5GHz WES4 Series
Point-to-Point & Point-to-Multipoint
Wireless Ethernet System

Product Description

The WES4 Wireless Ethernet System is the latest generation wireless transmission system that is IEEE802.11a/n/ac compliant and operates in the license-free, 5GHz band.

Featuring new Gigabit Ethernet LAN ports, 400 Mbps of throughput is now achievable in long range point-to-point and point-to-multipoint applications. WES4 is ideal for constant streaming video to enable a network of stand-alone video cameras to remotely connect to an otherwise disconnected internet source without the need for cost-prohibitive trenching. Simply pair two or more WES4 radios (also available in pre-configured point-to-point kits) for long range connectivity. Since the WES4 firmware is configurable for mode type (Host or Client) and offers auto SSID selection, it is also possible to adapt it to connect to a 3rd party 802.11a/n/ac compliant access point.

The WES4 units are wall or pole-mountable with the included hardware.

Product Features

- Configurable for client/single-point host/multi-point host
- Gigabit PoE - IEEE 802.3 af/at/bt or Passive 48Vdc
- IEEE802.11a/n/ac compliant
- Transmission Power Control
- Up to 30dBm output power
- Up to 400 Mbps of Throughput
- Secure transmission: WPA2 – AES or TKIP encryption
- Distance adjustment for long range transmission
- IP66 protection class
- Integrated direction antenna
- Embedded web browser graphical user interface (GUI) for at-a-glance diagnostics and ease of use configuration

Suitable for

- Point-to-Point & Point-to-Multi Point Systems
- High throughput back hauls
- Megapixel IP camera networks
- Remote gate access
- Solar power locations
- Surveillance in linear movement (such as elevators)
- Intercoms with embedded video
- Building to remote building network extension
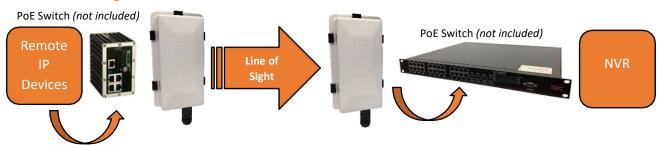- Exterior access points

Included in Each Unit

- Quick start instructions with mobile access to operations manuals available online.
- Rugged pole/wall mount assembly kit.
- Weather-proof connectors.

Contact KBC Networks for Pre-configured Point-to-Point kits and convenient bundled kits with remote power solutions providing all the needed equipment from one supplier.

Typical System Configuration
Point-to-Point using IEEE 802.3 af/at/bt or 48Vdc Passive PoE

Specifications

Standards

IEEE Standards	IEEE 802.3 10BASE-T, IEEE 802.3u 100BASE-TX
	IEEE 802.3ab 1000BASE-T, IEEE 802.3x Full Duplex
	IEEE 802.11a 5GHz, IEEE 802.11h ETSI DFS & TPC
	IEEE 802.11n MIMO
	IEEE 802.11ac MIMO

Radio

Frequency	
USA & Canada (FCC) U-NII3	5180 ~ 5240MHz, 5745 ~ 5825 MHz
Europe	5500 ~ 5700 MHz
Frequency Operation	Auto-select
	User static selectable
	Dynamic Frequency Selection (ETSI DFS)
Power Output	30dBm max [1]
	Transmit Power Control (ETSI TPC)
Channel Bandwidth Spectrum	Selectable 20 or 40MHz

Antenna Options

9dBi	Directional integrated patch
	Dual polarization
	Beamwidth:
	Azimuth: Horizontal 65˚, vert 65˚
	Elevation: Horizontal 33˚, vert 33˚
17dBi	Directional integrated patch
	Dual polarization
	Beamwidth:
	Azimuth: Horizontal 30˚, vert 33˚
	Elevation: Horizontal 17˚, vert 17˚

System

Data throughput [2]	HT40
	400Mbps
Latency	<10ms
Encryption	TKIP / AES encryption up to 128 bit

Power Method

PoE version	IEEE 802.3af/at/bt (PD)
PoE cable spec	100m on 24AWG Cat5/5e/6/6e/7

Mechanical (unit)

Casing	IP66 protection
Dimensions (L x W x D)	292mm x 152mm x 89mm /11.5” x 6.00” x 3.5”
Weight (17dBi unit)	0.82kg / 1.8lb
Installation	Wall-mount or pole-mount

Environmental

Operating Temperature	-40˚~ +74˚C / -40˚~ +165˚F
Storage Temperature	-40˚~ +90˚C / -40˚~ +194˚F
Operating Humidity	5 to 95% non-condensing
Mean Time Between Failure (MTBF)	> 100,000 Hours

Connectors

10/100/1000Mbps Electrical	1 x RJ45

Approvals

FCC Part 15 Subpart C	Class B
CE	Class B
EN 55024	
(IEC61000-4-2,3,4,5,6,8,11)	Electromagnetic Immunity
EN 55022 (CISPR 22)	Electromagnetic Interference (Conduction & Radiation)
EN 60 950: 1992+A1: 1993+A2: 1995+A4: 1996+A1: 1997	Low Voltage Directive
EN 300 328-2	
EN 300 826	
EN 301 489-17	
EN 301 893	
R&TT Directive (1999/5/EC)	

Part Numbers

Model #	Antenna	Power plug & Firmware (Region)	Single radio unit	Point-to-point Kit *Available in North America only*
WES4-AX-CF	Integrated 17 dBi directional	US	✓	
WES4-AX-BF	Integrated 9 dBi directional	US	✓	
WES4-KT	Integrated 17 dBi directional	US		Consists of (2) WES4-AX-CF
WES4-AX-CB	Integrated 17 dBi directional	EMEA	✓	
WES4-AX-BB	Integrated 9 dBi directional	EMEA	✓	
WES4-AX-CE	Integrated 17 dBi directional	Australian	✓	
WES4-AX-BE	Integrated 9 dBi directional	Australian	✓	

1. Territory specific.
2. Assumes ideal RF environment with max signal rates & within receive sensitivity specification.
3. WES4 products are IEEE 802.3 af/at/bt compatible, therefore a power supply is not included with the radio. Please order part number WES4-PIM if you require a power injection module included with your shipment.