Mesh2HT Series
230Mbps+ Dual Radio Wireless Ethernet System
2.4GHz / 4.9GHz / 5GHz

Product Description

The Mesh2HT is a dual radio, redundant mesh networking product that operates in the license-free 2.4GHz and 5GHz bands or the US public safety, 4.9GHz band, providing a wireless transmission path for an Ethernet channel. The system is 802.11a/b/g/n and y (US public safety) compliant and will support up to 230Mbps+[3] throughput due to the MIMO (Multiple In Multiple Out) and HT (High Throughput) technology defined in the 802.11n standard. Redundant mesh networks can be established by connecting multiple nodes to one another in a ring configuration. MESH2HT includes a Gigabit Ethernet port and provides connectivity for a wide range of Ethernet devices such as megapixel/HD cameras, DVRs, encoders/decoders and web servers. A secure encryption method is used to prevent unauthorized access to the system. Multiple nodes can be configured as a stand-alone system or as part of a larger wired network.
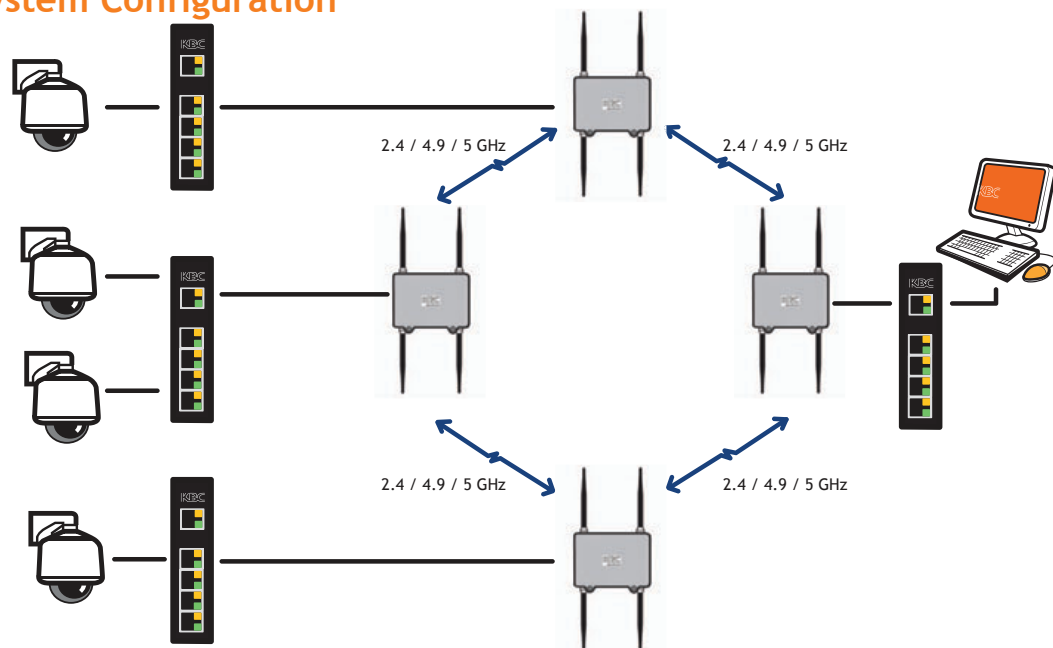
Mesh2HT units are available in wall-mount or pole-mount configurations. The units are supplied with omni-directional antennas; higher gain, directional, patch antennas are also available. Mesh2HT is IEEE802.3af compliant but is also supplied with a power injection module for applications where PoE is not available.

Product Features

- IEEE 802.11a/b/g/n/y compliant
- ETSI Dynamic Frequency Selection (DFS) & Transmission Power Control (TPC) compliant
- 230Mbps+ throughput[3]
- WPA2: AES or TKIP encryption
- Up to 23dBm output RF power (selectable)
- Extended operating temperature
- IP66 casing
- Remote management
- Distance adjustment for long range transmission
- Graphical mapping - dynamic view of system configuration & health
- IEEE 802.3af compliant

Typical System Configuration

Specifications

Standards

IEEE Standard	IEEE 802.3 10BASE-T
	IEEE 802.3u 100BASE-TX
	IEEE 802.3x Full Duplex
	IEEE 802.11a
	IEEE 802.11b
	IEEE 802.11g
	IEEE 802.11n MIMO
	IEEE 802.11h ETSI DFS & TPC
	IEEE 802.11y US Public Safety
	IEEE 802.1d
	IEEE 802.3af

