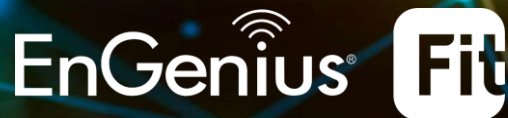




# Демонстрация установки и настройки решения EnGenius FIT

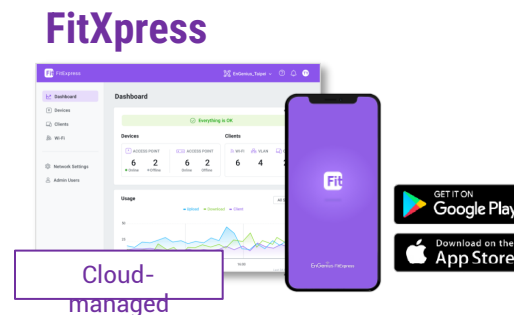




Alcindo Ferreira  
[www.linkedin.com/in/alcindo/](http://www.linkedin.com/in/alcindo/)  
Engenius Networks EU  
[www.engeniusnetworks.eu](http://www.engeniusnetworks.eu)



- Short introduction
- EnGenius Fit introduction
- FitController
- FitXpress
- Comparison
- Questions



Fellenoord 180

5611 ZB Eindhoven, NL

+31 40 8200 888

[sales@engeniushnetworks.eu](mailto:sales@engeniushnetworks.eu)

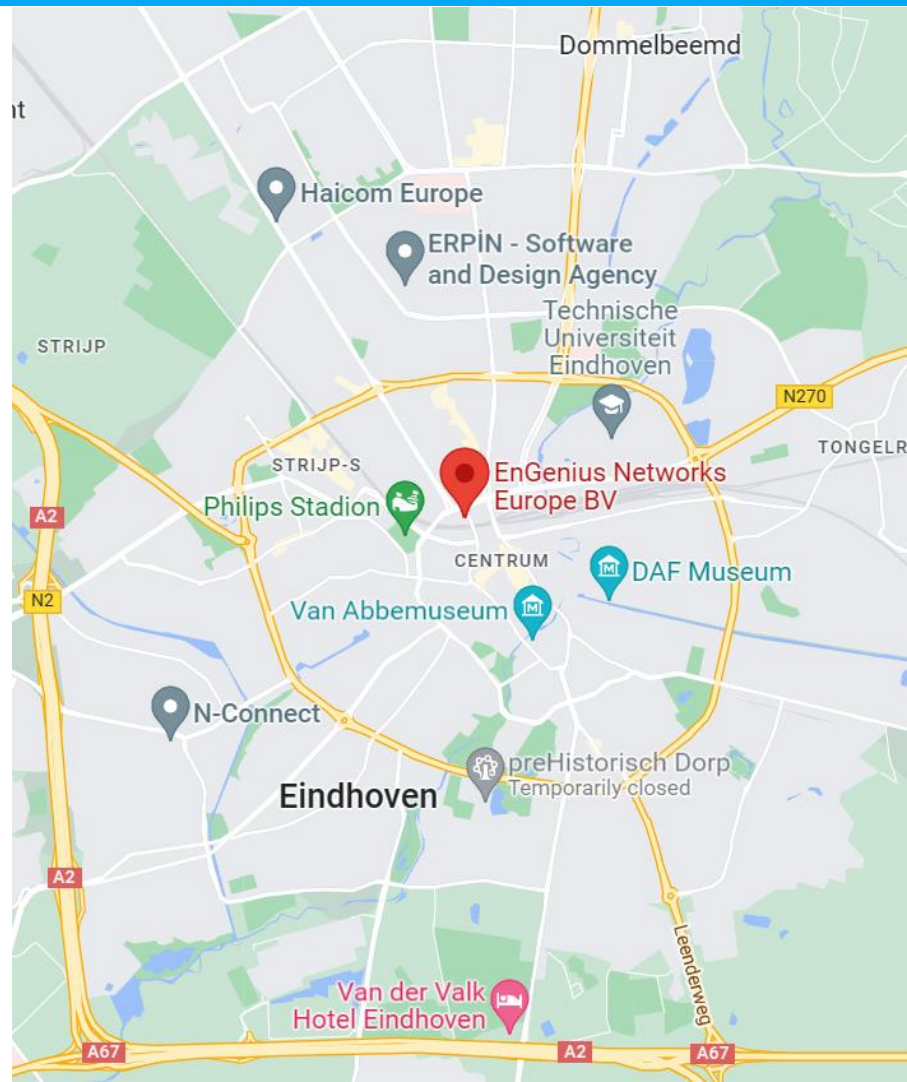
[support@engeniushnetworks.eu](mailto:support@engeniushnetworks.eu)

**Operating Hours**

Monday - Friday (9:00am - 6:00pm)

Closed on Saturdays, Sundays & Public  
Holidays

<https://www.engeniushnetworks.eu/en/contact-us>



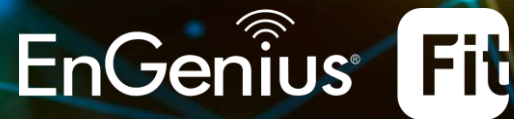
# EnGenius Fit

## Smart Networking for Small & Medium Business



---

# Introducing EnGenius Fit Solution | 01





## Network Solution Designed for **Small & Medium Businesses**

- ✓ Reliable, secure and smart networking (Wi-Fi)
- ✓ **Business-grade hardware but affordable price**
- ✓ Meet the needs with flexible management options

### HARDWARE

#### Indoor/ Outdoor Wireless

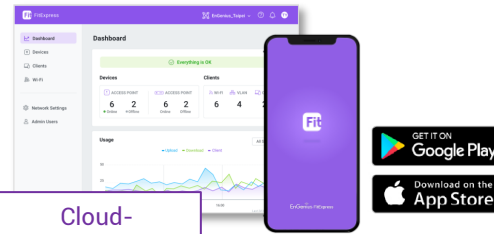


#### L2+ & PoE+ Switches



### MANAGEMENT PLANE

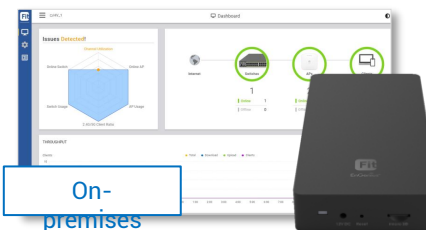
#### FitXpress



- With zero IT
- With multi-location

S&MB

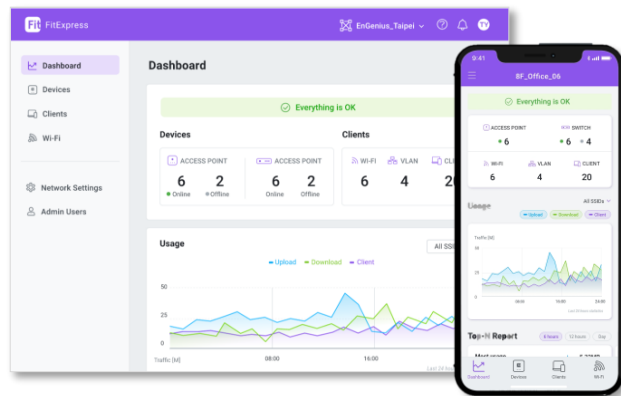
#### FitController



- Scalability demand
- Greater data autonomy

Meet the needs of small & medium businesses with flexible management options.

## FitXpress



- **Cloud-based** platform
- Mobile app & Web with account
- Up to 30 devices
- Up to 8 networks
- Remote management made easy

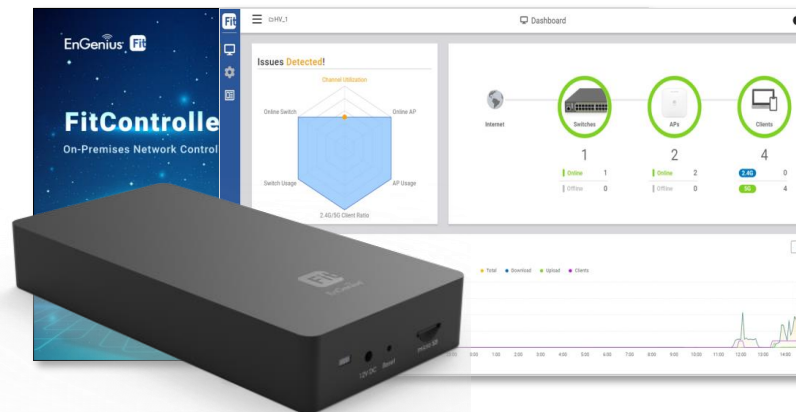
**TARGET** Zero IT/ Multi-location

### Highlights

**Easy to use**

**Manage on the go**

## FitController



- **On-premises** appliance
- Plug & play, no software required
- Up to 100 devices
- Up to 50 networks
- More enterprise-level features

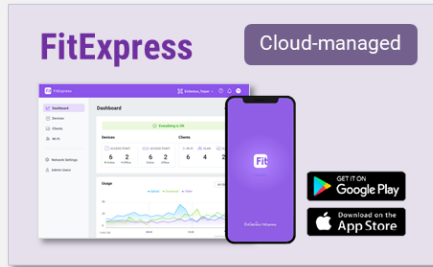
**TARGET** VARs/Sis/Data Autonomy

### Highlights

**Scalability**

**Enterprise features**





EnGenius® Fit



Small &amp; Medium Business

**BUSINESS  
PROFILE**

- ✓ Zero or less IT
- ✓ Tiny size of branch location

- ✓ Growing biz with scalability demand
- ✓ Greater data autonomy & privacy

**SOLUTION  
DEMAND**

- ✓ Everything needs to be **easy**
  - Easy onboarding
  - Easy configuration
  - Easy monitoring
  - Easy troubleshoot

- ✓ Future network expansion
- ✓ More enterprise-level features
- ✓ More historical network data

**NETWORK  
DEPLOYMENT**

- ✓ Remote management for multi-location
- ✓ Up to 30 devices
- ✓ Manage on the go
- ✓ User delegation for management

- ✓ Diverse deployment
- ✓ Up to 100 devices
- ✓ More networks with hierarchy

High-quality and business-class hardware at affordable prices



L2+

PoE+

**Network  
Switch**



Wi-Fi 6

**Indoor  
Wireless**



Wi-Fi 6

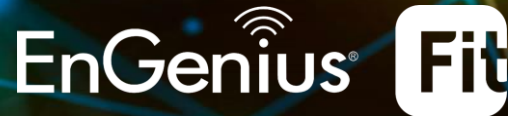
**Outdoor  
Wireless**

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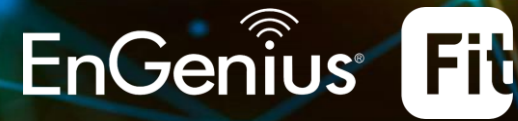
# Managing with **FitController**

02

<https://fitcon-demo.engenius.ai/>



# Why FitController?



On-Premises NMS platform for small & medium businesses with **scalability demand** and **greater data autonomy**.



TARGET  
USER

### Businesses with scalability demand

- Growing business for future network expansion
- More enterprise-level features for network complexity and diverse applications

### Businesses data autonomy requirement

- On-premises deployment for network management
- Diverse local deployment for multiple sub-managed domains

**Built-in Enterprise-grade NMS**

**A network appliance with market-proven and professional NMS built-in**

- ✓ **License-free** NMS
- ✓ Come with enterprise-level features for network management

**Custom Hardware**

**Designed with custom hardware for optimized performance**

- ✓ Specially built hardware for network management
- ✓ Scale management up to 100 devices

**On-premises Management**

**On-site deployment to manage your networks, keeping data local and secure**

- ✓ All network data would be kept within the FitController
- ✓ Encrypted control packet between FitController and devices

**Easy Installation**

**Quick installation without complex preliminary settings**

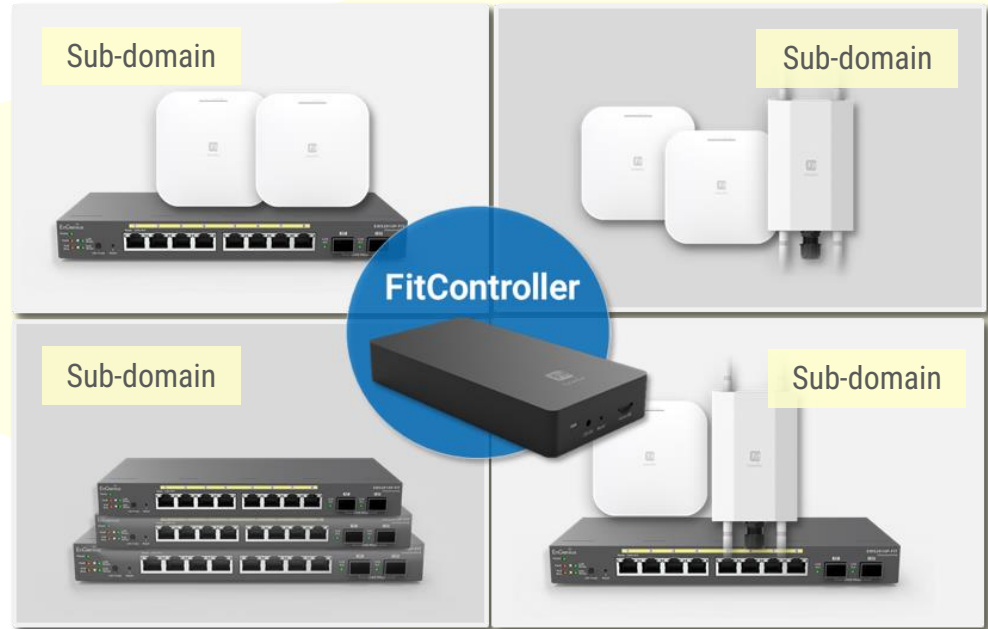
- ✓ Plug & play with PoE and without any server configurations
- ✓ Compact size with fanless design

Expand your network with more managed devices and sub-managed domains

Manage up to **100** Devices



Divide into up to **50** Networks



**Dual RJ45 Ports**  
(PoE & Local Management)



**Compact Size**  
(120x22x33 mm)



**Powerful Quad-Core CPU**



**Micro SD Slot**  
(Extra Back-up)





FitController supports managing the EnGenius Fit hardware portfolio.



