Mesh Surveillance System

Feature-Rich Hybrid 11ac Mesh AP Camera

The Neutron Mesh Surveillance System is a dual-functional 11ac Managed Wireless Access Point with mesh capabilities and an integrated 2-MP IP Camera featuring night vision and email alerts. This space-saving hybrid offers one installation for both an AP and IP camera, simplifying wiring with self-healing mesh networking and management via controller or ezMaster™ Network Management Software.

The Neutron Mesh Surveillance System is the first of its kind. Merging the capabilities of both an IP camera and a high-speed wireless access point, the System improves deployment options and the IP Camera's performance by combining technologies.

Ideal for overcoming installation-wiring hurdles in retrofit applications, the System utilizes wireless mesh to optimize connections automatically between multiple EWS1025CAMS and other supported Neutron devices.

Features & Benefits:

- Dual-Functional Mesh 11ac Wireless Access Point & Integrated IP Surveillance Camera
- Simplifies Deployments, Reduces Install Time & Costs
- 11ac Wireless Speeds to 867 Mbps (5 GHz); to 300 Mbps (2.4 GHz)
- Operate as a Stand-Alone or Manage via Neutron Switches or ezMaster™ Software
- Centrally Manage, Monitor & Troubleshoot Network via ezMaster
- Wide, 120° 2-MP Lens Captures 1920x1080P Images over a Broader Field
- 802.3at/af - PoE Extends Power to Unwired Areas Up to 328 Feet
- Built-In IR Illuminators Ensure Night Visibility to 65 Feet
- Enhanced Wireless Range & Coverage with High Transmit Power
- Remotely View Cameras & Receive Notifications with enViewer™ App
- No AP Licensing or Annual Subscription Fees for ezMaster
- Includes 16-Channel VM Software with Live Monitoring

Dual-Purpose System

The Mesh Surveillance System provides a dual-functional, aesthetically pleasing option for large residences, commercial, retail, and anywhere both Wi-Fi and surveillance are desired. Utilize the EWS1025CAM's mesh networking to provide these resources in entryways, hallways, stairwells, and lobbies and in retrofit applications such as landmark buildings, museums, and locations where long wire runs are prohibitive.


Increase Network Speed & Capacities

The onboard access point features high-performance 2x2 11ac dual-band Wi-Fi speeds ensuring smooth HD video delivery and ultra-fast file loading. The System supports greater user capacities while efficiently steering 5 GHz-capable network traffic off the heavily congested 2.4 GHz frequency band.

Wireless Mesh Flexibility

Easily create an adaptive mesh network when connecting multiple EWS1025CAMs or other Neutron mesh-compatible APs, and extend wireless access to larger areas without running cable to every unit. Employ mesh's auto-sensing technology to add devices quickly, optimize routes between mesh units, and self-heal in the event a network node is down.
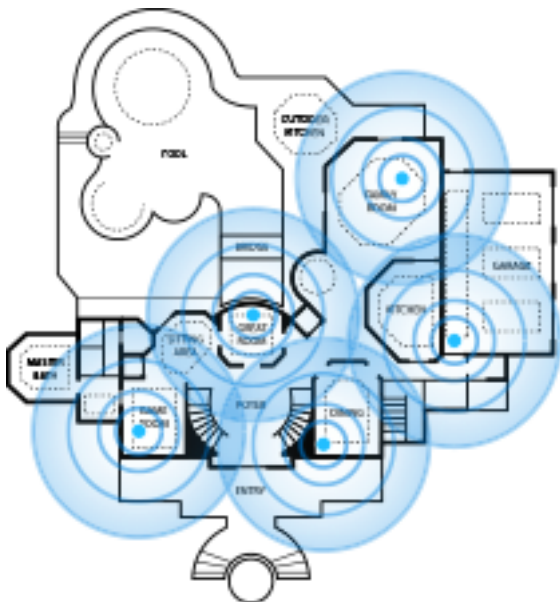
Reduce Wiring Challenges with Power-over-Ethernet

