

# EnGenius Profile



www.expertisewave.com





### **About EnGenius**

# Empowering Connectivity, Empowering Business

EnGenius Technologies is a cloud-driven leader within the connectivity space. Our mission for the past 20 years has been to deliver innovative world-class solutions for businesses of all sizes. Our team is committed to developing cutting-edge and simple-to-use designs to power your networks so you can focus on your business and customers.







# **Global Branch Locations**

- Registered in the U.S.A. for 20+ years in networking industry
- Technology and Cloud Networking leadership
- 8 Branch offices offering global support







# **Innovation of Networking**

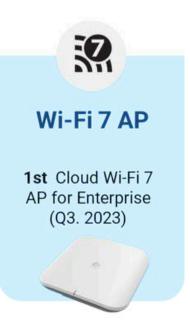
EnGenius continues to develop new technologies and solutions and gain global customers' trust with innovative capabilities and high-quality manufacturing, providing the best products and services.















### **Our Milestones**

### **Continuous Evolution For Business Success**





### Established in U.S.A (1999)

A Global provider of long-range wireless telephony solutions.





### **Enterprise Wi-Fi Equipment**

High performance Indoor and longrange outdoor APs.





### Established in U.S.A (1999)

Plan, deployment, and management of the networks.





### Established in U.S.A (1999)

Comprehensive and unified Cloud solution for enterprise networks.





### Established in U.S.A (1999)

Integrating SD-WAN Gateway and PDU further improves cloud ecosystem.





### **Award Received**

# **Industry-leading Awards For Innovation**







# **Vision & Goals**

### **Build A Secure Cloud-Eco system**

We are building a secure cloud-ecosystem of Wireless Technologies, Switches, Access Points, Gateways, and Power Units with advanced features and customer-driven market to provide a flexible and comprehensive solution to manage enterprise networks.

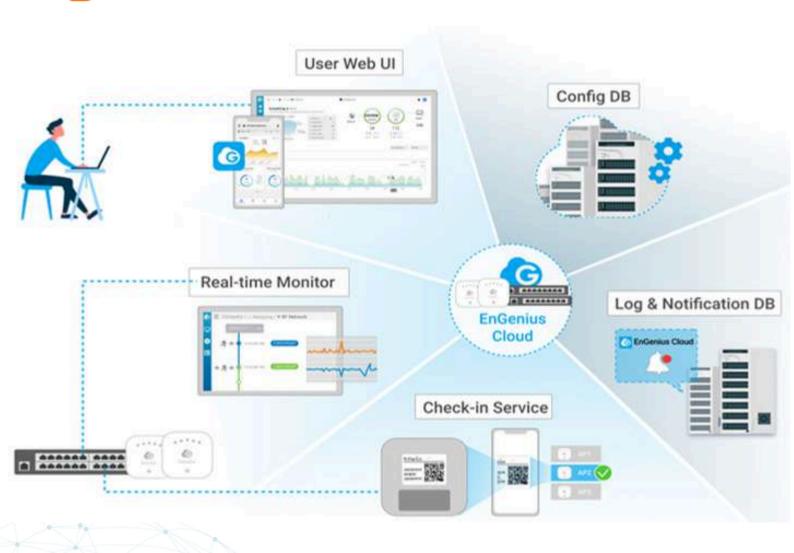






# Highly Scalable and Redundant Cloud Infrastructure

- © Serverless FaaS (Function-as-a-Service) Infrastructure Design
- Highly Scalable and Redundant







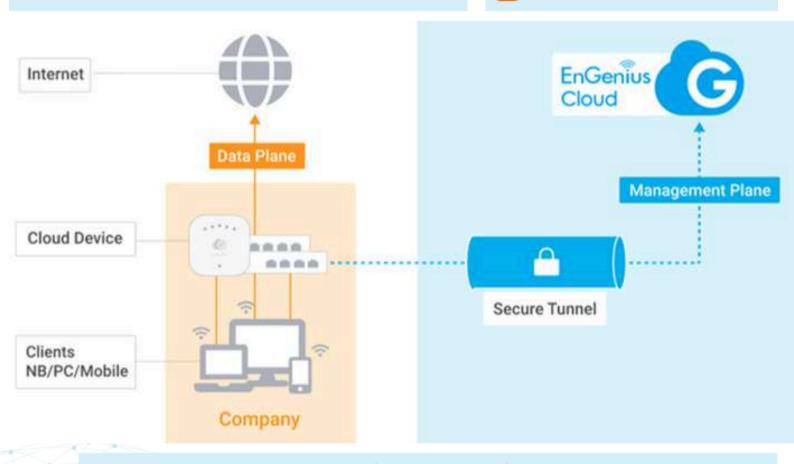
# **Highly Secured Cloud Management Platform**

### **User Data Security**

- C Users' data plane will NOT go through EnGenius Cloud
- Only device management plane goes to EnGenius Cloud

### **Cloud Security**

- **6** 99.99% SLA
- FaaS design for high redundancy
- Protected User Privacy



## **Device Security**

- Built-in certificate on devices
- Multiple Factor Authentication to make sure the device is authorized EnGenius device
- C Data transfer is all encrypted





# **Business Networking Solutions**





# EnGenius Fit III

Midsize Business/Enterprise









Reliable and secure networking for small business





# "EnGenius Cloud" Solution for SME

Segment

### **SME Market Segment**

**Target** 

**Target:** Multi-Location Business / MSP for SME **Cases**:

- Campus with 11 buildings (800+ AP's )
- MSP with >2000 tenants (each with 2-5 AP's)
- Chain Stores with 7000 shops (each with 2-3 AP's)

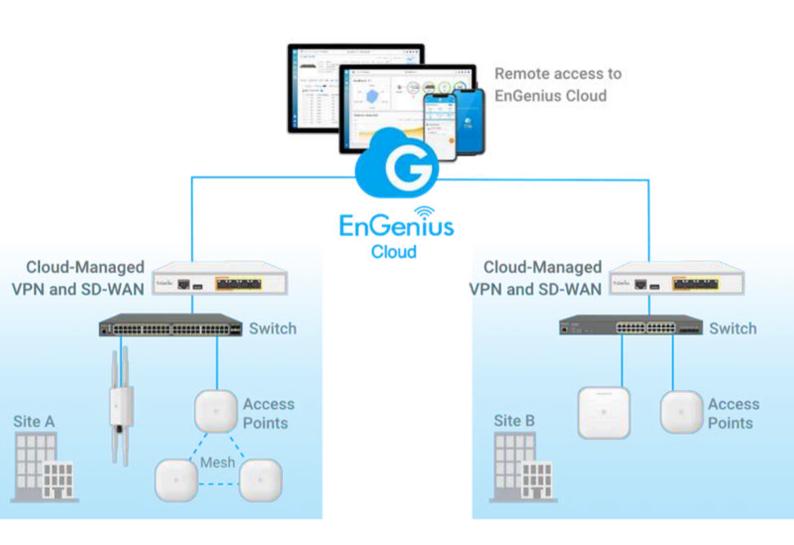
**Position** 

- End-End Networking solution (GW, AP, SW, PDU)
- CUnified Cloud Management (both Web and APP)
- Rich enterprise grade features various verticals
- © Sophisticat diagnostic for easy remote support
- Freemium License model for flexibility





# Feature-Rich Cloud Solution for SME Market







# "EnGenius FIT" Solution for Small Business

Segment

**Small Business Market Segment** 

**Target** 

Target: No IT small business

=> Plug & Play

=> Easy Setup

Coffee shop with Guest Wifi

Small Office with normal VLAN/WiFi setup

**Position** 

**c** End-End Networking solution (GW, AP, SW)

Cunified Cloud Management (both Web and APP)

100% features in APP

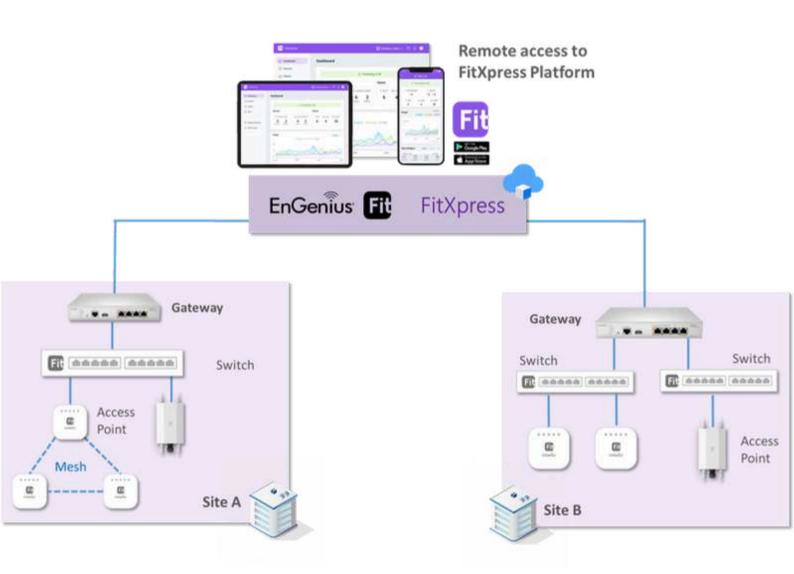
lntuitive Easy Setup

Free license





# Easy-to-use FitXpress Solution for Small Business







# **EnGenius Cloud Solution**







# **Unified Management of EnGenius Cloud Devices**

- © Single pane of glass to manage SD-WAN Gateway, Switch, AP, and PDU.
- Cloud solution for Plug & Play and easy remote support.
- Business-grade networking features for midsize business/enterprise
- On-the-go network management with Cloud To-Go app







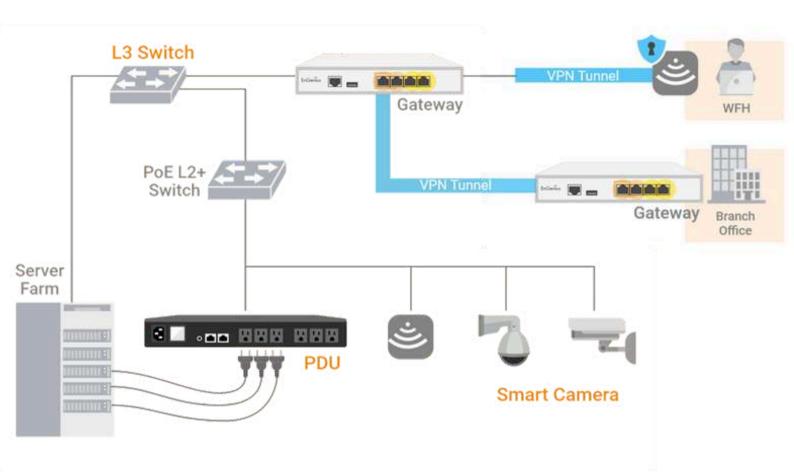








# **EnGenius Cloud Solution New Families**









# Cloud To-Go Management

### **Smart Management**

The EnGenius Cloud To-Go mobile app lets you manage networks centrally. You can see the real-time performance and detailed information of the devices and clients to easily manage networks remotely from any location.







### **Visualized Analytics**

EnGenius Cloud mobile app empowers you to troubleshoot with accurate and feasible advice. With the comprehensive dashboard, you can get a complete picture of network status and setup eventbased alerts and push notifications for commonly detected issues.





### Elaborate Freemium business model with Pro-license



#### Basic Plan

For SOHO, SMB, and fast-growing retail and hospitality to manage networks in a simple way

#### FREE (no license needed)

PRO

#### Professional Plan

For SMEs, managed service providers and networks required more advanced features

#### **(S)** Require Cloud PRO License

#### Easy to Deploy

#### Easy to Manage



**Advanced Networking Planning** 



Cost-Saving Troubleshooting





Unique Functions for projects







# Design For Practical Use Cases C









# **Key Use Cases**



7000 Stores with POS, Kiosk, and Surveillance.



MSP of Service Apartment or Dormitory with >10 Buildings, 200 suites each.



Hospitality - Hotel Chain with 130 rooms in 9 floors each



Campus with 11 buildings, 800+ AP, 6000 Students



Multi-Location Enterprise Use Cases



Auditorium: Zero-wait DFS for High Density Environment





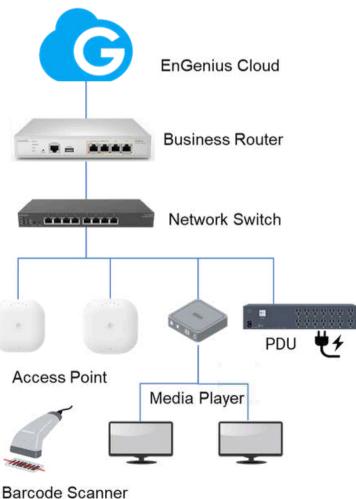
# Smart Stores – 7000 Stores with POS, Kiosk, and Surveillance

## Challenges

- **Scalability:** Large-scale management and configuration changes for all devices.
- **Stability and Security:** High redundancy and secure network needed.
- **Access Control:** Manage team privileges for changing team members.