L2+

PoE+

**Network  
Switch**



Wi-Fi 6

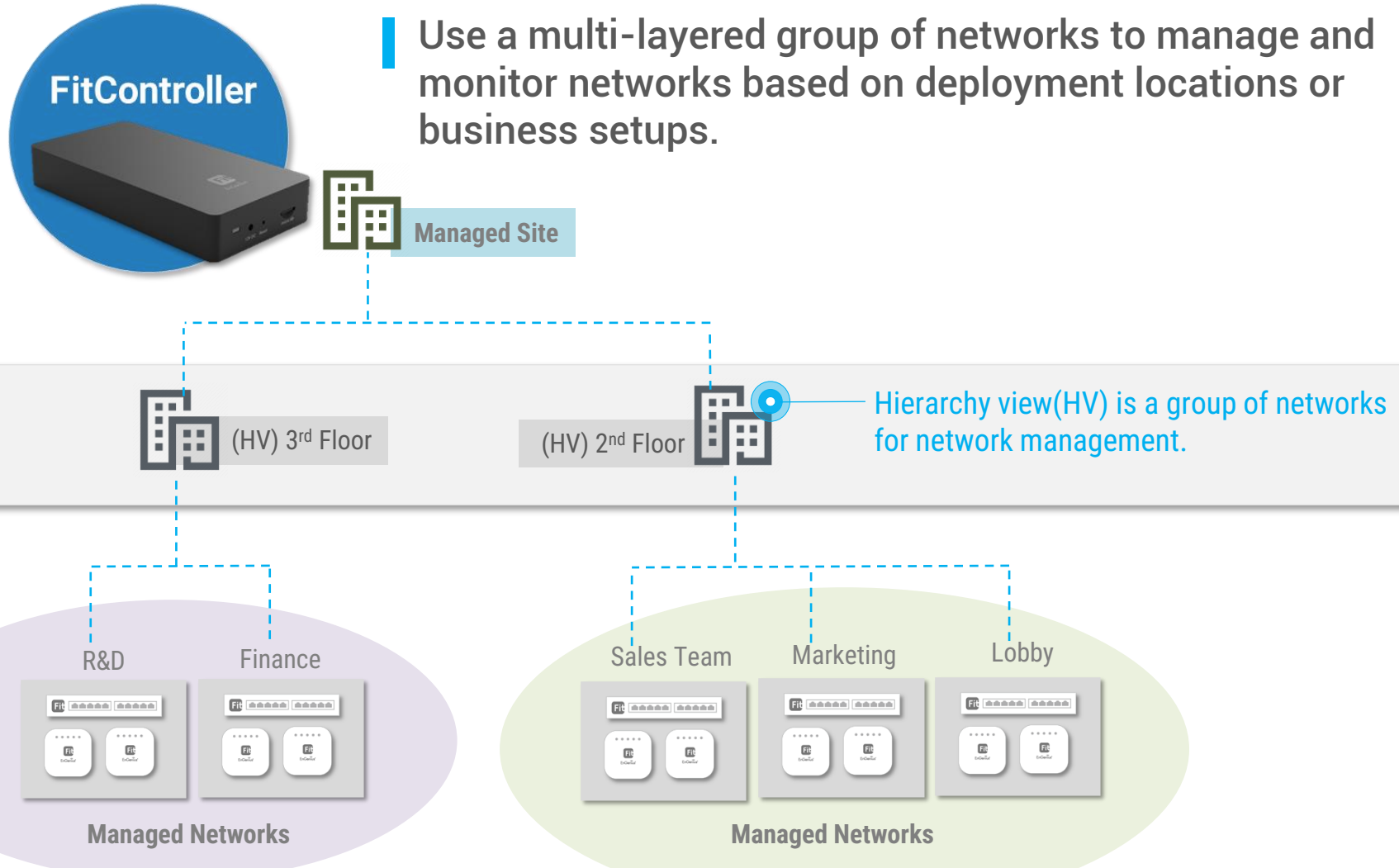
**Indoor  
Wireless**



Wi-Fi 6

**Outdoor  
Wireless**

# FitController Feature Highlights



FitController



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



Managed Site



Admin

Organization-wide privileges to manage all networks.



(HV) 3rd Floor



(HV) 2nd Floor

Network-wide users to manage specific network sites.

R&amp;D

Finance

Sales Team

Marketing

Lobby

Viewer

Admin

Admin

Viewer

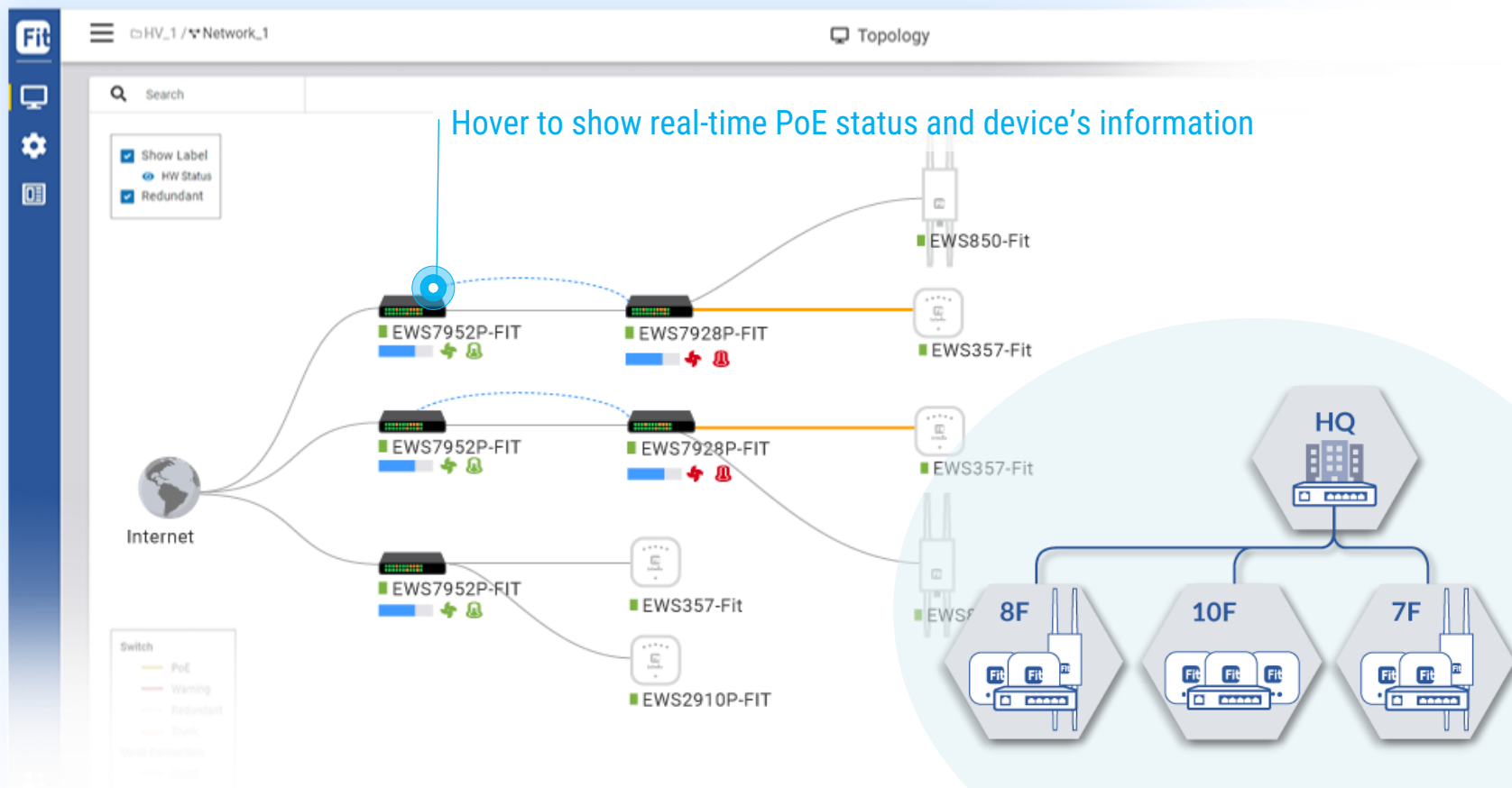
Managed Networks

Managed Networks

Holistic assessments of real-time network health let you provide rapid responses to network issues.



The topology view displays all the devices managed by FitController and the relationships between devices.





## Real-time quick view of AP

<input type="checkbox"/>	Name ▾	MAC	Model Name	Channel	WAN IP
<input type="checkbox"/>	ECW120_12AB3	A0:00:00:65:00:16	ECW120	6 40	211.23.
<input type="checkbox"/>	ECW120_12AB3	A0:00:00:65:00:16	ECW120	6 40	211.23.
<input type="checkbox"/>	ECW120_12AB3	A0:00:00:65:00:16	ECW120	6 40	211.23.

Online

10 Clients

0 Bytes Download

0 Bytes Upload

Throughput

Channel Utilization

Radio

2.4G Auto

5G Auto

WLAN

SNGU... SNWL

SSID: SNGUE

Status: ☐ Enab ☐ Hide

<input type="checkbox"/>	ECW120_12AB3	A0:00:00:65:00:16	ECW120	6 40	211.23.
<input type="checkbox"/>	ECW120_12AB3	A0:00:00:65:00:16	ECW120	6 40	211.23.
<input type="checkbox"/>	ECW120_12AB3	A0:00:00:65:00:16	ECW120	6 40	211.23.



## Product detail page of Switch

Senao / Nangang / 8F Network

Switch List ▶ Device D

< EWS7952P-FIT

Model Name ECS120

Firmware v 1.0.5

Serial No. sn123456789

MAC Address 0A:1B:2C:3D:4F:FE

Configuration

IP Address 192.168.1.150

Subnet Mask 255.255.254.0

Gateway 192.168.1.1

Topology [Show](#)

Summary

System Settingsgs

Port Setting

VLAN

Mirror

Link Aggregation

Sc

SSID Information

10/100Mbps 1G 2.5G 5G 10G Disconnected Disabled PoE

1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35

2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36

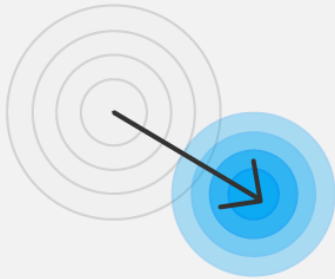
TOTAL POE USAGE

0W 100W

50%

Providing business-class Wi-Fi networks to your clients without the security breach between clients

### Fast Roaming



→ Better User Experience

Clients can roam quickly from one AP to another without the need to re-authenticate to the RADIUS server.

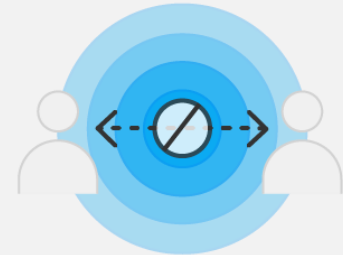
### Band Steering



→ Better Performance

Steer clients connecting to a wireless network to the best frequency band available and supported,

### L2 Isolation



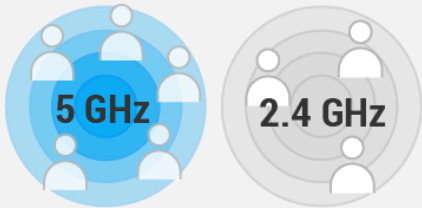
→ Better Client Security

Prevent wireless clients from communicating with one another within the same Layer-2 subnet.



