

# N51 series

## L2 Smart PoE Switches

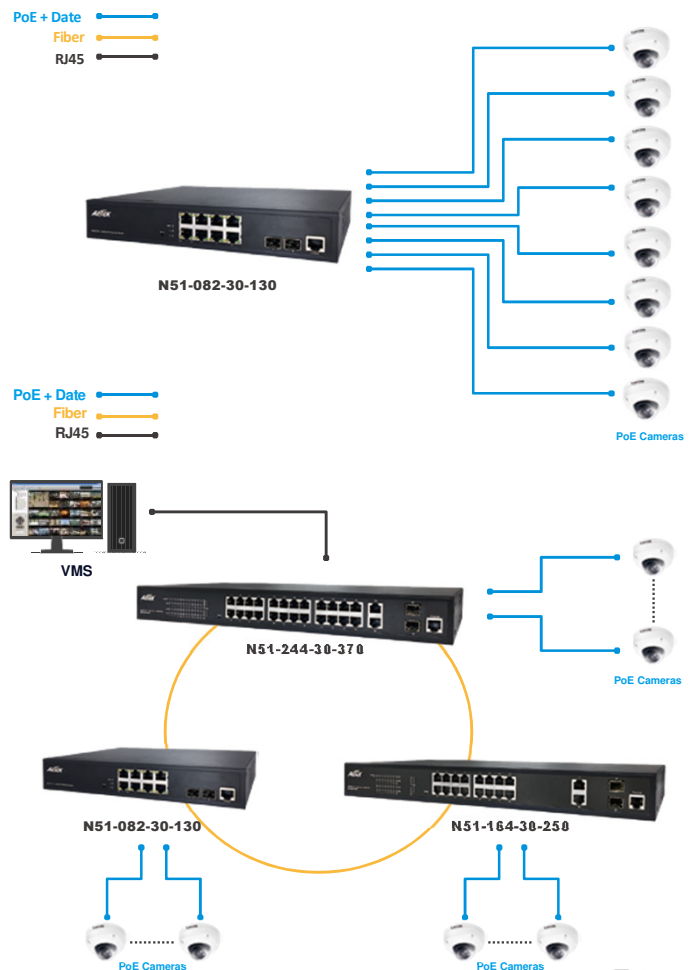


The N51 series from Natalus offers a broad range of L2 Smart PoE Switches, equipped with multi-port Gigabit PoE (10M/100M/1G) and SFP transceiver (1G) slots for flexible link. The N51 series has three sub-models including 8 ports, 16 ports, and 24 ports complying with IEEE 802.3af/at standards with sufficient PoE power budget for any application.

### Features

- Layer 2 Switch
  - 802.1d (STP), 802.1w (RSTP), 802.1s (MSTP)
  - Loop protection
  - LACP
  - QoS
  - VLAN
  - Ethernet cable length measurement
  - DHCP Server
- Flexible SFP transceiver ports for uplink
- 15.4W/30W per port IEEE802.3af/at compliant
- Supports 10/100/1000Mbps data rates
- Support Auto-MDI/MDIX
- Built-in 12KV surge protection for each PoE port
- IEEE 802.3az Energy Efficient Ethernet standard for green power
- 19" Rackmount installation

### Applications



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*Specifications subject to change without prior notice*

## Specifications – Software



PoE Management	
Port Configuration	Supports per port PoE configuration function
PoE Scheduling	Supports per port PoE scheduling to turn on/off the PoE devices (PDs).
Auto-checking	Check the link status of PDs. Reboot PDs if there is no responses
Power Delay	The switch provides power to the PDs based on delay time when PoE switch boots up, in order to protect switch from misuse of the PDs.
Layer 2 Switching Specifications	
Spanning Tree Protocol	MAC Bridges Standard Spanning Tree (STP) 802.1d, Rapid Spanning Tree (RSTP) 802.1w, Multiple Spanning Tree (MSTP) 802.1s
Port Trunking	Link Aggregation Control Protocol (LACP) IEEE 802.3ad , Static aggregation.
VLAN	Supports up to 4K VLANs simultaneously (out of 4096 VLAN IDs), Port-based VLAN, 802.1Q tag-based VLAN
IGMP v1/v2 Snooping	IGMP limits bandwidth-intensive multicast traffic to only the requesters.
Layer 3 Switching Specifications	
DHCP Server	Assign IP to DHCP clients
Security	
Port Security	Locks MAC addresses to ports, and limits the number of learned MAC address
Storm Control	Prevents traffic on a LAN from being disrupted by a broadcast, multicast, or unicast storm on a port
Loop Protection	To prevent unknown unicast, broadcast and multicast loops in Layer 2 switching configurations.
QoS	
Classification	Port based, 802.1p VLAN priority based
Bandwidth Control	Ingress policer, Egress shaping and rate control, Per port
Management software	
Port Mirroring	Traffic on a port can be mirrored to another port for analysis with a network analyzer or RMON probe. Up to N-1 (N is Switch's Ports) ports can be mirrored to single destination port. A single session is supported.
IEEE 802.1ab (LLDP)	Used by network devices for advertising their identities, capabilities, and neighbors on an IEEE 802ab local area network, Support LLDP-MED extensions
Web GUI Interface	Built-in switch configuration utility for browser-based device configuration
SNMP	SNMP version1, 2c
Flow Control	The IEEE 802.3x standard for monitoring high speed switched networks. It gives complete visibility into the use of networks enabling performance optimization, accounting/billing for usage, and defense against security threats
Firmware Upgrade	Web browser upgrade HTTP and TFTP
NTP	Network Time Protocol (NTP) is a networking protocol for clock synchronization between computer systems over packet-switched
Other Management	HTTP, SSH, Telnet, DHCP Client, Cable Diagnostics, Syslog, IPV4 Management

