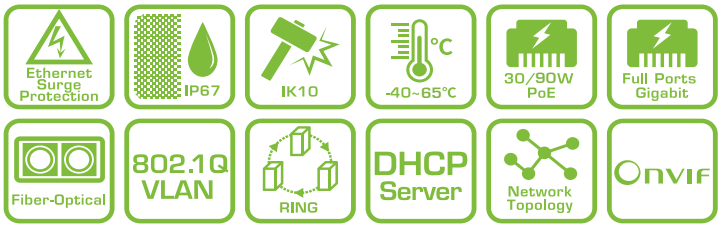
# H60-DC series

## IP67/IK10 L2 PRO Gigabit PoE Switches w/ 12~56VDC Input




The H60 series of IP67/IK10 Pro L2 Managed PoE Switches are designed with 6KV Ethernet port surge protection, 4KV surge protection in DC Input , and harden-graded standard to operate between -40° C and 65° 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.

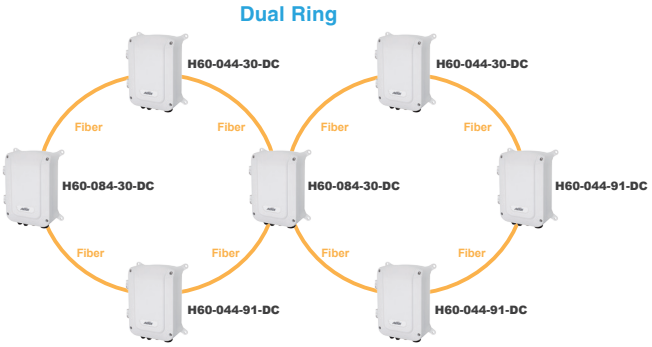
The H60 series provides multi-port Gigabit PoE (10M/100M/1G) delivering data and power to PoE PDs over a single network cable and additional SFP transceiver slots for flexible uplink. The H60 series has three sub models classified as power source equipment (PSE) and provide PoE budget up to 30W or 90W per port.

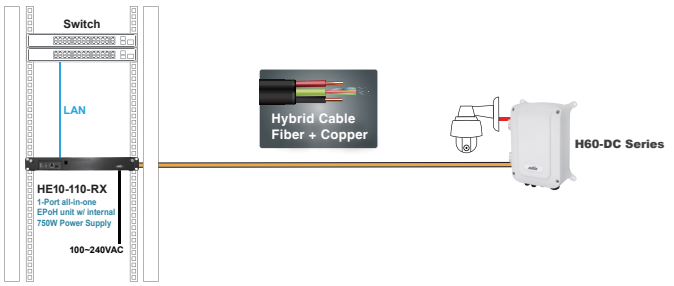
Besides general functions of L2 plus & basic L3 switch such as QoS, security, spanning tree, cable length measurement, and SNMP v1/v2c/v3, a dedicated web graphic user interface of IP surveillance is easy to configure and manage ONVIF cameras. It automatically generates camera topology maps, cable diagnostic, and PoE management.

## 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
- Network Topology System
  - Automatic discovery for ONVIF camera
  - Generates camera topology map automatically
  - Cable diagnostic & reboot camera remotely
  - PoE management
  - Topology view / Floor view / Google map
  - Monitor / Configure / Manage ONVIF camera thru web
- Flexible SFP transceiver ports for uplink
- IP67 standard
- IK10 impact rated cast aluminum housing
- Operating temperature between -40°C and 65°C
- Compliant IEEE802.3at 30W per port (H60-044-30-DC, H60-084-30-DC)
- 90W bt PoE per port (H60-044-91-DC)
- Supports 10/100/1000Mbps data rates
- 6KV PoE surge protection
- IEEE 802.3az Energy Efficient Ethernet standard for green power