The System is designed to reduce wiring challenges and installation time and costs with a single cable run. Power each unit via one Ethernet cable with 802.3at/af Power-over-Ethernet (PoE) up to 325 feet from the power source or with a DC power input.
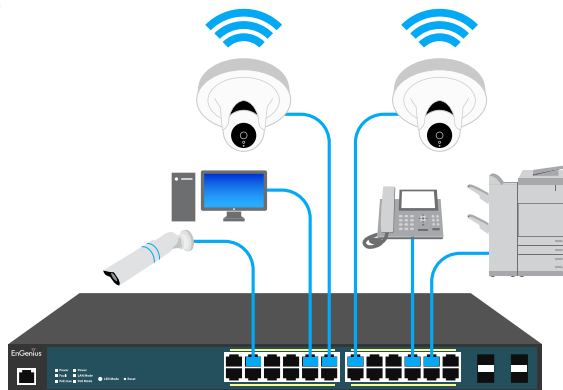
Secure Guest Networks & Workgroups

Establish and secure Guest Networks and block access to central computers and servers. Limit Internet resources for visiting guests and ensure your network is secure from sophisticated Trojans and malware that can use guest's mobile devices to attack your network.

Highly Defined Images & Clear Day/Night Viewing

The EWS1025CAM features a 2-MP Progressive Scan CMOS sensor and 1920 x1080P HD video, which ensures precise image details and smooth video playback. With its powerful, 24-piece built-in IR LED illuminators, the Mesh Surveillance System transmits clear, distinct images day or night in low light or total darkness up to 65 feet.

Motion & Audio Detection Triggers Provide Instant Proof

To immediately capture suspicious activity, the EWS1025CAM supports motion and audio detecting-triggers, to automatically activate a recording of the covered area ensuring all activity is monitored. Its built-in microphone can hear events giving you a more accurate representation of a situation.

EnViewer™ Mobile App

Remote Viewing & Push Notifications

Remotely view and monitor up to four (4) cameras simultaneously and instantly record video with EnGenius' free EnViewer™ Mobile App. View, record and receive motion or audio-triggered event alerts directly to your mobile device for instant notification of events-in-progress.

Zone Coverage

Set precise zone coverage within designated areas to record activity or detect motion near entryways or around windows within the camera's field of view. Customize sensitivity in each zone for greater control and set motion and audio detection mobile alerts.
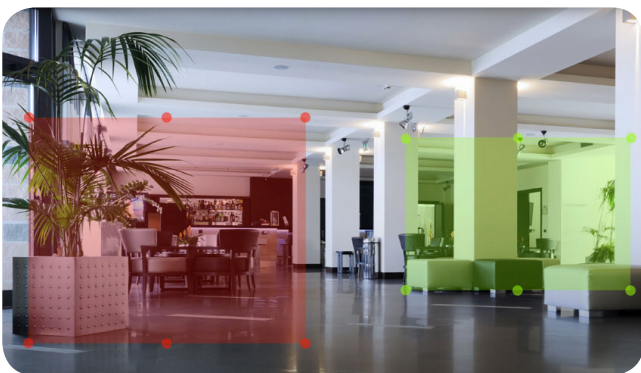

Video Management Software (VMS)

Monitor Up to 16 Cameras Simultaneously

EnGenius' 16-Channel Video Management Software is included free with the Neutron Mesh Surveillance System. Streamline camera setup and configuration with the VMS' Discovery Tool. Import building floor plans to create a camera location map through eMap and easily monitor the entire camera network regardless of its location. Additional features:

