



NSW100-28P

24-port GbE Nebula Cloud Managed PoE Switch

The Zyxel Nebula NSW100-28P Cloud Managed PoE Switch is a 375-watt high power budget layer-2 switch designed to be managed completely from the Nebula cloud. The cloud-based management interface provides site-wide configuration and monitoring of all ports, which allows multiple switches to be configured at the same time with a single click over the Web.

The NSW100-28P brings many benefits of the cloud management systems, such as simplified configuration, easy management, site-wide visibility and real-time control for speedy branch network deployments into networks. Advanced settings such as user friendly ACL, VLAN-based QoS and PoE scheduling significantly improve the efficiency of network management.

Benefits

Zero-touch deployments

The Zyxel Nebula Cloud Managed Switches support plug-and-play installation through remote provision with simple steps. NSW100-28P automatically downloads the current network configuration to the device and enables auto-provisioning without the need for on-site network professionals.

Efficient network provisioning

Rather than traditional management operations that require network administrators to configure each device separately with repetitive command lines, all Nebula Switches connected to the Nebula Control Center can be centrally managed with a single management interface. For better network



Essential L2 features with user-friendly ACL and VLAN configuration



Optimized for quality voice and video traffic with high 375-watt power budget PoE technology



Support Port Mirroring for network traffic monitoring



Support DHCP white list and IGMP snooping



RADIUS, static MAC forwarding and 802.1X authentication



nebula

management efficiency, switch settings made in the Nebula Control Center can automatically propagate to all connected Nebula switches.

Increased network uptime

User misspecifications are commonly seen in setting up ACL, reconfiguring VLAN/IP or other similar operations, and these may cause interruption to cloud connection. The Zyxel Nebula Cloud Managed Switches provide stable network environments by incorporating a mechanism that detects and prevents configuration that could potentially cause network disconnection between the switch and Nebula Control Center.

Better user experience

Quality-of-service (QoS) functionality is essential for applications that require guaranteed quality for stable connections. The Zyxel Nebula NSW100-28P PoE switches offer a smarter way for optimizing quality of service, which enables administrators to specify VLAN configuration with different priorities directly. This means that administrators can assign a priority to a specific VLAN through Nebula Control Center, and this priority can be applied to all tagged traffics for a specific VLAN. Traffics of the higher priority VLAN will receive preferential treatment and are serviced before VLANs with lower priorities. The same mechanism applies to voice VLAN configuration as well.

Holistic management

Zyxel Nebula Switches can automatically discover wired and wireless devices that connected to a network, and then draw the network topology to enable network administrators to easily troubleshoot issues remotely without the need for manual mapping and overlay monitoring software.

Model List

NSW100-28P

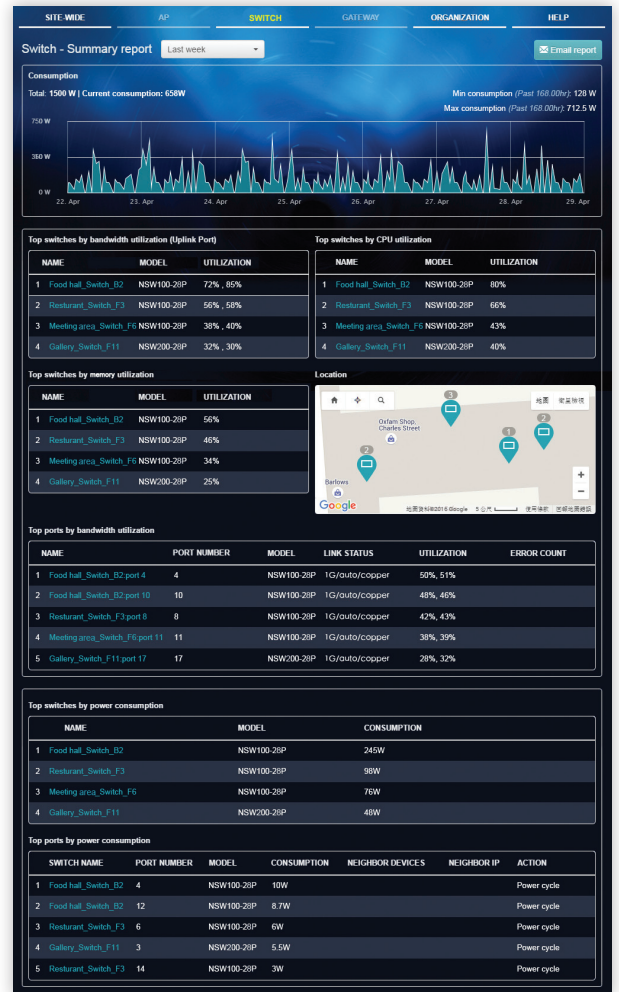
24-port GbE Nebula Cloud Managed PoE Switch



