



54-Port L3 Fully Managed PoE+ Switch with 48 Gigabit Ethernet Ports and 6 SFP+ Uplinks

IEEE 802.3at/af (PoE+/PoE) Compliant, 850 W PoE Power Budget, Layer 3, Six 10G SFP+ Open Slots, Self-Healing Network, 19" Rackmount

Part No.: **562041**

EAN-13: 0766623562041 | UPC: 766623562041

Layer 3 switch with dynamic IP routing, a massive 850 W PoE power budget and six 10G Uplinks

L3 Switch for Next-Level Switching

The Intellinet Network Solutions 54-Port L3 Fully Managed PoE+ Switch with 48 Gigabit Ethernet Ports and 6 SFP+ Uplinks provides excellent network management and communication to fit your mix of devices, existing media and speed requirements. It features 48 x 10/100/1000 Mbps PoE+-capable ports, an available power budget of 850 W, six 10G/1G-capable SFP+ ports, a switching capacity of 216 Gbps, and a range of great Layer 2 and Layer 3 features. Its dynamic IP routing solution includes OSPF, RIP and VRRP, which makes it ideal for enterprise networks. It offers convenient configuration via a Web browser (among others) and is Domotz-compatible for easy cloud management.

Layer 2, Layer 2+, Layer 3 Lite and Layer 3 explained

This Layer 3 switch gives you the most feature-rich options, but what separates it from the other types? The main difference between Layer 2 and Layer 3 switches is the routing function. An L2 switch only operates on MAC addresses, not on IP addresses or anything on higher layers, while an L3 switch can do all that plus static and dynamic routing. Consequently, a Layer 3 switch has a MAC address table and an IP routing table, handling communication within a VLAN and between different VLANs. A compromise between both are L2+ switches (also known as Layer 3 Lite) that only support static routing. Besides routing packets, Layer 3 switches also have functions that require understanding the IP address information of the data entering the switch, such as assigning VLAN

traffic based on IP address instead of manually configuring a port.

Power over Ethernet 802.3at

Supporting the IEEE 802.3at protocol, this switch is designed to inject up to 30 watts of power per port*. IEEE802.3af or IEEE802.3at compliant devices attached to the switch require no additional power, which eliminates the time and expense of electrical rewiring and minimizes the unsightly clutter of power supplies and adapters on ceilings and walls. Any mix of PoE and non-PoE devices is supported, and thanks to its short circuit, overload and high-voltage protection function, your equipment is well-protected. For devices that are not 802.3at/af compliant (legacy wireless access points or network cameras), we suggest the use of an Intellinet Network Solutions PoE/PoE+ Splitter.

10 Gigabit Ethernet (IEEE 802.3ae)

Equipped with six 10G SFP+ open slots, this switch is the ideal solution for cost-sensitive organizations considering 10 Gigabit Ethernet. With 10G technology going mainstream and becoming ever more popular, the need for additional bandwidth is more urgent than ever, even in smaller networks. Whether you wish to connect servers, network-attached-storage units or NVRs at 10 Gbps, or simply connect to another gigabit switch without using LACP techniques, 10G provides the solution. If you are not quite ready for 10G, this switch's SFP slots accept standard 1G SFP transceiver modules until the time is right for you to make the change.

Complete IPv6 Support

IPv6 management and SMB features like MLD Snooping, SSH, ACL, WRR and RADIUS authentication help you enter the IPv6 era at the lowest cost, without upgrading your hardware.

Self-Healing Network with increased reliability and stability - Intellinet Powered Device Monitor (PDM)

This Power over Ethernet switch is equipped with Powered Device Monitoring, a self-healing PoE function. This PoE watchdog performs a PD alive check on all connected PDs and automatically resets unresponsive devices, such as PoE security surveillance cameras, by cutting off and then restoring power. The PDM function is especially useful in applications where connected devices are critical to network operation, such as in industrial or surveillance settings. As an added benefit, the PD Alive function helps eliminate unnecessary technical support calls and costly field trips by field-support engineers because the functional reboot can often bring the unresponsive device back online.

How our PoE scheduling saves you energy

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As part of our Self-Healing Networks suite, our managed switches are not only capable of providing high power but also of controlling the power supply efficiently. The "PoE scheduling" function allows you to turn on or off the PoE power for each PoE port at specific time intervals. Turning off devices like IP phones and access points outside of office hours helps your enterprise reduce its energy costs and protect the environment.

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Features:

- Layer 3 solution with dynamic IP routing, including OSPF, RIP and VRRP for enterprise networks
- Provides up to 48 PoE network devices with power and data
- Six small-form-factor pluggable SFP/SFP+ module slots for 10G uplink capability
- Self-Healing Network - the Powered Device Monitor feature (PDM), also known as PD Alive Check, restarts any connected PoE device that fails to respond or send out network traffic
- Domotz compatible for cloud management
- PoE power budget of 850 watts
- Power output up to 30 watts per port
- Supports 802.1Q VLAN (tag-based and port-based)
- 10/100/1000 auto-sensing ports that automatically detect optimal network speeds
- Supports IEEE 802.3at and IEEE 802.3af-compliant PoE devices (wireless access points, VoIP phones, IP cameras)
- Supports IEEE 802.3at/af detection and short circuit, overload and high-voltage protection
- Auto-MDIX and NWay auto-negotiation support on all RJ45 ports
- 216 Gbps switch fabric / switching capacity
- Supports static and dynamic IP routing, MAC-based and IPv4/IPv6 IP-based ARP ACL
- Supports static and policy routing, RIP (Routing Information Protocol), OSPF (Open Shortest Path First) and VRRP (Virtual Router Redundancy Protocol)
- Supports link aggregation (trunking)
- IGMP and MLD Snooping for multicast filtering
- DHCP supports client, relay, server and snooping
- Supports bandwidth control per port
- Supports port mirroring with one-to-one or many-to-one
- Supports two types of QoS: CoS and DSCP
- Broadcast storm control with broadcast, multicast and DLF package rate settings