### **Solutions**

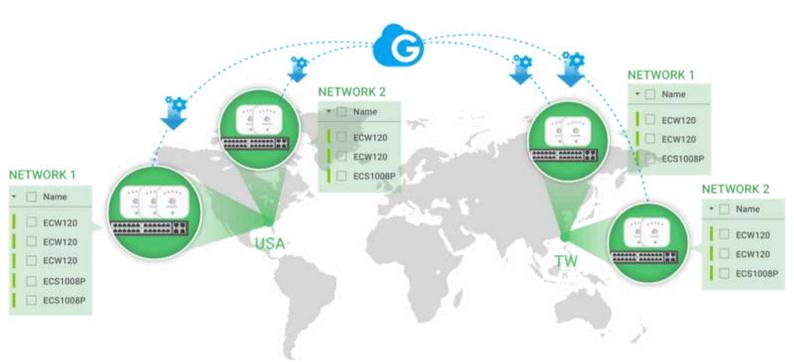






# **Group Configuration and Firmware Management**

- **Challenge:** Deploying networks across regions is time consuming and costly.
- **Solution:** Deploying and managing multiple sites across different time zones with varying network policies made easy with Cloud networking.

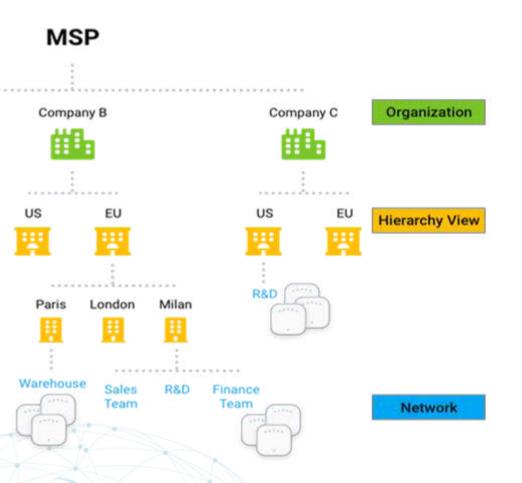






# Simple Hierarchical View of Networks

- **Challenge:** Unable to flexibly control business network according to authority or business unit.
- **Solution:** Manage and monitor company networks with hierarchy view based on different locations or business groups.



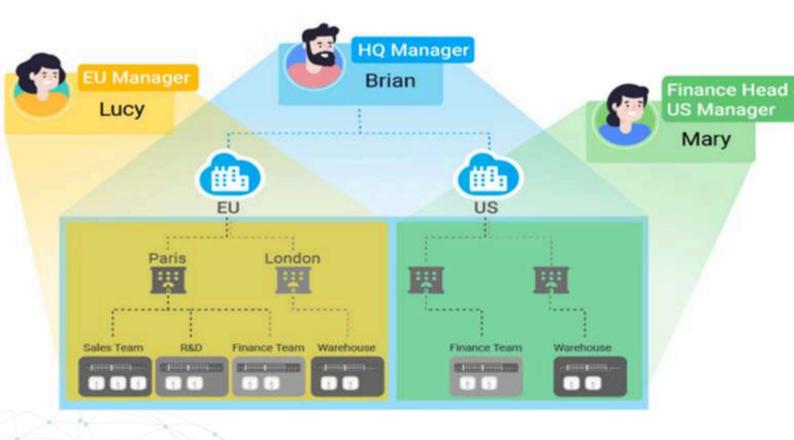






# Multi-Tenants Design for High Flexibility

- Challenge: Customers need to assign network permissions according to organizational responsibilities or business regions
- **Solution:** Configure user roles and privileges in the network to align with your business management policies.







# **PDU Cloud Management**

- **Challenge:** Managing multiple PDUs across different sites can be time-consuming and complex.
- **Solution:** PDU Cloud Management simplifies this with a webbased GUI, plug-and-play setup, batch maintenance, multisite control, and unified network management.



Web Based & Intuitive GUI
Check your PDU Status
anytime with a simple web
based interface



Plug & Play
Scan the QR code to easily
add PDUs in EnGenius
Cloud.



**Batch Maintenance**Simultaneous update of configuration/ firmware for distributed PDUs.



Multi-sites Control
No need to waste time and
money on site visits or inperson support.

**Unified Network** 



Operation Log
You can check the settings
and activities in the system
log, so that maintenance
tasks are easy.



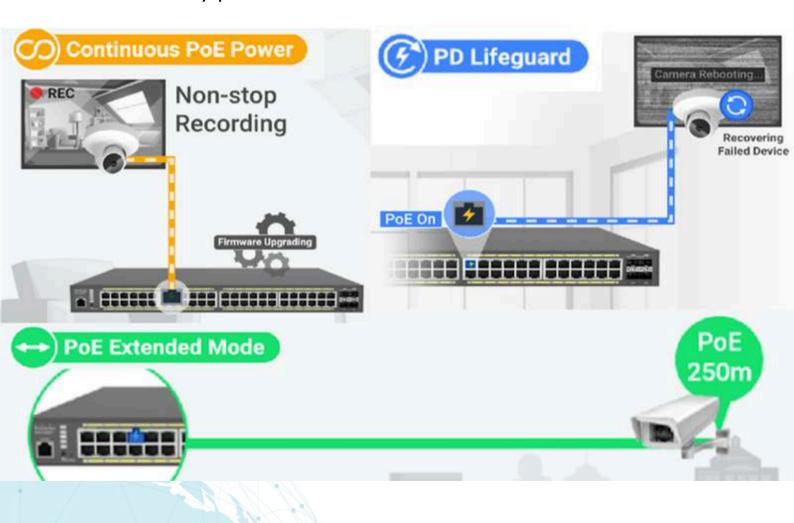
Management
Manage all your network
devices
(PDU/AP/Switch/Router) in
one platform.





### **Advanced Switch PoE Features for Surveillance**

- **Challenge:** Reliable video streaming, real-time surveillance monitoring, and uninterrupted power supply during firmware upgrades are crucial for optimal performance.
- **Solution:** EnGenius provides a range of switches specifically designed for surveillance. These switches also come equipped with advanced Power over Ethernet (PoE) to address any potential inconveniences.







### Case Study: MSP of Service Apartment or Dormitory

### **Challenges**

- PSK for each Room unit or individual with uniqueness and limited period.
- Consume the Support team member privilege management.
- Big scale configuration deployment.
- Integrated with MSP existing management platform with API access.
- Accelerated WiFi-Calling services for tenants from aboard.

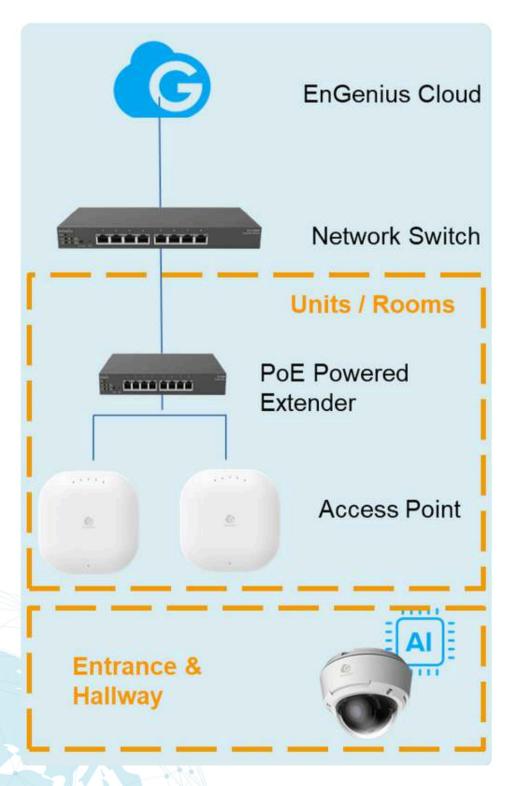






# Case Study: MSP of Service Apartment or Dormitory

### **Solution**

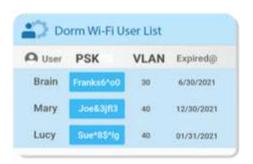






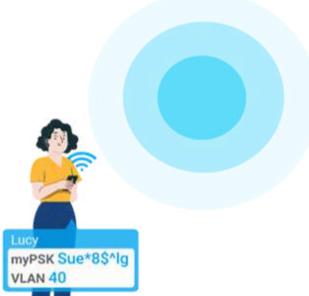
# Unique my PSKto Access Same Wi-Fi Network

- **Challenge:** When the original tenant's rental expires, the wireless network authority should be canceled to avoid security and rights issues.
- Solution: When accessing the same SSID, each tenant will have a unique PSK and is associated with a different VLAN tag based on the privilege., including automated access revocation for expired or non-resident users.



mvPSK Joe&3ifl3





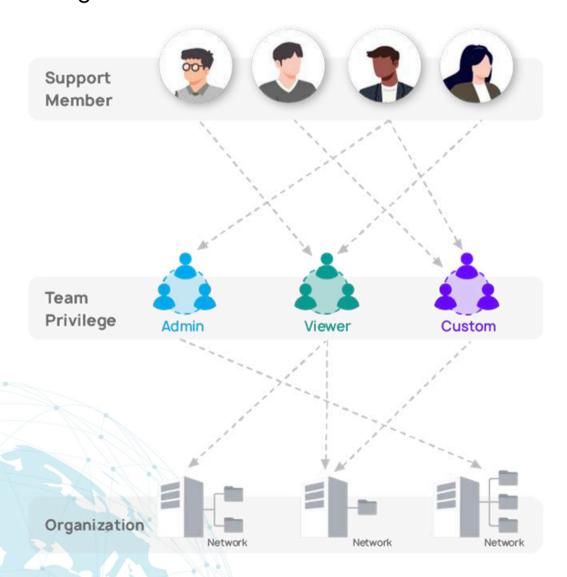






# **Team Member Privilege Management**

- **Challenge:** Traditional MSP Administration involves the time-consuming task of manually adding or removing support team members for each tenant as they come and go.
- **Solution:** MSP Administrators can grant access rights to teams rather than individuals. When team changes are needed, updating the 'Team' list auto-reflects access across related Organizations or Networks.







### Streamlined Network Deployment with Setup Cloning

- Challenge: Configuring network settings repeatedly from scratch as an MSP can be a constant challenge, demanding time and precision to ensure seamless connectivity for multiple clients.
- **Solution:** The 'Clone feature' allows quick copying of configurations from specific Organizations and Networks, reducing repetitive Org-based or site-based settings.







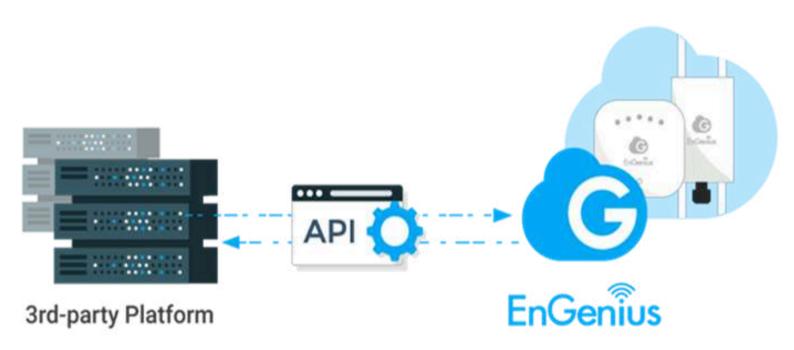






# **Restful API for Central Management Platform**

- **Challenge:** Interoperability challenges arise from various applications using different communication protocols and data formats when exchanging data with EnGenius Cloud.
- **Solution:** With RESTful principles, EnGenius Cloud can define a standardized API that all applications can adhere to, ensuring seamless data exchange and integration.

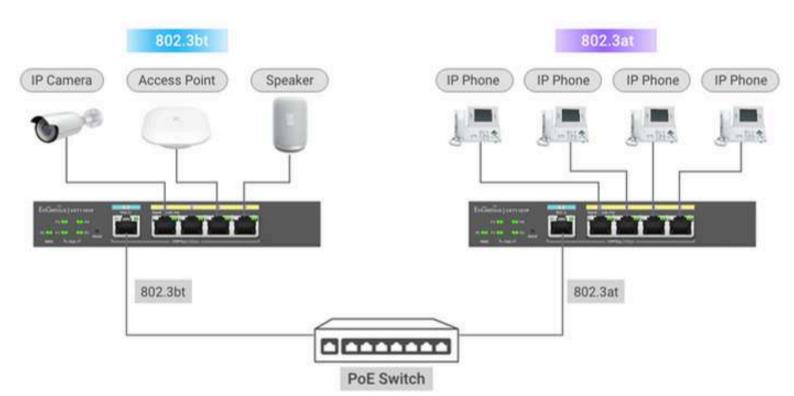






### **Efficient Network Connectivity with Switch Extenders**

- **Challenge:** Extending network connectivity efficiently without compromising performance across various devices.
- **Solution:** The Extenders provide seamless connectivity for multiple PoE devices and support different PoE standards for optimal performance and power delivery.

