

# CENTRALIZED SOFTWARE-BASED NETWORK MANAGEMENT

**Nuclias Connect** is an intuitive network management solution for SMBs seeking a flexible, hands-on approach to their infrastructure and user data.

*Your Network, Your Way*

#### Built For...

- SMBs
- Retail Chains
- Hospitality
- Education

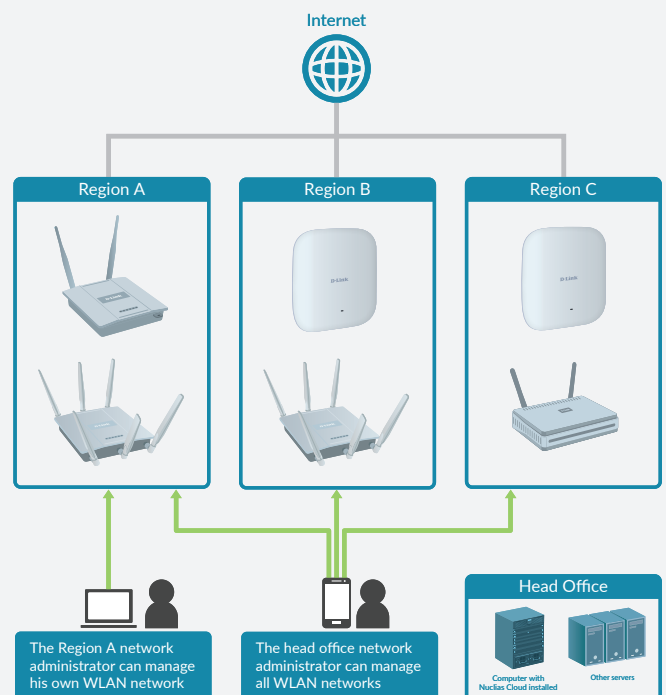
## Enter Nuclias Connect

Welcome to the solution guide for Nuclias Connect, D-Link's centralized management solution for small to medium-sized business (SMB) networks. Nuclias Connect makes it easier to analyze, automate, configure, optimize, scale, and secure your network – delivering the convenience of an enterprise-wide management solution, at an SMB price.

Deployable on a Windows server (or Linux via Docker), PC, or smartphone (via management app), the Nuclias Connect free-to-download software is capable of managing up to 1,000 Access Points (AP) without license fees, coupled with a versatile and cost-effective optional hardware controller (The Hub) suitable for remote locations. Through software-based monitoring and remote management of all wireless APs on your network, Nuclias Connect offers tremendous flexibility compared to traditional hardware-based unified management systems. Configuration can be done remotely. Network traffic analytics are available at a glance (in whole or in part). Load balancing, airtime fairness and localized throttling are all enabled.

## Why Nuclias Connect?

- » Nuclias Connect is designed to meet the specific needs of SMBs looking to...
- » Minimize network administration burden and costs.
- » Carry out Digital Transformation initiatives without unduly adding to their network administration workload.
- » Provide a robust and seamless Guest/Public Wi-Fi experience for users on par with what Enterprises can offer.



## Who Needs Nuclias Connect?

### SMBs

Connect offer a robust yet affordable foundation for SMB's who acknowledge the need for Digital Transformation in order to stay competitive. Especially designed for those business that need fine-grained control over their network, as well as the ability to customize as to best meet their businesses unique needs.



### Hospitality

Create a secure and easy to access Wi-Fi environment with features such as a customizable captive portal to enable multi-channel marketing. Real time traffic and analytics, virtualized floor maps and mapping of customer foot print gives deeper insights and aids you to better understand guest behaviors.



### Retail Chains

Real time traffic analytics and insights help you tailor your customers Wi-Fi experience and further drive sales. Features such as customizable captive portal maintain secure and easy to access Wi-Fi, and also enables multi-channel marketing. Meanwhile, a powerful network can support business functions such as digital signage and point of sale (POS) devices.