Radio

Frequency	USA & Canada (FCC) U-NII3	5180-5240MHz, 5745 ~ 5825 MHz
	Europe	5500 ~ 5700 MHz
	USA & Europe	2412 ~ 2472 MHz
	USA only	4940 ~ 4990 MHz
Frequency Operation		Auto - select
		User static selectable
		Dynamic Frequency Selection
		(ETSI DFS)
Power Output		23dBm max[1]
		Transmit Power Control (ETSI TPC)
Channel Bandwidth Spectrum		Selectable 5, 10, 20, 20/40 MHz[2]

4.9 & 5GHz Antenna Options

5dBi	Omni-directional
17dBi (order separately - see below)	Directional integrated patch
	Dual polarization
	Beamwidth:
	Azimuth: Horizontal 30°, vert 33°
	Elevation: Horizontal 17°, vert 17°

2.4GHz Antenna Options

5dBi	Omni-directional
11dBi (order separately - see below)	Directional integrated patch
	Dual polarization
	Beamwidth:
	Azimuth: Horizontal 56°, vert 62°
	Elevation: Horizontal 38°, vert 26°

System

Data throughput[3]	HT40
	230Mbps+
Convergence	<60s

Power

Power method	IEEE 802.3 af (PD) / PIM
PoE cable spec	100m on 24AWG Cat5 / 5e / 6 / 6e

Mechanical

Casing	IP66
Dimensions (Patch L x W x D)	170mm x 170mm x 40mm /
	6.7" x 6.7" x 1.58"
Weight	1.15kg / 2.54lb
Installation	Wall-mount or pole-mount

Environmental

Operating Temperature	-40° ~ +70°C / -40° ~ +158°F
Storage Temperature	-40° ~ +90°C / -40° ~ +194°F
Operating Humidity	5 to 95% non-condensing

Connectors

Antenna	4 x N-type female
	(dual radio nodes)
10/100/1000 Electrical	1 x RJ45

Approvals

FCC Part 15 Subpart C	Class B
FCC CFR Title 47 Part 15 Subpart E	
FCC OET 65	
FCC CFR Title 47 Part 90 Subpart Y: 2011	
FCC CFR Title 47 Part 2:2011	
ANSI TIA-603-C2004	
FCC CFR Title 47 Part 15 Subpart B Class B, CISPR 22	
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:	Low Voltage Directive
1995+A4: 1996+A1: 1997	
EN 300 328-2	
EN 300 826	
EN 301 489-17	
EN 301 893	
R&TT Directive (1999/5/EC)	

Part Number Configurator

MESH2HT-AA-OA

A: 5 GHz
B: 4.9 GHz
C: 2.4 / 5GHz

A: 5 GHz
B: 4.9 GHz
C: 2.4 / 5GHz

A: US Power Connection & Firmware
B: UK Power Connection & EMEA Firmware
C: Euro Power Connection & EMEA Firmware
E: Australian Power Connection & Firmware

O: Outdoor
I: Indoor[4]

Mesh2HT Patch Antennas

Mesh is supplied with 5dBi omni-directional antennas. Please use the following ordering information for patch antennas:

Antenna	
PAT5M	5GHz & 4.9GHz, 17dBi MIMO patch antenna, includes 2 x 1m cables
PAT2M	2.4GHz, 11dBi MIMO patch antenna, includes 2 x 1m cables

Power Injection Module Specifications

Mechanical

Physical	Plastic housing,
Dimensions (LxWxH)	36 x 44 x 23mm
Weight	25g (0.8oz)
Interface	2 x RJ45 connectors

Environmental

Operating Temperature	-40° ~ +74°C (-40° ~ +158°F)

Power

Power Supply	Input: 100 ~ 240Vac, 10W
	Output: 24Vdc, 500mA
	(UL / cUL listed wall transformer supplied)
Power-over-Ethernet (PoE)	Passive PoE "mid-span" compliant
	(pins 4,5 positive –pins 7,8 ground)
Indicator	LED - green
Connectors	DC Jack 2.5mm x 5.5mm

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