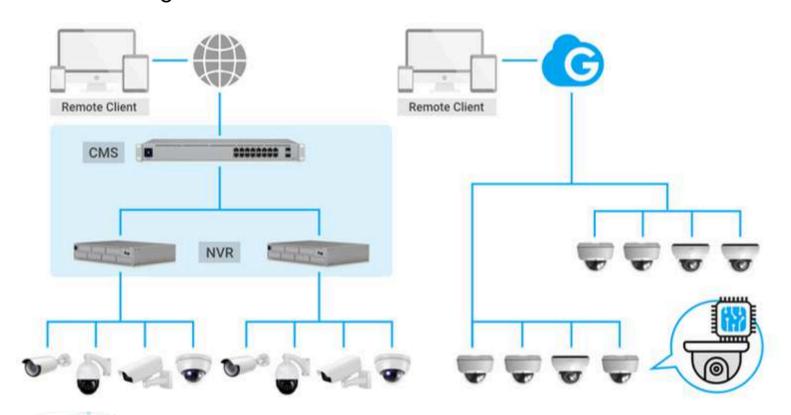






# **EnGenius Al Cloud vs. Traditional Surveillance**

- **Challenge:** Traditional systems need complex NVR/CMS setups and maintenance, making large-scale management difficult.
- **Solution:** EnGenius Cloud AI cameras have built-in storage, eliminating NVR/CMS needs, simplifying deployment and enabling cloud-based data search.



- Al Camera with embedded video storage
- Plug and Play
- No NVR/CMS installation and Maintenance
- Big scale deployment and management
- Big Data Search on cloud





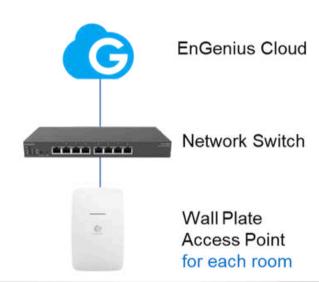
# Case Study: Hospitality - Hotel Chain with 130 rooms in 9 floors each

### Challenges

- Guest devices privacy (Client Isolation)
- Trend of BYOM (bring your own media) for stream casting
- In-Room Switch/AP installation and management



### **Solutions**



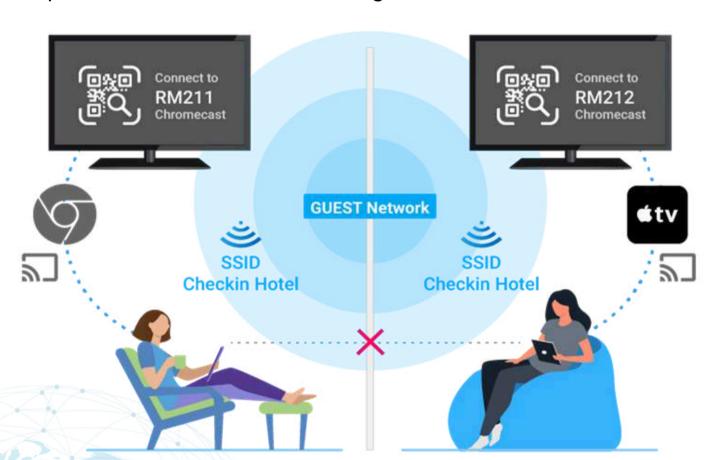






# **SmartCasting for Mobile Media Streaming to TV**

- Challenge: Guest Network with L2 isolation blocks device-to-TV casting, creating inconvenience and poor guest experience.ion protocols and data formats when exchanging data with EnGenius Cloud.
- **Solution:** SmartCasting enables easy setup and mobile streaming to TVs, enhancing guest entertainment with personalized content on the big screen.

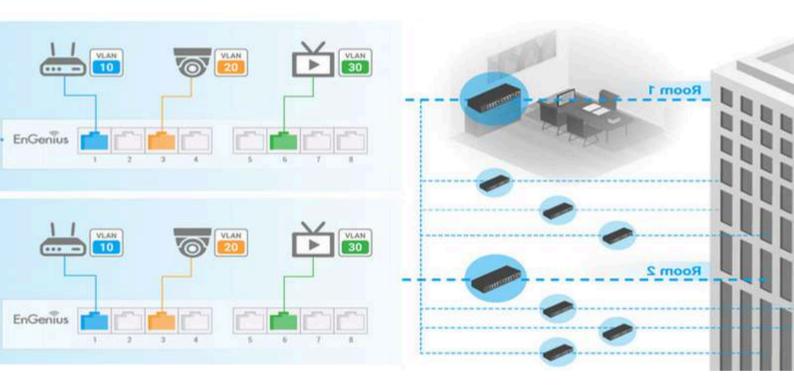






## Switch Configuration Template for Easy Deployment

- **Challenge:** Time-consuming and cumbersome process of setting up each switch port.
- **Solution:** Deploy port configurations to the same device models in your network. For example, the hotel manager can easily deploy the same switch port settings to each room.

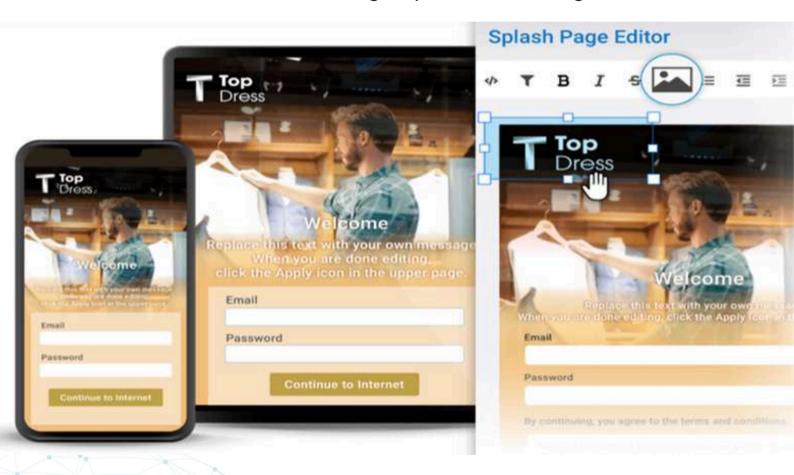






# Captive Portal & Splash Page for Guest Wi-Fi

- **Challenge:** Need to personalize branding, message delivery, and visitor traffic redirection via the Wi-Fi portal page.
- **Solution:** Customize splash pages of your captive portal with a WYSIWYG editor from the template you choose, redirecting visitor traffic while delivering important messages.



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# Case Study: Campus with 11 buildings, 800+ AP, 6000 Students

### **Challenges**

- AD server with separate authentication for Staff and Student
- Need to eliminate the broadcast/multicast traffic to minimum area
- Heavy Video streaming and multicast usage



#### **Solutions**





Access Point X800





# AD Authentication Integration for Wi-Fi Access with Groups

- **Challenge:** Complexity of managing multiple user credentials for Wi-Fi access, both for individual users and administrators.
- **Solution:** Single sign-on the campus Wi-Fi or SMB Wi-Fi with Google LDAP and Azure AD integration for centralized user management.



**Cloud Identity Services** 



Google LDAP Integration

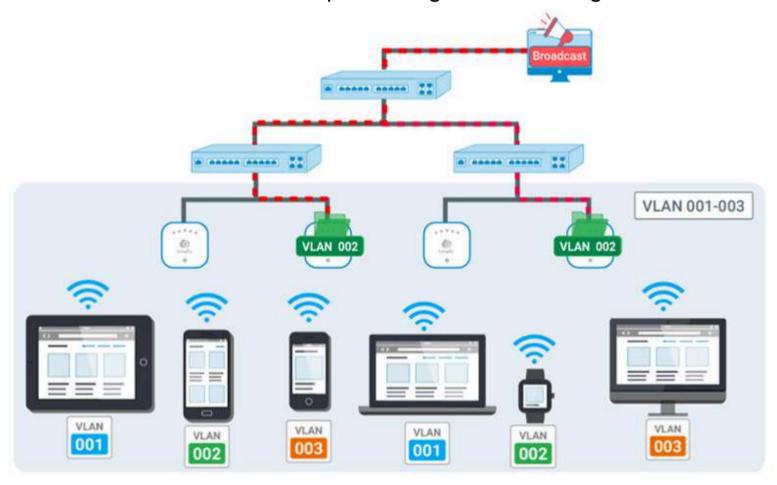






# VLAN Pooling to eliminate the broadcast/multicast Traffic

- **Challenge:** Broadcast traffic can flood the network, leading to inefficiencies and potential slowdowns.
- Solution: The APs automatically assign clients to different VLANs from a user-defined pool, effectively partitioning the broadcast domain and preventing traffic flooding.





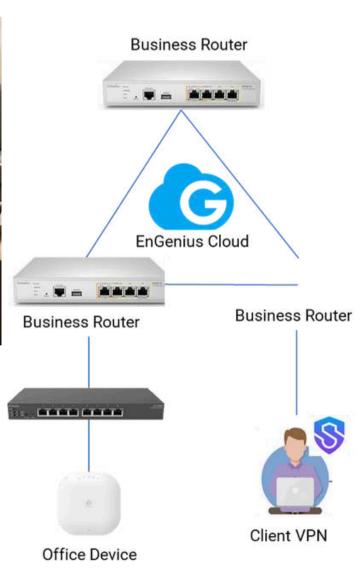


### **Multi-Location Offices Use Cases**

### **Challenges**

- Video conference might be impacted by other traffic
- Secure Site-Site Connections
- Easy Deployment of Client VPN
- Wi-Fi Heat Map Plan

#### **Solutions**

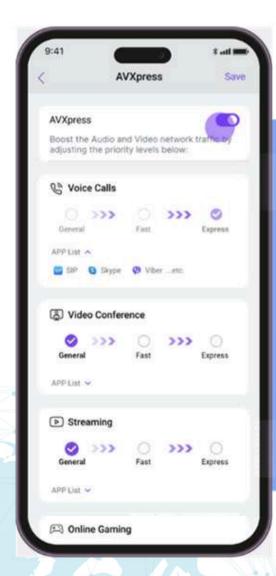






## Simple One-Click Prioritization User Interface

- **Challenge:** Users need an easy way to prioritize network traffic for various applications without technical expertise.
- **Solution:** EnGenius AVXpress mode offers a simple interface to prioritize services like voice calls, video conferencing, streaming, and gaming with just one click, ensuring optimal performance for critical applications.









# Consistent Wired & WiFi Networks Quality With AVXPress

- **Challenge:** Ensuring consistent quality of service for both wired and wireless networks.
- **Solution:** EnGenius AVXpress prioritizes application traffic across both wireless and wired connections, ensuring "Express" priority from EnGenius Access Points to EnGenius Switches for seamless end-to-end network performance.

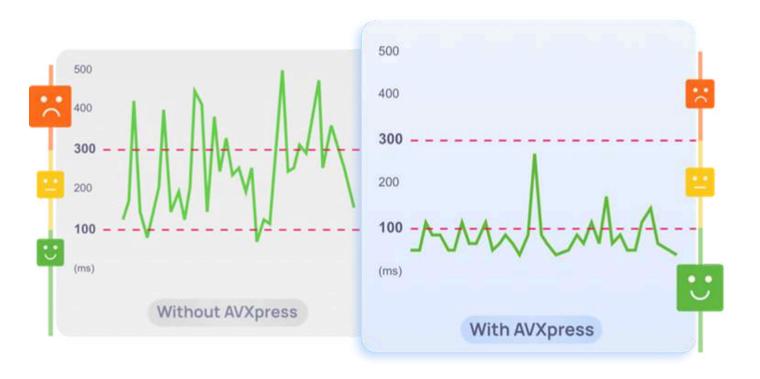






# AVXpress and its Improvement on Video Call Latency

- **Challenge:** High latency in video conferencing can degrade call quality and user experience.
- **Solution:** EnGenius AVXpress significantly reduces average latency to below 100ms, ensuring smoother, uninterrupted video calls, and enhancing overall communication stability and user satisfaction.