### Education

Connect offers versatile deployment and support for multiple campuses. Network enhancing features such as airtime fairness and channel optimization that enables stable digital collaboration. Web content filtering and application control protects staff and students alike. Resource intensive applications such as digital white boards or surveillance are supported.



### Nuclias Connect for MSPs

Nuclias Connect allows network administrators to do their jobs far more effectively and efficiently. Network expansion and configuration are easier, more intuitive, and more cost-effective thanks to centralized control. Privilege-Based Access Control allows managed access, avoiding accidental or malicious misconfigurations.

# What Nuclias Connect Delivers

Nuclias Connect gives you the financial and technical flexibility to expand from a small network to a larger one (up to 1,000 APs), while retaining a robust and centralized management system. And with its intuitive Graphical User Interface (GUI), a wealth of enhanced AP features, and a setup wizard that supports 11 languages, Nuclias Connect minimizes the hassle of deployment, configuration, and administration tasks, with the key benefits falling into key areas below.

## 1. Value

Nuclias Connect is tremendous value. Its APs are license free, while the management software is absolutely free to download. Backwards compatability with legacy D-Link APs means no need to tear out older but still functional hardware. Meanwhile its dedicated hardware controller is versatile and inexpensive, all while providing a comprehensive set of technical features that reduce admin costs, and that are suitable for most SMB networking activities.

### Benefits to You

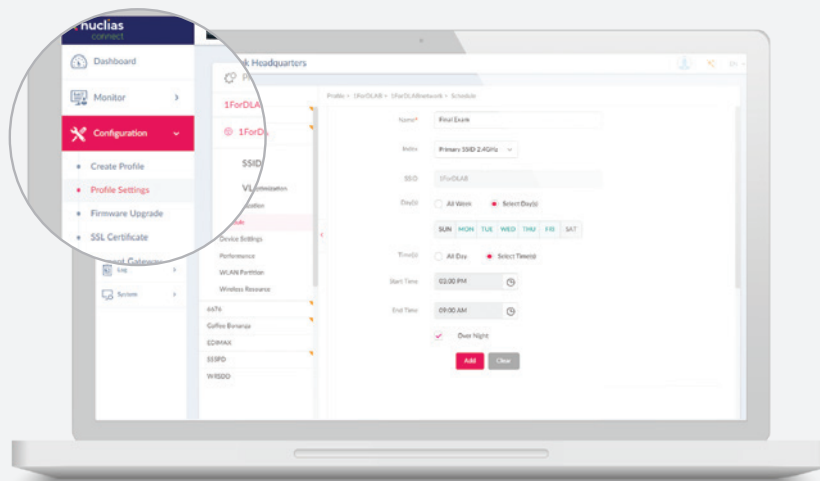
- » Management software can be installed on as many terminals as necessary
- » Less costly network expansion thanks to centralized configuration and license-free APs (up to 1,000)
- » Less costly network administration thanks to easy intuitive free-to-download software

## 2. Flexibility

Nuclias Connect offers the flexibility to thrive in a variety of deployment scenarios, business needs, and use cases. The solution can utilize legacy equipment if needed (PCs and select access points), or be implemented as a total solution. A wide variety of APs are available for various situations and price points. The management software is customizable and enables control and analytics of a broad or fine granularity – and presentation in a variety of formats.

### Benefits to You

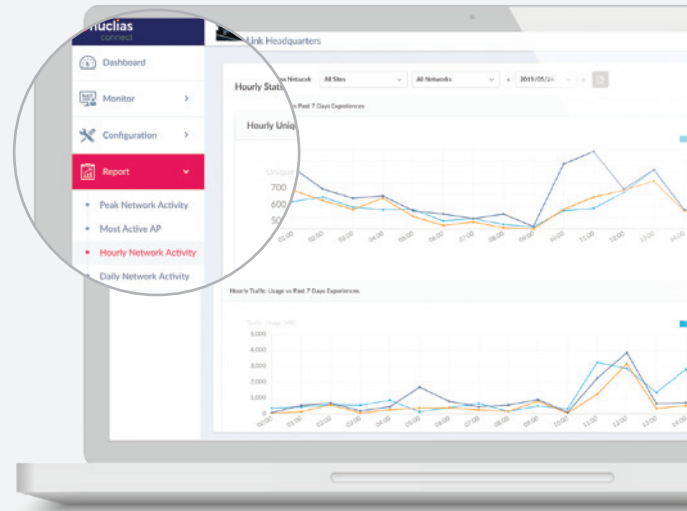
- » Suited to deployments with varied conditions on the ground
- » Network can be managed from anywhere with an Internet connection
- » Public Wi-Fi Login can be customized with your logo
- » Display, analytics, reporting, and management can be customized in a variety of ways for utility or convenience
- » Multiple tenants can manage through the software