Ensure Wi-Fi Network quality during peak time and avoid specific clients occupying most of the bandwidth.

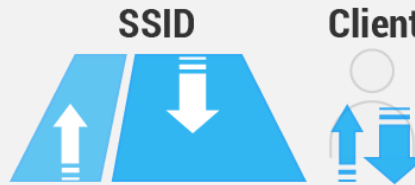
### Client Limit



→ Ensure Wi-Fi Quality

Limit the total amount of wireless clients that can access to Wi-Fi Network on a specific radio

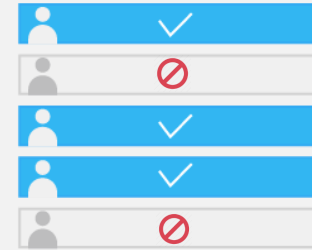
### Traffic Shaping



→ Ensure Wi-Fi Quality

Limit the amount of bandwidth that can be consumed on per SSID or per client basis

### Block & VIP List









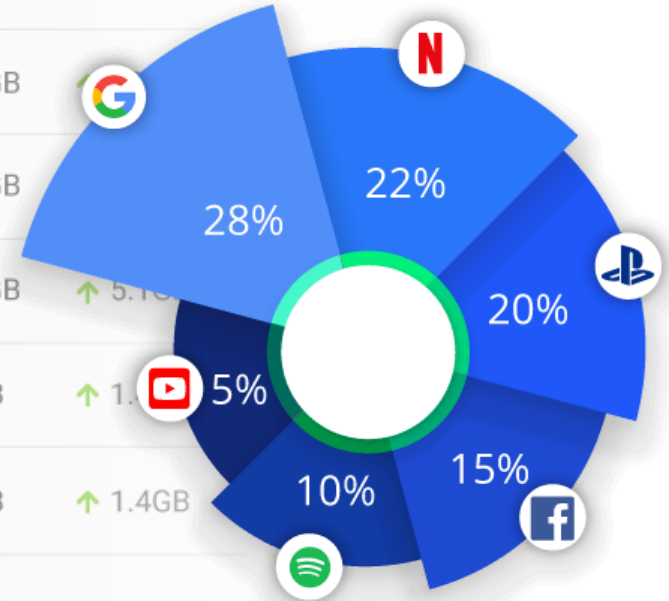
→ Better Network Security

Block suspicious clients from Wi-Fi network and allow VIP clients to bypass captive portal

Know the most used network applications by clients and ranked by usage.

### Top Applications

	Google	28%	45.1GB	↓ 45.1GB	↑ 20.24GB
	Netflix	22%	22.3GB	↓ 22.3GB	
	PlayStation	20%	15.9GB	↓ 15.9GB	
	Facebook	15%	11.4GB	↓ 11.4GB	↑ 5.1GB
	Spotify	10%	3.4GB	↓ 3.4GB	↑ 1.4GB
	Youtube	5%	3.4GB	↓ 3.4GB	↑ 1.4GB



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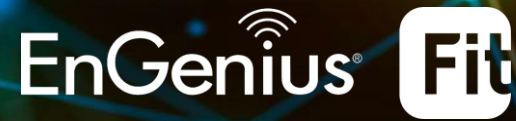
# Managing with **FitXpress**

03

Download from Apple AppStore  
and Google PlayStore



# Why FitXpress?



Network Management for small & medium businesses with little to no IT support and single or multiple sites.



TARGET  
USER

### Businesses with zero IT

- Easy-to-use/ simple onboarding
- Quick setup for reliable and secured Wi-Fi
- Quick and real-time view of managed network

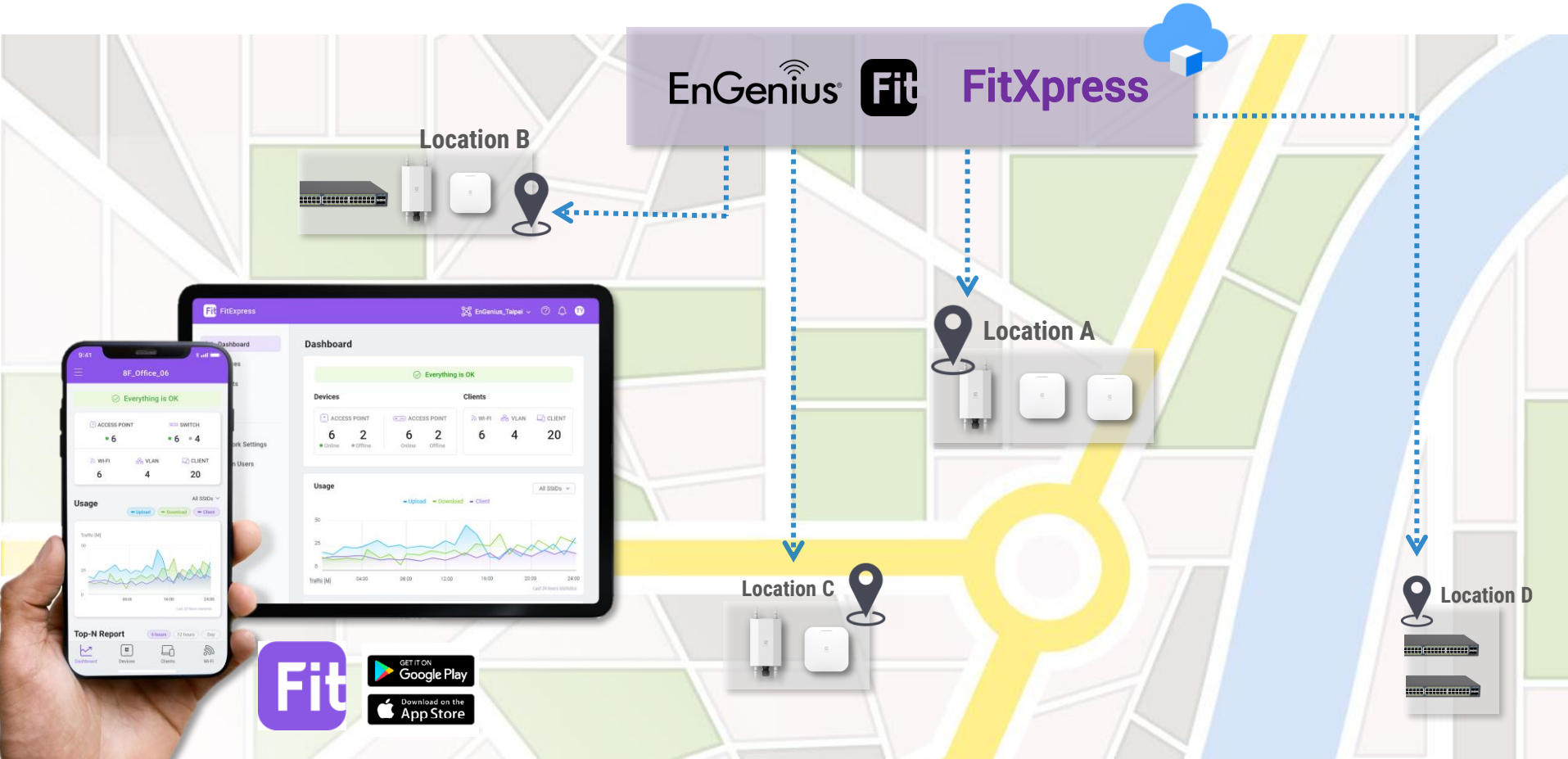
### Businesses with multiple locations

- Remote management in single interface
- Delegate users for network management
- Manage on the go made easy

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



Remotely manage your networks anywhere, anytime, with any devices.



FitXpress supports managing the EnGenius Fit hardware portfolio.



L2+

PoE+

**Network  
Switch**



Wi-Fi 6

**Indoor  
Wireless**

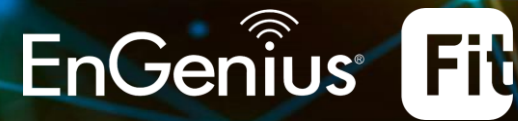


Wi-Fi 6

**Outdoor  
Wireless**



# FitXpress Use Cases



Small & medium businesses and retail with zero IT are looking for the simple and smart networking solution.



**I want to setup a secured Guest Wi-Fi separated from Staff network.**

- ✓ Wi-Fi templates are available for Guest and Staff usage.
- ✓ Set up guest Wi-Fi with predefined template options in a few steps.



**I want to promote my store FB page to in-store customers.**

- ✓ Enable Facebook Wi-Fi for your in-store guest network.
- ✓ Users need to check in your FB page before accessing Internet



**I worry about in-store customers using most of the Internet bandwidth.**

- ✓ You can set up a bandwidth limit policy for the guest Wi-Fi network or on per client basis.



**I want to block Internet access for suspicious clients.**

- ✓ You can block the client for whole or specific Wi-Fi networks whenever a suspicious client is found.



FitXpress

Small & medium businesses with multiple locations require efficient way for network management.



### How can I manage my branch office networks more efficiently?

- ✓ Set up multiple networks and managed devices for different branch offices.
- ✓ Manage multiple networks by the same user account and from a single interface.



### I don't have time for on-site support when a problem occurred.

- ✓ Remote management made it easy to save time being on-site for support.
- ✓ Manage and monitor your networks anytime, anywhere on the go.



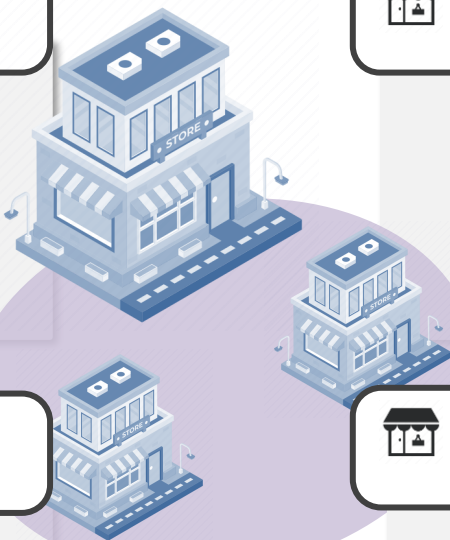
### Can I have someone manage remote networks for me?

- ✓ Set up different admins with privileges to manage multiple remote sites.
- ✓ Manage admin user list for multiple networks from the single interface.



### How could I know any devices from remote site got offline?

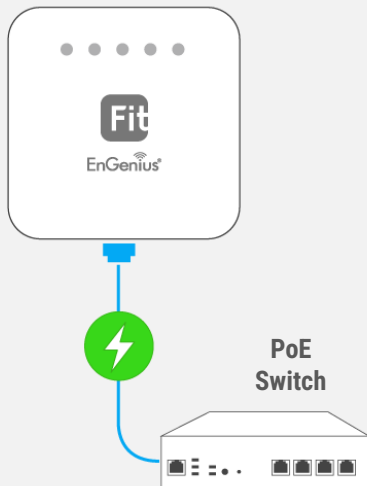
- ✓ Get notified by mobile app or email whenever a device goes offline.
- ✓ Locate the device that went offline and see recommendation actions.



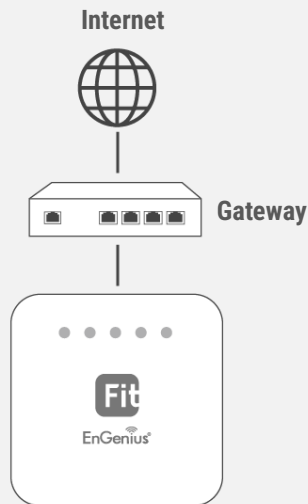
# FitXpress Feature Highlights

Get your network ready and all set with the 3-step device onboarding process.

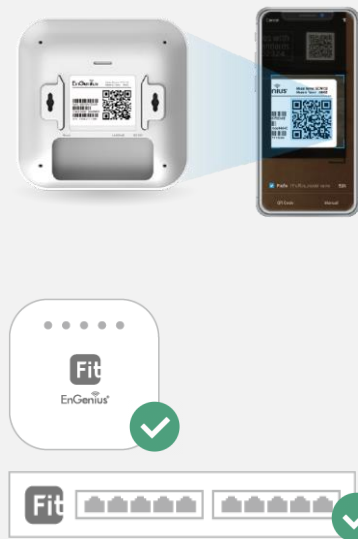
### Step-1 Powering the Device



### Step-2 Connecting Ethernet



### Step-3 Scan to Get Onboard



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

### Wi-Fi Usage - STAFF

#### Open Wi-Fi

Access Wi-Fi network without any password



#### Password

Connect Wi-Fi network with password

WPA2/3  
Enterprise



#### RADIUS

Verify user identity when connecting to a Wi-Fi network



#### Portal

Require authentication in Captive Portal before accessing the network

9:41

Cancel Create New Wi-Fi

Wi-Fi Name

Wi-Fi Usage ⓘ

**STAFF** GUEST

Designed for guest users, grants Internet access and prevents from communicating with each other to protect privacy.