## Applications



# IP Camera Controller Features

## Device List

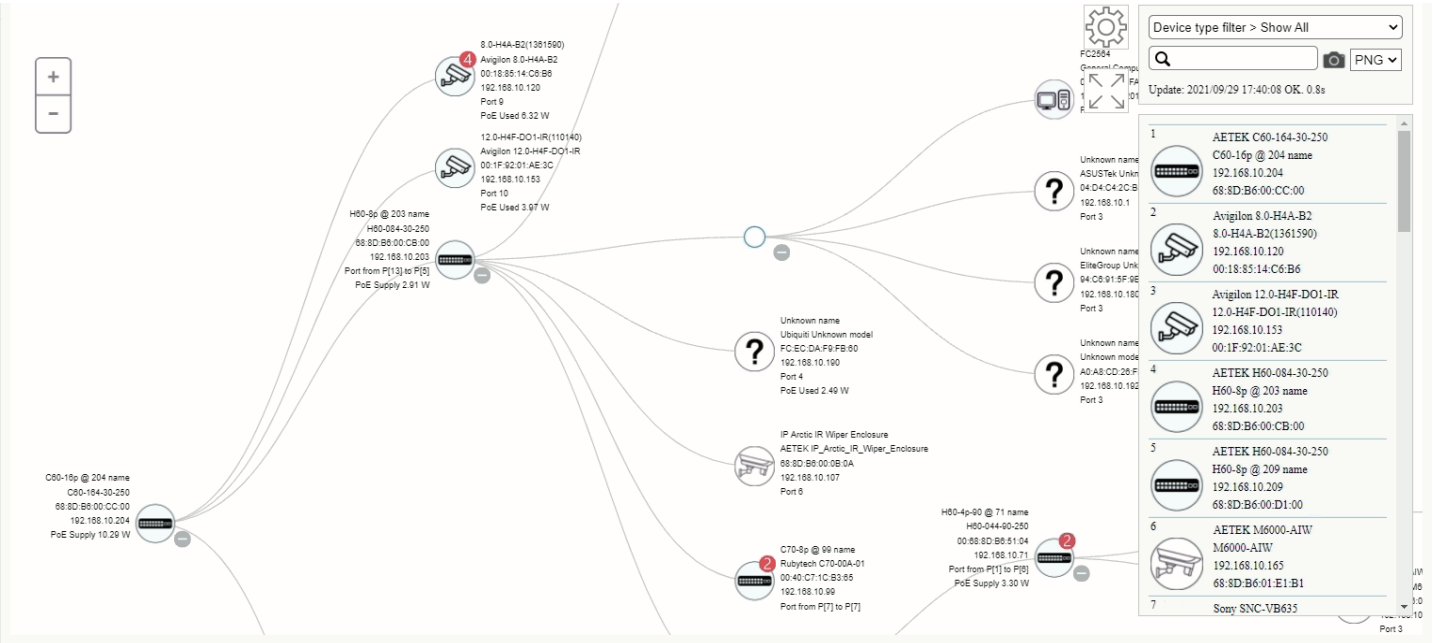
Show 10 entries Search:

| Status | Device Type | Model Name | Device Name | MAC | IP Address |
|---|---|---|---|---|---|
| Online | PoESW | H60-084-30-250 | H60-8p @ 203 name | 68:8D:B6:00:CB:00 | 192.168.10.203 |
| Online | PoESW | H60-084-30-250 | H60-8p @ 209 name | 68:8D:B6:00:D1:00 | 192.168.10.209 |
| Online | IPMX | M6000-AIW | M6000-AIW | 68:8D:B6:01:E1:B1 | 192.168.10.165 |
| Online | IP Camera | SNC-VB635 | Sony | D8:D4:3C:DD:F5:C7 | 192.168.10.122 |
| Online | IP Camera | WV-S1131 | Panasonic_WV-S1131 | BC:C3:42:71:79:D0 | 192.168.10.104 |
| Online | IPSG | SD-504 | SD-504 | 68:8D:B6:00:00:01 | 192.168.10.108 |
| Online | PC | General Computer | FC2564 | 00:50:56:2D:FA:AC | 192.168.10.201 |
| Online | Others | Unknown model | Unknown name | 04:D4:C4:2C:B5:EC | 192.168.10.1 |
| Online | Others | Unknown model | Unknown name | 94:C6:91:5F:9E:EA | 192.168.10.180 |
| Online | PC | General Computer | MIS-TEMP-NB4 | A0:A8:CD:26:FE:FD | 192.168.10.192 |