– Optional Split-Screen Camera Views
– Monitor Up to 16 Cameras Simultaneously
– View Live Monitoring, Record Video & Playback Options
– Quickly Search Archived Video via Time Bar
– Schedule Recordings
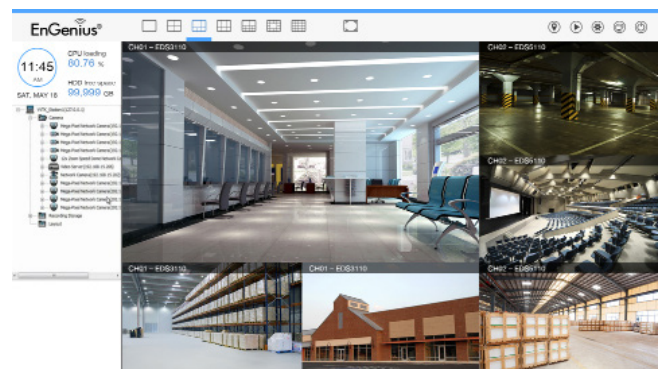
Network Management

Manage Up to 50 APs with Neutron Managed Switches

Neutron Switches also act as wireless controllers capable of managing up to 50 Neutron EWS1025CAMs and other Neutron EWS Access Points. In controller mode, IT administrators have access to all connected Neutron devices and a full array of Layer 2 management tools. Choose between PoE+ and non-PoE switch models with flexible deployment and management options.

ezMaster™
Network Management Software
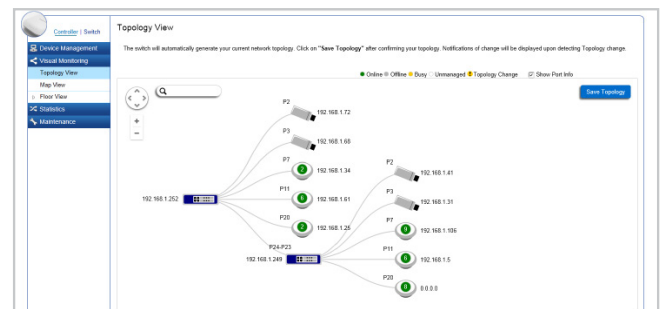
## Flexible Distributed Network Management

EzMaster Network Management Software expands the flexibility and scalability of Neutron Series EWS Managed Access Points and Switches.

EzMaster allows organizations, such as branch offices and managed service providers, to easily and affordably deploy, monitor and manage a large number of Neutron APs, Controller Switches and Managed Smart Switches across geographically diverse properties. Centrally manage an unlimited number of independent distributed networks in the same subnet or cross-subnet from a single, at-a-glance network dashboard, no matter where they're located.

Deploy ezMaster locally, remotely or via a Cloud-based service with or without an onsite controller.

Powerful, Scalable Options

EzMaster scales with your growing business needs. Manage 1,000+ Neutron EWS Access Points and Switches and 10,000+ concurrent users. Together, Neutron APs, Switches and ezMaster provide a flexible, fully integrated solution with redundancy support and future expandability for broader device connectivity.
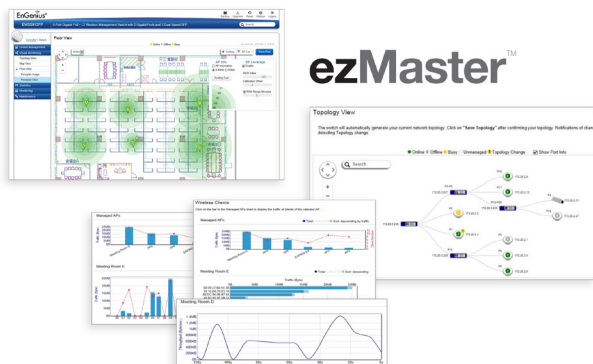
System Requirements

Recommended environment for managing up to 500 APs
CPU: Intel® Core™ i3 3.6 GHz dual-core or above
RAM: 4 GB minimum
HDD: 500 GB (actual requirement dependent on log size)
OS: Microsoft® Windows® 7 or later + VMware® Player 7.0 or compatible virtualization software