Hide Wi-Fi (SSID) ☒

Radio 2.4G & 5G >

Security Type

**Open** Password RADIUS

This is an Open Wi-Fi  
Users can access Wi-Fi network without any password

### Wi-Fi Usage - GUEST



#### Open Wi-Fi

Access Wi-Fi network without any password



#### Password

Connect Wi-Fi network with password

WPA2 Personal



#### Portal

Required to see a web page when accessing a Wi-Fi network

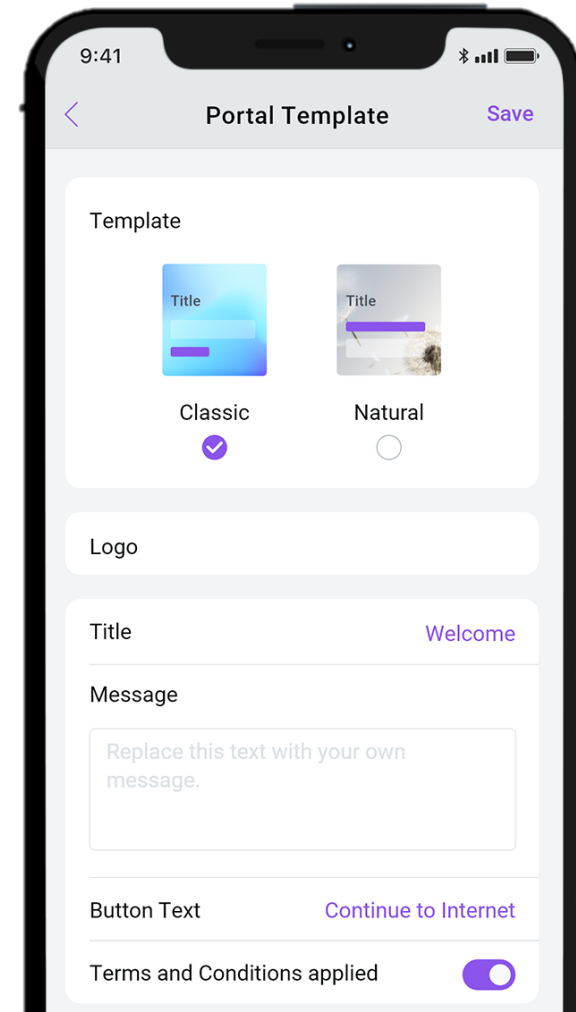
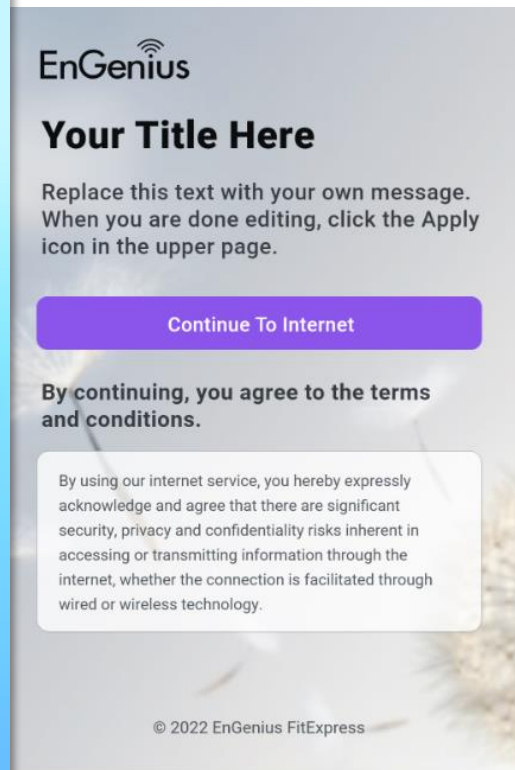
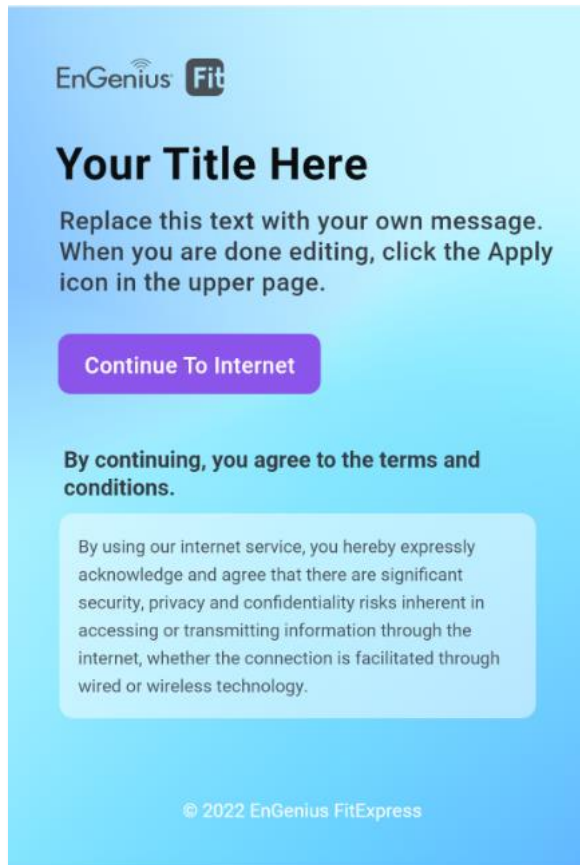


#### FB Wi-Fi

Required to check in the FB page before accessing a Wi-Fi network


Guests cannot communicate with each other

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




Grasp network's real-time device and traffic information and get alerted when a problem occurs.

Locate the device with alerts and take action accordingly.

**8F\_Beside Gordon**Edit

● Offline

 **Alerting**

This device got office

Occurred Today at 1:36 PM

[Recommendation Actions](#)

Model Name

Fit6 2x2

Model Number

ECW120

Firmware

v1.0.5

Serial No.

SN1234567890

MAC


AA:BB:CC:11:22:33

Configuration

Up-to-date

9:41

EnGenius\_Taipei

 **Attention Required**

ACCESS POINT

6

SWITCH

6

4

WI-FI

6

VLAN

4

CLIENT

20

Usage

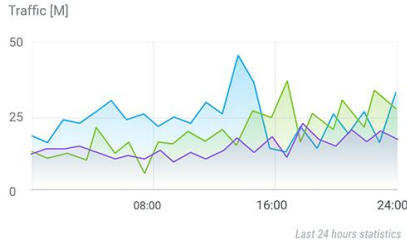
All SSIDs

Upload

Download

Client

Traffic [M]



Last 24 hours statistics

Top-N report

6 hours

12 hours

Day

Find the most usage AP and Wi-Fi Network


Most usage

Wi-Fi


Total


5.32MB


396.23MB


 8F\_Beside Gordon

56.2%


 6.18MB


 390.89MB





 8F\_Beside Sunny

56.2%


 6.18MB


 390.89MB




 8F\_806\_Office

56.2%

 6.18MB

 390.89MB




Most usage

Access Points


Total


5.32MB


396.23MB


 8F\_Beside Gordon

56.2%


 6.18MB


 390.89MB





 8F\_Beside Sunny

56.2%


 6.18MB


 390.89MB





 8F\_806\_Office

56.2%


 6.18MB


 390.89MB





 8F\_Back Office

56.2%


 6.18MB


 390.89MB




 8F\_meetingRoom

56.2%

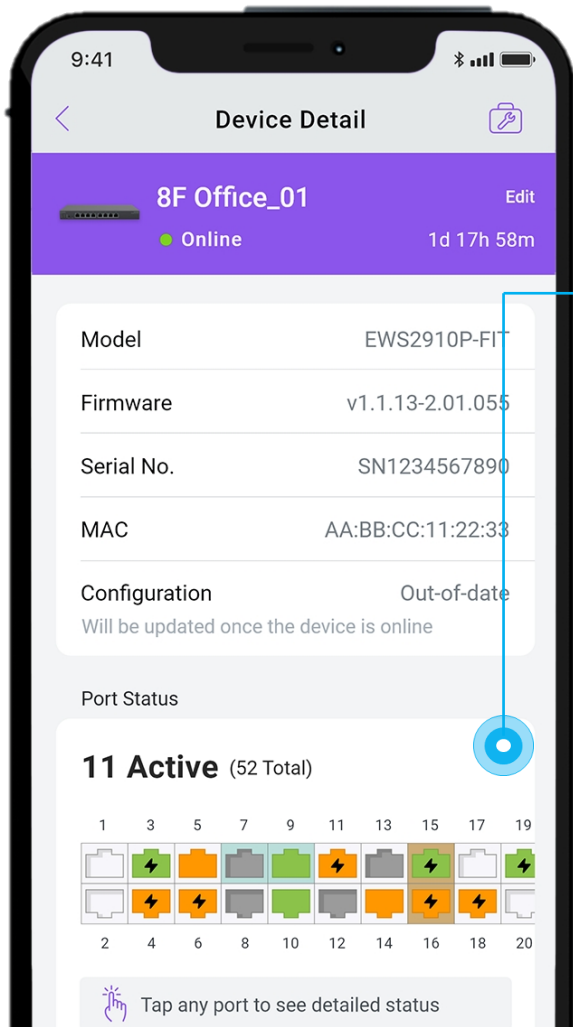
 6.18MB

 390.89MB

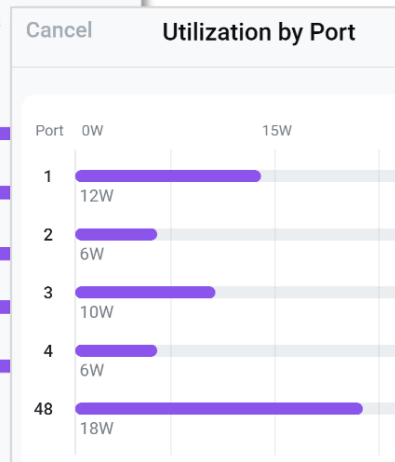
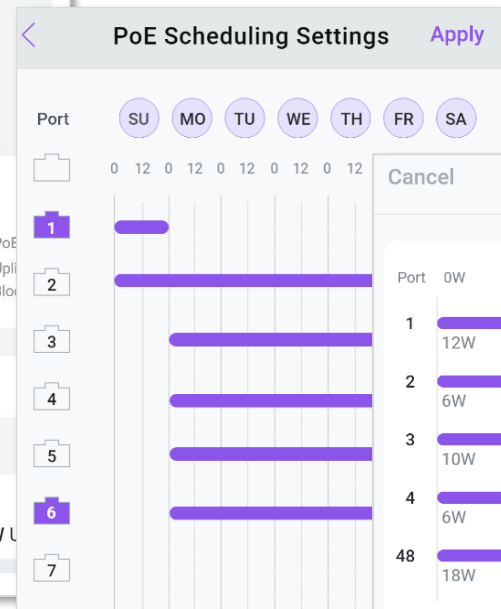
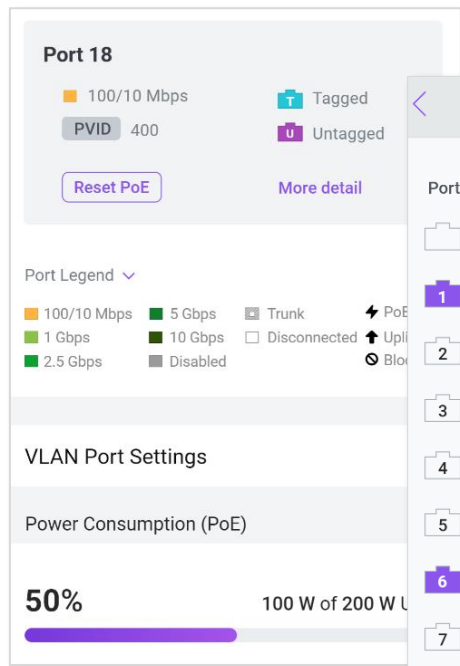




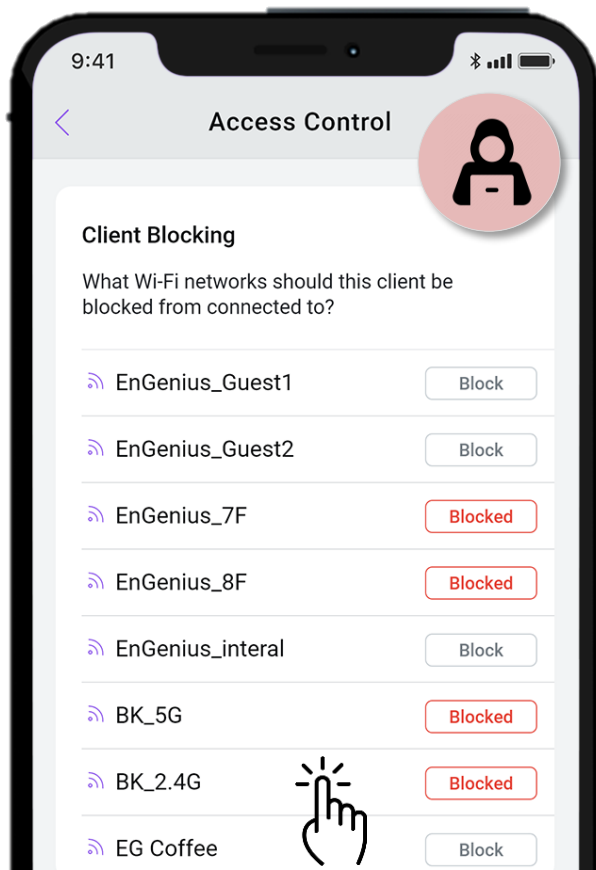
Get a quick view of a particular device with comprehensive info, and drill into the device detail if needed.