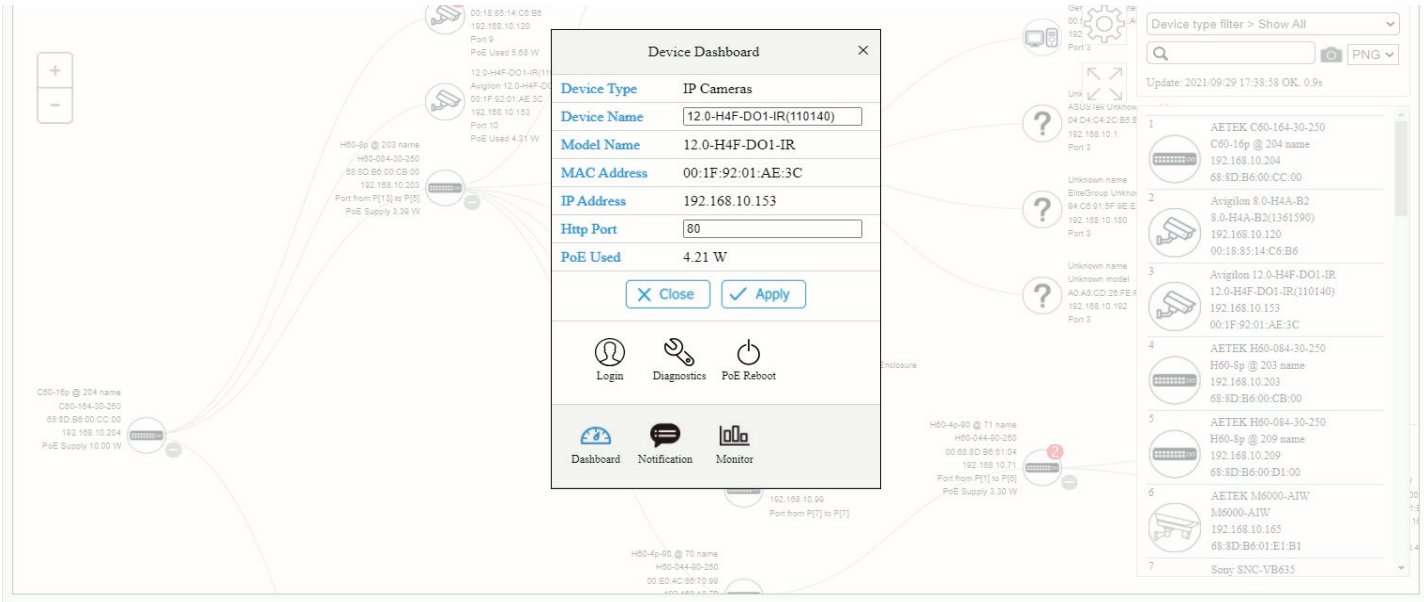
Showing 1 to 10 of 29 entries Previous 1 2 3 Next