\*Source: EnGenius Test Lab

Average Latency(ms)

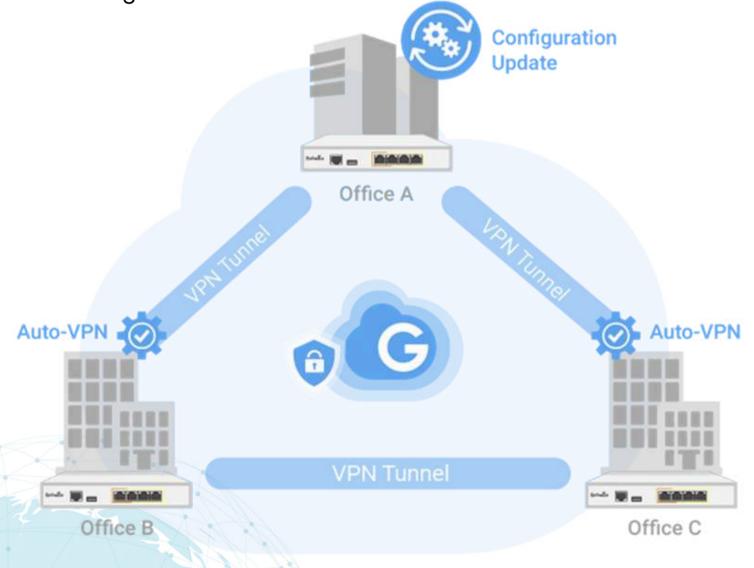




## Seamless Connectivity with Gateway Auto-VPN and NAT Traversal

**Challenge:** When VPN settings or WAN IP changes, the connection will be lost until manually restored

**Solution:** Effortlessly ensure seamless connectivity with Auto-VPN, auto-healing and adjusting VPN settings when WAN IP changes.

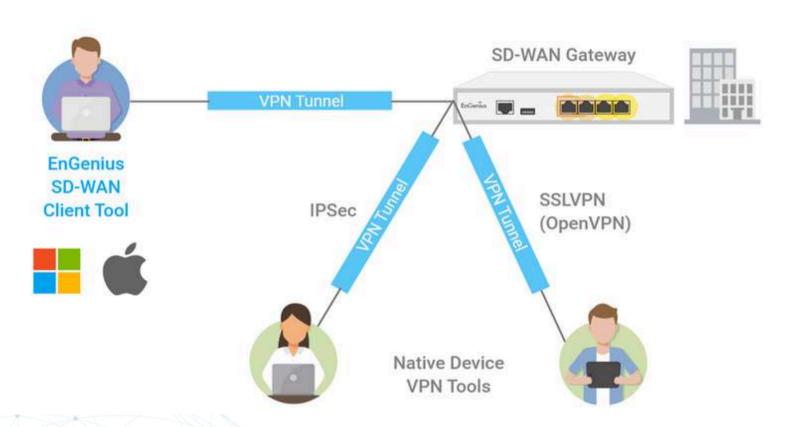






# SecuPoint Client VPN Tool for Remote Connection to Office

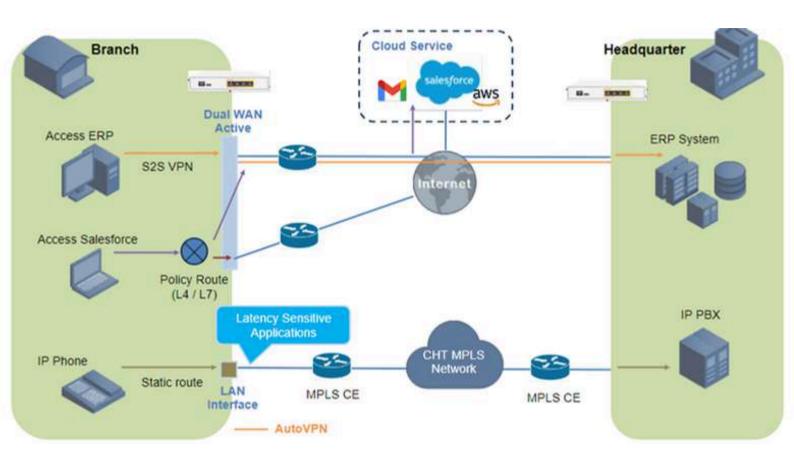
- **Challenge:** Enterprises must establish secure VPN channels quickly for remote and mobile work.
- **Solution:** The SD-WAN Client VPN tool for secure authentication, encryption, and seamless connection for work-from-home users.







# Layer 4/7 Policy Route



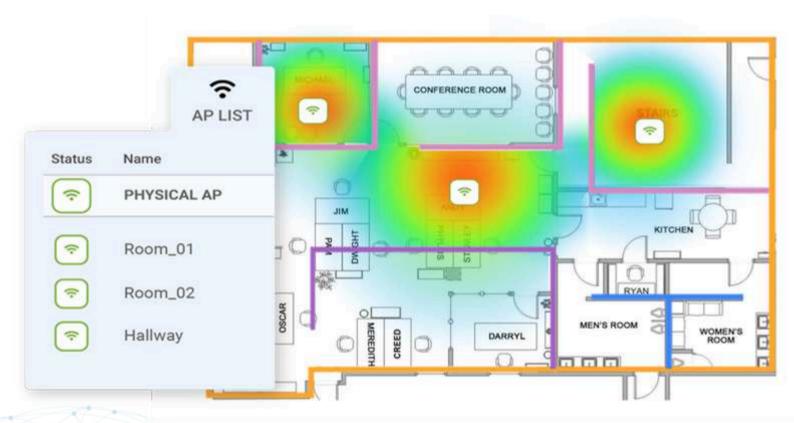






# Wi-Fi Planning with Real Environmental Effects

- **Challenge:** •Customers cannot understand the real coverage and signal conditions of Wi-Fi to effectively plan and optimize the network.
- **Solution:** View the actual Wi-Fi coverage according to the floor map you uploaded, where real-world obstacles such as wall effects are factored in.



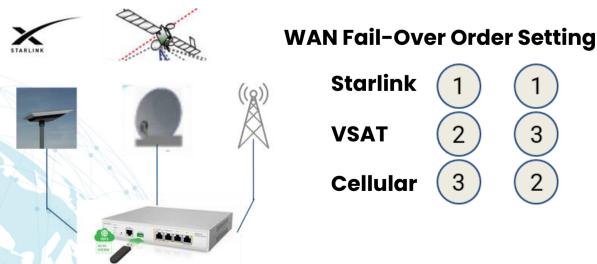




### Flexible Internet Links Fail-over for Maritime

- **Challenge:** •Customers cannot understand the real coverage and signal conditions of Wi-Fi to effectively plan and optimize the network.
- **Solution:** View the actual Wi-Fi coverage according to the floor map you uploaded, where real-world obstacles such as wall effects are factored in.







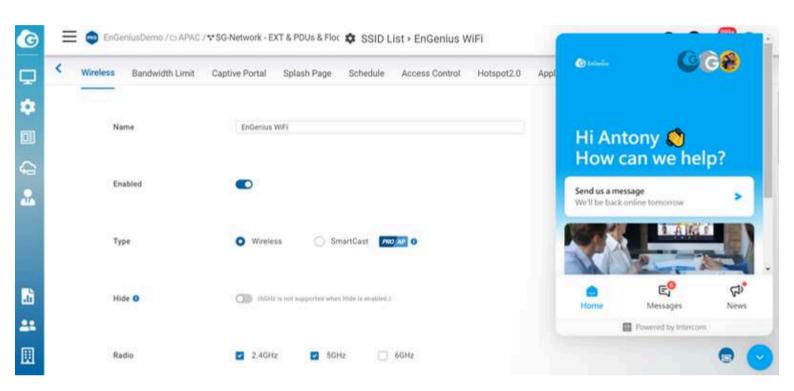


# Diagnostics and Support





## EnGenius Cloud Global Support - On-Line Chat Box

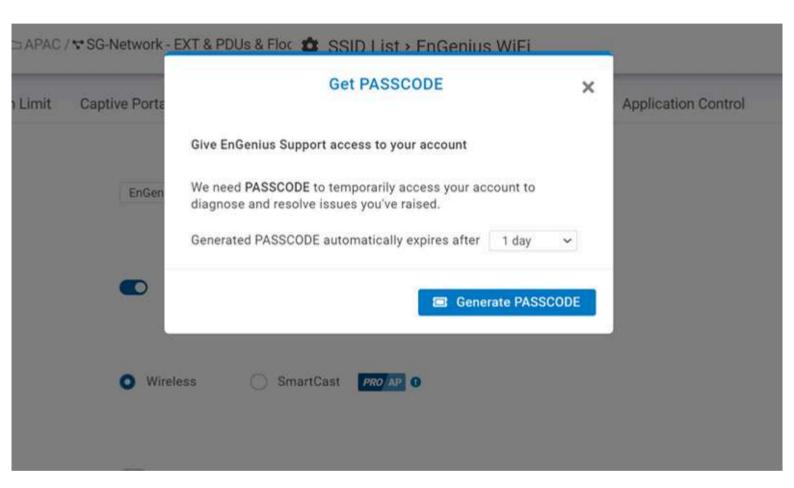








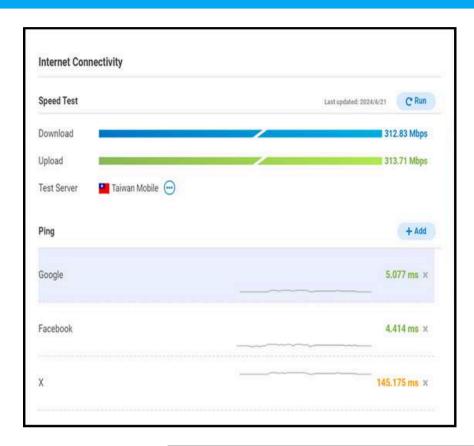
# EnGenius Cloud Global Support - Remote Support with users Privilege

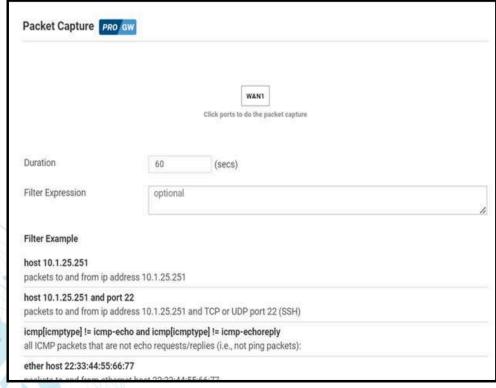






# **Advanced Tools for Self-Diagnostics**









# AP with Dedicated Scanning Radio



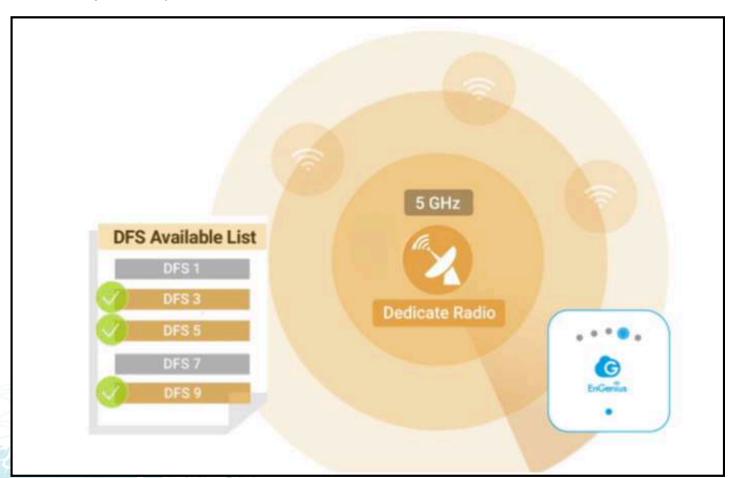






### Auditorium:Zero-wait DFS for High Density Environment

- **Challenge:** Customers cannot understand the real coverage and signal conditions of Wi-Fi to effectively plan and optimize the network.
- **Solution:** The dedicated radio continuously scan all DFS channels in the background and maintain a list of available DFS channels—preventing client devices from being temporarily disconnected.







### Military:WIPS for High Security Concern Environment

- **Challenge:** Rogue access points bring risks and can often mimic legitimate SSIDs, tricking users into connecting to them.
- Solution: AirGuard™ is an intelligent wireless security system built in to the EnGenius Cloud security AP to protect the airspace from rogue devices and wireless threats with dedicated scanning radios.