### Real-time Switch Port Status & PoE Information



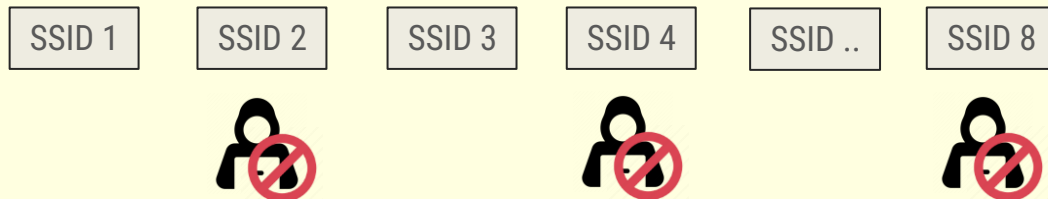
Block suspicious wireless clients for the whole network or specific Wi-Fi with a few clicks



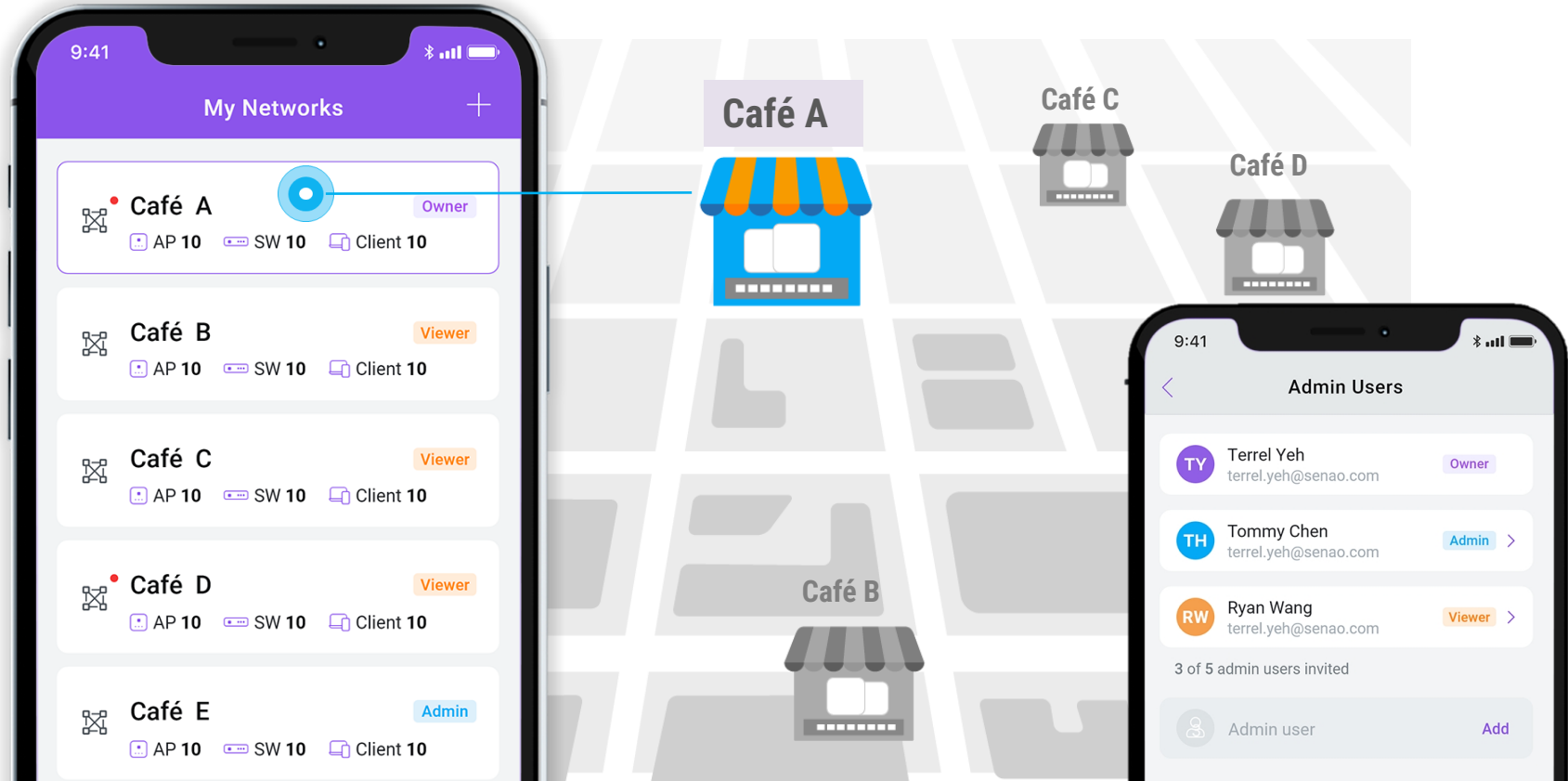
## Network-wide Access Control

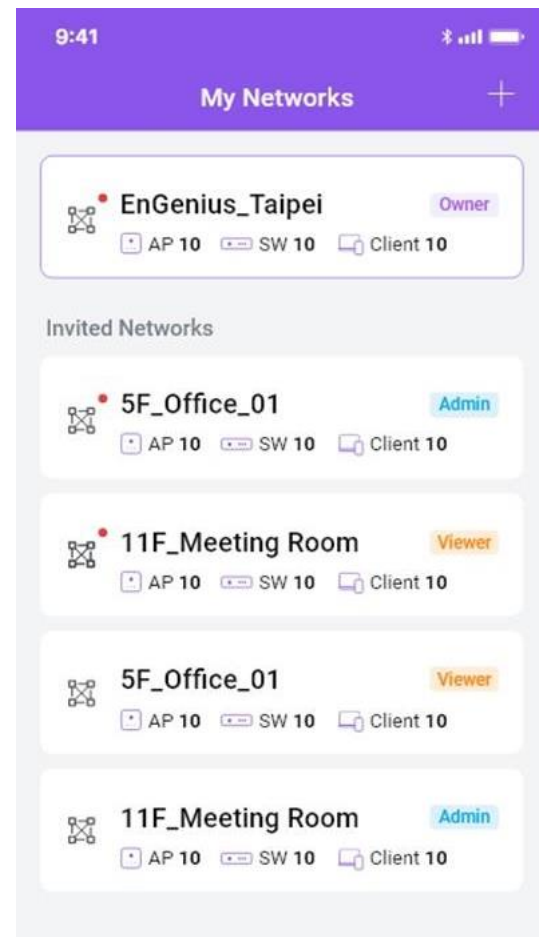
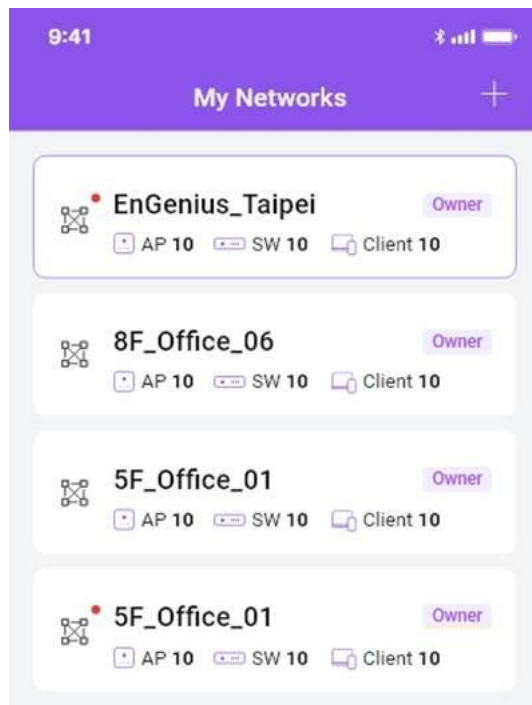


## SSID-wide Access Control (Block list)



Manage multiple networks from a single interface and delegate users with privileges for network management.





Maximums supported with FitXpress (app):

- 5 networks per owner account
- 5 admins per network: Owner and 4 invited
- **Unlimited** invited networks
- 30 devices per owner account

A bunch of visualized diagnostic tools is in place whenever a device is found problematic.

## Real-time Device Meter

CPU Usage

29%



Memory

29%

## Port Activity



☐ Disconnected ☒ Disabled

Test

Last Updated 2021/12/05

Port 1 - 2 3 - 4 5 - 6 7 - 8

1 ✓ ✓ ✓ ✓

3 ✓ ✓ ✓ ✓

## Connectivity Test

Ping

Add

Google 2.29 ms

Facebook 2.14 ms

Twitter 141.00 ms

## Clients on Switch

Refresh

Port ↓	MAC Address	VLAN
1	00:02:6F:00:00:01	8
1	00:02:6F:00:00:01	28
1	00:02:6F:00:00:01	32
1	00:02:6F:00:00:01	99
		13
		26

## Cable Diagnostic



Port Legend

100/10 Mbps 5 Gbps Trunk PoE  
1 Gbps 10 Gbps Disconnected Uplink  
2.5 Gbps Disabled Blocked

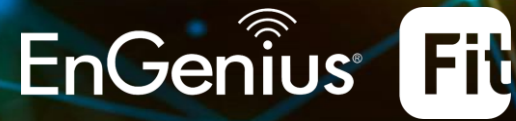
Port 1

↓ 1.68K

↑ 18.31K



# FitXpress roll-out



Moto G (5S) Plus

86% 15:01

EnGenius Fit

Email

admin@engeniustech.eu

Password



.....

☒ Remember me [Forgot password?](#)

Log in

Don't have an account yet? [Create account](#)

or


 Facebook  Google

[Terms of Use](#) [Privacy Policy](#)

Moto G (5S) Plus

86% 15:01

< My Networks



**No Networks Created**


There is no FitXpress Network created for this account. You need at least one Network ready to manage your FitXpress devices.