Edit

## Topology View

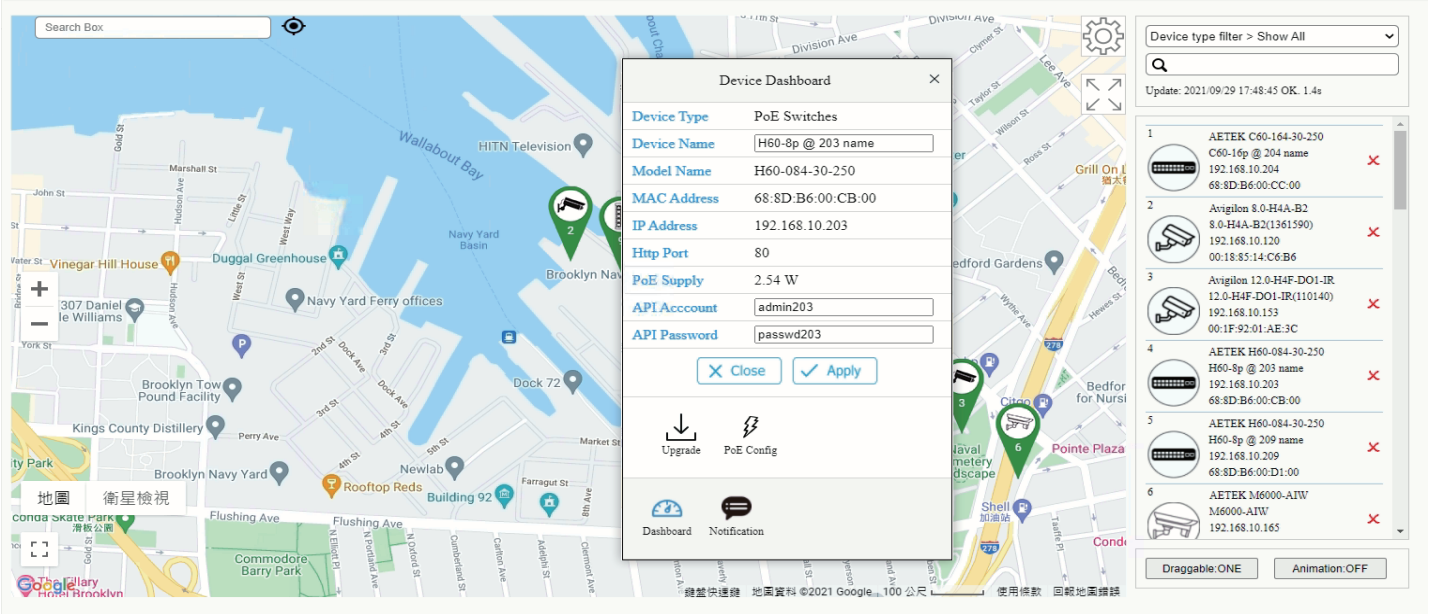



## Device Dashboard

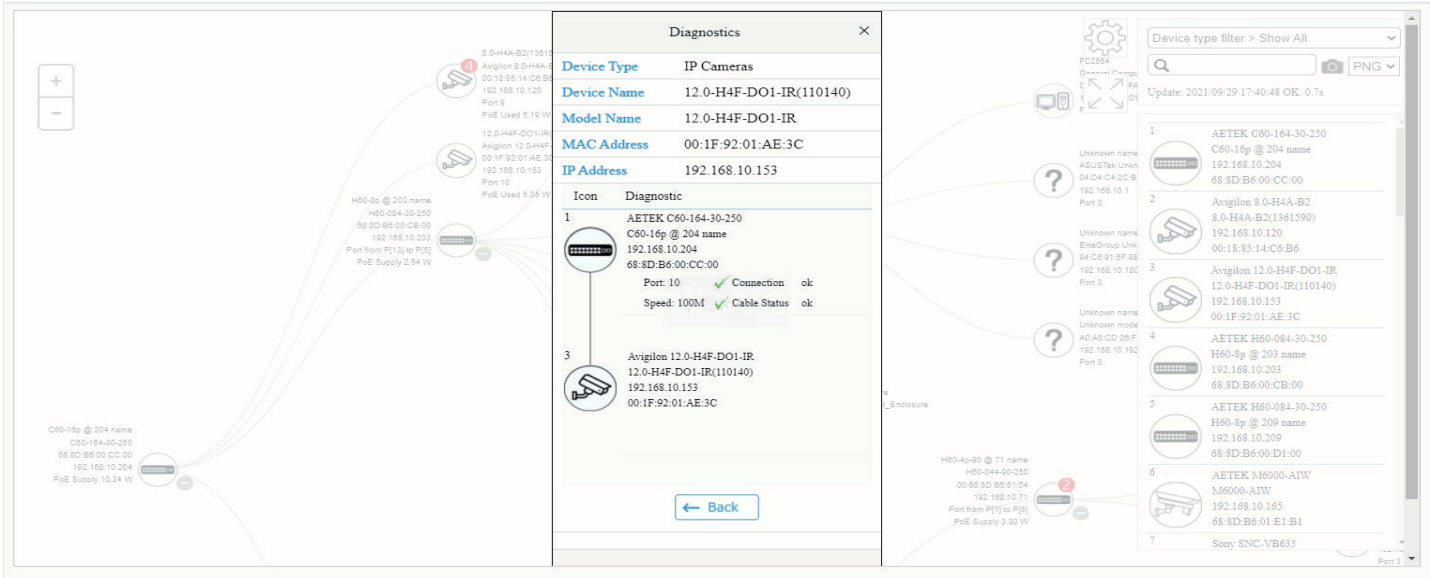


## Floor Map View


## Google Map View




## Cable Diagnostics



## PoE Features

- **IEEE802.3at (PoE+ 30W),bt 90W**
- **Max. allowed 30W / 90W per port**
- **Port status table**

**PoE Port Configuration**

| Local Port | PD Class | Power Used | Current Used | Priority | Port Status |
|---|---|---|---|---|---|
| 1 | - | 0.00 [W] | 0 [mA] | high | No PD detected |
| 2 | - | 0.00 [W] | 0 [mA] | high | No PD detected |
| 3 | - | 0.00 [W] | 0 [mA] | high | No PD detected |
| 4 | class0 | 2.65 [W] | 50 [mA] | high | on |
| 5 | - | 0.00 [W] | 0 [mA] | high | No PD detected |
| 6 | - | 0.00 [W] | 0 [mA] | high | No PD detected |
| 7 | - | 0.00 [W] | 0 [mA] | high | No PD detected |
| 8 | - | 0.00 [W] | 0 [mA] | high | No PD detected |
| Total | | 2.00 [W] | | | |

Apply Refresh

## 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. |
| **IP Surveillance Graphical User Interface Specifications** | |
| Automatic Discovery | Discover IP cameras complying ONVIF automatically |
| Topology View | Generate Topology maps to manage IP cameras |
| Floor view | It's easy to drag and drop PoE devices and help you to build smart workforces |
| Map view | Enhance efficiency to drag and drop devices and monitor surroundings on google map |
| Traffic Monitoring | Comprehensive chart to show traffic status |
| PoE Management | Reboot IP camera, Scheduling PoE on/off, alive checking, Power delay as PoE switch boots up, PoE configuration |
| **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** | |
| IEEE 802.1X | IEEE802.1X: RADIUS authentication, authorization and accounting, MD5 hash, guest VLAN, single/multiple host mode and single/multiple sessions, Supports IGMP-RADIUS based 802.1X, Dynamic VLAN assignment |
| 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. |
| RADIUS/ TACACS+ | Supports RADIUS and TACACS+ authentication. Switch as a client |
| **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, 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, DHCP Client, Cable Diagnostics, Syslog, IPV4/IPV6 Management, SSH, Telnet |