▲ Network-Wide Configuration

### 3. Real-Time Analytics & Automated Reporting

Nuclias Connect enables an extensive understanding of your network and its users through traffic analytics and status reports, which can be viewed at a glance. Insights derived from this traffic data can be used to create business value. Traffic can be viewed across the entire network, down to the level of a single AP.



▲ Statistics – Hourly Network Activity

#### Benefits to You

- » Gain visibility into the network to substantiate traffic to evaluate capacity and growth.
- » Analytics provide actionable intelligence whereby businesses can take appropriate actions.
- » Spot irregularities.
- » Gain insights into customers & users.
- » Easier troubleshooting.

### 4. Security & Privacy

Nuclias Connect is designed for businesses where concerns about security and privacy are paramount. All communications over Nuclias Connect are encrypted. User data never leaves your possession. Additional security measures (such as firewalls) can be added without undue difficulty.

#### Benefits to You

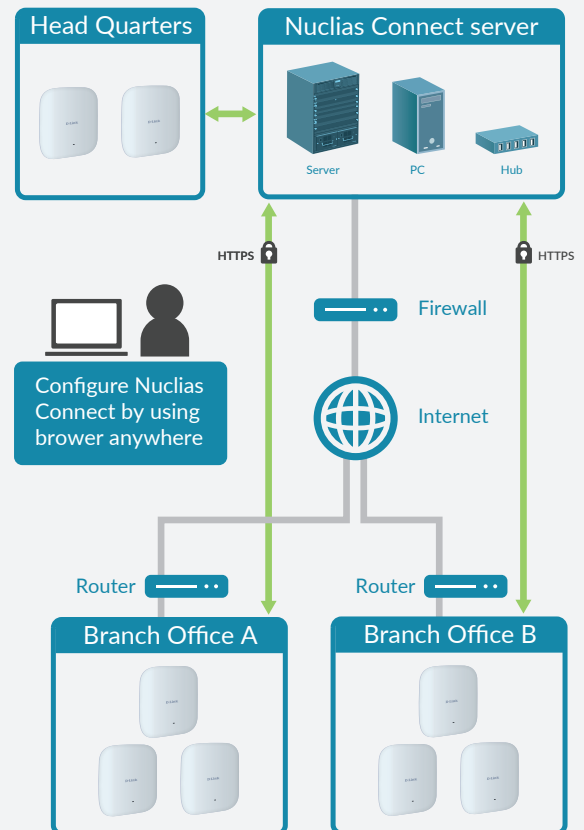
- » End to end encryption
- » User data remains private
- » Security add-ons are no problem

### 5. Ease-of-Use

Nuclias Connect’s centralized management capabilities, easy setup and intuitive dashboard functionality make life easier for network administrators, while its functionality makes life easier for network users.