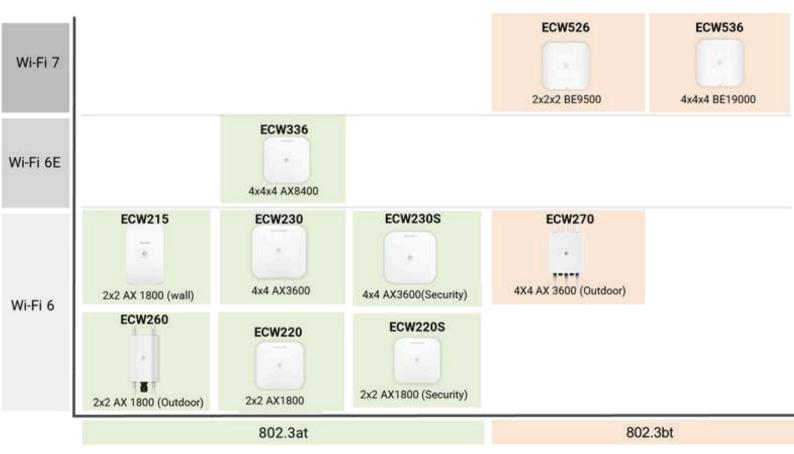


# Cloud Product Offerings C





# **Cloud-Managed Access Points**







# **EnGenius Wi-Fi 7 Product Offerings**



#### Cloud7 4x4x4 (ECW536)

Cloud-managed Wi-Fi 7 Indoor AP

- 18,800 Mbps
- -4 x 4:4
- -802.3bt
- 1x 10GE PoE++ port & 1x 10GE port
- EnGenius Cloud-managed



#### Cloud7 2x2x2 (ECW526)

Cloud-managed Wi-Fi 7 Indoor AP

- 9,400 Mbps
- 2 × 2:2
- 802.3at
- 1x 10GE PoE+ port
- EnGenius Cloud-managed







# **EnGenius Wi-Fi 7 Product Highlights**

EnGenius

ECW536(Cloud7 4x4x4)





2x Wider Bandwidth







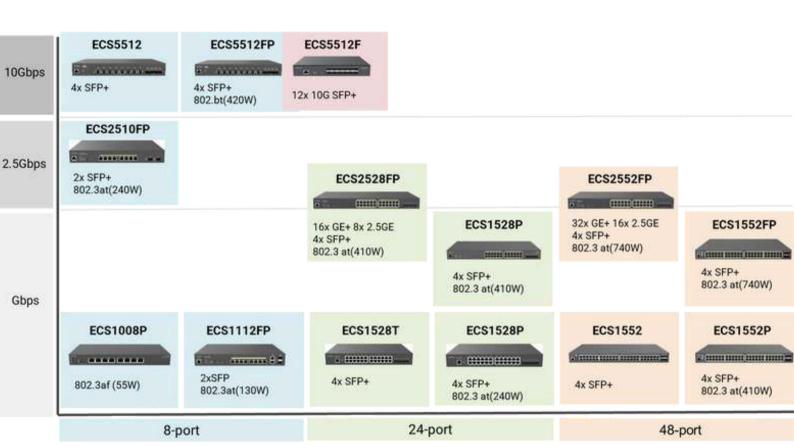
Cloud Management







# **Cloud-managed Network Switches**







# Cloud-managed SD-WAN Gateways

	Gateway5 4mG (ESG510)	Gateway6 4mG (ESG610)	Gateway6 8mG 2SFP+ (ESG620)
CPU Processor	Quad Core 1.6 GHz	Quad Core 2.2 GHz	Quad Core 2.2 GHz
RJ45 Interface	4x 2.5G Ports (1x PoE+)	4x 2.5G Ports (1x PoE+)	8x 2.5G Ports (4x PoE+)
SFP Interface	3.	*	2x SFP+
Mounting Method	Wall Mount	Wall Mount	Rack Mount
irewall Throughput	4G (Firewall Throughput)	6.7G (Firewall Throughput)	9.5G (Firewall Throughput)
VPN Throughput	960 Mbps (VPN Throughput)	1.7 Gbps (VPN Throughput)	1.7 Gbps (VPN Throughput)







# **Cloud-managed Power Distribution Units**



#### ECP106-INT

6 Individually IP Controlled and Metered Outlets



#### ECP212-INT

12 Individually IP Controlled and Metered Outlets







# **Cloud-managed Switch Extenders**



#### **EXT1105P**

#### **Switch Extender 4 Po**

Effortless network extension with integrated PoE and PSE output capabilities.

- 4x GE PoE Ports
- 1x GE PD Power Input



**EXT1106** 

#### **Switch Extender 4GE ISFP**

Beyond 100-meter network extension with an SFP interface while ensuring optimal performance.

- 1x SFP Interface
- 1x GE PD Power Input & 4x GE Ports



#### **EXT1106**

# Switch Extender 3GE 4 PoE ISFP

Comprehensive network extension beyond 100-meter with PoE, PSE, and SFP interface for optimal performance.

- 1x SFP Interface
- 4x GE PoE Ports
- 1x GE PD Power Input & 4x GE Ports





# EnGenius Fit Solution |





### **EnGenius Fit Overview**

### **Smart Networking for Small Business**

Affordable Business-Grade Hardware. Meet the needs of small businesses with flexible deployment and management options.







### Fit Solution Benefits for Small Business

#### **Seamless & Affordable Solution**







### Easy Deployment

### Flexible Management

# Cost-effective Devices

Setup network with easy on-boarding features

Suitable for remote or on-premises scenarios

Affordable hardware with enterprise features



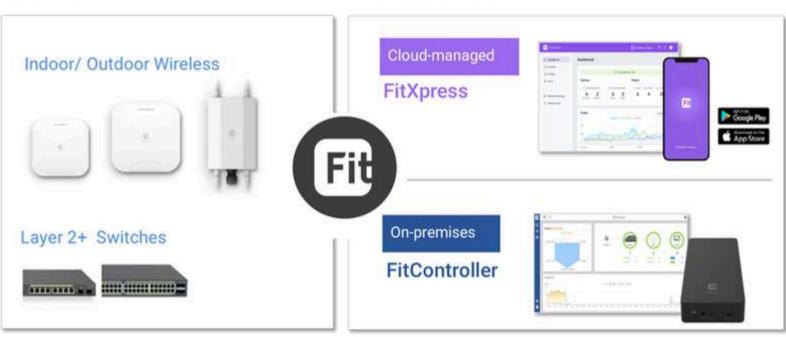


# **Components of EnGenius Fit Solution**

- **Hardware:** Access Points, Network Switches, SD-WAN Gateway
- **Management platform:** Cloud management (FitXpress) and On-premises (FitController)

#### HARDWARE

#### MANAGEMENT PLANE









# FitXpress Highlights | Fit





# Easy-to-use Solution for Small Business

FitXpress streamlines the entire network management process with a mobile app without any software installed and time-consuming setup.







### Manage On The Go With Always-on Platform

Remotely manage your networks and devices anywhere and at any time.

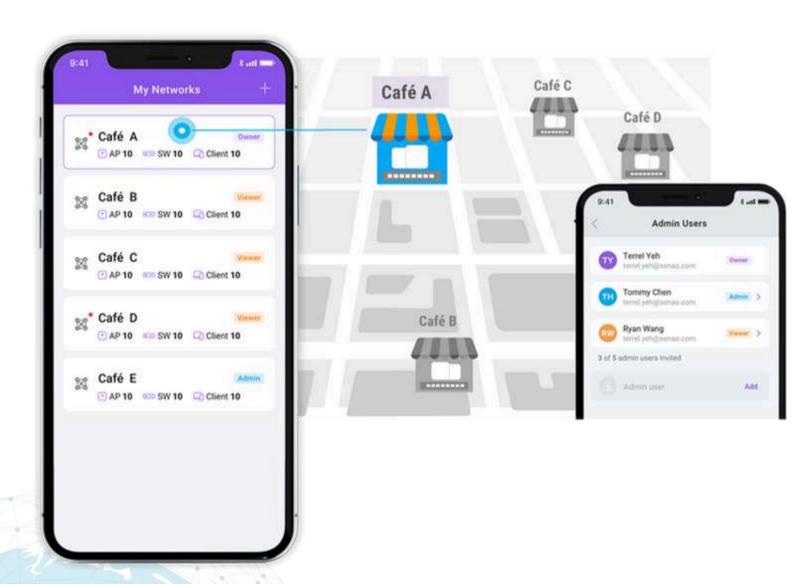






# User Delegation for Multiple-locations Management

Manage multiple networks through a unified interface and delegate users with specific privileges for network management.

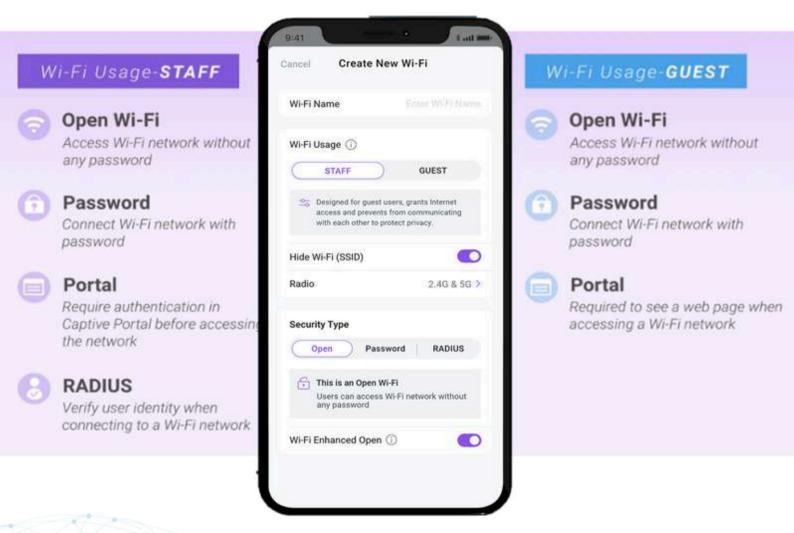






#### Quickly Create Secure Staff and Guest Wi-Fi Networks

© Separate Wi-Fi networks for guests and employees in minutes with predefined security and authentication profiles



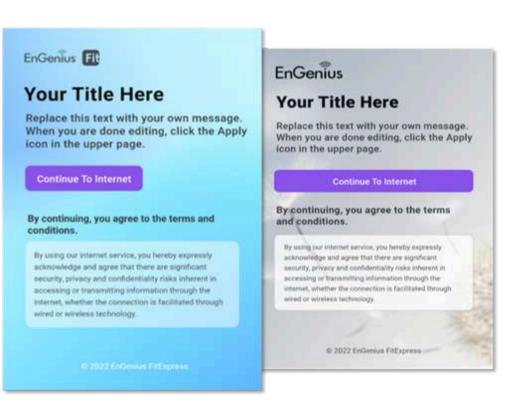


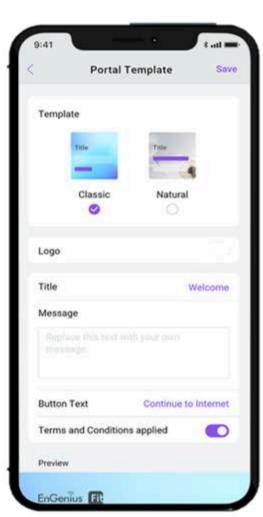


# Personalize Captive Portals for Wi-Fi Networks

G

Customize different Captive Portals for Wi-Fi networks to authenticate users before they can access the Internet.



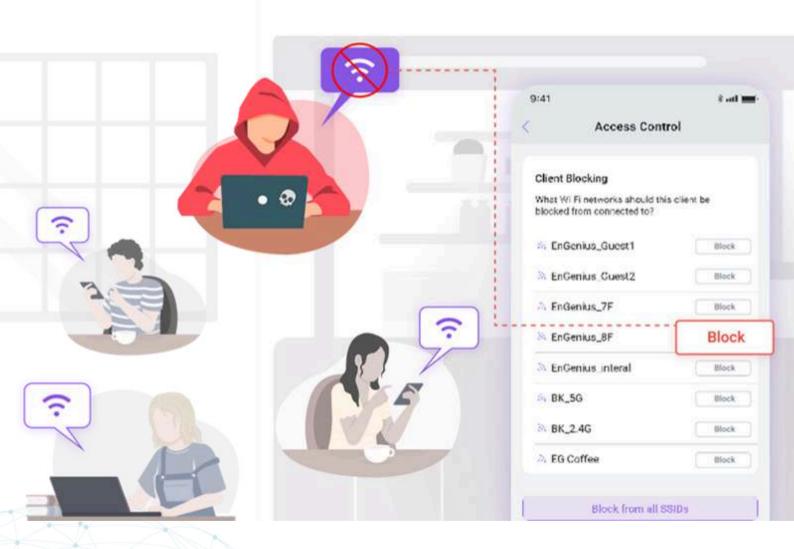






#### Secure Your Wi-Fi with Client Access Control

Block suspicious wireless clients for the entire network or specific Wi-Fi with just a few clicks.