Set Up a New Network

Moto G (5S) Plus

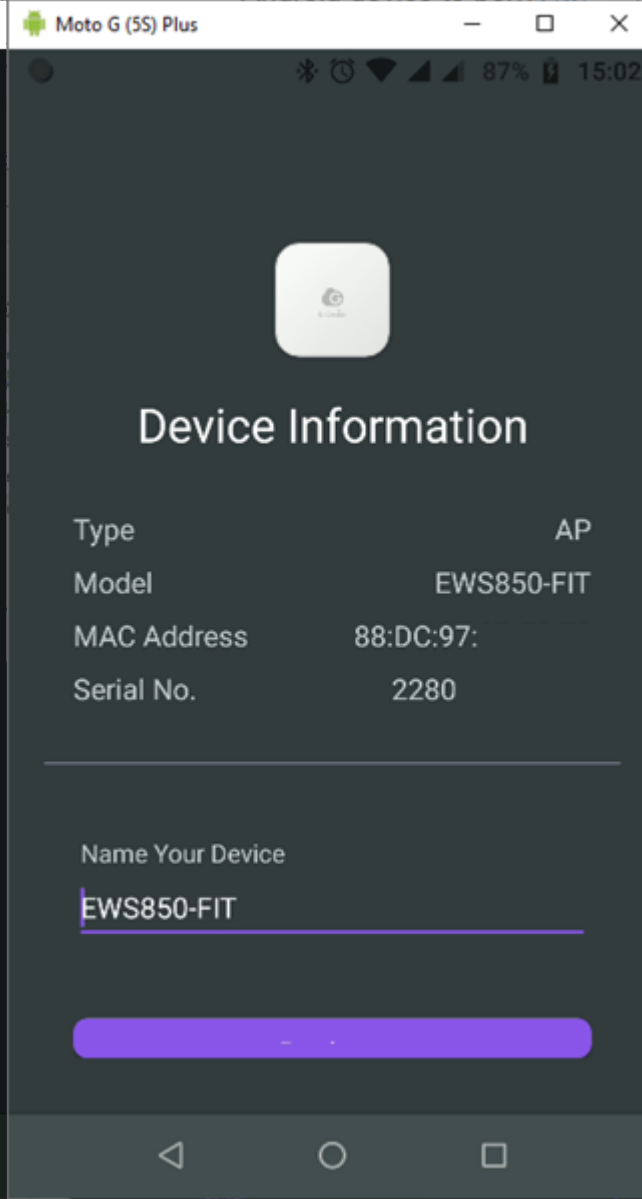
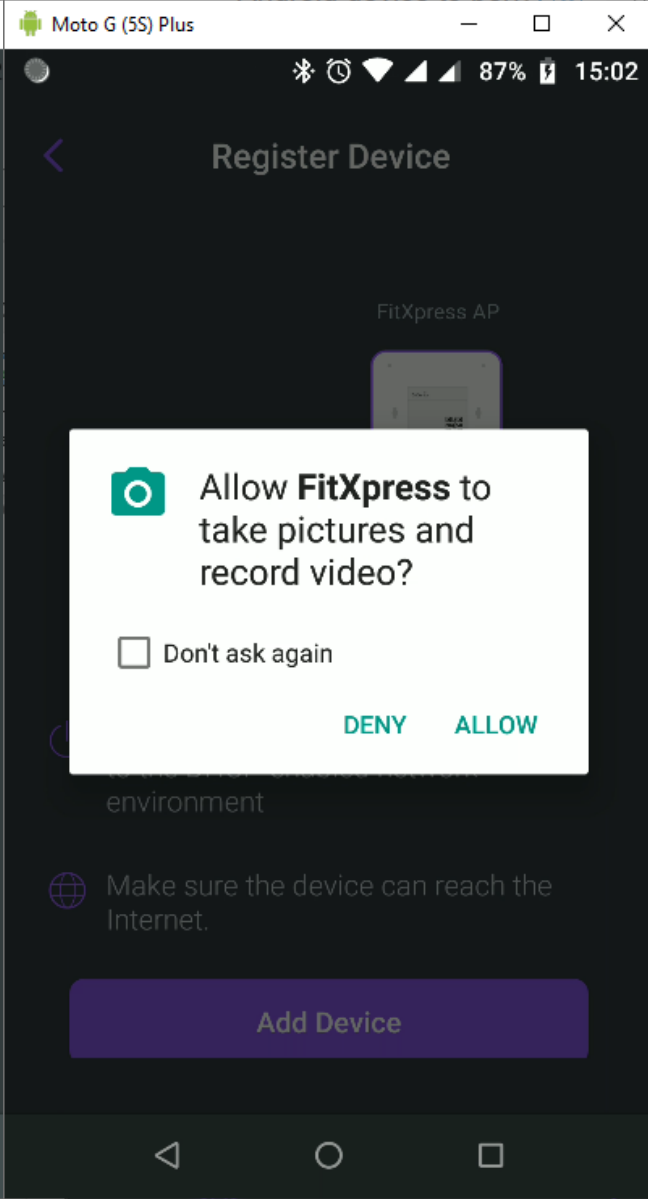
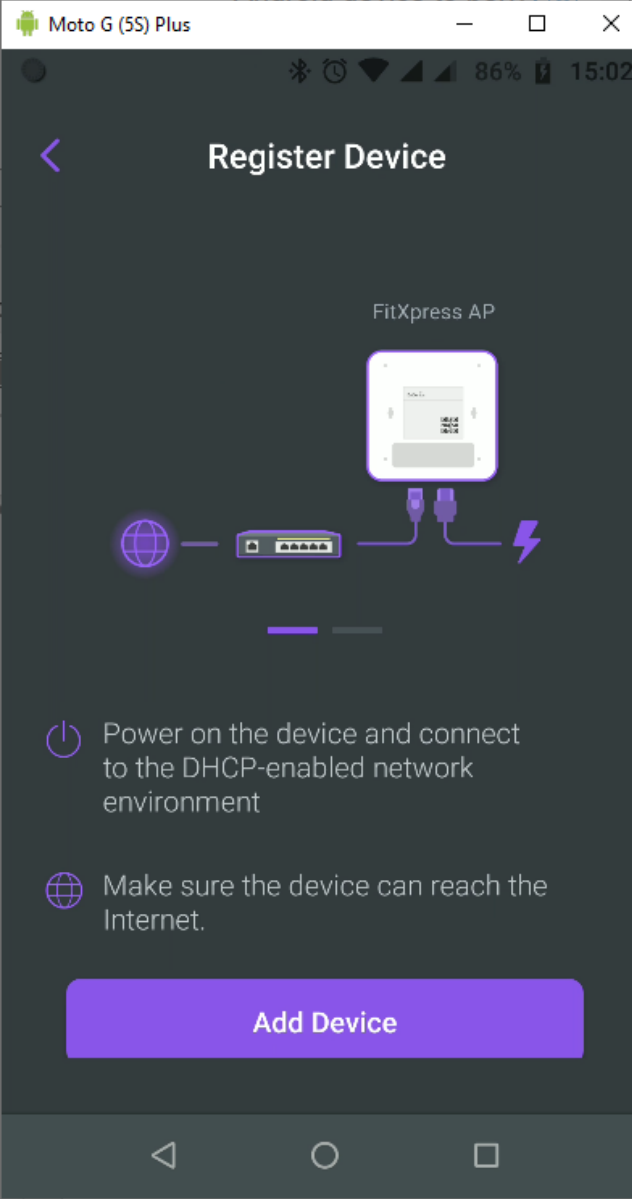
86% 15:01

Cancel Set Up a New Network

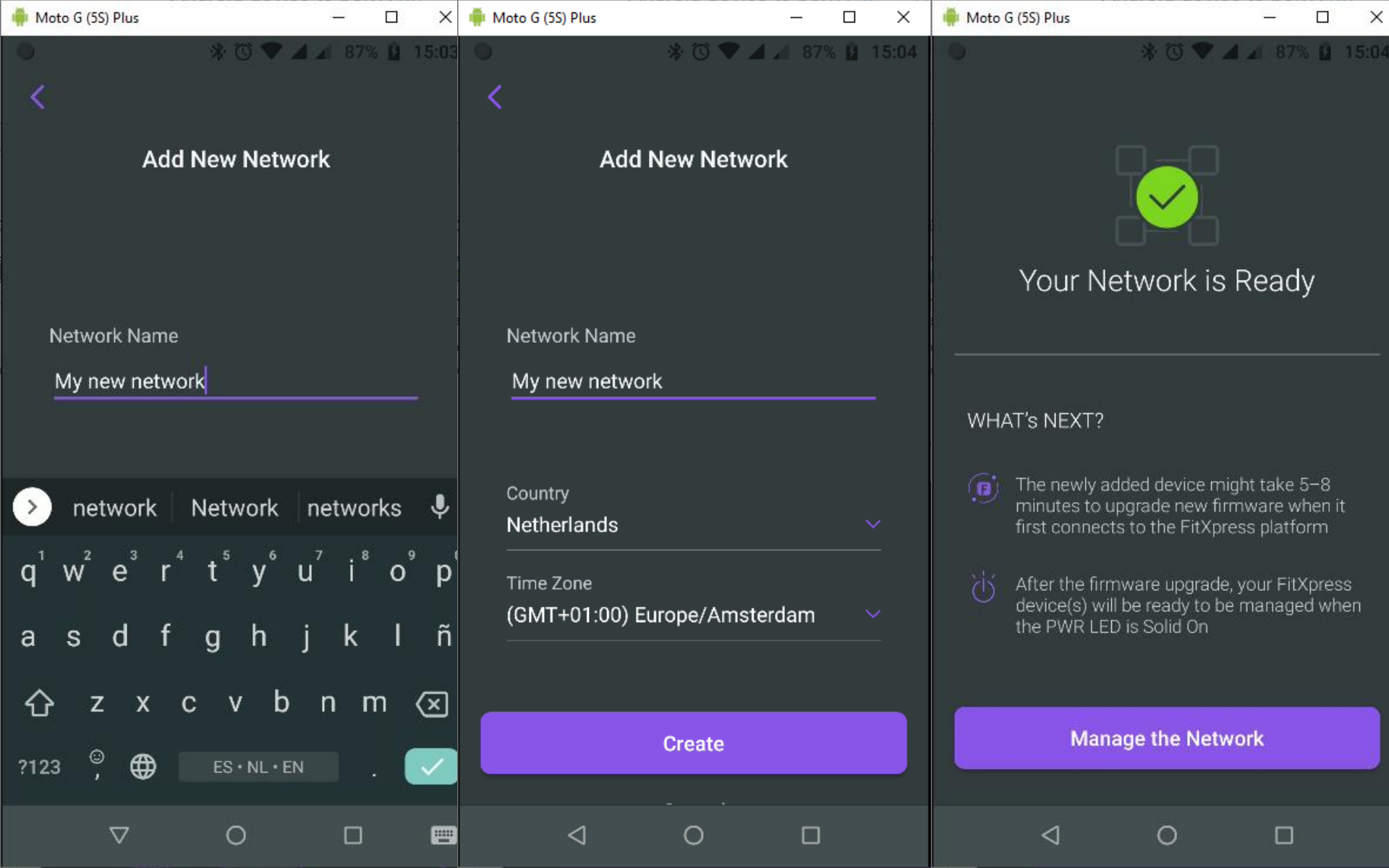


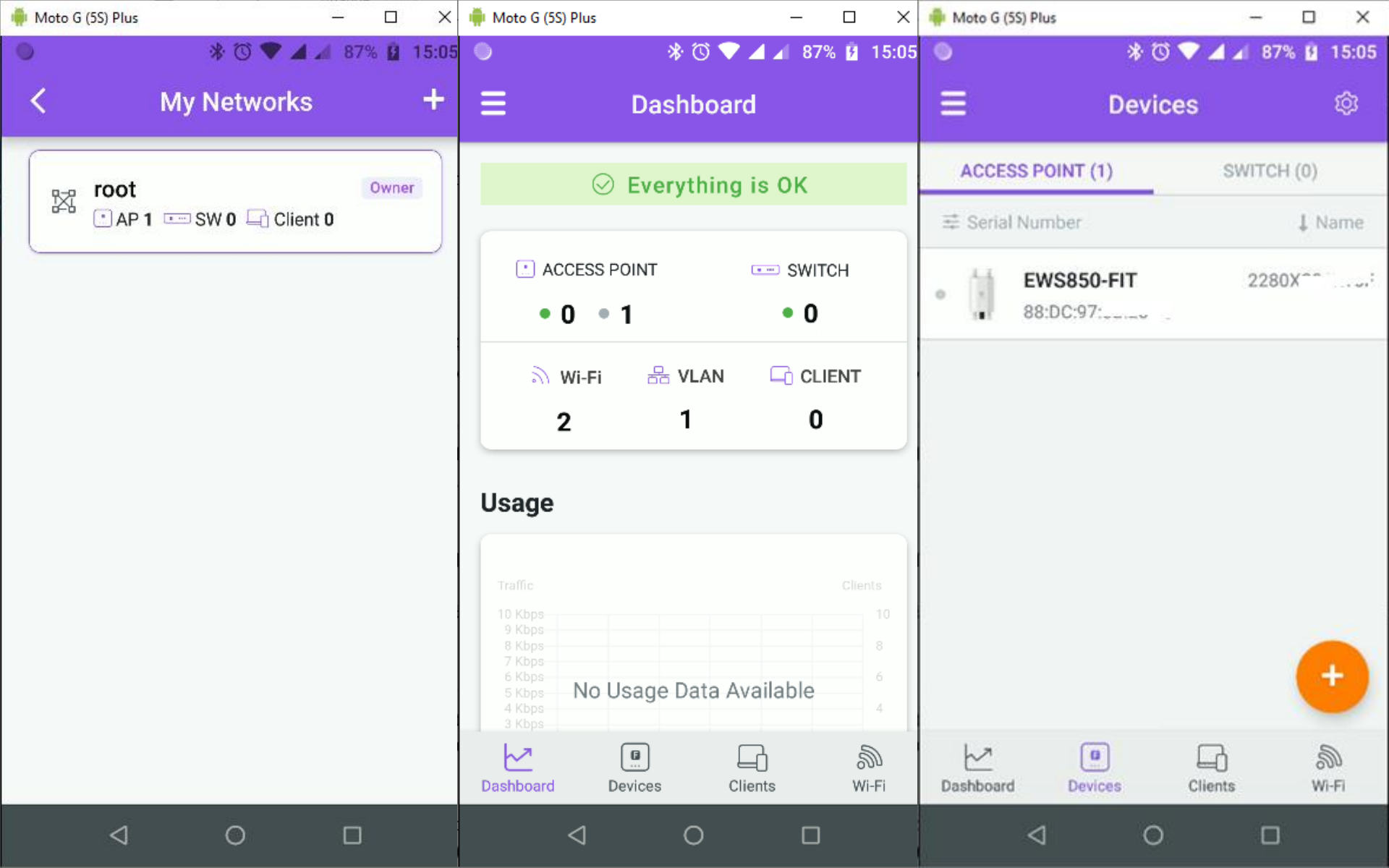
The Network is the configuration scope and consists of a group of devices. It must include at least one device.