#### Benefits to You

- » Convenient access from anywhere with internet connectivity
- » Centralized configuration reduces the chance of error
- » Batch configuration, automated network management & reporting, and searchable & auditable Event and Change logs save time
- » Diverse authentication options (Captive Portal, RADIUS Server, POP3, LDAP, AD)



▲ Captive Portal with Customizable Login Page

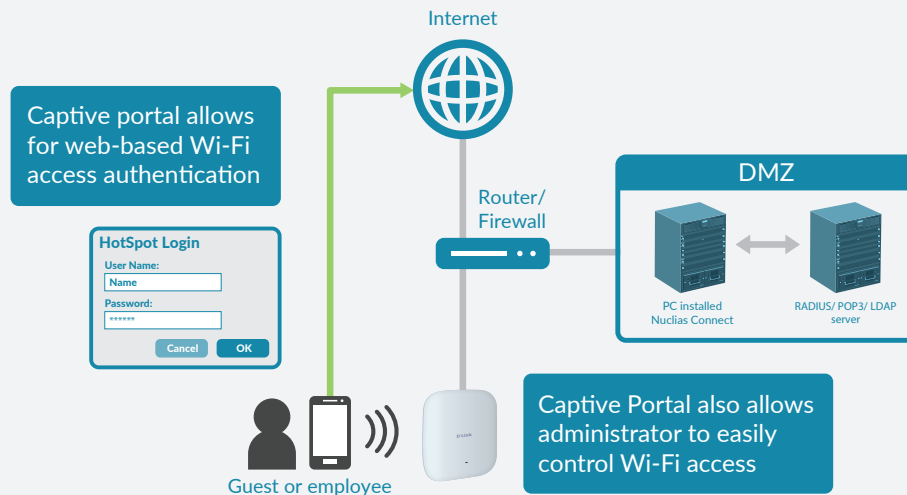
# Nuclias Connect For Admins

Nuclias Connect supports multi-tenancy, so network admins can grant localized management authority for local networks. Furthermore, because APs can support 8 SSIDs per radio (16 SSIDs per dual-band AP), administrators have the option of using one SSID to create a guest network for visitors.


Nuclias Connect provides direct AP discovery and provisioning when it shares the same Layer 2 or Layer 3 network with a given AP, allowing users to find APs and import profiles with minimal effort, which can be applied as needed to individual or groups of APs for even more effective configuration.

Since Nuclias Connect operates transparently, an AP can be deployed anywhere in a NAT environment. Admins can provide & manage a variety of distributed deployments, including settings & admin account configuration for each deployment.

Nuclias Connect allows for multiple user authentications while enabling specific access control configurations for each SSID, giving admins the option of configuring separate internal networks for different subnets, while enabling more advanced Value-Added Services, such as customizable captive portal or Wi-Fi Hotspot.



## Key Features

-  Free-to-Download Management Software
-  Inexpensive Hardware Controller
-  Searchable Event Log and Change Log
-  License-Free Access Points
-  Traffic Reporting & Analytics
-  Authentication via Customizable Captive Portal, 802.1x and RADIUS Server, POP3, LDAP, AD
-  Backwards-Compatibility
-  Remote Config. & Batch Config.
-  Multilingual Support
-  Intuitive Interface
-  Multi-Tenant & Role-Based Administration
-  Payment Gateway (Paypal) Integration and Front-Desk Ticket Management

# About the Nuclias Connect App

Monitor and manage your network remotely on an iOS or Android device.



Timely Network Monitoring



Remote Troubleshooting



Easy Reporting



# Technical Specifications






WLAN Management	
Maximum APs per Device (Controller)	1000 <sup>1</sup> (Software Controller) 100 <sup>1</sup> (Hardware controller)
WLAN Management Features	<ul style="list-style-type: none"> <li>• AP grouping</li> <li>• Multi-tenancy</li> <li>• Visualized topology</li> <li>• NAT pass-through</li> <li>• Setup wizard</li> <li>• AP discovery (layer 2 and layer 3)</li> <li>• Report system</li> </ul>
User Authentication	
Guest Portal	Captive portal
Authentication Method	<ul style="list-style-type: none"> <li>• Local</li> <li>• POP3</li> <li>• RADIUS</li> <li>• LDAP</li> <li>• Voucher</li> </ul>
Hotspot Features	<ul style="list-style-type: none"> <li>• Built-in support for voucher-based authentication</li> <li>• Built-in hotspot manager for voucher creation and guest management</li> <li>• Rate limiting and bandwidth control for guest and hotspot portal</li> </ul>
Wireless Features	
RF Management and Control	<ul style="list-style-type: none"> <li>• Auto Output Power Control</li> <li>• Auto Channel</li> <li>• Self-healing around failed APs</li> </ul>
Multiple SSIDs per Radio(AP)	8
Advanced Wireless Features	<ul style="list-style-type: none"> <li>• Band steering</li> <li>• L2 roaming</li> <li>• Bandwidth optimization</li> <li>• Airtime fairness</li> </ul>
System Management	
Management Interface	Web-based user interface (HTTPS)
Minimum System Requirements	Computer running Microsoft Windows 10 or server 2016 (64 bit)
Scheduling	Firmware update Configuration update
Order Information	
Part Number	Description
DNC-100	Nuclias Connect