Recommended environment for managing up to 1,000+ APs
CPU: Intel® Core™ i5 3.2 GHz quad-core or above
RAM: 4 GB minimum
HDD: 500 GB (actual requirement dependent on log size)
OS: Microsoft® Windows® 7 or later + VMware® Player 7.0 or compatible virtualization software

Browser Requirements
Internet Explorer 10 or better
Firefox 34.0 or better
Chrome 31.0 or better
Safari 8.0 or better

Network Topology Requirements
At sites where APs are deployed: A DHCP-enabled network for APs to obtain an IP address

Simplified Device Management

EzMaster Network Management Software makes centralized device management easy. How? Through centralized bulk configuration, provisioning and monitoring, a comprehensive at-a-glance network dashboard, rich analytics and reporting, and much more.

ezMaster Software Features

- Centralized Management
  - Configure, Managed & Monitor 1,000+ Neutron Devices
  - Cross-Network AP Management
  - AP Group Configuration
- Access Point Configuration & Management
  - Auto Channel Selection
  - Auto Tx Power
  - Background Scanning
  - Band Steering (Auto Band Steering & Band Balancing)
  - Client Isolation
  - Client Limiting
  - Fast Roaming
  - L2 Isolation
  - LED On/Off Control
  - Multiple SSID
  - RSSI Threshold
  - Secure Guest Network
  - Traffic Shaping
  - VLAN Isolation
  - VLAN Tag
- Comprehensive Monitoring
  - Device Status Monitoring
  - Floor Plan View
  - Map View
  - Rogue AP Detection
  - System Status Monitoring
  - Visual Topology View
  - Wireless Client Monitoring
  - Wireless Coverage View
  - Wireless Traffic & Usage Statistics
- Management & Maintenance
  - Bulk Firmware Upgrade
  - Captive Portal
  - Email Alert
  - ezRedundancy (Available 2016)
  - Kick/Ban Clients
  - One-Click Update
  - Remote Logging
- Seamless Migration
- SmartSync Redundancy (Available 2016)
- Syslog

Technical Specifications

Frequency

RF: 2.4 and 5 GHz Frequency Bands

Standards

IEEE 802.11b/g/n on 2.4 GHz

IEEE 802.11a/n/ac on 5 GHz

IEEE 802.3at/af

Radio Chains/Spatial Streams

2x2:2

Radio I

11b/g/n: 2.412~2.484

Radio II

11a/n/ac: 5.18-5.24 and 5.26-5.32 and 5.5-5.7 and 5.745-5.825 GHz

Data Rates

Up to 300 Mbps on 2.4 GHz

Up to 867 Mbps on 5 GHz

Memory Capacity

Micro SD/SDXC – up to 64G

Power Consumption

Maximum 12.4W

Antenna

Internal High-Gain Antennas 5dBi per band

Physical Interface

1 x 100/1000 Gigabit Ethernet Port

 - 802.3af PoE Input

1 x Reset Button

1 x Power Connector

1 x Micro SD/SDXC Slot

24 x IR LEDs

1x Embedded Microphone

LED Indicators

1 x Power

1 x 2.4 GHz

1 x 5 GHz

1 x Ethernet

1 x Mesh

Power Source

24V Proprietary Compliant Source

12VDC/1.5A

Active Ethernet (PoE)

Transmit Power

Up to 21dBm on 2.4 GHz

Up to 19dBm on 5 GHz

Modulations

802.11b: BPSK, QPSK, CCK

802.a/g/n: BPSK, QPSK, 16-QAM, 64-QAM

802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM

Supported Radio Technology

802.11b: Direct-Sequence Spread-Spectrum (DSSS)

802.11a/g/n/ac: Orthogonal Frequency-Division Multiplexing (OFDM)

Channelization

802.11ac with 20/40/80 MHz channel width

802.11n with 20/40 MHz channel width

802.11a/b/g with 20 MHz channel width

Operation Modes

Mesh Access Point/Access Point

Standalone: Access Point, Client Bridge, WDS Access Point, WDS Bridge, WDS Station

(Device cannot be managed when used in Bridge mode)

Camera

Image Sensor

Sony 1 /2.9" 2-Megapixel Progressive Scan CMOS

Lens

Fixed Board Lens

Fixed-Focus, f=2.8 mm / F2.0

F.O.V.