## Specifications

| | H60-044-30-DC | H60-044-91-DC | H60-084-30-DC |
|---|---|---|---|
| **Networking Specifications** | | | |
| Total Gigabit Ports | 8 | 8 | 12 |
| Gigabit PoE Ports (10M/100M/1G) | 4 x 30W PoE | 4 x 90W bt | 8 x 30W PoE |
| SFP Slots (100M/1G) | 2 | 2 | 4 |
| Gigabit Ports (RJ45) | 2 | 2 | - |
| Forwarding Capacity | 11.904Mpps | 11.904Mpps | 17.856Mpps |
| Mac Table | 8 k | 8 k | 8k |
| Jumbo Frames | 9,216 Bytes | 9,216 Bytes | 9,216 Bytes |
| Switching Capacity | 16 Gbps | 16 Gbps | 24 Gbps |
| **Power Specifications** | | | |
| Input Voltage | 12VDC ~ 56VDC | 12VDC ~ 56VDC | 12VDC ~ 56VDC |
| Output Voltage | 12VDC ~ 56VDC | 12VDC ~ 56VDC | 12VDC ~ 56VDC |
| Output Voltage Range / per PoE Port | 54 VDC<br>PoE 802.3af (15.4W)output<br>PoE+ 802.3at (30W) output | 54 VDC<br>PoE 802.3af (15.4W)output<br>PoE+ 802.3at (30W) output<br>PoE++ 802.3bt (90W) output | 54 VDC<br>PoE 802.3af (15.4W)output<br>PoE+ 802.3at (30W) output |
| PSE Power Pin Assignment | 12(-),36(+) | 12(-),36(+),45(+),78(-) | 12(-),36(+) |
| Switch power consumption (without PoE) | 10W | 10W | 10W |
| PoE Power Budget | 12VDC:90W<br>24VDC:120W<br>48VDC:120W | 12VDC:90W<br>24VDC:160W<br>48VDC:360W | 12VDC:90W<br>24VDC:160W<br>48VDC:360W |
| Surge Protection / each PoE Port | 6KV | 6KV | 6KV |
| **Mechanical Specifications** | | | |
| Dimensions (L x W x H) | 315.4 x 245.8 x 118mm | 315.4 x 245.8 x 118mm | 315.4 x 245.8 x 118mm |
| Weight | 4.2KG | 4.3KG | 4.37KG |
| Connectors | M16 x 4, M25 x 2 | M16 x 4, M25 x 2 | M16 x 4, M25 x 2 |
| DI/DO | 1/1 | 1/1 | 1/1 |
| Console | RJ45 | RJ45 | RJ45 |
| Reset Button | Yes | Yes | Yes |
| **Environmental Specifications** | | | |
| Weather Rating | IP67 | IP67 | IP67 |
| Vandal Proof | IK10 | IK10 | IK10 |
| Operating Temperature | -40°C~ 65°C (-40°F~ 149°F ) | -40°C~ 65°C (-40°F~ 149°F ) | -40°C~ 65°C (-40°F~ 149°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) |
| Operating Humidity | 5% ~ 95% non-condensing | 5% ~ 95% non-condensing | 5% ~ 95% non-condensing |
| **Certifications** | | | |
| EMC | CE,FCC,VCCI,<br>C-Tick Class A | CE,FCC,VCCI,<br>C-Tick Class A | CE,FCC,VCCI,<br>C-Tick Class A |
| Surge | EN61000-4-5 | EN61000-4-5 | EN61000-4-5 |

## Ordering Information

**PoE Switches**

**H60-044-30-DC**

- 4xGbE PoE (30W) + 2xGbE SFP + 2xGbE RJ45
- 12~56VDC Input

**H60-044-91-DC**

- 4xGbE bt PoE (90W)+2xGbE SFP + 2xGbE RJ45
- 12~56VDC Input

**H60-084-30-DC**

- 8xGbE PoE (30W) + 4xGbE SFP
- 12~56VDC Input

## 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

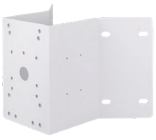
- SMF
- 40 km
- -40°C ~85°C

### Pole Mount Brackets

**AT-100**
Pole Mount Adapter

**AT-101**
Pole Mount Adapter

### Corner Mount Bracket



**AT-200**
Corner Mount Adapter

### Fiber Splice Tray

**AT-303 / AT-303-V2**
Fiber Splice Tray



6F, No.192-1, Lien-Cheng Rd., Chung-Ho, New Taipei City, 235, Taiwan, R.O.C. T: +886-2-82452822 E:sales@aetektec.com W: www.aetektec.com