

NUCLIAS CONNECT 2022 SOLUTION GUIDE

Nuclias Connect is an intuitive network management solutions for Small-to-Medium Enterprises (SMEs) and corporates with single or distributed multi-site networks, seeking a flexible, hands-on approach to their infrastructure and user data.

Your Network, Your Way

Built For...

- Small-to-Medium Enterprises (SMEs)
- Corporates
- Retail Chains
- Hospitality
- Education
- Healthcare
- ...more



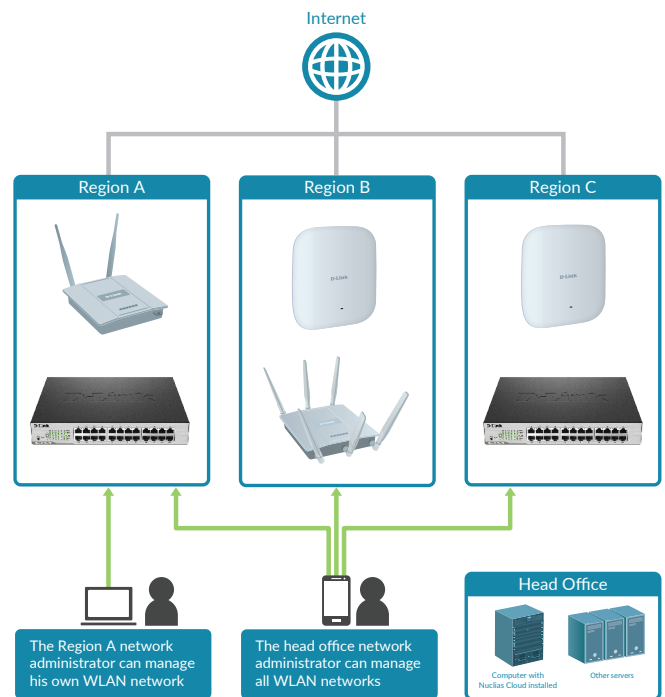
Enter Nuclias Connect

Welcome to the solution guide for Nuclias Connect, D-Link’s centralized management solution for Small-to-Medium-Sized Enterprises (SMEs) 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 a fraction of the cost.

Deployable on a Windows server (or Linux via Docker), PC, or smartphone (via management app), the Nuclias Connect (DNC-100) free-to-download software is capable of managing up to 1,800* wireless access points (AP), network switches and PoE switches without license fees, coupled with a versatile and cost-effective optional hardware controller (The Hub, DNH-100) suitable for remote locations. Through software-based monitoring and remote management of all wireless APs and switches 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 SMEs and corporates 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.



* Maximum number of managed devices is subject to hardware configuration of the server, user environments and settings of the devices.

Who Needs Nuclias Connect?

SME and Corporates

Connect offer a robust yet affordable foundation for corporates and SME'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 wired (switches) and 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 multichannel marketing. Meanwhile, a powerful PoE (Power-over-Ethernet) can simplify the deployment of advanced surveillance, smart sensors / alarms, access control, digital signage and point of sale (POS) devices for Smart Retail.



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.



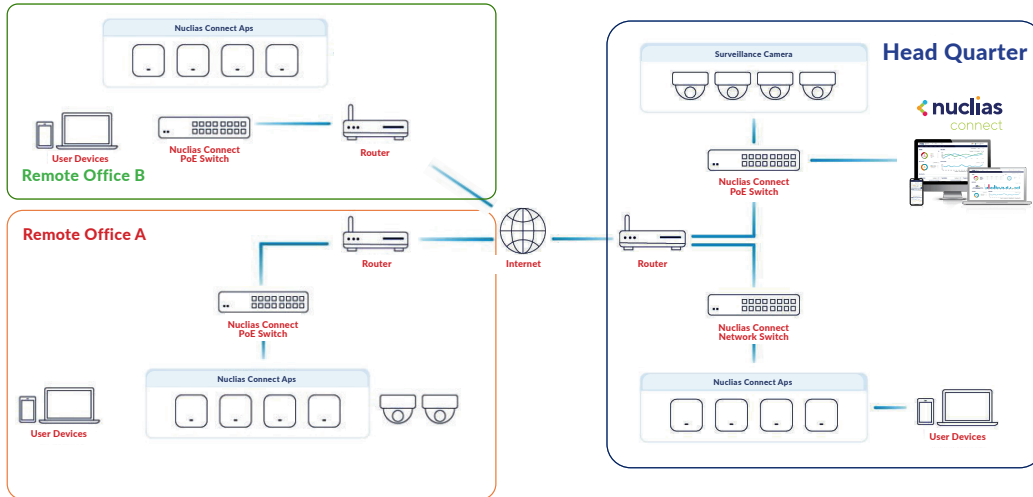


Nuclias Connect for MSPs

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.