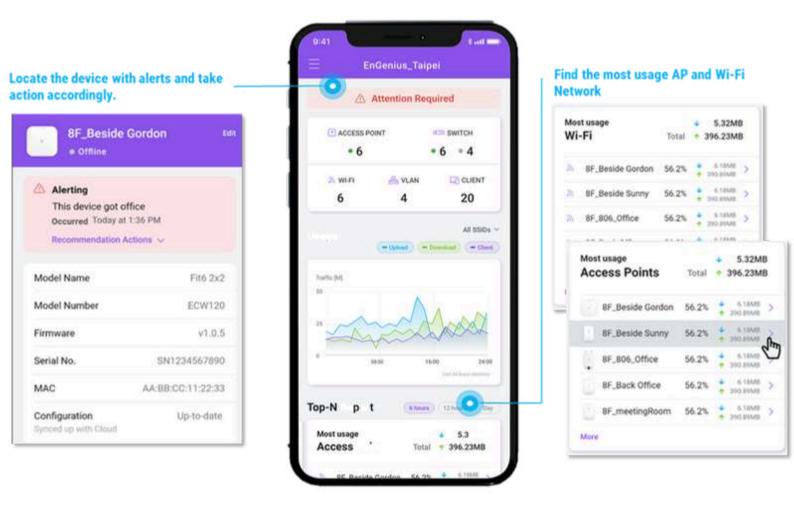






### Stay Informed with Network Status and Alerts

© Obtain real-time access to device and traffic information within your network, and receive timely alerts of any issues.

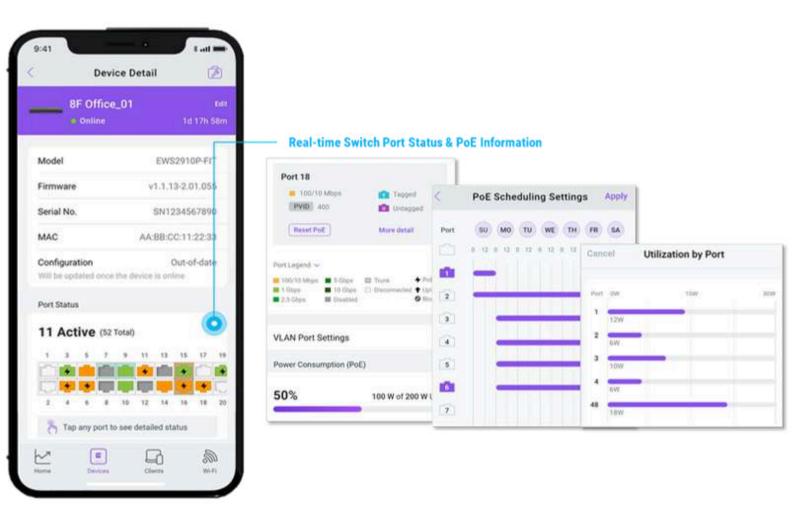






### In-depth Device Information at Your Fingertips

Access information about a specific device at a glance and drill into more details whenever necessary.



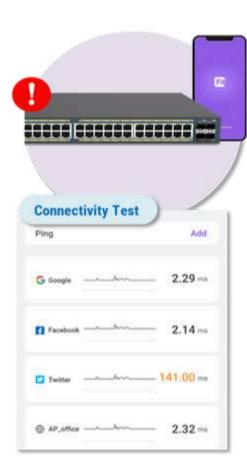




### **Effortless Troubleshootingwith Visualized Tools**

Visual diagnostic tools are readily available whenever a problematic device is detected.











## FitController Highlights Fit







# On-premises Appliance with Built-in Enterprise-level Features



#### **Plug and Play**

PoE without additional configurations and connections.



#### No Extra installation

built-in network management system without software installation



#### **Professional and Scalable**

Business-grade features for deploying, monitoring and managing.

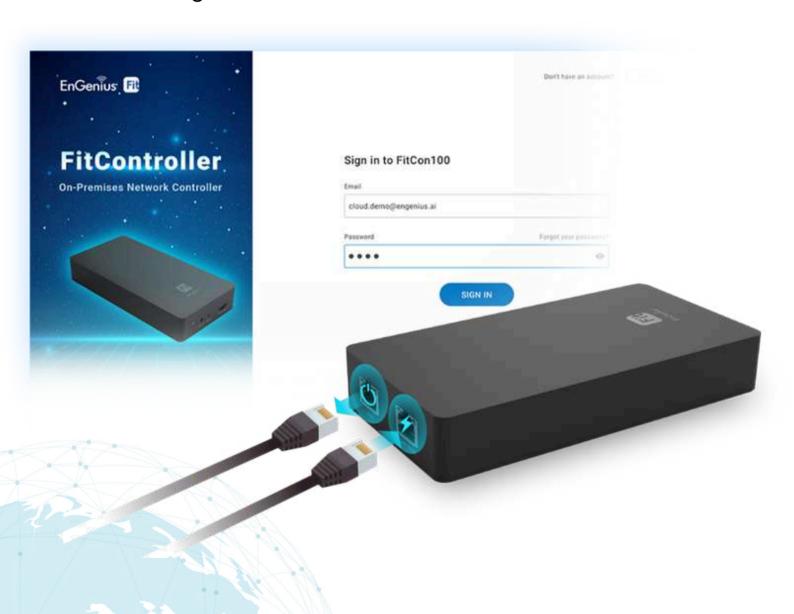






# Quick Installation Without Complex Preliminary Settings

The plug & play FitController simplifies on-site network management with built-in software. No need for a computer or server, no extra installation, and no complicated configuration. The group configuration will make your devices onboarding in minutes.

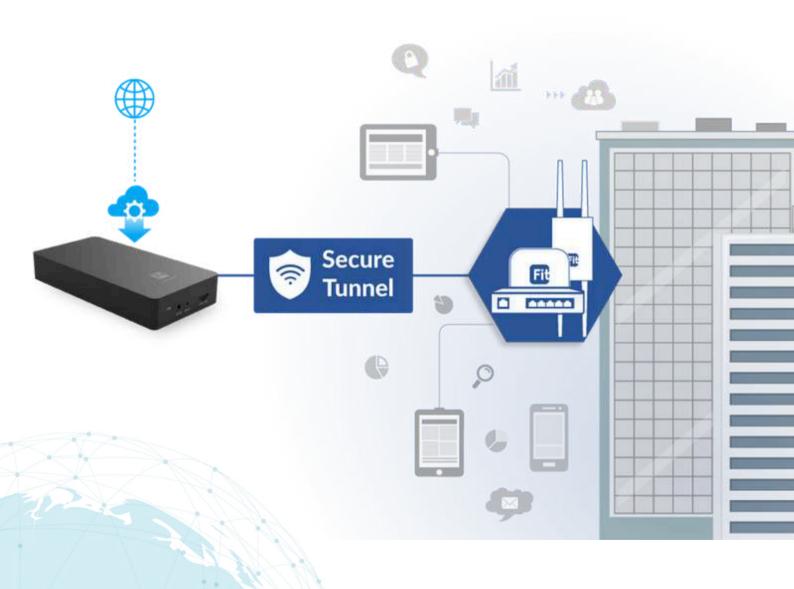






### **Greater Autonomy and Data Security**

Fitcontroller supports local Storage and Control packets are all encrypted through the secure tunnel, allowing businesses to use these features securely while maintaining autonomy and data privacy.

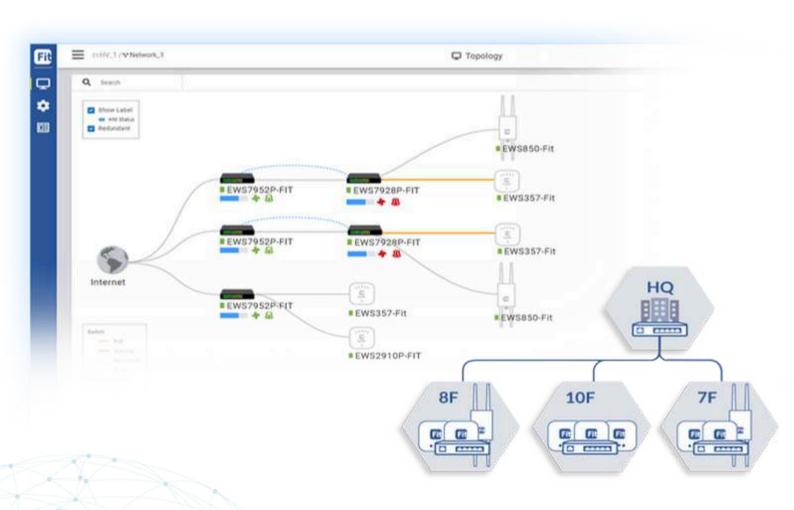






### **Central Management of Distributed Networks**

FitController provides a central place to monitor distributed networks. You can manage devices hierarchically by a multilayered group of networks and monitor networks based on deployment locations or business setups.

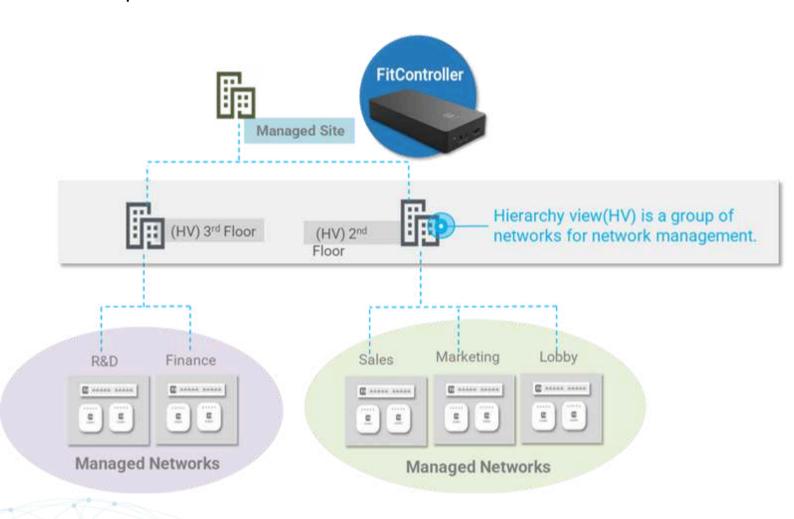






### **Manage Your Network with Hierarchy View**

Use a multi-layered group of networks to manage and monitor networks based on deployment locations or business setups.

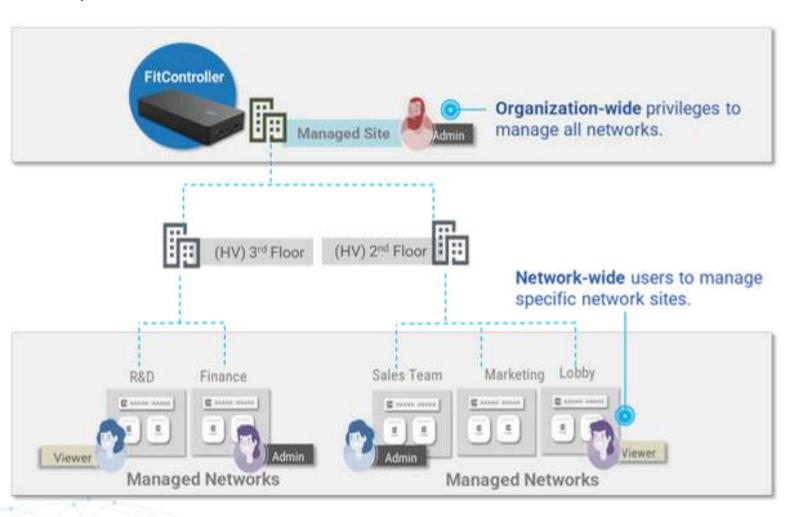






### Multi-tenant Design with Roles and Privileges

Assign users with different roles and privileges to manage your company's network and conform to management policies.







#### **Network Health and Dashboard**

Holistic assessments of real-time network health allow you to respond quickly to network issues.





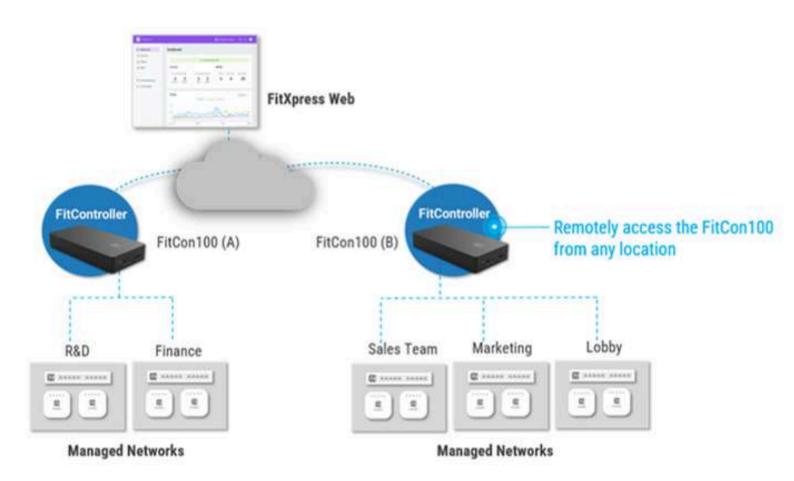






#### FitCon100 Remote Access

On-premises network management enables administrators to manage networks through the cloud, allowing remote access of multiple networks from a single portal.