120° (diagonal)

IR Illuminator

24 Pcs LEDs, Up to 65-Feet

Day/Night

Removable IR-Cut Filter

Minimum Illumination

Color (IR-Off): 0.01 Lux / F2.0

B/W (IR-On): 0 Lux / F2.0

Shutter Time

1/2 sec. to 1/10,000 sec.

Video

Compression

H.264/MJPEG

Stream

2x Video Streams

Frame Rates

Up to 30 FPS at 1920 x 1080P

Image Settings

Adjustable Image Size, Quality & Bit Rate

Configurable

Brightness

Sharpness

Contrast

White Balance

Saturation

Exposure

AGC/AWB/AES

Flip & Mirror

Time Stamp & Text Caption Overlay

Auto/Manual Day & Night Mode

3D Noise Reduction

Low Light Compensation (LLC)

Audio

Audio Streaming

1-Way

Interface

Built-In Microphone

Deployment Options

Standalone (Individually Managed)

Managed Mode (with Neutron Series Switch/ezMaster)

Multiple BSSID

Supports up to 16 SSIDs, 8 SSIDs per Radio

VLAN Tagging

Supports 802.1q SSID-to-VLAN Tagging

VLAN Pass-Through

Spanning Tree

Supports 802.1d Spanning Tree Protocol

QoS

Compliant with IEEE 802.11e Standard

WMM

SNMP

v1, v2c, v3

MIB

I/II, Private MIB

Standalone Management Features

Auto-Channel Selection

Wireless STA (Client) Connection List

Guest Network

Fast Roaming (802.11k & 802.11r)

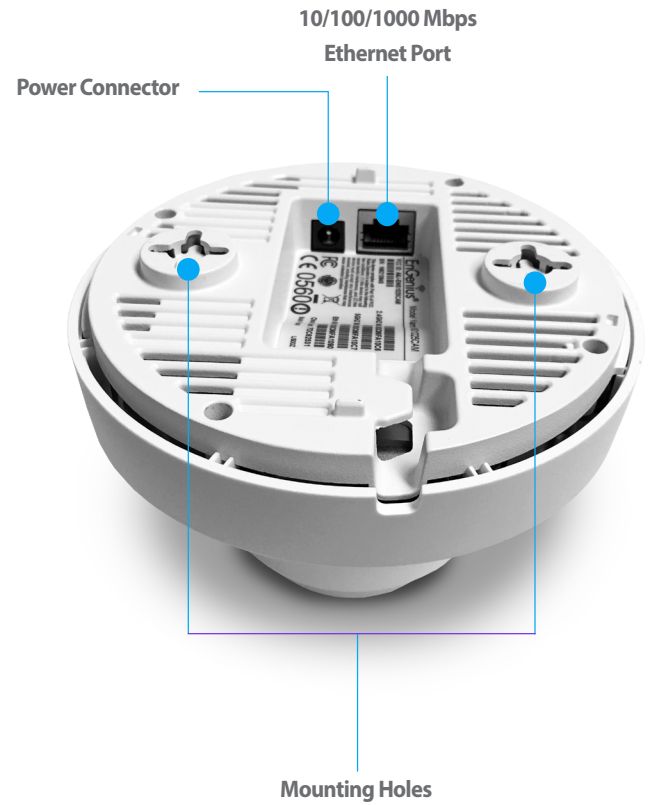Pre-Authentication (802.11i, 802.11x)