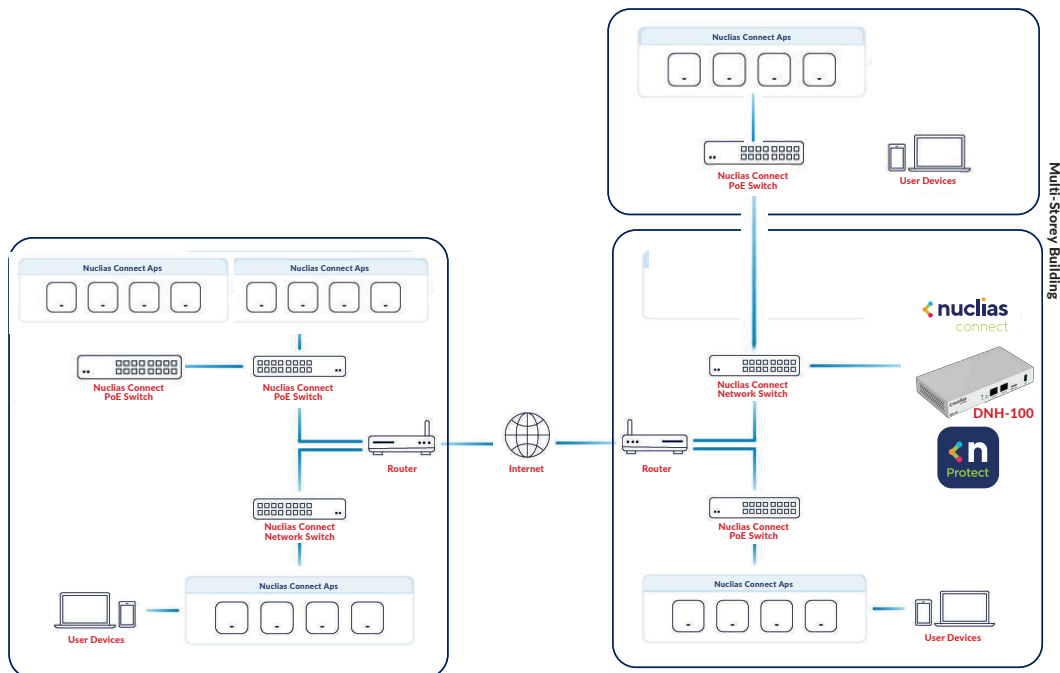
Multi-Site Nuclias Connect deployment

(Up to 1,800* wireless access points and switches)



Medium-sized Nuclias Connect deployment

(Up to 200* wireless access points and switches)



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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 1,800* devices), Medium (up to 200* devices) 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 & switches 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 Enterprise & SMB networking activities.

2. Flexibility

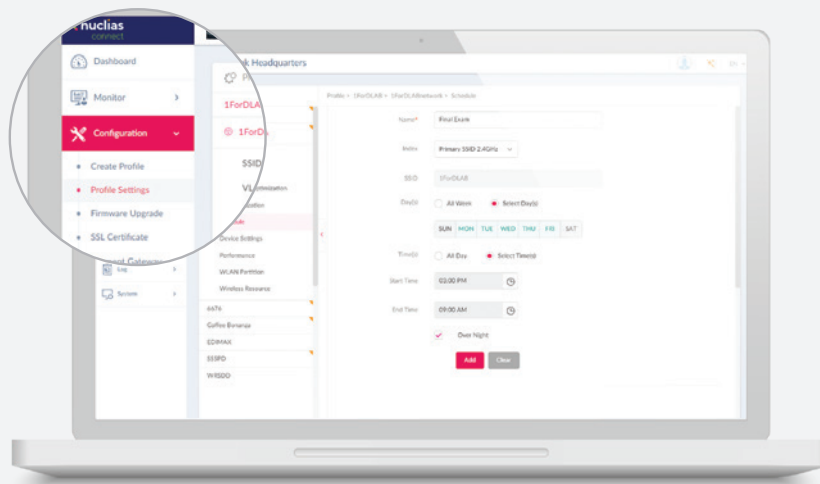
Nuclias Connect offers the flexibility to thrive in a variety of deployment scenarios, business needs, and use cases. A wide variety of wireless access points (APs), network and PoE switches are available for various situations and price points. The management software is customizable and enables control and analytics of a broad or fine granularity – and presentation in a variety of formats.

