5GHz WES3HTG Series

Gigabit Point-to-Point & Point-to-Multipoint
Wireless Ethernet System PoE / Non PoE

Product Description

The WES3HTG Wireless Ethernet System is a high throughput gigabit wireless transmission system that operates in the license-free, 5GHz band providing an Ethernet channel of up to 1.3Gbps aggregate.

The WES3HTG firmware is configurable for product type, enabling one common unit to be configured as a client, single-point host or multipoint host.

The system is IEEE802.11ac compliant and will support up to 1.3 Gbps throughput due to MIMO technology (Multiple In Multiple Out). WES3HTG provides high throughput connectivity for backhaul applications as well as a wide range of Ethernet devices such as megapixel/HD IP cameras, DVRs and web servers. It uses secure encryption to prevent unauthorized access to the system. WES3HTG is IEEE802.3af compliant and can also be used with a power injection module for applications where PoE is not available. The WES3HTG units are wall or pole-mountable with the included hardware.
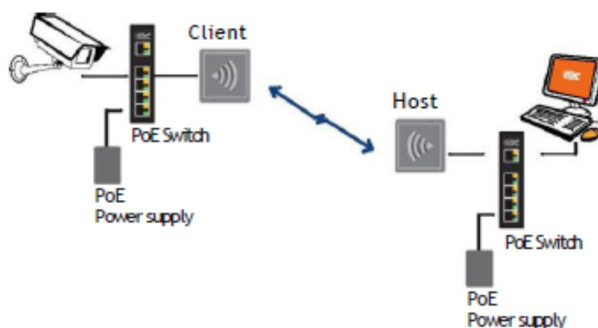
Product Features

- Configurable for client / singlepoint host / multipoint host
- IEEE802.11ac compliant
- Transmission Power Control
- Up to 30dBm output power
- Secure transmission: WPA2 – AES or TKIP encryption
- Antenna alignment & site signal survey tools
- Distance adjustment for long range transmission
- Range of antenna options
- Passive midspan compliant PoE support
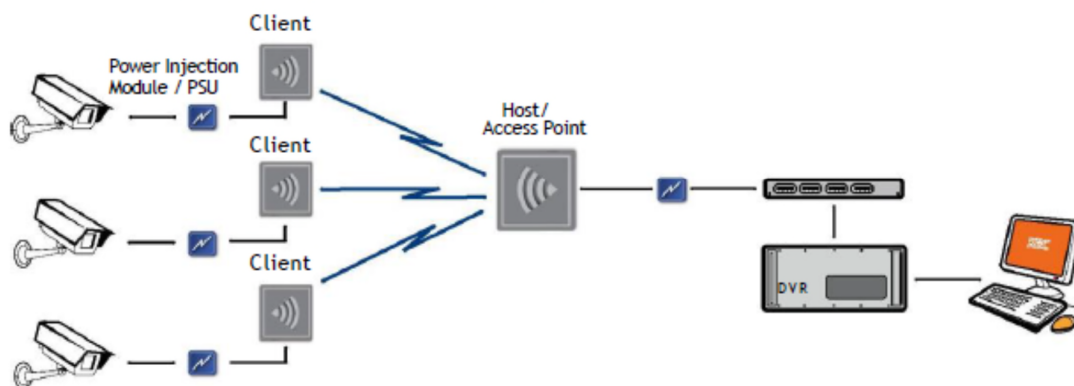- IP66 protection class

Typical System Configuration

Point-to-Point using 48Vdc Passive PoE

Point-to-Point using 48Vdc IEEE802.3af PoE

Point-to-Multipoint using 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

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, 40 or 80MHz

Antenna Options

5dBi — Omni-directional
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	HT80
300Mbps	650Mbps

Latency — <10ms
Encryption — TKIP / AES encryption up to 128 bit

Power Method

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

Mechanical (unit)

Casing — IP66 protection
Dimensions (L x W x D) — 292mm x 146mm x 89mm /11.5" x 5.75" 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) — > 1,500,000 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*
WES3HTG-AX-CA	Integrated 17 dBi directional	US	✓	
WES3HTG-AX-BA	Integrated 9 dBi directional	US	✓	
WES3HTG-AX-AA	External 5 dBi Omni-directional	US	✓	
WES3HTG-KT	Integrated 17 dBi directional	US		Consists of (2) WES3HTG-AX-CA
WES3HTG-KT-P8	Integrated 17 dBi directional	US		Consists of (2) WES3HTG-AX-CA & (1) ESUGS8-B and DRP240-48
WES3HTG-KT-P8T	Integrated 17 dBi directional	US		Consists of (2) WES3HTG-AX-CA & (1) ESUGS8-B and SDR240-48
WES3HTG-AX-CB	Integrated 17 dBi directional	UK & EMEA	✓	
WES3HTG-AX-BB	Integrated 9 dBi directional	UK & EMEA	✓	
WES3HTG-AX-AB	External 5 dBi Omni-directional	UK & EMEA	✓	
WES3HTG-AX-CC	Integrated 17 dBi directional	Euro & EMEA	✓	
WES3HTG-AX-BC	Integrated 9 dBi directional	Euro & EMEA	✓	
WES3HTG-AX-AC	External 5 dBi Omni-directional	Euro & EMEA	✓	
WES3HTG-AX-CE	Integrated 17 dBi directional	Australian	✓	
WES3HTG-AX-BE	Integrated 9 dBi directional	Australian	✓	
WES3HTG-AX-AE	External 5 dBi Omni-directional	Australian	✓	

Included Power Injection Module (PIM)

Mechanical

Physical — Plastic housing
Dimensions (LxWxH) — 84 x 47 x 54mm /3.31 x 1.85 x 2.13"
Interface — 2 x RJ45 connectors

Environmental

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

Power

Input — 100 ~ 240Vac
Output — 48Vdc, 500mA
Consumption — 12W (max)
Power-over-Ethernet (PoE) — Passive PoE "mid-span" compliant
Indicator — LED (green)

1. *Territory specific.*
2. *Assumes ideal RF environment with max signal rates & within receive sensitivity specification. Max values - limited by 10/100 port.*