



Product Description

The MESHII 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 99Mbps 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. MESHII 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.

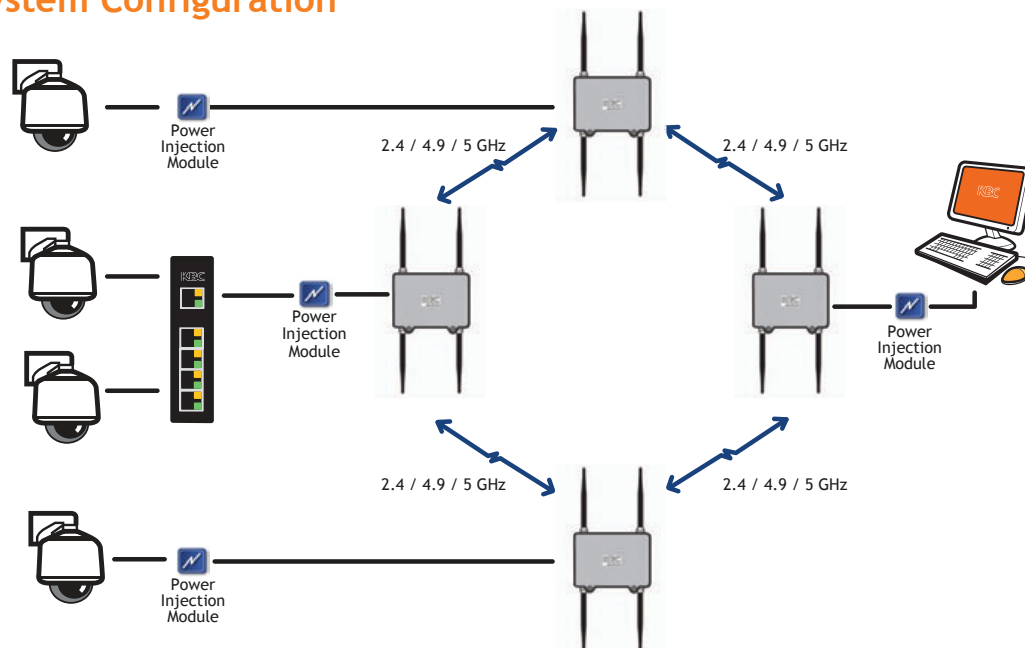
MESHII units are available in wall-mount or pole-mount configurations. The units are supplied with omni-directional antennas; higher gain, directional, patch antennas are also available. MeshII is IEEE802.3af compliant but is also supplied with a power injection module for applications where PoE is not available.



Product Features

- IEEE 802.11a/b/g/n/y compliant
- ETSI Dynamic Frequency Selection (DFS) & Transmission Power Control (TPC) compliant
- Up to 99Mbps throughput
- 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

Power Output

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⁾

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⁾
 (max values - limited by 10/100 port)
 Convergence

HT5 HT20 HT40
 17Mbps 99Mbps 99Mbps
 <60s

Power

Power Supplied by PIM
 Power method PoE
 PoE cable spec

Passive PoE (see spec below)
 IEEE 802.3 af (PD)
 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
 10/100 Electrical

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

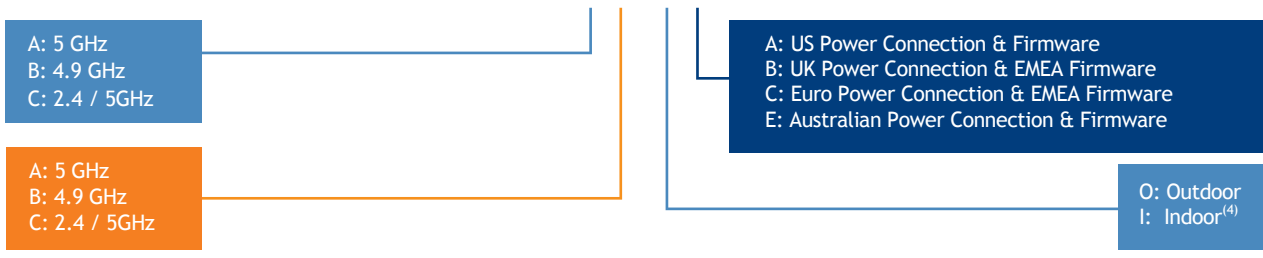
Approvals

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

Part Number Configurator

MESHII-AA-OA



MeshII 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

Power

Power Supply
 Power-over-Ethernet (PoE)

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

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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