Benefits to You

- » Management software can be installed on as many terminals as necessary
- » Less costly network expansion thanks to centralized configuration and license-free APs/Switches (up to 1,500/200)
- » Less costly network administration thanks to easy intuitive free-to-download software or cost effective hardware hub.

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

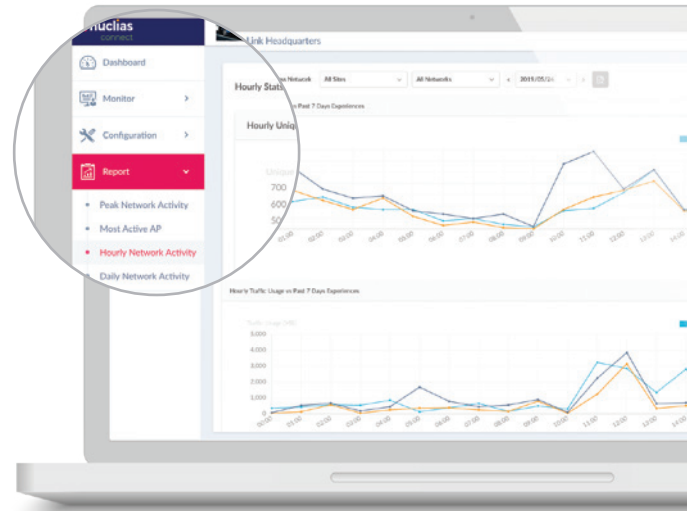


▲ Network-Wide Configuration

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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 and a LAN or PoE port of a switch.



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.

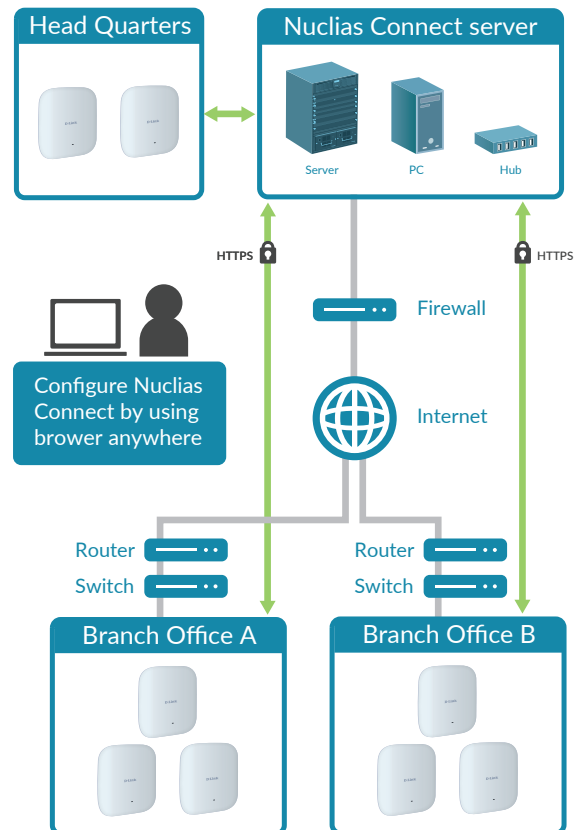
▲ Statistics – Hourly Network Activity

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



▲ Captive Portal with Customizable Login Page

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)