<sup>1</sup> Number of wireless access points supported depends on the specification of the computer on which DNC is installed. To support 1000 APs, a computer with at least an Intel Core i7 with 16 GB RAM and 4 TB hard drive, and 20 Mbps uplink bandwidth is recommended. To support 100 APs, a computer with at least an Intel Core i5 3.2GHz with 8 GB RAM and 2 TB hard drive, and 10 Mbps uplink bandwidth is recommended.



# Nuclias Connect: Device Compatibility\*






## – Nuclias Connect Supported Wireless Access Points

Model	DAP-2230	DAP-2310	DAP-2360	DAP-2610	DAP-2620
Environment	Indoor	Indoor	Indoor	Indoor	Indoor
Product Image					
H/W Version	Ax	Bx	Bx	Ax	Ax
IEEE Standard	802.11 b/g/n	802.11 b/g/n	802.11 b/g/n	802.11a/b/g/n/ac	802.11 a/b/g/n/ac
Mesh	No	No	No	No	No
2.4 GHz Speed	300 Mbps	300 Mbps	300 Mbps	400 Mbps	300 Mbps
5 GHz Speed	-	-	-	867 Mbps	867 Mbps
Number of SSIDs	8	8	8	16 (8 per radio)	16 (8 per radio)
Ethernet Interface	1 x Fast Ethernet	1 x Gigabit Ethernet	1 x Gigabit Ethernet	1 x Gigabit Ethernet	2 x Gigabit Ethernet
PoE	802.3af	802.3af	802.3af	802.3af	802.3af
Max Tx Power	2.4 GHz: 27 dBm	2.4 GHz: 26 dBm	2.4 GHz: 26 dBm	2.4 GHz: 23 dBm 5 GHz: 23 dBm	2.4 GHz: 23 dBm 5 GHz: 23 dBm
Antenna Type	Internal	External	External	Internal	Internal
Antenna Gain	2.4 GHz: 3 dBi	2.4 GHz: 2 dBi	2.4 GHz: 5 dBi	2.4 GHz: 3 dBi 5 GHz: 3 dBi	2.4 GHz: 2 dBi 5 GHz: 2 dBi
Mounting Type	Ceiling/Wall/Desktop	Wall/Desktop	Wall/Desktop	Ceiling/Wall/Desktop	Wall Plate
Security Lock	Yes	No	Yes	Yes	Yes

\* Please contact your local D-Link office for availability.

