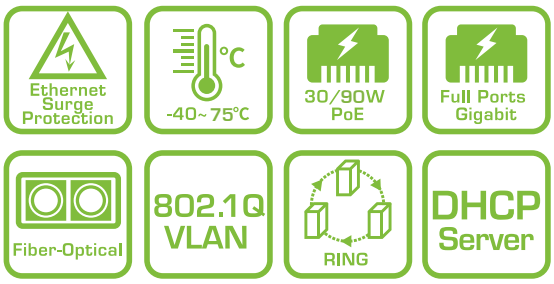
D51 series

Industrial L2 Gigabit PoE Switches



The D51 series of Industrial L2 PoE Switches are designed with 6KV Ethernet port surge protection and harden-graded standard to operate between -40°C and 75°C for harsh weather conditions. They enable outdoor connections of PoE PDs to the network such as outdoor IP cameras, wireless APs, and other outdoor industrial applications.

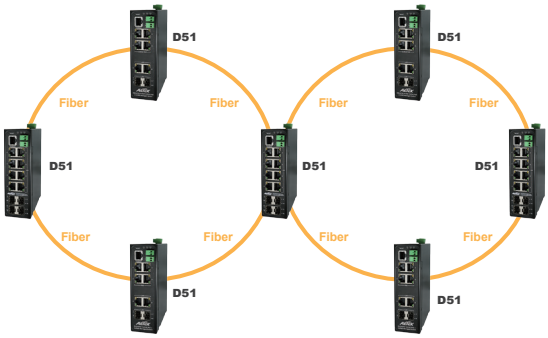
The D51 series provides multi-port Gigabit PoE (10M/100M/1G) delivering data and power to PoE PDs over a single network cable and additional SFP transceiver slots for flexible uplink. The D51 series has three sub models classified as power source equipment (PSE) and provide PoE budget up to 30W or 90W per port.

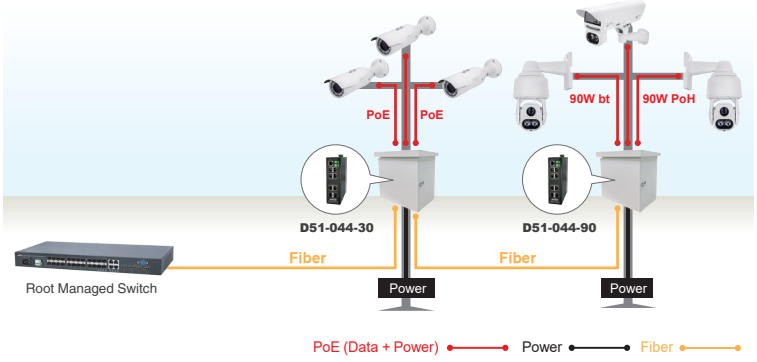
Features

- Layer 2 Switch
  - 802.1d (STP), 802.1w (RSTP), 802.1s (MSTP)
  - Loop protection
  - SNMP v1/v2c/v3
  - QoS
  - VLAN
  - Ethernet cable length measurement
  - DHCP Server
- Flexible SFP transceiver ports for uplink
- Operating temperature between -40°C and 75°C
- Compliant IEEE802.3at 30W per port (D51-044-30, D51-084-30)
- Configures proper 90W mode each port via GUI to fit respective bt, PoH PoE PD (D51-044-90)
- Configures proper 90W mode each port via GUI to fit respective bt PoE PD (D51-044-91)
- Supports 10/100/1000Mbps data rates
- 6KV PoE surge protection
- IEEE 802.3az Energy Efficient Ethernet standard for green power

Applications

Dual Ring





Technical 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
IP/Mac 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 version 1, 2c, 3
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	System, HTTP, HTTPS, DHCP Client, Cable Diagnostics, Syslog, IPV4 Management, SSH, Telnet

