



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.

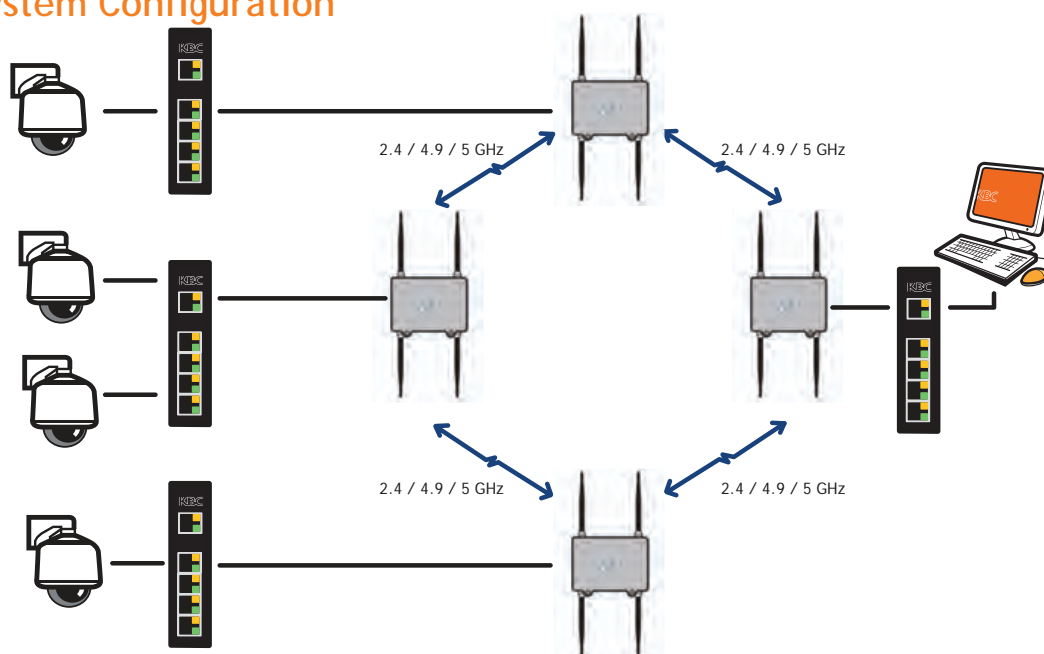
Mesh2HT units are available in wall-mount or pole-mount configurations. The units are supplied with omni-directional antennas; higher gain, directional, patch antennas are also available. Mesh2HT is IEEE802.3af compliant but is also supplied with a power injection module for applications where PoE is 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
Europe
USA & Europe
USA only
Frequency Operation

5180-5240MHz, 5745 ~ 5825 MHz
5500 ~ 5700 MHz
2412 ~ 2472 MHz
4940 ~ 4990 MHz
Auto - select
User static selectable
Dynamic Frequency Selection
(ETSI DFS)
23dBm max⁽¹⁾
Transmit Power Control (ETSI TPC)
Selectable 5, 10, 20, 20/40 MHz⁽²⁾

Power Output

Channel Bandwidth Spectrum

4.9 & 5GHz Antenna Options

5dBi
17dBi (order separately - see below)

Omni-directional
Directional integrated patch
Dual polarization
Beamwidth:
Azimuth: Horizontal 30°, vert 33°
Elevation: Horizontal 17°, vert 17°

2.4GHz Antenna Options

5dBi
11dBi (order separately - see below)

Omni-directional
Directional integrated patch
Dual polarization
Beamwidth:
Azimuth: Horizontal 56°, vert 62°
Elevation: Horizontal 38°, vert 26°

System

Data throughput⁽³⁾

HT40
230Mbps+
<60s

Convergence

Power

Power method
PoE cable spec

IEEE 802.3 af (PD) / PIM
100m on 24AWG Cat5 / 5e / 6 / 6e

Mechanical

Casing
Dimensions (Patch L x W x D)

IP66
170mm x 170mm x 40mm /
6.7" x 6.7" x 1.58"

Weight

Installation

1.15kg / 2.54lb
Wall-mount or pole-mount

Environmental

Operating Temperature
Storage Temperature
Operating Humidity

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

Connectors

Antenna

4 x N-type female
(dual radio nodes)
1 x RJ45

10/100/1000 Electrical

Approvals

FCC Part 15 Subpart C
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
EN 55024 (IEC61000-4-2,3,4,5,6,8,11)
EN 55022 (CISPR 22)

Class B

EN 60 950: 1992+A1: 1993+A2:
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)

Class B
Electromagnetic Immunity
Electromagnetic Interference
(Conduction & Radiation)
Low Voltage Directive

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
Dimensions (LxWxH)
Weight
Interface

Plastic housing,
36 x 44 x 23mm
25g (0.8oz)
2 x RJ45 connectors

Power

Power Supply

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

Power-over-Ethernet (PoE)

Environmental

Operating Temperature

-40° ~ +74°C (-40° ~ +158°F)

Indicator

Connectors

1. Territory specific

2. Dependent on operational frequency and regional requirements

3. Assumes ideal RF environment with max signal rates & within receive sensitivity specification

4. Please contact KBC for details

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