C50 series

Smart PoE Switches



802.1Q VLAN | RING | DHCP Server | Network Topology | ONVIF | Full Ports Gigabit | Fiber-Optical | 30W PoE

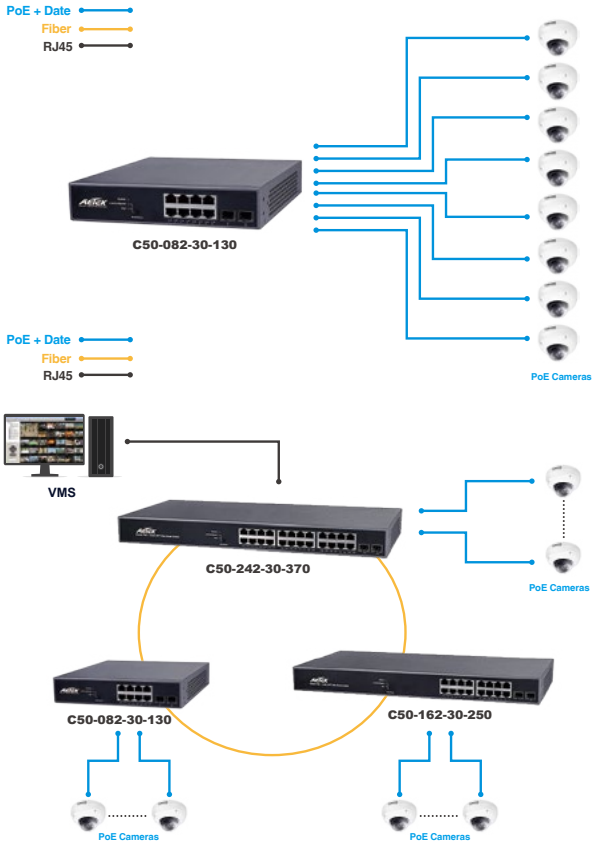
The C50 series from AETEK offers a broad range of basic Layer 2 **Smart PoE Switches**, equipped with multi-port Gigabit PoE (10M/100M/1G) and SFP transceiver (100M/1G) slots for flexible link. The C50 series has three sub-models including 8 ports, 16 ports, and 24 ports complying with IEEE 802.3af/at standards with sufficient PoE power budget for any application.

Besides a basic Layer 2 Smart PoE switch, C50 series is also an IP camera controller specially designed for easy overview & management of IP cameras complying with ONVIF, even if installers is not familiar with advanced software of Layer 2 Smart PoE switch. A centralized GUI (Graphic User Interface) makes it easy to find cameras and generate topology automatically once ONVIF IP cameras are connected to C50 series. Meanwhile, installers can easily catch comprehensive individual camera information including camera list, IP/MAC address, topology, power consumption, and traffic monitoring thru web browser. Furthermore an intuitive web GUI leads installer to group VLAN over graphic topology.

