



X22e Dual 5GHz MeshRanger

Smart Virtual Fiber



X22e is a high-performance dual 5 GHz radios wireless backhaul unit designed for flexible and expandable deployment regardless of physical constraints. Working as Smart Virtual Fiber, the X22e extends connectivity to the locations where extensive fiber optic cabling is unfeasible due to a tight timescale.

The Smart Virtual Fiber technology breaks the traditional hopping limitation of wireless networks by tackling the multi-hop bandwidth degradation. With Smart Virtual Fiber, the X22e MeshRanger supports over 10 hops and up to 600 Mbps world's leading end-to-end ring topology backhauling speed.

- High throughput wireless surveillance backhauling applications

- Up to 600 Mbps throughput

- Train connectivity applications

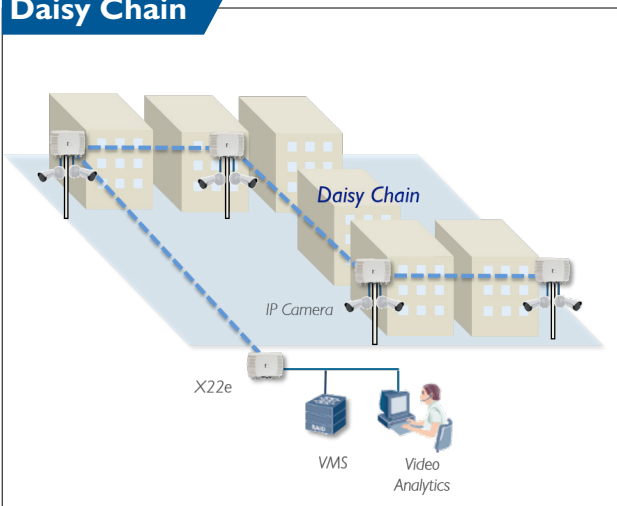
- Greater than 10 hops backhauling

- 20/40/80 MHz channel

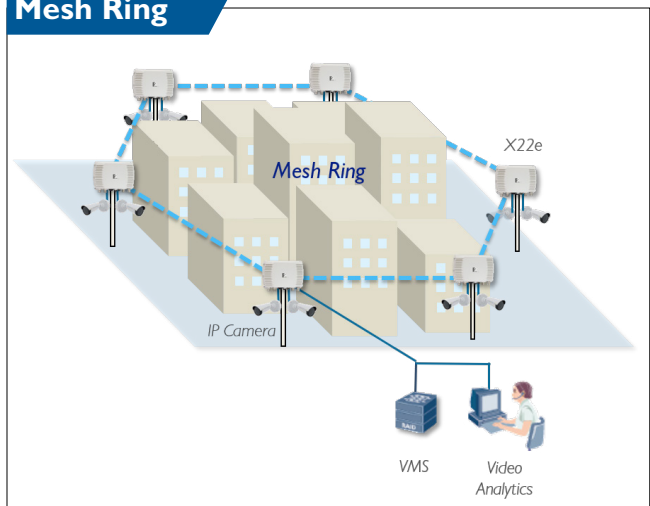
- 2 × 5 GHz radio, external antenna ports

Deployment Architecture

Daisy Chain



Mesh Ring



X22e Dual 5GHz MeshRanger

Specifications

Wireless

Operating Frequency (Country-dependent)	5.150 - 5.350 GHz 5.470 - 5.850 GHz
Modulation Techniques	OFDM: BPSK, QPSK, 16QAM, 64QAM, 256QAM DSSS: DBPSK, DQPSK, CCK
No. of Spatial Stream	2x2: 2 MIMO, 20/40/80 MHz Channel
Receive Sensitivity	-91 dBm (20 MHz); -88 dBm (40 MHz); -85 dBm (80 MHz)
Transmit Power (Country-dependent)	27 dBm (Max.)

Antenna

Type	External 5 GHz
Gain	Optional Antennas: 5 GHz 19/23 dBi Panel; More Options on Request

Networking

Smart Virtual Fiber Technology	Designed for Multi-hop High Throughput Wireless Surveillance and Backhauling
Topology	Daisy Chain, Mesh Ring
Redundancy	STP
Features	End-to-End Layer 2 Transparent, VLAN Trunking

Security

Mesh Link	2-tier Irreversible Key Generation Algorithm, Enhanced 3-factor (Mesh ID, Mesh Key and Static Key) Authentication Mechanism, MAC-based Access Control, Unique Per-link Packet Encryption
Authentication	Open System, Shared Key, WPA/WPA-PSK, WPA2/WPA2-PSK, 802.1x(EAP-PEAP/TLS/TTLS/SIM/AKA), MAC address
Encryption Protocol	TKIP, 128-bit AES

Management

Built-in Web User Interface	SmartMoment
Support	Remote Firmware Upgrade, SNMP v1/v2c, MIB support

Hardware

No. of Radio	2 x 5 GHz Radio
Network Interface	1 x GE & PoE Port
LED	PWR; ETH; RADIO 0; RADIO 1

Power Supply	802.3at PoE Injector, DC 12V
Power Consumption	25 W (Max.)
MTBF	350,000 hours (50°C)

Physical Characteristics

Dimensions	221 x 162 x 47 mm (w/o Mounting)
Weight	1.08 kg (Net w/o Mounting); 1.49 kg (Gross)
Mounting	Pole and Wall Mounting

Environmental

Temperature	-40°C to 65°C (Operating)
Humidity	5% to 95 % Non-condensing
Elevations	86 to 106 kPa
Wind Loading	216 km/h (Max.)
Weatherproof	IP67, IEC 60529, IEC 60950-1 6 kV Common Mode Surge Protection Salt Mist EN 50155 Part 12.2.10

Certification

FCC, CE, RCM, OFCA
EMC Rolling Stock Apparatus: EN 50121-3-2
Environment, Safety and EMC: EN 50155
Vibration and Shock: EN 61373 (Class 1B), EN 50155 Part 12.2.11
Fire: EN 45545-2 (R25) Level 1 to 3, EN 60950-2-11

Warranty

First year free limited hardware warranty and firmware upgrade

Ordering Information

Part Number	Description
GE.AP-X22E-00	X22e Dual 5GHz MeshRanger

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