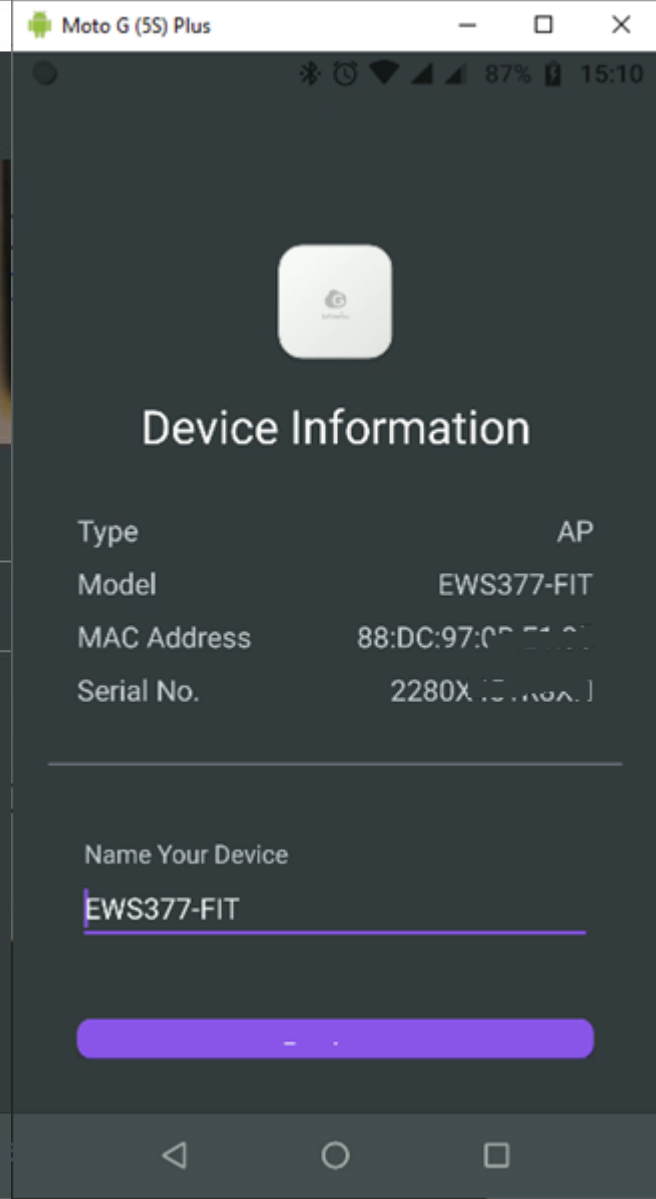
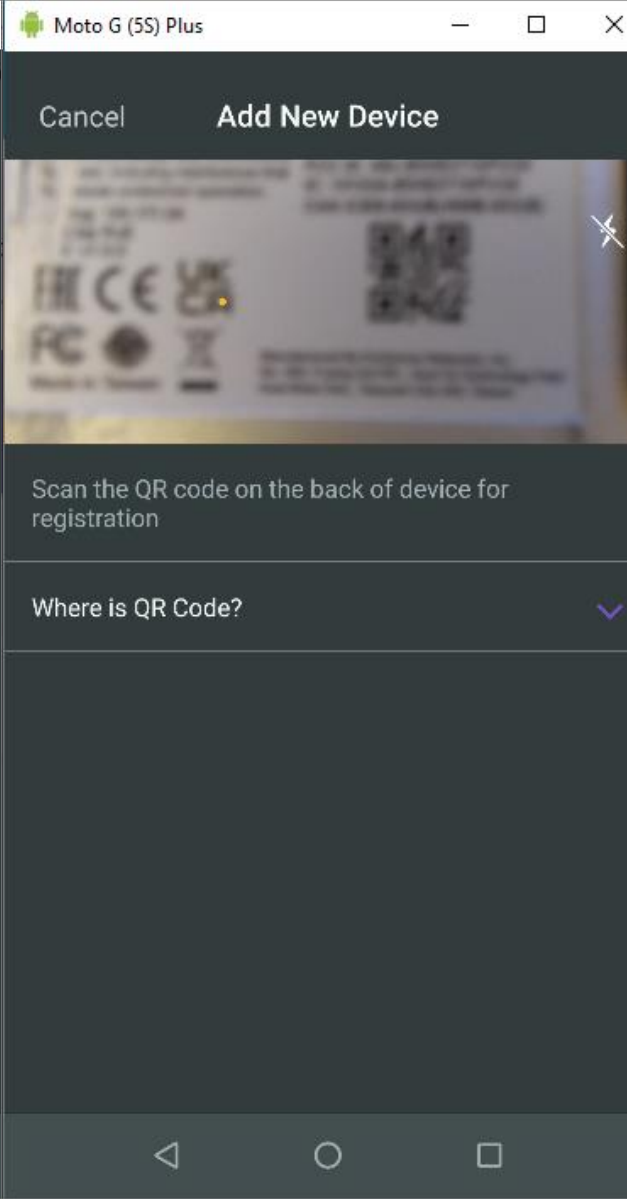
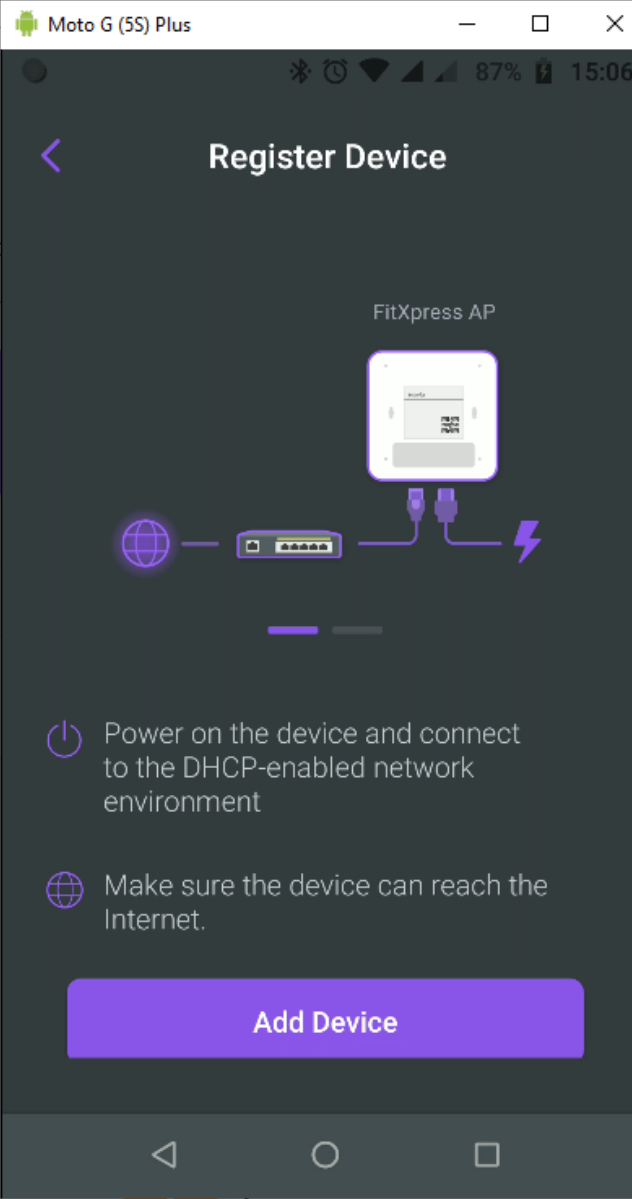
NEXT













## Your Device is Ready

### WHAT's NEXT?



The newly added device might take 5-8 minutes to upgrade new firmware when it first connects to the FitXpress platform



After the firmware upgrade, your FitXpress device(s) will be ready to be managed when the PWR LED is Solid On

[Manage the Device](#)



## Devices



ACCESS POINT (2)

SWITCH (0)



Serial Number



Name



**EWS377-FIT**

2280X...

88:DC:97:88:DC:97



**EWS850-FIT**

2280Y...