# Fit Product Offerings









#### **EnGenius Fit Access Points**

Wi-Fi 6

EWS356-FIT

EWS357-FIT

EWS377-FIT

EWS850-FIT

2x2 AX 3000

2x2 AX 1800

2x2 AX 1800

802.3af

802.3at





#### **EnGenius Fit Network Switches**

EWS2910FP-FIT EWS7928P-FIT EWS7952FP-FIT ..... -----Tummum'ummum 4x SFP+ 4x SFP+ 2x SFP 802.3at(240W) 802.3 at(740W) 802.3af (110W) Gbps EWS2910P-FIT EWS7928FP-FIT EWS7952P-FIT amminim. .......... Samu man anna man 4x SFP+ 4x SFP+ 2x SFP 802.3at(410W) 802.3 at(410W) 802.3af (55W) 48-port 24-port 8-port





# **Appendix**





## Cloud-managed Access Points Detailed Specs

		Indoor				Outdoor	
	Wifie	Wi-Fi 6E	WHZ	WHZ	and the same of	W:fie	Willo
					190	73877	
Model Name	Cloud6 4x4 S	Cloud6E 4x4x4	Cloud7 2x2x2	Cloud6E 4x4x4	Cloud5 2x2 Outdoor	Cloudé 2x2 Outdoor	Cloud6 4x4 Outdoor
Model Number	ECW230S	ECW336	ECW526	ECW536	ECW160	ECW260	ECW270
Wi-Fi Standard	Wi-Fi 6 (11ax)	Wi-Fi 6E (11ax)	Wi-Fi 7(11be)	Wi-Fi 7 (11be)	11ac Wave 2	Wi-Fi 6 (11ax)	Wi-Fi 6 (11ax)
Frequency	2.4 GHz & 5 GHz	2.4 GHz & 5 GHz & 6 GHz	2.4 GHz & 5 GHz & 6 GHz	2.4 GHz & 5 GHz & 6 GHz	2.4 GHz & 5 GHz	2.4 GHz & 5GHz	2.4 GHz & 5GHz
Data Rate (2.4 GHz)	1200 Mbps	1,200 Mbps	700 Mbps	1,400 Mbps	400 Mbps	600 Mbps	1200 Mbps
Data Rate (5 GHz)	2.400 Mbps	2,400 Mbps	2,900 Mbps	5,800 Mbps	867 Mbps	1200 Mbps	2400 Mbps
Data Rate (6 GHz)	*:	4,800 Mbps	5,800 Mbps	11,600 Mbps	18.	*:	*
Radio Chains	4×4:4	4 × 4:4	2×22	4 × 4;4	2×2:2	2×22	4 x 4.4
Tx Power (2.4 GHz)	23 dBm	23 dBm	25 dBm	25 dBm	23 dBm	23 dBm	24 d8m
Tx Power (5 GHz)	23 dBm	23 dBm	24 dBm	24 dBm	23 dBm	25 dBm	24 dBm
Tx Power (6 GHz)		23 dBm	24 dBm	24 dBm	LE:	- 23	• •
Antennas (2.4 GHz)	4 x 5 dBi Omni	4 x 5 dBi Omni	2 x 5 dBi Omni	4 x 5 dBi Omni	2 x 5 dBi External Omni	2 x 5 dBi External Omni	4 x 5 dBi External Omni
Antennas (5 GHz)	4 x 6 dBi Omni	4 x 6 dBi Omni	2 x 6 dBi Omni	4 x 6 dBi Omni	2 x 5 dBi External Omni	2 x 5 dBi External Omni	4 x 7 dBi External Omni
Antennas (6 GHz)		4 x 5 dBi Omni	2 x 6 dBi Omni	4 x 5 dBi Omni	16		
PoE Standard	802.3at	802.3at	802.3at	802.3bt	802.3af/at	802.3af/at	802.3at/bt
Scanning Radio	•		-	-		*	*
BLE	•				(8)		
Power Consumption (Peak)	19.5W	22.5W	18W	38W	12.6W	15.9W	46W
Ethernet Port	1x 2.5GE PoE+ port	1x 5GE PoE+ port	1x 10GE PoE+port	1x 10GE PoE++port 1x 10GE port	1x GE PoE+ port	1x 2.5GE PoE+ port	1x 2.5GE PoE++ port 1x GE PSE Out port
Mounting	Wall/ Ceilling	Wall/ Ceiling	Wall/ Celling	Wall/ Ceiling	Wall/ Pole	Wall/ Pole	Wall/Pole
IP Rating	N/A	N/A	N/A	N/A	IP67	IP67	IP68
Dimensions	205 x 205 x 33 mm	205 x 205 x 33 mm	190 x 190 x 39.5 mm	230 x 230 x 37mm	112 x 173 x 30 mm	124 x 190 x 52.5 mm	218 x 285 x 53 mm
Mesh Technology			•	•			
Mobile app (Cloud To-Go)							







## Cloud-managed Access Points Detailed Specs

			Indoor			
			WI-FI 6	Wi-Fi 6	Wist 6	W-FIS
Model Name	Cloud5 2x2	Cloud5 4x4	Cloud6 2x2 Wallplate	Cloud6 2x2	Cloud6 2x2 S	Cloudé 4x4
Model Number	ECW120	ECW130	ECW215	ECW220	ECW220S	ECW230
Wi-Fi Standard	11ac Wave 2	11ac Wave 2	Wi-Fi 6 (11ax)	Wi-Fi 6 (11ax)	Wi-Fi 6 (11ax)	Wi-Fi 6 (11ax)
Frequency	2.4 GHz & 5 GHz	2.4 GHz & 5 GHz	2.4 GHz & 5 GHz	2.4 GHz & 5 GHz	2.4 GHz & 5 GHz	2.4 GHz & 5 GHz
Data Rate (2.4 GHz)	400 Mbps	800 Mbps	600 Mbps	600 Mbps	600 Mbps	1200 Mbps
Data Rate (5 GHz)	867 Mbps	1800 Mbps	1200 Mbps	1200 Mbps	1200 Mbps	2400 Mbps
Data Rate (6 GHz)			2	141	141	
Radio Chains	2×22	4×4:4	2×22	2×22	2×22	4×4:4
x Power (2.4 GHz)	23 dBm	25 dBm	20 dBm	22 dBm	22 d8m	23 dBm
Tx Power (5 GHz)	23 dBm	24 dBm	20 dBm	22 dBm	22 dBm	23 dBm
Tx Power (6 GHz)	×6	*	×	2.43:	2345	90
Antennas (2.4 GHz)	2 x 5 dBi Omni	2 x 4 dBi Omni	2 x 4 dBi Omni	2 x 4 dBi Omni	2 x 4 dBi Omni	4 x 5 dBi Omni
Antennas (5 GHz)	2 x 5 dBi Omni	2 x 6 dBi Omni	2 x 5 dBi Omni	2 x 5 dBi Omni	2 x 5 dBi Omni	4 x 6 dBi Omni
Antennas (6 GHz)				(0)	(2)	100
PoE Standard	802,3af	802.3at	802.3af/at	802.3af/at	802.3af/at	802.3at
Scanning Radio	98	*	*			14.5
BLE	4	×	2	(4)	•	54.5
Power Consumption (Penk)	12W	19.1W	14.2W	12.8W	12.8W	19.5W
Ethernet Port	1x GE PoE port	1x GE PoE+port 1x GE port	2x GE PoE+ ports 1x GE PSE Out port	1x GE PoE port	1x GE PoE+ port	1x 2.5GE PoE+ port
Mounting	Wall/ Ceilling	Wall/Ceilling	Wall	Wall/ Ceilling	Wall/ Ceilling	Wall/ Ceilling
P Rating	N/A	N/A	N/A	N/A	N/A	N/A
Dimensions	161 x 161 x 41 mm	215 x 215 x 56mm	140 x 90 x 40 mm	160 x 160 x 33 mm	160 x 160 x 33 mm	205 x 205 x 33 mm
Mesh Technology	•	•	•	•	•	•
Mobile app (Cloud To-Go)					•	







# Cloud-managed Network Switches Detailed Specs

				Gigabit	Switch				- 4
							-	C	-
Model Name	L2Plus 8 PoE	L2Plus 8 Full PoE	L2Plus 24	-	L2Plus 24 PoE	L2Plus 24 Full PoE	L2Plus 48	L2Plus 48 PoE	L2Plus 48 Full Pot
Model Number	EC51008P	ECS1112FP	ECS1528T	ECS1528	ECS1528P	ECS1528FP	ECS1552	ECS1552P	ECS1552FP
Switch Class	Layer 2+								
Gigabit Ethernet Ports	8	10	24	24	24	24	48	48	48
Multi-Gigabit Ethernet Ports	_ 4	- 72	- 4	54	- 25	- 1	27	¥	
SFP Ports	- 2	2	78	- 4	18	12	- 81		*
SFP+ Ports	- 2	- 22	4	4	4	4	4	4	4
RJ45 Console Port	- 3				•				
Form Factor	9.45* (desktop)	13" 10	13" 10	19° 1U	19° 1U	19" 1U	19* 1U	19*10	19" 10
Power-over-Ethernet	802.3af	802.3af/at	(12)	(2)	802.3af/at	802.3af/at		802.3af/at	802.3af/at
Total PoE Budget	55W	130W	19	(20)	240w	410w	- 2	410w	740w
PoE Capable Ports	Ports 1-8	Ports 1-8	18	1991	Ports 1-24	Ports 1-24	- 23	Ports 1-48	Ports 1-48
Switching Capacity	16Gbps	24Gbps	128Gbps	128Gbps	128Gbps	128Gbps	176Gbps	176Gbps	176Gbps
Packet Forwarding Rate (Mpps)	11.904Mpps	17.856Mpps	95.23Mpps	95.23Mpps	95.23Mpps	95.23Mpps	130,95Mpps	130.95Mpps	130.95Mpps
MAC Address Table	8K	8K	16K	16K	16K	16K	32K	32K	32K
Packet Buffer Memory	512KB	512KB	1.5MB	1.5MB	1.5MB	1.5MB	2MB	2M8	2MB
Full load Power consumption	62.05 Watts	152.8 Watts	24.41 Watts	24.41 Watts	297,6 Watts	500.46 Watts	43.92 Watts	476.3 Watts	885 Watts
*PoE Extended Mode			- 14						
PD Lifeguard			4.5						
Continuous PoE Power	•		3,9	1000		•	- 0	•	•
Dimension	240mm x 105mm x 27mm	330mm x 230mm x 44mm	330mm x 230mm x 44mm	440mm x 260mm x 44mm	440mm x 310mm x 44mm	440mm x 310mm x 44mm			







# Cloud-managed Network Switches Detailed Specs

			Mult	-G Switch				
			-	(m)(m)	<b>Синдиномирии</b>			
Model Name	MGPlus 8 Full PoE	MGPlus 8	MGPlus 8 Full PoE	MGPlus 24 Full PoE	MGPlus 48 Full PoE	Aggregate 8XG	Aggregate 8XG Full PoE	Aggregate 12
Model Number	ECS2510FP	ECS2512	ECS2512FP	ECS2828FP	ECS2552FP	ECS5512	ECS5S12FP	ECS5512F
Switch Class	Layer 2+	Layer 2+						
Gigabit Ethernet Ports	- 2	14.5		16	32	2	197	
Multi-Gigabit Ethernet Ports	8x2.5G	8x2.5G	8x2.5G	8x2.5G	16x2.5G	8 x 10G	8 x 10G	3.
SEP Ports	2				· •	- 4		
SEP+ Ports	2	4	4	4	4	4	4	12
RJ45 Console Port							(*)	
Form Factor	13* 10	13* 10	13" 10	19" 1U	19° 1U	13° 1U	13" 1U	Half Rack
Power-over-Ethernet	802.3af/at	- RE	802.3af/at/bt	802.3af/at	802.3af/at		802.3af/at/bt	
Total PoE Budget	240w	10	240w	410w	740w	95	420w	3.
PoE Capable Ports	Ports 1-8		Ports 1-8	Ports 1-24	Ports 1-48	- 4	Ports 1-8	-
Switching Capacity	80Gbps	120Gbps	120Gbps	152Gbps	224Gbps	240Gbps	240Gbps	240Gbps
Packet Forwarding Rate (Mpps)	59.52 Mpps	89.29 Mpps	89.29 Mpps	113,10 Mpps	166.67 Mpps	178.57 Mpps	178.57 Mpps	178,57 Mpps
MAC Address Table	16k	16k	16k	16k	32k	32k	32k	32k
Packet Buffer Memory	512KB	512KB	512KB	1.5MB	2MB	2MB	2MB	2M8
Full load Power consumption	270.47 Watts	23.52 Watts	299 Watts	499.85 Watts	913 Watts	29.22 Watts	506.7 Watts	43.4 Watts
*PoE Extended Mode	(*)		2		•		27.0	
PD Lifeguard	300	- 3	16		•			- 4
Continuous PoE Power					•		•	15
Dimension	330mm x 230mm x 44mm	330mm x 230mm x 44mm	330mm x 230mm x 44mm	330mm x 260mm x 44mm	330mm x 310mm x 44mm	330mm x 230mm x 44mm	330mm x 230mm x 44mm	330mm x 230mm x 44mm