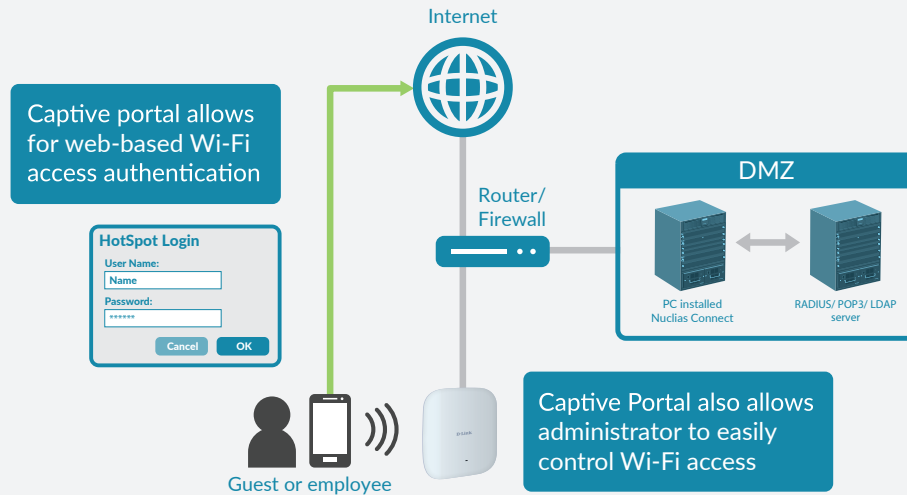
Nuclias Connect For Admins

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
- License-Free Management of Up to 1,800* Access Points and Switches
- Backwards-Compatibility
- Intuitive Interface
- Inexpensive Hardware Controller
- Traffic Reporting & Analytics
- Remote Config. & Batch Config.
- Multi-Tenant & Role-Based Administration
- Searchable Event Log and Change Log
- Authentication via Customizable Captive Portal, 802.1x and RADIUS Server, POP3, LDAP, AD
- Multilingual Support
- Payment Gateway (Paypal) Integration and Front-Desk Ticket Management

* Maximum number of managed devices is subject to hardware configuration of the server, user environments and settings of the devices.

About the Nuclias Connect Apps

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



Timely Network Monitoring



Remote Troubleshooting



Easy Reporting



Technical Specifications

Network Management	
Maximum Number of Managed Access Points and Switches Per Controller	1,800* (DNC-100 Software Controller) 200* (DNH-100 Hub Controller)
WLAN Management Features	<ul style="list-style-type: none"> • AP grouping • Multi-tenancy • Visualized topology • NAT pass-through • Setup wizard • AP discovery (layer 2 and layer 3) • Report system
User Authentication	
Guest Portal	Captive portal
Authentication Method	<ul style="list-style-type: none"> • Local • POP3 • RADIUS • LDAP • Voucher • Facebook & Google login
Hotspot Features	<ul style="list-style-type: none"> • Built-in support for voucher-based authentication • Built-in hotspot manager for voucher creation and guest management • Rate limiting and bandwidth control for guest and hotspot portal
Wireless Features	
RF Management and Control	<ul style="list-style-type: none"> • Auto Output Power Control • Auto Channel • Self-healing around failed APs
Multiple SSIDs per Radio(AP)	8
Advanced Wireless Features	<ul style="list-style-type: none"> • Band steering • L2 roaming / Fast Roaming • Bandwidth optimization • Airtime fairness
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 Software Controller
DNH-100	Nuclias Connect Hub Controller

* Maximum number of managed devices is subject to hardware configuration of the server, user environments and settings of the devices. To manage > 1,000 wireless access points and switches by DNC-100, a computer server with minimum configuration of Intel 8th i7, 24GB RAM, 4TB storage and minimum uplink bandwidth of 20Mbps is recommended.