Features

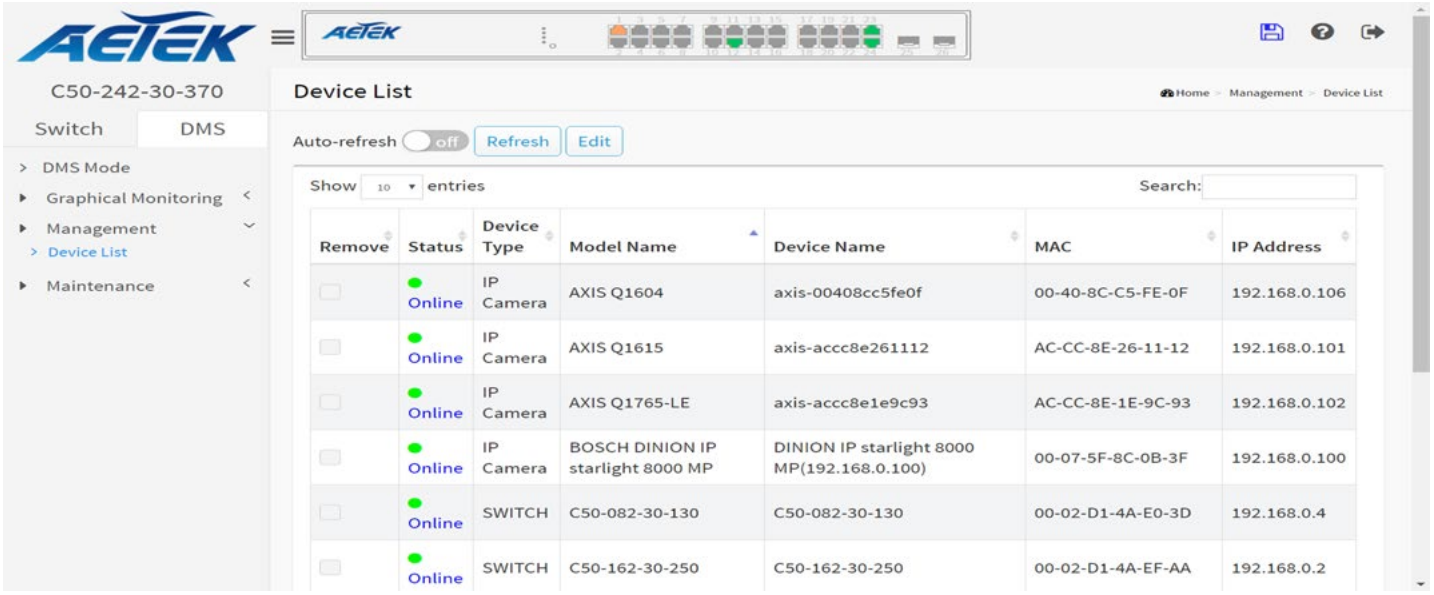
- Layer 2 Switch
  - 802.1d (STP), 802.1w (RSTP), 802.1s (MSTP)
  - Loop protection
  - SNMP v1/v2c/v3
  - QoS
  - VLAN
  - Ethernet cable length measurement
  - DHCP Server
- IP Surveillance Controller
  - Automatic discovery for ONVIF camera
  - Generates camera topology map automatically
  - Cable diagnostic & reboot camera remotely
  - Graphic grouping VLAN
  - PoE management
  - Topology view / Floor view / Google map
  - Monitor / Configure / Manage ONVIF camera thru web
- Flexible SFP transceiver ports for uplink
- 15W/30W per port IEEE802.3at/af compliant
- Supports 10/100/1000Mbps data rates
- Built-in 6KV surge protection for each PoE port
- IEEE 802.3az Energy Efficient Ethernet standard for green power

