuse.

The CPEs are available with several choices of antennas for deployment at distances of up to 30 Km.

The system is easy to install and maintain, as it incorporates deployment tools such as spectrum analyzer, antenna alignment and remote management configuration. Both Base station and CPE are powered via 802.3at PoE or directly from a 12 VDC source.

Remote management can be performed via SSL, SSH and SNMPv3.

Product Specification¹



Model Number	BWA5.8-240	BWA5.8-100
	BASE STATION	BASE STATION
Frequency Band	4.900 – 5.925 GHz	4.900-5.925 GHz
Channel Selection	Dynamic Channel Selection (DCS) based on interference detection	Dynamic Channel Selection (DCS) based on interference detection
MIMO	3X3 and 2X2	2x2
Channel Bandwidth	40 MHz, 20 MHz, 10 MHz	40 MHz, 20 MHz, 10 MHz
Modulation	OFDM with BPSK, QPSK, QAM16, QAM64	OFDM with BPSK, QPSK, QAM16, QAM65
Data Rate	MCS 0 to 15, 6.5 to 300 Mbps with Dynamic Data Rate Selection	MCS 0 to 15, 6.5 to 300 Mbps with Dynamic Data Rate Selection
Throughput	240 Mbps Max	100 Mbps Max
Transmitter Power	26 dBm max (Triple chain)	26 dBm max (dual chain)
Sensitivity (40 Mhz channel)	-87 dBm to -68 dBm for MCS 0 to 15	-88 dBm to -69 dBm for MCS 0 to 15
Antenna	Dual Polarized	Dual Polarized
Encryption	AES - 128 bits	AES - 128 bits
Authentication	Internal MAC Address Control List, Radius based Authentication	Internal MAC Address Control List, Radius based Authentication
Synchrhonization	Sync internal clock to PPS signal from GPS module connected to RJ11 serial port or Ethernet Synchronization module connected to RJ45 ethernet port	Sync internal clock to PPS signal from GPS module connected to RJ11 serial port or Ethernet Synchronization module connected to RJ45 ethernet port
QoS	Service flow based QoS with 32 Queues and layer 2, 3 and 4 packet identification rules	Service flow based QoS with 32 Queues and layer 2, 3 and 4 packet identification rules
Local Management	RS-232 serial (RJ11 to DB-9 dongle provided)	RS-232 serial (RJ11 to DB-9 dongle provided)
Remote management	Telnet and SSH, Web GUI and SSL, TFTP, SNMPv3	Telnet and SSH, Web GUI and SSL, TFTP, SNMPv4
Wireless Protocol	Wireless Outdoor Router Protocol WORP®	Wireless Outdoor Router Protocol WORP®
Interface	Two auto MDI-X RJ45 10/100/1000Mbps Ethernet	One auto MDI-X RJ45 10/100/1000Mbps Ethernet with PoE in
	- Port #1 with PoE in & Data	
	- Port #2 with PoE out (802.3af pin out) & Data	
Humidity - IP Rating	100% relative humidity - IP67	100% Relative Humidity - IP67
Operating Temperature	-40° to 60° C	-40° to 55° C
Power Consumption	12 Watt typical (22 Watt max)	6 Watt typical (15 Watt max)
Weight & Dimensions	4.1 kg, 370 x 370 x 94 mm	1.3 kg, 127.5 x 220.5 x 72.5 mm
	CPE	CPE
Frequency band	5.150 – 5.925 GHz	5.150 – 5.925 GHz
Output Power	+26 dBm max, dual chain	+26 dBm max, dual chain
Mimo	2x2 MIMO	2x2 MIMO
Modulation	OFDM with BPSK, QPSK, QAM16, QAM64	OFDM with BPSK, QPSK, QAM16, QAM65
Data Rate	MCS 0 to 15, 6.5 to 300 Mbps with Dynamic Data Rate Selection	MCS 0 to 15, 6.5 to 300 Mbps with Dynamic Data Rate Selection
Throughput	50 Mbps max	50 Mbps max
Sensitivity (40 Mhz channel)	-88 dBm to -69 dBm for MCS 0 to 15	-88 dBm to -69 dBm for MCS 0 to 15
Antenna	Standard is integrated 15 dBi dual pol panel antenna	Standard is integrated 15 dBi dual pol panel antenna
Mobility	Yes	Yes
Interface	One auto MDI-X RJ45 10/100Mbps Ethernet with PoE in	One auto MDI-X RJ45 10/100Mbps Ethernet with PoE in
Power Consumption	6 Watt Typical , 15 Watt max	6 Watt Typical , 15 Watt max
Temperature	-40° to 55°C	-40° to 55°C
Humidity	100% relative humidity (non-condensing)	100% relative humidity (non-condensing)
Wind Loading	180 Km/h	180 Km/h
Dimensions	126 x 219 x 65.5 mm	127 x 219 x 65.5 mm
Weight	0.95 kg	0.95 kg

¹ Specifications subject to change without prior notice.