Nuclias Connect Device Compatibility*






- Nuclias Connect Supported Wireless Access Points

Model	DAP-X2850	DAP-X2810	DAP-2662	DAP-2682	DAP-2610
Environment	Indoor High Density (HD)	Indoor Long Range (LR)	Indoor Long Range (LR)	Indoor High Density (HD)	Indoor
Product Image					
OFDMA	Yes*	Yes*	-	-	-
IEEE Standard	802.11 b/g/n/ac/ax	802.11 b/g/n/ac/ax	802.11a/b/g/n/ac	802.11a/b/g/n/ac	802.11a/b/g/n/ac
Roaming	Yes*	Yes*	Yes*	Yes*	Yes*
2.4 GHz Speed	1147 Mbps	574 Mbps	300 Mbps	600 Mbps	400 Mbps
5 GHz Speed	2402 Mbps	1201 Mbps	867 Mbps	1732 Mbps	867 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 2.5 Gigabit and 1 x Gigabit Ethernet	1 x Gigabit Ethernet	1 x Gigabit Ethernet	2 x Gigabit Ethernet	1 x Gigabit Ethernet
PoE	802.3at	802.3at	802.3af	802.3at	802.3af
Max Tx Power	2.4 GHz: 28 dBm 5 GHz : 25.5 dBm	2.4 GHz: 23 dBm 5 GHz : 26 dBm	2.4 GHz: 26 dBm 5 GHz: 26 dBm	2.4 GHz: 23 dBm 5 GHz: 23 dBm	2.4 GHz: 23 dBm 5 GHz: 23 dBm
Antenna Type	Internal	Internal	Internal	Internal	Internal
Antenna Gain	2.4 GHz: 3.5 dBi 5 GHz : 5.5 dBi	2.4 GHz: 3.2 dBi 5 GHz : 4.3 dBi	2.4 GHz: 3.8 dBi 5 GHz: 3.8 dBi	2.4 GHz: 2 dBi 5 GHz: 2 dBi	2.4 GHz: 3 dBi 5 GHz: 3 dBi
Mounting Type	Ceiling/Wall/ Desktop	Ceiling/Wall/ Desktop	Ceiling/Wall/ Desktop	Ceiling/Wall/ Desktop	Ceiling/Wall/ Desktop
Security Lock	Yes	Yes	Yes	Yes	Yes

* Available soon.



Nuclias Connect Device Compatibility*

- Nuclias Connect Supported Wireless Access Points

Model	DAP-2680	DAP-2620	DAP-2622	DAP-3666	DAP-3315
Environment	Indoor	Indoor	Indoor	Outdoor	Outdoor
Product Image				 IP68	 Suitable for PTP
OFDMA	-	-	-	-	-
IEEE Standard	802.11a/b/g/n/ac	802.11 a/b/g/n/ac	802.11 a/b/g/n/ac	802.11a/b/g/n/ac	802.11 a/b/g/n/ac
Roaming	Yes*	Yes*	Yes*	Yes*	Yes*
2.4 GHz Speed	450 Mbps	300 Mbps	300 Mbps	300 Mbps	300 Mbps
5 GHz Speed	1300 Mbps	867 Mbps	867 Mbps	867 Mbps	NA
Number of SSIDs	16 (8 per radio)	16 (8 per radio)	16 (8 per radio)	16 (8 per radio)	8
Ethernet Interface	1 x Gigabit Ethernet	2 x Gigabit Ethernet (PoE in + LAN)	3 x Gigabit Ethernet (PoE in + PoE Out + LAN)	2 x Gigabit Ethernet	2 x 10/100 Ethernet
PoE	802.3at	802.3af	802.3af	802.3af	24V Proprietary
Max Tx Power	2.4 GHz: 26.5 dBm 5 GHz: 26.5 dBm	2.4 GHz: 23 dBm 5 GHz: 23 dBm	2.4 GHz: 23 dBm 5 GHz: 23 dBm	2.4 GHz: 26 dBm 5 GHz: 26 dBm	2.4 GHz band: 27dBm
Antenna Type	Internal	Internal	Internal	Internal	Internal
Antenna Gain	2.4 GHz: 3.6dBi 5 GHz: 4.2 dBi	2.4 GHz: 2 dBi 5 GHz: 2 dBi	2.4 GHz: 2 dBi 5 GHz: 2 dBi	2.4 GHz: 6 dBi 5 GHz: 6 dBi	2.4 GHz:12 dBi
Mounting Type	Ceiling/Wall/ Desktop	Wall Plate	Wall Plate	Pole	Wall/Pole
Security Lock	Yes	Yes	Yes	Yes	Yes

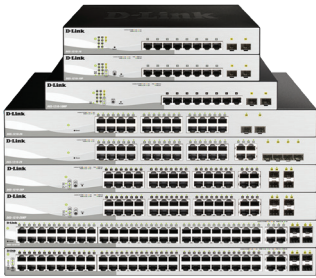
* Available soon.