- 24 x GbE PoE RJ-45 ports
- 4 x GbE combo (RJ-45/SFP) ports



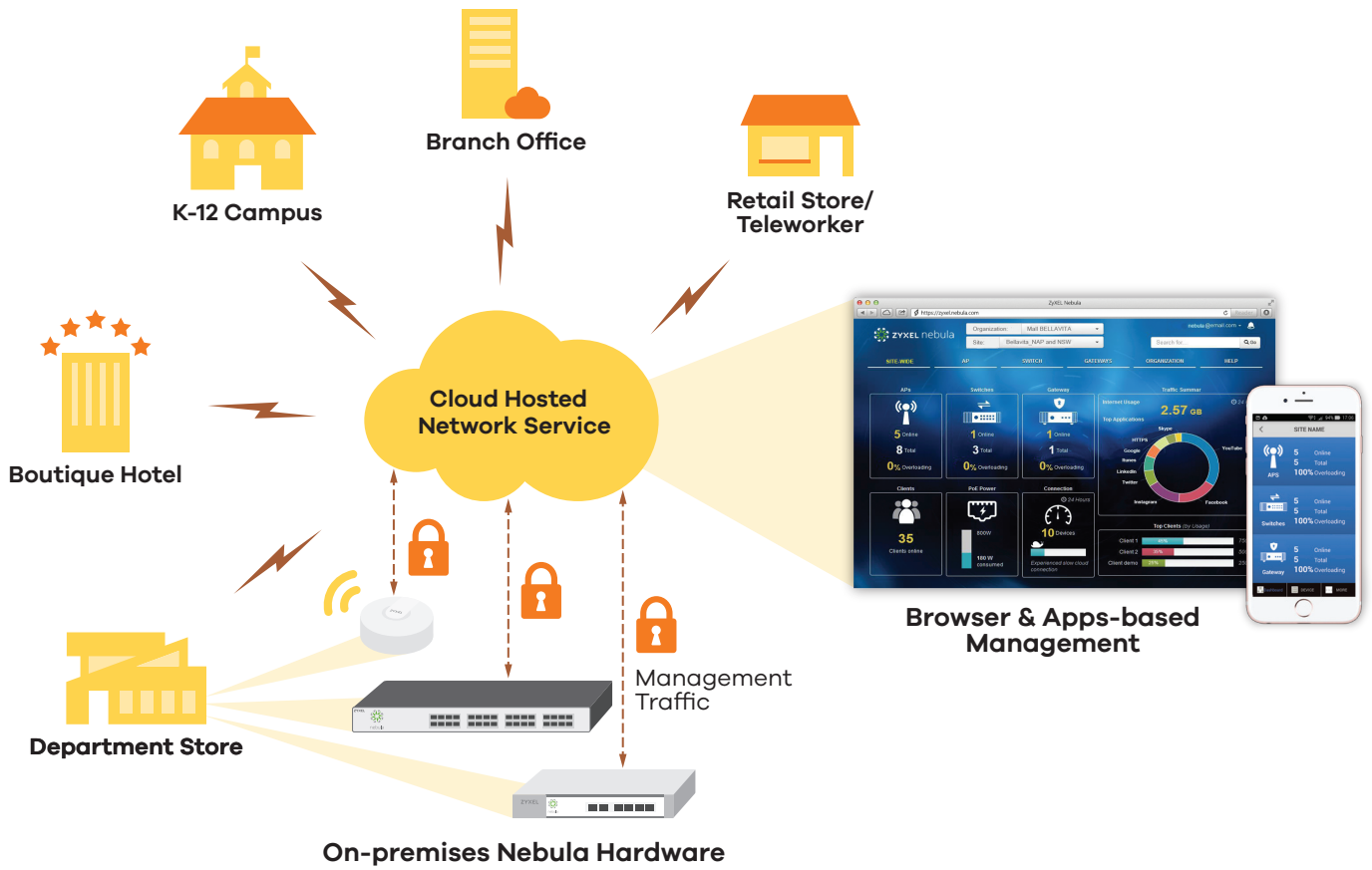
Real-time control of all the devices through a single pane of glass



Monitor switch port usage and bandwidth utilization by different time intervals and view historical status record with the intuitive management interface

Applications Diagram

Nebula cloud management architecture



Ultra Durable Hardware Design



Unlike normal switch hardware design with Electrolytic capacitors (E-cap), the Zyxel Nebula Cloud Managed Switches adopt solid capacitors to get rid of drying out, bursting and leaking problems. Solid capacitors ensure Nebula switches with longer lifetime, high stability and robust operation.