88:DC:97:88:DC:97



Dashboard



Devices



Clients



Wi-Fi

Moto G (5S) Plus

Wi-Fi

- Fit- GUEST Wi-Fi  
GUEST OPEN 5G 2.4G
- Fit- STAFF Wi-Fi  
STAFF OPEN 5G 2.4G

Dashboard Devices Clients Wi-Fi

Moto G (5S) Plus

Wi-Fi Details Save

Fit- STAFF Wi-Fi  
STAFF ⓘ

Hide Wi-Fi (SSID) ☐

Radio 2.4G & 5G & 6G >

Security Type

OPEN Password RADIUS

This is an Open Wi-Fi  
Users can access Wi-Fi network without any password

More Options >

Moto G (5S) Plus

Wi-Fi Details Save

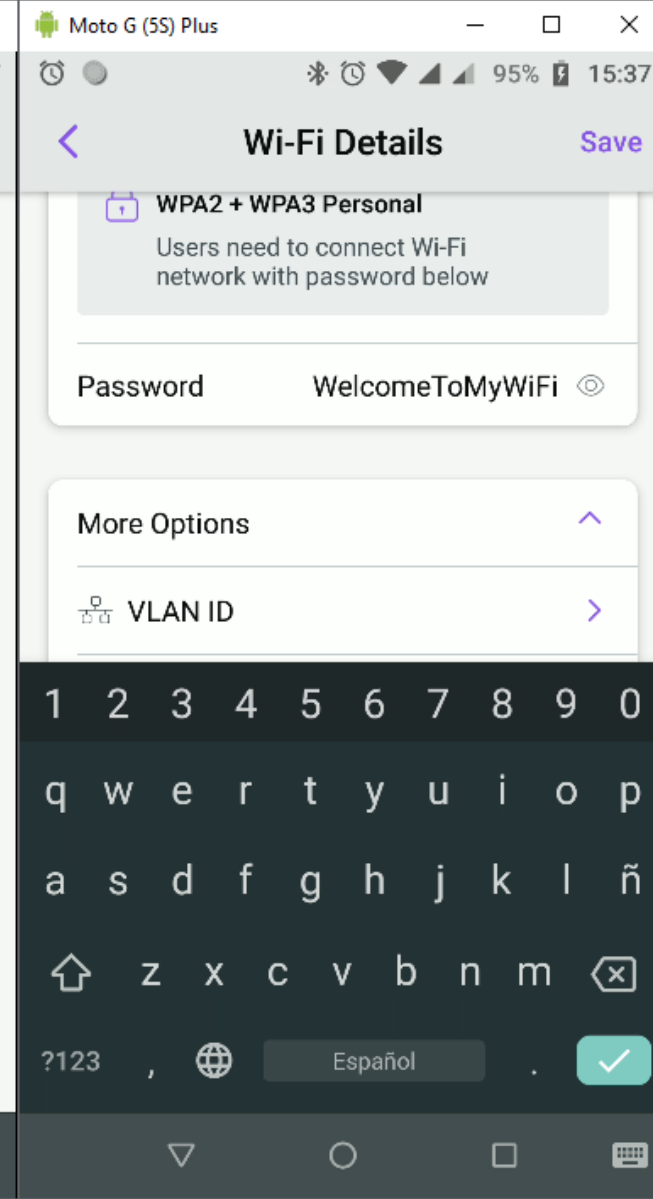
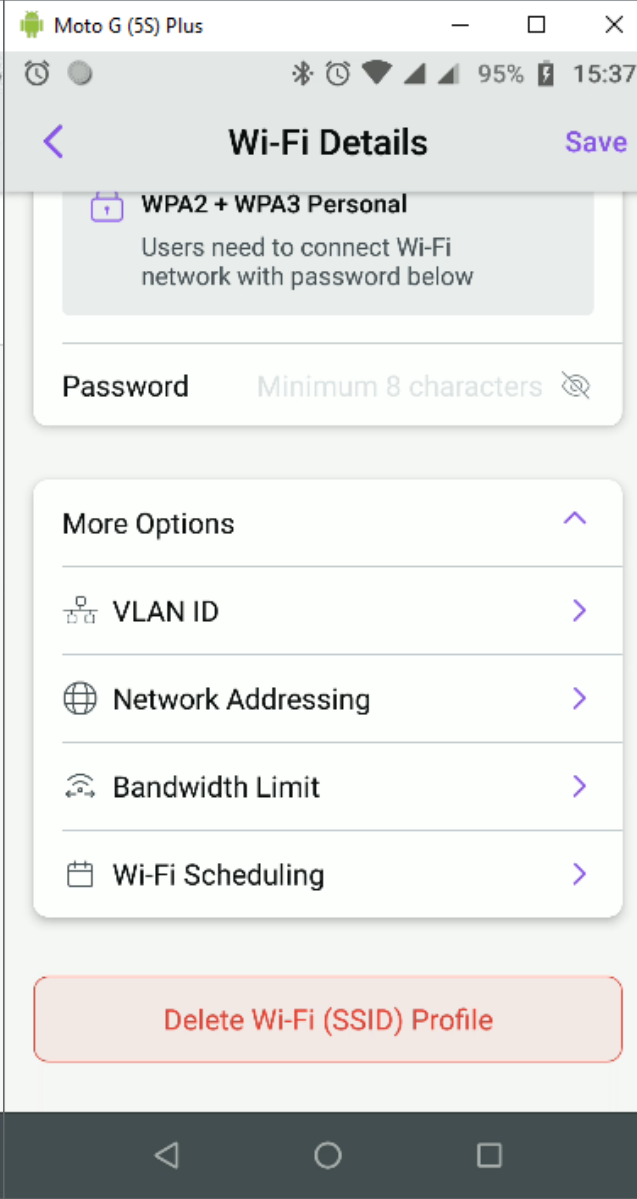
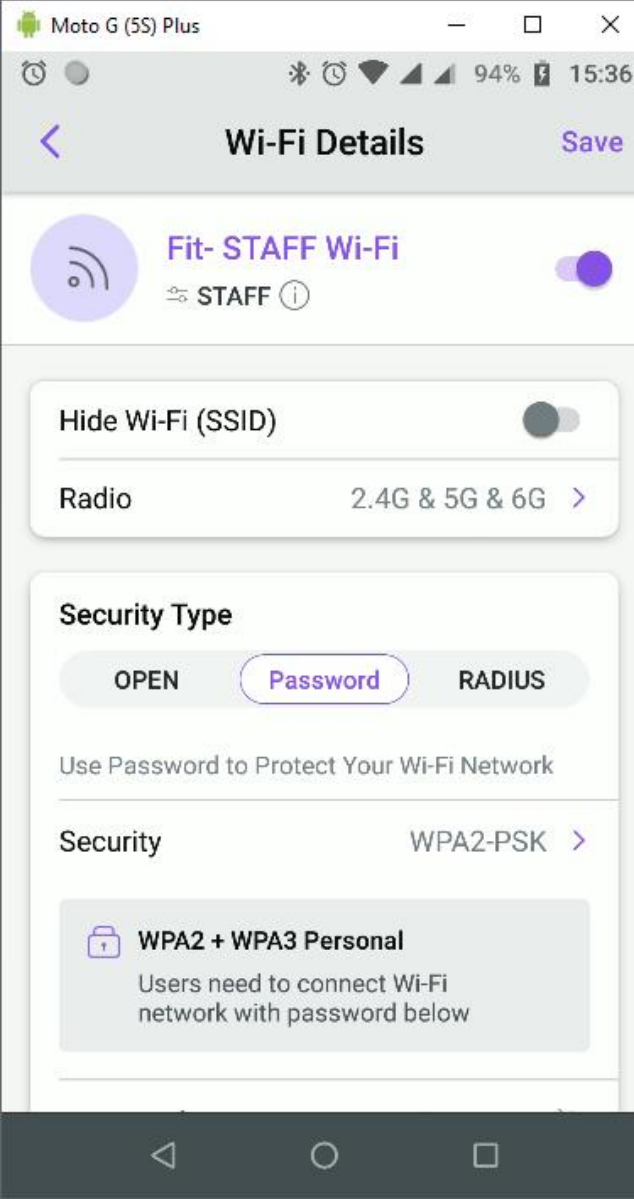
OPEN Password RADIUS

This is an Open Wi-Fi  
Users can access Wi-Fi network without any password

More Options >

- VLAN ID >
- Network Addressing >
- Bandwidth Limit >
- Wi-Fi Scheduling >

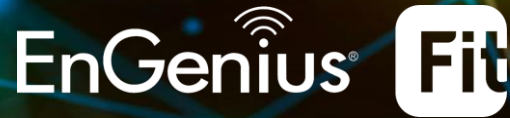
Delete Wi-Fi (SSID) Profile





# Comparison

| 04



- Use **FitXpress** for small solutions where Internet is available and cloud management is allowed. And cost is important
- Use **FitController** for “on-premises” solutions where Internet is not available, or cloud management is not possible (not allowed)

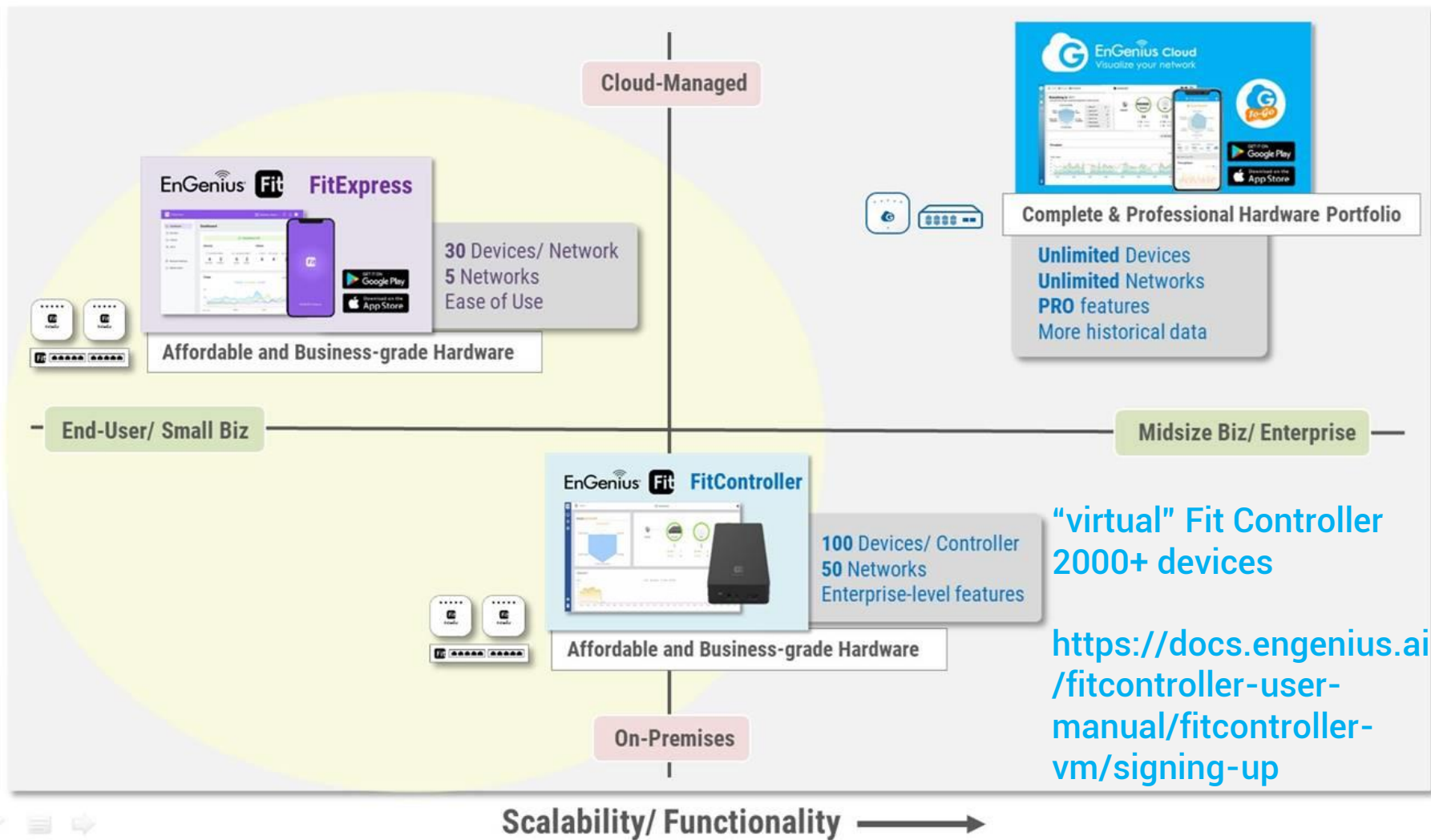


Select **EnGenius Cloud**, because **EnGenius Cloud** features:

- Supports any size of solutions
- Managing unlimited number of organizations and devices per account
- Optional “Pro” features (LDAP, Google LDAP, and Microsoft and Azure AD authentication, API, AP EoGRE tunnel, MyPSK, AirGuard, diagnostic tools)
- Latest products (first on **Cloud**, only later maybe on Fit, Security APs, Wi-Fi 6E AP, Wi-Fi6 4x4 outdoor AP, switches with 10 Gb/s SFP+ ports)

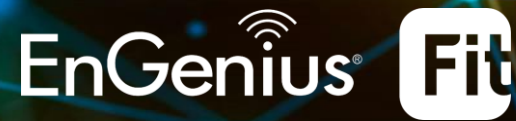
Select **FitController** only for “on-premises” solutions.

Select **FitXpress** only for small, budget solutions.



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# Appendix | 05



## Fit Access Points Lineup

Type	Indoor	Indoor	Outdoor
Model Name	Fit6 2x2	Fit6 4x4	Fit6 2x2 Outdoor
Model #	EWS357-FIT	EWS377-FIT	EWS850-FIT
Wi-Fi	Wi-Fi 6	Wi-Fi 6	Wi-Fi 6
Speed (2.4GHz)	574 Mbps	1,148 Mbps	574 Mbps
Speed (5GHz)	1,200 Mbps	2,400 Mbps	1,200 Mbps
Tx Power (2.4GHz)	22 dBm	23 dBm	23 dBm
Tx Power (5GHz)	22 dBm	23 dBm	25 dBm
Antenna (2.4GHz)	2 x 4 dBi	4 x 5 dBi	2 x 5 dBi (SMA-Type)
Antenna (5GHz)	2 x 5 dBi	4 x 6 dBi	2 x 5 dBi (SMA-Type)

## Fit Switches Lineup

Type	Layer 2 +	Layer 2 +	Layer 2 +	Layer 2 +	Layer 2 +
Model Name	FitSwitch 8 PoE	FitSwitch 24 PoE	FitSwitch 24 Full PoE	FitSwitch 48 PoE	FitSwitch 48 Full PoE
Model #	EWS2910P-FIT	EWS7928P-FIT	EWS7928FP-FIT	EWS7952P-FIT	EWS7952FP-FIT
Form Factor	Desktop	19" 1U	19" 1U	19" 1U	19" 1U
Gigabit RJ45	8	24	24	48	48
1Gbps SFP	2	4	4	4	4
RJ45 Console	-	1	1	1	1
PoE	802.3af	802.3af/at	802.3af/at	802.3af/at	802.3af/at
PoE Budget	55W	240W	410W	410W	740W
Switching Capacity	20Gbps	56Gbps	56Gbps	104Gbps	104Gbps

Friendly name	EWS-Fit code	Part number	EAN	UPC
Fit6 2x2	EWS357-FIT	1102A1371322	4713361936210	6 55216 01096 3
Fit6 4x4	EWS377-FIT	1102A1350316	4713361936227	6 55216 01097 0
Fit6 2x2 Outdoor	EWS850-FIT	1102A1376309	4713361936234	6 55216 01098 7
FitController100	FitCon100	1203A0020001	4713361936272	6 55216 01099 4
FitSwitch 8 PoE	EWS2910P-FIT	1402A0090323	4713361936289	6 55216 01100 7
FitSwitch 24 PoE+	EWS7928P-FIT	1402A0194310	4713361936302	6 55216 01101 4
FitSwitch 24 Full PoE+	EWS7928FP-FIT	1402A0193310	4713361936326	6 55216 01102 1
FitSwitch 48 PoE+	EWS7952P-FIT	1402A0196307	4713361936340	6 55216 01103 8
FitSwitch 48 Full PoE+	EWS7952FP-FIT	1402A0195307	4713361936364	6 55216 01104 5

## Software schedule:

- EnGenius **FitXpress** Android and iPhone apps have been released
- EnGenius **FitXpress** “web”, “soon”
- FitController “docker”:  
<https://docs.engenius.ai/fitcontroller-user-manual/fitcontroller-vm>

## Hardware availability:

- All Fit products in mass production
- All in stock? Except FitCon100 in transit





# EnGenius®

Unwire the Possibilities