Applications

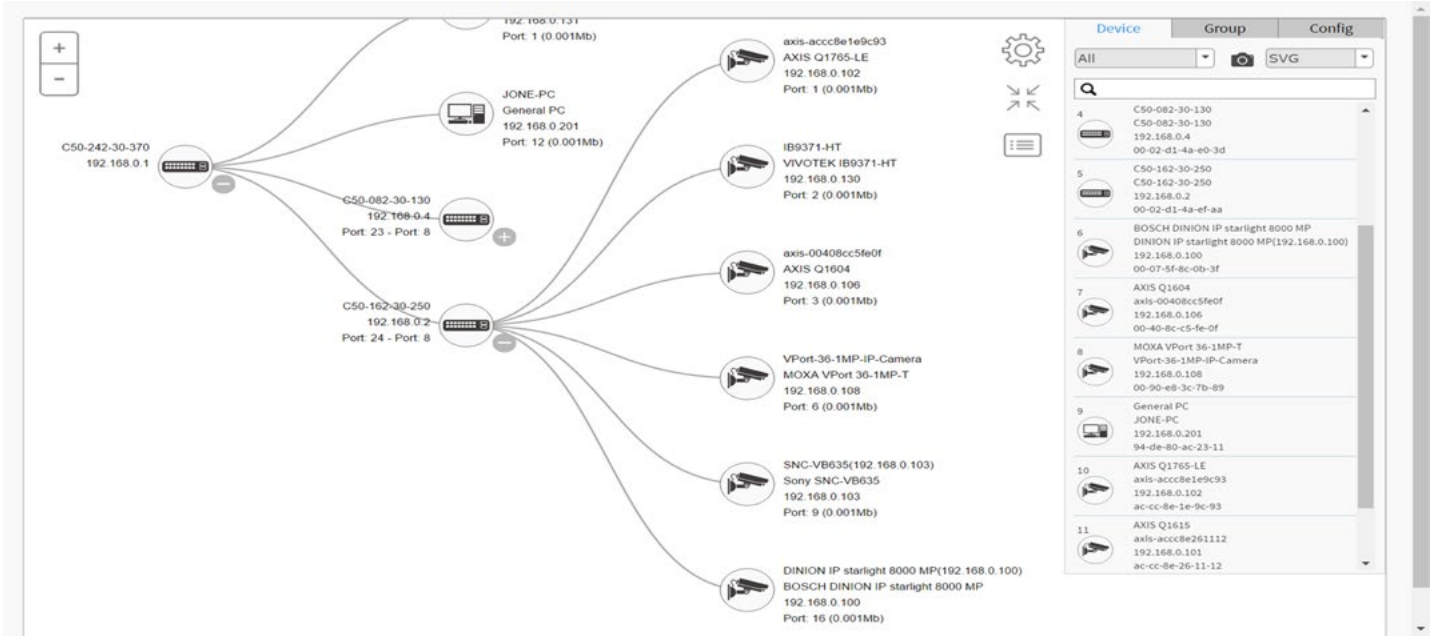


IP Camera Controller Features

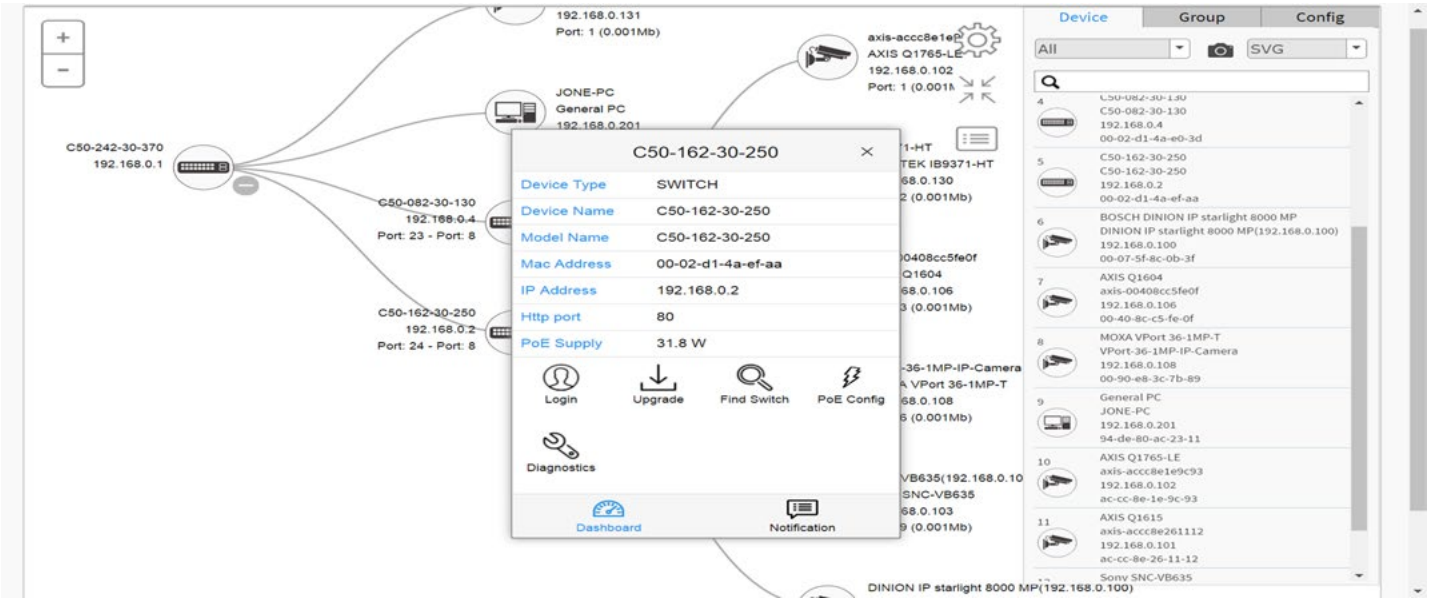
Device List



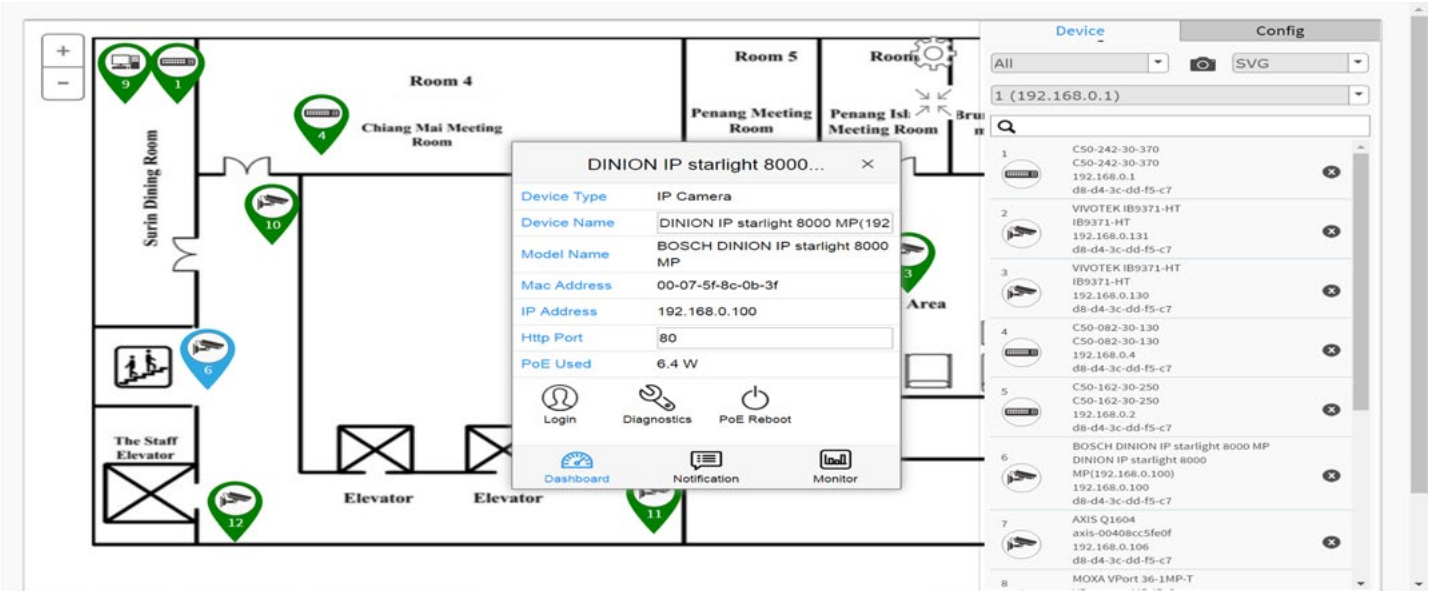
Topology View



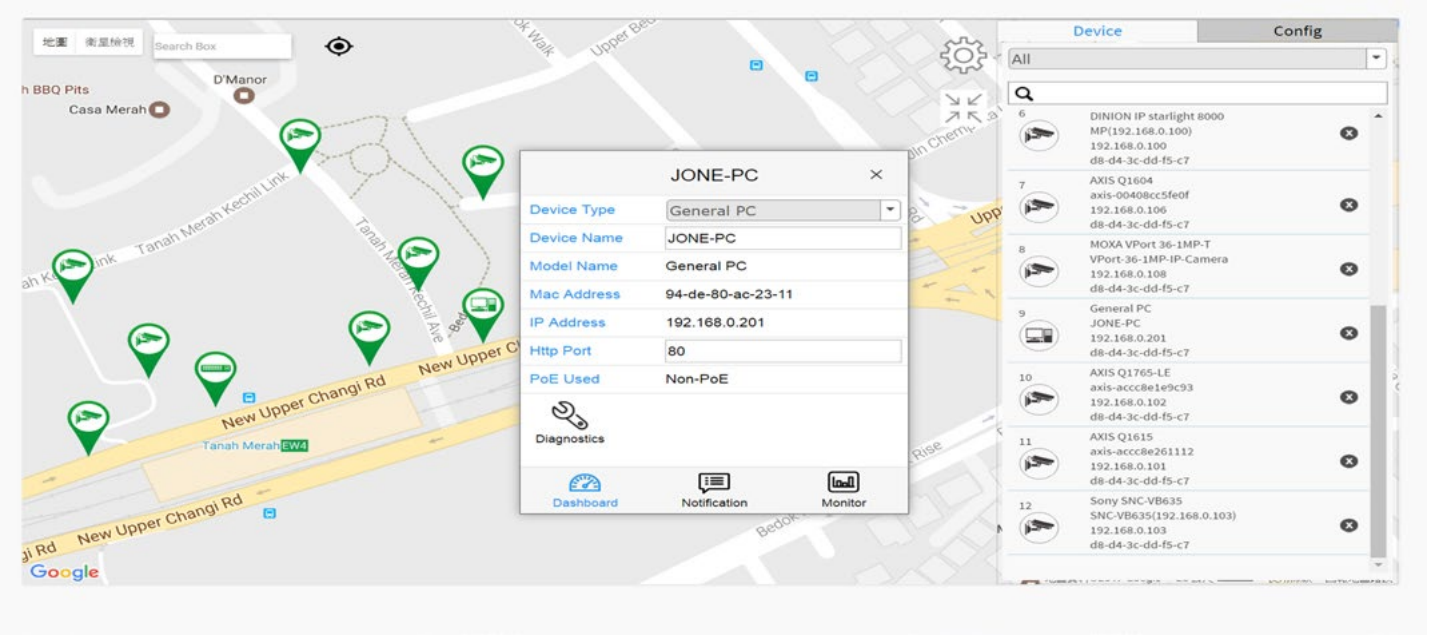
Device Dashboard



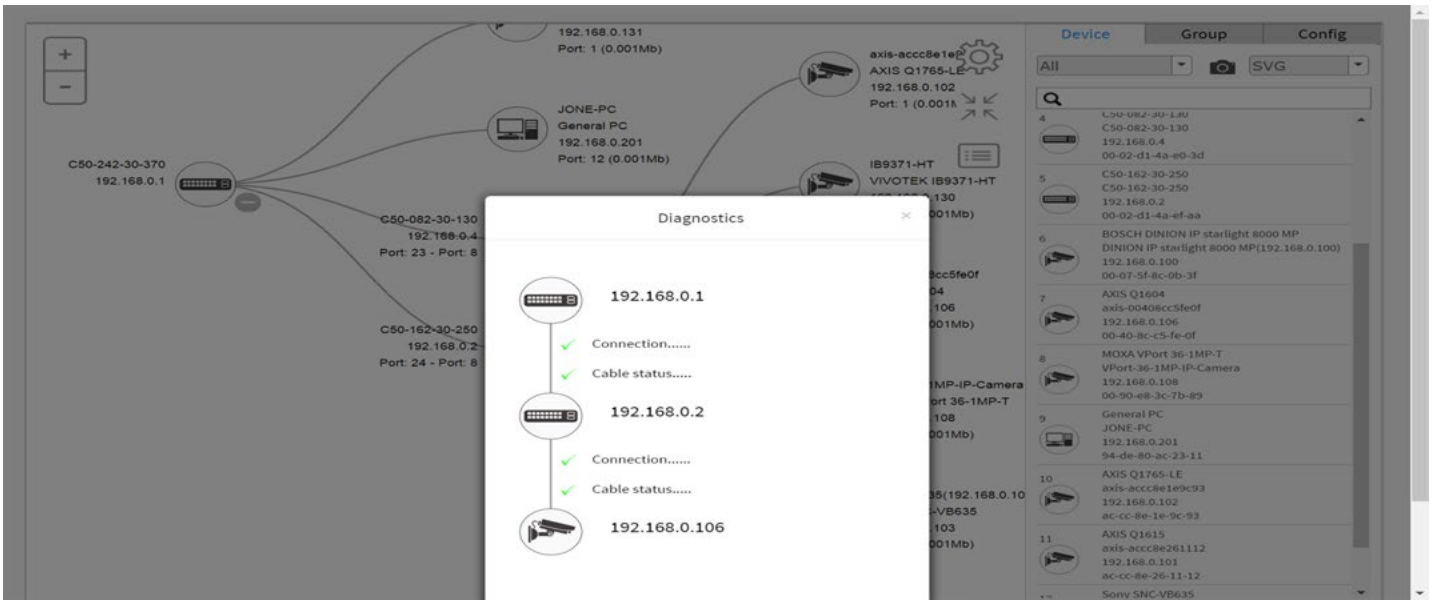
Floor Map View



Google Map View



Cable Diagnostics



PoE Features

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

Local Port	PD Class	Power Allocated	Power Used	Current Used	Priority	Port Status
1	3	30 [W]	4 [W]	76 [mA]	Low	PoE turned ON