Specifications

Model	NSW100-28P
Product name	24-port GbE Nebula Cloud Managed PoE Switch



Switch Class	Layer 2	
Port Density		
Total port count	28	
100/1000 Mbps PoE	24	
Gigabit combo (SFP/RJ-45)	4	
Performance		
Switching capacity (Gbps)	56	
Forwarding rate (Mbps)	41.67	
Packet buffer (byte)	1.5 M	
MAC address table	16 K	
Power		
Input	100 - 240 V AC, 50/60 Hz	
Max. power consumption (watt)	454	
Total PoE power budget (watt)	375	
Physical Specifications		
Item	Dimensions (WxDxH)(mm/in.)	440 x 330 x 44.5/17.32 x 12.99 x 1.75
	Weight (kg/lb.)	4.79/10.56
Packing	Dimensions (WxDxH)(mm/in.)	583 x 451 x 98/22.95 x 17.76 x 3.86
	Weight (kg/lb.)	5.747/12.67
Included accessories	<ul style="list-style-type: none"> • Power cord • Rack mounting kit 	
Environmental Specifications		
Operating	Temperature	0°C to 50°C/32°F to 122°F
	Humidity	10% to 90% (non-condensing)
Storage	Temperature	-40°C to 70°C/-40°F to 158°F
	Humidity	10% to 95% (non-condensing)
MTBF (hr)	949,326	
Heat dissipation (BTU/hr)	1,625.55	
Acoustic noise (dBA)	59.6	

Features

Standard Compliance

- IEEE 802.3 10BASE-T Ethernet
- IEEE 802.3u 100BASE-TX Ethernet
- IEEE 802.3ab 1000BASE-T Ethernet
- IEEE 802.3z 1000BASE-X
- IEEE 802.3af PoE
- IEEE 802.3at PoE plus
- IEEE 802.3az EEE
- IEEE 802.3ad LACP aggregation
- IEEE 802.1AB LLDP
- IEEE 802.1D Spanning Tree Protocol (STP)
- IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
- IEEE 802.1Q VLAN tagging
- IEEE 802.1p Class of Service (CoS) prioritization
- IEEE 802.1X port authentication
- ZDP (Zyxel Discovery Protocol)

Resilience and Availability

- IEEE 802.3ad LACP (Max # Trunks/ Links per Trunk): 8/8

Traffic Control

- 802.1Q static VLANs/dynamic VLANs: 1 K/4 K
- Port-based VLAN
- Voice VLAN

Security

- 802.1X
- Port security
- Layer 3 IP filtering
- Layer 4 TCP/UDP socket filtering
- Multiple RADIUS servers
- Authorization on RADIUS
- SSL
- DHCP white list
- Guest VLAN
- ACL packet filtering (IPv4)

Quality of Service (QoS)

- No. of hardware queues per port: 8 (User configurable: 6)

Layer 2 Multicast

- L2 multicast
- IGMP snooping (v1, v2, v3)

Manageability

- SNMP v1, v2c
- SNMP trap group
- ICMP echo/echo reply
- Syslog
- IEEE 802.1AB LLDP

Device Management

- Web interface
- Configuration saving and retrieving
- DHCP client
- Daylight saving
- Cloud-managed
- NTP
- Port mirroring
- Scheduled PoE

Certifications

Safety

- LVD
- BSMI

EMC

- FCC Part 15 (Class A)
- CE EMC (Class A)
- BSMI EMC

RoHS

- Level A

Accessories

Transceivers (Optional)

Model	Speed	Connector	Wavelength	Max. Distance	DDMI
SFP-1000T	Gigabit	RJ-45	-	100 m (109 yd)	-
SFP-BX1310-10-D	Gigabit	LC	1310 nm (Tx); 1490 nm (Rx)	10 km (10936 yd)	Yes
SFP-BX1490-10-D	Gigabit	LC	1490 nm (Tx); 1310 nm (Rx)	10 km (10936 yd)	Yes
SFP-LHX1310-40-D	Gigabit	LC	1310 nm	40 km (43744 yd)	Yes
SFP-LX-10-D	Gigabit	LC	1310 nm	10 km (10936 yd)	Yes
SFP-SX-D	Gigabit	LC	850 nm	550 m (601 yd)	Yes
SFP-ZX-80-D	Gigabit	LC	1550 nm	80 km (87488 yd)	Yes
SFP-100BX1310-20-D	Fast Ethernet	LC	1310 nm (Tx); 1550 nm (Rx)	20 km (21872 yd)	Yes
SFP-100BX1550-20-D	Fast Ethernet	LC	1550 nm (Tx); 1310 nm (Rx)	20 km (21872 yd)	Yes
SFP-100FX-2	Fast Ethernet	LC	1310 nm	2 km (2187 yd)	-
SFP-100LX-20	Fast Ethernet	LC	1310 nm	20 km (21872 yd)	-

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Datasheet [NSW100-28P](#)



5-100-02616006 09/16