# Nuclias Connect: Device Compatibility\*

## – Nuclias Connect Supported Wireless Access Points

Model	DAP-2660	DAP-2662	DAP-2680	DAP-2682	DAP-2695
Environment	Indoor	Indoor	Indoor	Indoor	Indoor
Product Image					
H/W Version	Ax	Ax	Ax	Ax	Ax
IEEE Standard	802.11a/b/g/n/ac	802.11a/b/g/n/ac	802.11a/b/g/n/ac	802.11a/b/g/n/ac	802.11a/b/g/n/ac
Mesh	No	Available soon	Available soon	Available soon	No
2.4 GHz Speed	300 Mbps	300 Mbps	450 Mbps	600 Mbps	450 Mbps
5 GHz Speed	867 Mbps	867 Mbps	1300 Mbps	1732 Mbps	1300 Mbps
Number of SSIDs	16 (8 per radio)	16 (8 per radio)	16 (8 per radio)	16 (8 per radio)	16 (8 per radio)
Ethernet Interface	1 x Gigabit Ethernet	1 x Gigabit Ethernet	1 x Gigabit Ethernet	2 x Gigabit Ethernet	2 x Gigabit Ethernet
PoE	802.3af	802.3af	802.3at	802.3at	802.3at
Max Tx Power	2.4 GHz: 26 dBm 5 GHz: 26 dBm	2.4 GHz: 26 dBm 5 GHz: 26 dBm	2.4 GHz: 26.5 dBm 5 GHz: 26.5 dBm	2.4 GHz: 23 dBm 5 GHz: 23 dBm	2.4 GHz: 27.5 dBm 5 GHz: 27.5 dBm
Antenna Type	Internal	Internal	Internal	Internal	External
Antenna Gain	2.4 GHz: 3 dBi 5 GHz: 4 dBi	2.4 GHz: 3.8 dBi 5 GHz: 3.8 dBi	2.4 GHz: 3.6 dBi 5 GHz: 4.2 dBi	2.4 GHz: 2 dBi 5 GHz: 2 dBi	2.4 GHz: 4 dBi 5 GHz: 6 dBi
Mounting Type	Ceiling/Wall/Desktop	Ceiling/Wall/Desktop	Ceiling/Wall/Desktop	Ceiling/Wall/Desktop	Wall/Desktop
Security Lock	Yes	Yes	Yes	Yes	Yes

\* Please contact your local D-Link office for availability.

## Nuclias Connect: Device Compatibility\*


### – Nuclias Connect Supported Wireless Access Points

Model	DAP-2720	DAP-3315	DAP-3662	DAP-3666
Environment	Outdoor	Outdoor	Outdoor	Outdoor
Product Image				
H/W Version	Ax	Ax	Ax	Ax
IEEE Standard	802.11a/b/g/n/ac	802.11 b/g/n	802.11a/b/g/n/ac	802.11a/b/g/n/ac
Mesh	Yes	No	No	Available soon
2.4 GHz Speed	450 Mbps	300 Mbps	300 Mbps	300 Mbps
5 GHz Speed	1300 Mbps	N/A	867 Mbps	867 Mbps
Number of SSIDs	24 (8 per radio)	8	16 (8 per radio)	16 (8 per radio)
Ethernet Interface	1 x Gigabit Ethernet	2 x 10/100 Ethernet	2 x Gigabit Ethernet	2 x Gigabit Ethernet
PoE	802.3at	24V Proprietary	802.3af	802.3af
Max Tx Power	2.4 GHz band: 26 dBm 5 GHz band: 24 dBm	2.4 GHz band: 27dBm	2.4 GHz: 26 dBm 5 GHz: 26 dBm	2.4 GHz: 26 dBm 5 GHz: 26 dBm
Antenna Type	Internal	Internal	Internal	Internal
Antenna Gain	2.4 GHz: 26 dBm 5 GHz: 24 dBm	2.4 GHz:12 dBi	2.4 GHz: 6 dBi 5 GHz: 6 dBi	2.4 GHz: 6 dBi 5 GHz: 6 dBi
Mounting Type	Wall/Ceiling	Wall/Pole	Pole	Pole
Security Lock	Yes	Yes	Yes	Yes

\* Please contact your local D-Link office for availability.

## Nuclias Connect: Device Compatibility\*

### – Nuclias Connect Hub

Model	DNH-100
Environment	Outdoor
Product Image	
Max Device Management	100
Built in Software Controller	Nuclias Connect
IEEE Standard	802.3u/ab
Mesh	No
Interace	1 x Gigabit Ethernet Console port x 1 USB 3.0 x 1 Micro SD x 1*
Single Sign on	Yes
App for Management	IOS and Android Mobile Phone
Mounting Support	Rack Mount
Supported Devices	Nuclias Connect Aps

\* Please contact your local D-Link office for availability.