# Specifications - Hardware



	N51-082-30-130	N51-164-30-250	N51-244-30-370
<b>Network Specifications</b>			
Total Gigabit Ports	10	20	28
Gigabit PoE Port (10M / 100M / 1G) IEEE 802.3 10BaseT IEEE 802.3u 100BaseTX IEEE 803.3ab 1000BaseTX	8 x 30W PoE	16 x 30W PoE	24 x 30W PoE
Gigabit SFP Port	2	2	2
Gigabit RJ45 Port	-	2	2
Auto MDI / MDIX	v	v	v
1Gbps Full Duplex 100Mbps Full / Half Duplex 10Mbps Full / Half Duplex	v	v	v
Forwarding Capacity	14.88Mpps	26.784Mbps	38.688Mpps
Mac Table	8 k	8 k	8k
Jumbo Frames	9,216 Bytes	9,216 Bytes	9,216 Bytes
Switching Capacity	20 Gbps	40 Gbps	56 Gbps
<b>Power Specifications</b>			
Input Voltage	100VAC ~ 240VAC	100VAC ~ 240VAC	100VAC ~ 240VAC
Output Voltage Range /per PoE Port	54 VDC PoE IEEE 802.3af (Max. 15.4W) output PoE+ IEEE802.3at (Max. 30W) output	54 VDC PoE IEEE 802.3af (Max. 15.4W) output PoE+ IEEE802.3at (Max. 30W) output	54 VDC PoE IEEE 802.3af (Max. 15.4W) output PoE+ IEEE802.3at (Max. 30W) output
PoE Power Budget	130W	250W	370W
Surge Protection / each PoE Port	12KV	12KV	12KV
<b>Mechanical Specifications</b>			
Dimensions (WxDxH)	270 x 180 x 44 mm	440 x 200 x 44 mm	440 x 200 x 44 mm
Weight	1.95KG	3KG	3.2KG
<b>Environmental Specifications</b>			
Operating Temperature	0°C ~ 50°C (32°F ~ 122°F)	0°C ~ 50°C (32°F ~ 122°F)	0°C ~ 50°C (32°F ~ 122°F)
Storage Temperature	-20°C ~ 70°C (-4°F ~ 158°F)	-20°C ~ 70°C (-4°F ~ 158°F)	-20°C ~ 70°C (-4°F ~ 158°F)
Operating Humidity	10% to 90% non-condensing	10% to 90% non-condensing	10% to 90% non-condensing
<b>Certifications</b>			
EMC	CE, FCC, VCCI, C-Tick Class A	CE, FCC, VCCI, C-Tick Class A	CE, FCC, VCCI, C-Tick Class A
Safety	EN62368-1, IEC62368-1	EN62368-1, IEC62368-1	EN62368-1, IEC62368-1
Surge	IEC-61000-4-5	IEC-61000-4-5	IEC-61000-4-5

## Ordering Information

PoE Switches					
	<b>N51-082-30-130</b> <ul style="list-style-type: none"> <li>• 8xGbE PoE+2xGbE SFP</li> <li>• 100-240VAC</li> </ul>		<b>N51-164-30-250</b> <ul style="list-style-type: none"> <li>• 16xGbE PoE+2xGbE RJ45+2xGbE SFP</li> <li>• 100-240VAC</li> </ul>		<b>N51-244-30-370</b> <ul style="list-style-type: none"> <li>• 24xGbE PoE+2xGbE RJ45+2xGbE SFP</li> <li>• 100-240VAC</li> </ul>



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