PMK Caching (802.11i)

Technical Specifications

Standalone Management Features continued

Band Steering

Traffic Shaping

RSSI Threshold

VLANs for Access Point - Multiple SSIDs

Backup/Restore Settings

Auto Reboot

E-Mail Alert

Wireless Management Features (with ezMaster & Neutron Switch)

Access Point Auto Discovery and Provisioning

Access Point Auto IP Assignment

Access Point Group Management

Remote Access Point Rebooting

Access Point Device Name Editing

Access Point Radio Settings

Fast Roaming (802.11k & 802.11r)

Pre-Authentication (802.11i, 802.11x)

PMK Caching (802.11i)

RSSI Threshold

Access Point Client Limiting

Client Fingerprinting

Access Point VLAN Management

Secured Guest Network

Captive Portal

Access Point Status Monitoring

Rogue Access Point Detection

Wireless Client Monitoring

Background Scanning

Auto-Transmit Power

Auto-Channel

Email Alert

Wireless Traffic & Usage Statistics

Real-Time Throughput Monitoring

SmartSync Redundancy

Visual Topology View

Floor Plan View

Map View

Wireless Coverage Display

Secure Control Messaging (SSL Certificate)

Local MAC Address Database

Remote MAC Address Database (RADIUS)

Unified Configuration Import/Export

Bulk Firmware Upgrade Capability

One-Click Update

Intelligent Diagnostics

Kick/Ban Clients

Wi-Fi Scheduler

Auto Reboot

Configuration

Web Interface (HTTP)

CLI (Telnet)

Security

WEP Encryption (64/128/152 bit)

WPA/WPA2 Enterprise (PSK using TKIP or AES)

Hide SSID in Beacons

MAC Address Filtering, Up to 50 MACs per SSID

SSH Support

Client Isolation

QoS (Quality of Service)

IEEE 802.11e

WMM (Wireless Multimedia)

Supporting Protocol

IPv4, TCP, UDP, DHCP, NTP, DNS, DDNS, SMTP, FTP, HTTP, UPnP, NFS/Samba Client, QoS/DSCP, RTP, RTSP, 3GPP, PPPoE, Time Zone Management

ONVIF Compatible (Profile S)

Alarm & Event/Recording

Event Trigger

Motion/Tamper/Audio Detection

Event Notification

Email/Push Notifications

Event Actions

File Upload to NFS/SAMBA/FTP/SMT/Local SD Card/ EnGenius Cloud & Play Audio

EnGenius Simple Smart Recording (Only for EnGenius Cloud Series Routers/Gateways)

Video Buffer

5-Seconds Pre-Alarm & Post-Alarm

Video Playback

PC/iPhone®/Android™ via EnViewer App

Schedule Recording

Viewing System Requirements

Operating System

Microsoft® Windows® XP/2000/2003/Vista/7/8

Web Browser

IE, Safari, Chrome, Firefox, Opera

Video Management Software

Microsoft Windows XP/2000/2003/Vista/7/8/10

EnViewer Mobile APP

iOS/Android Devices

Live Viewing for Up to 5 Clients

Temperature Range

Operating: 32°F to 122°F, 0°C to 50°C

Humidity (non-condensing)

Operating: 80% or less

Storage: 80% or less

Device Dimensions & Weights:

Weight: 1.11 lbs. (503.4 g)

Diameter: 5.27" (134 mm)

Height: 3.81" (97 mm)

Package Contents

12V/1.5A Power Adapter

Mounting Bracket

Mounting Screw Set

T-Rail Mounting Kit

RJ45 Ethernet Cable

Quick Installation Guide

Certifications

FCC, IC, CE

Warranty

1-Year Standard

EWS1025CAM

Built-In Lens

IR LEDs

Built-In Microphone

10/100/1000 Mbps Ethernet Port

Power Connector

Reset Button

Micro SD Card Slot

Mounting Holes