# Cloud-managed SD-WAN Gateway Detailed Specs

	so	-WAN Gateway	
			6.1 m
Model Name	Gateway 5 4mG	Galewayé 4mG	Gateway6 EmG 2SFP+
Model Number	ESG510	ESG610	ESG620
Processor	Quad Core	Quad Core	Quad Core
Operating Frequency	@1.6GHz	@2.2GHz	@2.2GHz
Memory	4GB	8GB	8GB
Flash Storage	8G8	8G8	16GB
RJ-45 Interface	4 x 2.5G	4 x 2.5G	8 x 2.5G
SFP interface			2 x 10G
PoE ports	1	1.	4
PoE Standard	802.3 af/at	802.3 af/at	802.3 af/at
I/O Interfaces	1 x RJ-45 console/1 x USB 3.0	1 x RJ-45 console/1 x USB 3.0	1 x RJ-45 console/1 x USB 3.0
Mounting Method	Wall mount	Wall mount	Rack mount
Firewall (SPI throughput)	4G	6.7G(**)	9.5G(**)
VPN throughput	970M	1.7G(**)	1.7G(**)
Max. Concurrent VPN Tunnels	200	300(***)	300(**)
Max. Concurrent VPN Users*	250	500(**)	500(**)
Max, TCP Concurrent Sessions	1,000,000	1,250,000 (**)	1,500,000 (**)
Max VLAN	96	256(**)	256(**)
Power	54V/1.2A	54V/1,2A	300w internal power
Operation Temperature	0°C to 40°C	0°C to 40°C	0°C to 50°C
Humidity (non-condensing)	5 to 95% non-condensing	5 to 95% non-condensing	5 to 95% non-condensing
Dimensions	210 x 179.5 x 35 mm	210 x 179.5 x 35 mm	330 x 230 x 44 mm







# Cloud-managed PDE & Extender Detailed Specs

	PDU	
Model Name	PDU 6P 12A 100-120V	PDU 14P 12A 100-120V
Model Number	ECP106	ECP214
Dimensions	440 x 44 x 70 mm	440 x 88 x 88 mm
Weight	1035 g	2430 g
Enclosure Material	AL6063	SECC
Networking Interfaces	10/100/1000 BASE-T	10/100/1000 BASE-T
Management Interface	Ethernet	Ethernet
Power Output	NEMA-5-15R, 120V AC, 15A miox,60Hz	NEMA-5-15R, 120V AC, 15A max,60Hz
Power Method	100-120VAC, 12A mex_50/60Hz	100-120VAC, 12A max,50/60Hz
Max. Power Consumption	1440W for 120V AC	1440W for 120V AC
Buttons	-Factory Reset -Circuit Breaker -Outlet Power Button -LCD Control Buttons	-Factory Reset -Circuit Breaker -Outlet Power Button -LCD Control Buttons
Protection	Surge Protection Gounded Protection	Surge Protection Gounded Protection
LCM Display	1.3 RGB display, Non-touch Firmware Upgradable	1.3 RGB display, Non-touch Firmware Upgradable
Operating Temperature	Operating: 0°C ~ +50°C	Operating 0°C ~ +50°C
Operating Humidity	Humidity 5% ~ 95% RH Non-condensing	Humidity 5% ~ 95% RH Non-condensing

	Switch Extender	
	- Indexes	(******
Model Name	Switch Extender 4 PoE	Switch Extender 4GE 1 SFF
Model Number	EXT1105P	EXT1106
SW Type	Gigabit Switch	Gigabit Switch
Feature labels (product image)	PD Switch	PD Switch
Switch Class	Switch Extender	Switch Extender
Gigabit Ethernet Ports	5	5
Multi-Gigabit Ethernet Ports	8#8	580
SFP Ports	.60	1
SFP+ Ports		3+5
RJ45 Console Ports	1/2	(5)
Form Factor	6.7* (desktop)	4.92* (desktop)
Power-over-Ethernet	802.3 af/at	
Total PoE Budget	Up to 60w	3.50
PoE Capable Ports	Ports 1-4	32
Switching Capacity	10Gbps	12Gbps
Packet Forwarding Rate	7.44 Mpps	8.93 Mpps
MAC Address Table	8k	8k
Packet Buffer Memory	512KB	512KB
Full load Power consumption	69,36 Watts	4.57 Watts







# Cloud Freemium Licensing Features – Basic vs Pro

Features	Basic (free)	Pro (Premium)
Statistic Data Stored	3 days	30 days
Team Members	10 users	Unlimited
Clone Network	120	V
Cloud Radius and Voucher Service	100 entries	10,000 entries
Alert Notification	Online/offline	V
Backup & Restore		v
Client List Export (.csv)	15	v
API Integration (3rd party)	1.5	V
Scheduling Report System	1 report	v
Customer Support	Limited support	Priority support with online tools
	Access Points	
Client Timeline		V
Wi-Fi Floor Plan Heatmap	V	v
Wi-Fi Floor (Obstacle & Virtual AP)		V
Dynamic VLAN	-	V
myPSK (dynamic/private PSK)	(w)	V
VLAN Pooling		V
Broadcast Suppression		V
Facebook Wi-Fi 2.0	V	V
Auto VPN (with ESG)		v
AD / LDAP / Google Authentication		v
Live Diagnostic Tools	Limited	٧
Live Client List	•	v
RF Spectrum *	74	V
WIDS / (WIPS) *	12	V
Zoro Woit DEC *	W	· ·







# Cloud Freemium Licensing Features – Basic vs Pro

Feet Marie	De-1- (6)	D /D
Features	Basic (free)	Pro (Premium)
Statistic Data Stored	3 days	30 days
Team Members	10 users	Unlimited
Clone Network	-	V
Cloud Radius and Voucher Service	100 entries	10,000 entries
Alert Notification	Online/offline	V
Backup & Restore	7 <del>.</del>	V
Client List Export (.csv)		v
API Integration (3rd party)	7.E	v
Scheduling Report System	1 report	V
Customer Support	Limited support	Priority support with online tools
	Access Points	
Client Timeline	-	V
Wi-Fi Floor Plan Heatmap	٧	V
Wi-Fi Floor (Obstacle & Virtual AP)	-	V
Dynamic VLAN	-	٧
myPSK (dynamic/private PSK)	,e	V
VLAN Pooling		v
Broadcast Suppression		V
Facebook Wi-Fi 2.0	٧	V
Auto VPN (with ESG)	-	V
AD / LDAP / Google Authentication		V
Live Diagnostic Tools	Limited	٧
Live Client List	-	٧
RF Spectrum *		V
WIDS / (WIPS) *		٧
Zoro Woit DEC *	v	· ·







### **EnGenius Fit Access Points Detailed Specs**

		Indoor						
Access Points	Wi-Fi 6	Wi-Fi 6	Wi-Fi6	Wi-Fi 6	Wi-Fi 6			
Model Name	Fit6 2x2 Lite	Fit6 4x4 Lite	Fit6 2x2	Fit6 4x4	Fit6 2x2 Outdoor			
Model Number	EWS356-FIT	EWS276-FIT	EWS357-FIT	EWS377-FIT	EWS850-FIT			
Wi-Fi Standard	802.11a/b/g/n/ac/ax	802.11a/b/g/n/ac/ax	802.11a/b/g/n/ac/ax	802.11a/b/g/n/ec/ax	802.11a/b/g/n/ac/ax			
Radio	2.4 GHz & 5 GHz							
Max. Data Rate (2.4 GHz)	574 Mbps	1,148 Mbps	574 Mbps	1,148 Mbps	574 Mbps			
Max. Data Rate (5 GHz)	2,400 Mbps	2,400 Mbps	1,200 Mbps	2,400 Mbps	1,200 Mbps			
Radio Chains	2×22	4 x 4.4	2×22	4×44	2 x 2:2			
Transmit Power on (2.4 GHz)	21 dBm	23 dBm	22 d8m	23 d8m	23 dBm			
Transmit Power on (5 GHz)	21 dBm	23 d8m	22 dBm	23 d8m	25 dBm			
Antennas (2.4 GHz)	2 x 4 dBi	4 x 5 dBi	2 x 4 dBi	4 x 5 dBi	2 x 5 dBi (SMA-Type)			
Antennas (5 GHz)	2 x 5 dBl	4 x 5 dBi	2 x 5 dBi	4 x 6 dBi	2 x 5 dBi (SMA-Type)			
Antenna Beamwidth	N/A	N/A	N/A	N/A	360 *			
Power-over-Ethernet	802.3ef	802.3at	802.3af/at	802:3at	802.3af/at			
Ethernet Ports	1x GE Port	1x 2.5GE Port	1x GE Port	1x 2.5GE Port	1x 2.5GE Port			
P Rating	N/A	N/A	N/A	N/A	IP67			
Surge Protection	N/A	N/A	N/A	N/A	1KV			
ESD Protection	N/A	N/A	N/A	N/A	Contact: 4KV Air: 8 K			
Mounting Type	Wall/ Ceilling	Wall/ Ceilling	Wall/ Ceilling	Wall/ Ceilling	Wall/Pole mount			
Dimensions	160 x 160 x 30 mm	205 x 205 x 33 mm	160 x 160 x 27 mm	205 x 205 x 33 mm	190x 124 x 47 mm			





### **EnGenius Fit Network Switches Detailed Specs**

			Fit Switch	ies		
PoE Switches		***********	firm tourings	F mutuu	Managan and State of the State	50000000000000000000000000000000000000
Model Name	FitSwitch 8 PoE	FitSwitch 8 Full PoE	FitSwitch 24 PoE	FitSwitch 24 Full PoE	FitSwitch 48 PoE	FitSwitch 48 Full PoE
Model Number	EWS2910P-FIT	EWS2910FP-FIT	EWS7928P-FIT	EWS7928FP-FIT	EWS7952P-FIT	EWS7952FP-FIT
Switching Class	Layer 2+	Layer 2+	Layer 2 +	Layer 2+	Layer 2 +	Layer 2 +
Gigabit Ethernet Ports	8	8	24	24	48	48
SFP Ports	2	2	4	4	4	4
RJ45 Console Ports	17.1	31	1	1	ï	1
Form Factor	Desktop	Desktop	19"1U	19"1U	19"10	19°1U
Power-over-Ethernet	802.3af/at	802.3ef/et	802.3af/at	802.3af/at	802.3af/at	802.3af/at
PoE Capable Ports	Ports 1-8	Ports 1-8	Ports 1-24	Ports 1-24	Ports 1-48	Ports 1-48
Total PoE Budget	55W	110W	240W	410W	410W	740W
Switching Capacity	20Gbps	20Gbps	56Gbps	56Gbps	104Gbps	104Gbps
Full load Power Consumption	63.72 Watts	119.45 Watts	283.88 Watts	470.5 Watts	430.2Watts	840.8 Watts
Packet Buffer Memory	512KB	512KB	512KB	512KB	1.5MB	1.5MB
Max. Packet Forwarding Rate	14.88Mpps	14.88Mpps	41,664Mpps	41.664Mpps	77.376Mpps	77.376Mpps
MAC Address Table Size	8K	BK	5K	BK	16K	16K
Jumbo frame size	9K	9K	9K	9K	9K.	9K
Weight	0.6 kg	0.6 kg	3.6 kg	3.8 kg	6.4 kg	6.4 kg
Dimensions	240mm x 105mm x 27mm	240mm x 105mm x 27mm	440mm x 260mm x 44mm	440mm x 260mm x 44mm	440mm x 310mm x 44mm	440mm x 310mm x 44mm