Specifications

	D51-044-30	D51-084-30	D51-044-90	D51-044-91
Networking Specifications				
Total Gigabit Ports	8	12	8	8
Gigabit PoE Ports (10M/100M/1G) IEEE 802.3 10BaseT IEEE 802.3u 100BaseTX IEEE 803.3ab 1000BaseTX	4 x 30W at PoE	8 x 30W at PoE	4 x 90W bt / PoH	4 x 90W bt PoE
Gigabit SFP Slots (100M/1G) IEEE 802.3z 1000BaseX	2	4	2	2
Gigabit Ports (RJ45)	2	-	2	2
Forwarding Capacity	11.904Mpps	17.856Mpps	11.904Mpps	11.904Mpps
Mac Table	8 k	8k	8 k	8 k
Jumbo Frames	9,216 Bytes	9,216 Bytes	9,216 Bytes	9,216 Bytes
Switching Capacity	16 Gbps	24 Gbps	16 Gbps	16 Gbps
Power Specifications				
Input Voltage	48VDC ~ 56VDC x2	48VDC ~ 56VDC x2	48VDC ~ 56VDC x2	48VDC ~ 56VDC x2
Output Voltage Range / per PoE Port	PoE IEEE 802.3af (Max. 15.4W) output PoE+ IEEE802.3at (Max. 30W) output	PoE IEEE 802.3af (Max. 15.4W) output PoE+ IEEE802.3at (Max. 30W) output	PoE IEEE 802.3af (Max. 15.4W) output PoE+ IEEE802.3at (Max. 30W) output bt / PoH PoE (Max. 90W) output	PoE IEEE 802.3af (Max. 15.4W) output PoE+ IEEE802.3at (Max. 30W) output bt PoE (Max. 90W) output
PSE Power Pin Assignment	12(-),36(+)	12(-),36(+)	12(-),36(+),45(+),78(-)	12(-),36(+),45(+),78(-)
Switch power consumption (without PoE)	10W	10W	10W	10W
PoE Power Budget	120W	240W	240W	360W
Surge Protection / each PoE Port	6KV	6KV	6KV	6KV
Mechanical Specifications				
Dimensions (L x W x H)	43.5 x 122 x 150 mm	43.5 x 122 x 150 mm	43.5 x 122 x 150 mm	43.5 x 122 x 150 mm
Weight	0.43KG	0.465KG	1KG	0.575KG
DI/DO	1/1	1/1	1/1	1/1
Console	RJ45	RJ45	RJ45	RJ45
Reset Button	Yes	Yes	Yes	Yes
Environmental Specifications				
Operating Temperature	-40°C~75°C (-40°F~167°F)	-40°C~75°C (-40°F~167°F)	-40°C~75°C (-40°F~167°F)	-40°C~75°C (-40°F~167°F)
Storage Temperature	-40°C~85°C (-40°F~185°F)	-40°C~85°C (-40°F~185°F)	-40°C~85°C (-40°F~185°F)	-40°C~85°C (-40°F~185°F)
Operating Humidity	5%~95% non-condensing	5%~95% non-condensing	5%~95% non-condensing	5%~95% non-condensing
Certifications				
EMC	CE,FCC,C-Tick	CE,FCC,C-Tick	CE,FCC,C-Tick	CE,FCC,C-Tick
Surge	EN 61000-4-5	EN 61000-4-5	EN 61000-4-5	EN 61000-4-5
Shock	IEC 60668-2-27	IEC 60668-2-27	IEC 60668-2-27	IEC 60668-2-27
Freefall	IEC 60068-2-31	IEC 60068-2-31	IEC 60068-2-31	IEC 60068-2-31
Vibration	IEC 60068-2-6	IEC 60068-2-6	IEC 60068-2-6	IEC 60068-2-6

Ordering Information

PoE Switches			
	D51-044-30 • 4xGbE PoE (30W) + 2xGbE SFP + 2xGbE RJ45		**D51-044-90** • 4xGbE bt / PoH PoE (90W) + 2xGbE SFP + 2xGbE RJ45
	D51-084-30 • 8xGbE PoE (30W) + 4xGbE SFP		**D51-044-91** • 4xGbE bt PoE (90W) + 2xGbE SFP + 2xGbE RJ45

Optional Accessories

SFP Modules

SFP-ISX-X5
Industrial Gigabit SFP Transceiver

- MMF
- 0.5 km
- -40°C ~85°C

SFP-ISX-02
Industrial Gigabit SFP Transceiver

- MMF
- 2 km
- -40°C ~85°C

SFP-ILX-10
Industrial Gigabit SFP Transceiver

- SMF
- 10 km
- -40°C ~85°C

SFP-ILX-40
Industrial Gigabit SFP Transceiver

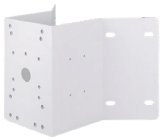
- SMF
- 40 km
- -40°C ~85°C

Pole Mount

AT-100
Pole Mount Adapter

AT-101
Pole Mount Adapter

Corner Mount



AT-200
Corner Mount Adapter

Jounction Box

JB-200
Junction Box

Industrial Power Supply

NDR-120-48
Indoor Industrial Din Rail Power Supply, 48~55VDC/120W, -20°C ~ 70°C

NDR-240-48
Indoor Industrial Din Rail Power Supply, 48~55VDC/240W, -20°C ~ 70°C

NDR-480-48
Indoor Industrial Din Rail Power Supply, 48~55VDC/480W, -20°C ~ 70°C

Industrial Power Supply

DRL-48V120W1EN
Indoor Industrial Din Rail Power Supply, 48V/120W

DRL-48V240W1EN
Indoor Industrial Din Rail Power Supply, 48V/240W

DRL-48V480W1EN
Indoor Industrial Din Rail Power Supply, 48V/480W

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