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- Supports jumbo frames up to 12 kBytes
- Store and forward switching architecture
- Full/half duplex operation
- Supports 802.3x flow control for full duplex mode and collision-based backpressure for half duplex mode
- Supports 32k MAC address entries with Auto-learning and Auto-aging
- Event log for easy troubleshooting
- Command line interface management
- Buffer memory of 16 Mbits
- Configuration via Web browser, SNMP/Remote Monitoring (RMON), Telnet, SSH or RJ45 console port
- LEDs for power, link/activity and PoE
- Grounding point to protect equipment from external electrical surges
- PoE surge protection up to 4 kV in common mode and 2 kV in differential mode for all RJ45 ports
- ESD protection up to 8 kV for air and 6 kV for contact
- Three high-volume cooling fans to ensure perfect ventilation
- Rubber feet for non-slip desktop use
- Includes 19" rackmount brackets
- Fully NDAA-compliant
- Three-year warranty

Specifications:

Standards

- IEEE 802.1p (Traffic Prioritization)
- IEEE 802.1q (VLAN Tagging)
- IEEE 802.1d (Spanning Tree Protocol)
- IEEE 802.1w (Rapid Spanning Tree Protocol)
- IEEE 802.1s (Multiple Spanning Tree Protocol)
- IEEE 802.3ad (Link Aggregation)
- IEEE 802.3ae (10 Gigabit Ethernet over fiber)
- IEEE 802.3z (Gigabit SX/LX)
- IEEE 802.3 (10Base-T Ethernet)
- IEEE 802.3ab (Twisted Pair Gigabit Ethernet)
- IEEE 802.3ad (Link Aggregation Control Protocol LACP)
- IEEE 802.3af (Power over Ethernet 802.3at Type 1)
- IEEE 802.3at (Power over Ethernet 802.3at Type 2)
- IEEE 802.3u (100Base-TX Fast Ethernet)
- IEEE 802.3x (flow control, for full-duplex mode)

General

- Ports
 - 48 x 10/100/1000 Mbps RJ45 PoE-enabled ports
 - Six 10G SFP+ slots
 - One console port
- Media support

- 10Base-T Cat5e UTP/STP RJ45, 8 pin
- 100Base-TX Cat5e UTP/STP RJ45, 8 pin
- 1000Base-T Cat5e UTP/STP RJ45, 8 pin
- MAC address table: 32k
- ACL table: 4k
- Routing host: 12k
- Routing entries: 24k (IPv4) or 4k (IPv6)
- Buffer memory: 16 Mbits
- Forwarding rate: 160.7 Mpps
- MTBF: 90k hours
- Backplane speed/switch fabric: 216 Gbps
- Number of VLANs: 4k
- Number of VLAN interfaces: 1k
- Switch architecture: store and forward
- Configuration options:
 - Port link speed: 10 Mbps, 100 Mbps, 1000 Mbps or auto-negotiation
 - PoE on/off per port
 - PoE maximum power per port
 - PoE mode per port
 - PoE priority per port: low, medium, high
 - PoE alarm notification via SNMP traps
 - PoE delay start configuration per port
 - PoE restart time configuration per port
 - PoE status monitoring
- PD monitor function, watch guard
- Flow control on/off per port
- Rate Limiting (ingress rate and egress rate)
- Port Mirroring: one-to-one or many-to-one
- Port Aggregation/LACP: 32 groups, each containing up to 8 ports
- Broadcast Storm configuration with broadcast rate, multicast rate and flooded unicast rate
- IGMP Snooping
- Access management filtering: SNMP, HTTP, HTTPS, SSH, TELNET
- Quality of Service (QoS): CoS or DSCP
- Link Layer Discovery Protocol: LLDP and LLDP-MED
- Integrated ICMP Ping client sends ping requests to other network nodes
- SNMPv1/v2c/v3 (Simple Network Management Protocol)
- Built-in RADIUS client to cooperate with the RADIUS servers
- Access Control List: MAC-based and IPv4/IPv6 IP-based ACL
- Dynamic ARP Inspection (DAI) discards ARP packets with invalid MAC-address to IP-address binding
- DoS attack prevention
- DHCP: client/relay/server/snooping
- LAN settings (IP address, Gateway, etc.)
- SSHv2
- Certifications: FCC, CE, RoHS, UKCA, NDAA

LEDs

- PoE
- Power
- Link/Activity

Pinout RJ45 output ports

- Pin 1: DC (-)
- Pin 2: DC (-)
- Pin 3: DC (+)
- Pin 6: DC (+)

Power

- Input: 100.0 - 240.0 VAC, 50 - 60 Hz, internal power supply
- Power output per port: 30.0 W / 52.0 V
- PoE power budget: 850.0 W (max.)
- Power consumption: 900.0 W (max.)

Physical

- Metal housing
- Dimensions (L x W x H): 350 x 440 x 44 mm (13.78 x 17.32 x 1.73 in.)
- Net weight: 5.5 kg (12.13 lbs.)
- Gross weight: 6.44 kg (14.2 lbs.)

Environmental

- Operating temperature: 0 - 40°C (32 - 104°F)
- Storage temperature: -10 - 70°C (14 - 158°F)
- Operating humidity: 5 - 95% RH, non-condensing
- Storage humidity: 10 - 95% RH, non-condensing

Package Contents

- 54-Port L3 Fully Managed PoE+ Switch with 48 Gigabit Ethernet Ports and 6 SFP+ Uplinks
- Power cable
- Instructions
- 19" rackmount brackets
- Rubber feet