Nuclias Connect Management Platform*

Model	DNC-100	DNH-100
Environment	Indoor	Indoor
Product Image		
Max. Managed Devices	1,800*	200*
Built in Software Controller	Nuclias Connect	Nuclias Connect
Medium-to-Large Enterprises & Corporates	Large Scale Enterprise Deployment	Small-to-Medium Enterprises & Corporates
Supported Devices	Access Points, Network and PoE Switches	Access Points, Network and PoE Switches
Interface	Support Windows OS Linux OS	1 x Gigabit Ethernet Console port x 1 USB 3.0 x 1 Micro SD x 1*
Single Sign on	Yes	Yes
App for Management	IOS and Android Mobile Phone	IOS and Android Mobile Phone
Mounting Support	Desktop PC Server	Rack Mount
Supported Apps	Nuclias Connect Apps	Nuclias Connect Apps

* Maximum number of managed devices is subject to hardware configuration of the server, user environments and settings of the devices. Please contact your local D-Link office for Firmware availability.

Nuclias Connect Switch

Ordering Information	
Model	Description
Product Image	
DGS-1210-10	8-port Gigabit UTP and 2-port Gigabit SFP L2+ Smart Managed Switch
DGS-1210-10P	8-port Gigabit UTP (af/at) and 2-port Gigabit SFP L2+ Smart Managed PoE Switch 65W PoE Budget
DGS-1210-10MP	8-port Gigabit UTP (af/at) and 2-port Gigabit SFP L2+ Smart Managed PoE Switch 130W PoE Budget
DGS-1210-20	16-port Gigabit UTP and 4-port Gigabit SFP Combo L2+ Smart Managed Switch
DGS-1210-26	24-port Gigabit UTP and 2-port Gigabit SFP L2+ Smart Managed Switch
DGS-1210-28	24-port Gigabit UTP and 4-port Gigabit SFP Combo L2+ Smart Managed Switch
DGS-1210-28P	24-port Gigabit UTP (af/at) and 4-port Gigabit SFP Combo L2+ Smart Managed PoE Switch 193W PoE Budget
DGS-1210-28MP	24-port Gigabit UTP (af/at) and 4-port Gigabit SFP Combo L2+ Smart Managed PoE Switch 370W PoE Budget
DGS-1210-52	48-port Gigabit UTP and 4-port Gigabit SFP Combo L2+ Smart Managed Switch
DGS-1210-52MP	48-port Gigabit UTP (af/at) and 4-port Gigabit SFP Combo L2+ Smart Managed PoE Switch 370W PoE Budget

af/at refers to 802.3af (up to 15.W per port) and 802.3at (up to 30W per port).

PoE Budget refers to the maximum PoE power delivered by a PoE switch.

Nuclias Connect Switch

Ordering Information	
Model	Description
Product Image	
DGS-1100-05V2	5-port Gigabit UTP L2 Smart Managed Switch
DGS-1100-08V2	8-port Gigabit UTP L2 Smart Managed Switch
DGS-1100-08PV2	8-port Gigabit UTP (af/at) L2 Smart Managed PoE Switch 64W PoE Budget
DGS-1100-10MPV2	8-port Gigabit UTP (af/at) and 2-port Gigabit SFP L2 Smart Managed PoE Switch 130W PoE Budget
DGS-1100-10MPPV2	8-port Gigabit UTP (af/at/bt) and 2-port Gigabit SFP L2 Smart Managed PoE++ Switch 242W PoE Budget
DGS-1100-18PV2	16-port Gigabit UTP (af/at) and 2-port Gigabit SFP Combo L2 Smart Managed PoE Switch 130W PoE Budget
DGS-1100-16V2	16-port Gigabit UTP L2 Smart Managed Switch
DGS-1100-24V2	16-port Gigabit UTP L2 Smart Managed Switch
DGS-1100-24PV2	24-port Gigabit UTP (af/at) L2 Smart Managed PoE Switch 100W PoE Budget
DGS-1100-26MPV2	24-port Gigabit UTP (af/at) and 2-port Gigabit SFP Combo L2 Smart Managed PoE Switch 370W PoE Budget
DGS-1100-26MPPV2	24-port Gigabit UTP (af/at/bt) and 2-port Gigabit SFP Combo L2 Smart Managed PoE++ Switch 525W PoE Budget
Optional 1 Gbps SFP Transceivers	
DGS-712	1000BASE-T SFP Transceiver
DEM-310GT	1000BASE-LX SFP Transceiver, Single-mode
DEM-311GT	1000BASE-SX SFP Transceiver, Multimode

af/at/bt refers to 802.3af (up to 15.4W per port), 802.3at (up to 30W per port), and 802.3bt (up to 90W).
 PoE Budget refers to the maximum PoE power delivered by a PoE switch.