2	-	0 [W]	0 [W]	0 [mA]	Low	No PD detected
3	3	30 [W]	3.2 [W]	58 [mA]	Low	PoE turned ON
4	-	0 [W]	0 [W]	0 [mA]	Low	No PD detected
5	-	0 [W]	0 [W]	0 [mA]	Low	No PD detected
6	-	0 [W]	0 [W]	0 [mA]	Low	No PD detected
7	-	0 [W]	0 [W]	0 [mA]	Low	No PD detected
8	3	30 [W]	6.7 [W]	145 [mA]	Low	PoE turned ON
9	0	30 [W]	0 [W]	0 [mA]	Low	Invalid PD

Specifications - Software

IP Surveillance Graphical User Interface Specifications	
Auto Discovery	Discover IP cameras complying ONVIF automatically
Topology View	Generate Topology maps to manage IP cameras
Traffic Monitor	Comprehensive chart to show traffic status
Cable Diagnostic	Real time to verify the cable status
VLAN Grouping	Easy grouping IP cameras thru topology map
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 (STP)	Standard Spanning Tree 802.1d, Rapid Spanning Tree (RSTP) 802.1w, Multiple Spanning Tree (MSTP) 802.1s
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, Protocol based VLAN, IP subnet-based VLAN, Private VLAN Edge (PVE), MAC-based VLAN, Q-in-Q (double tag) VLAN, Voice VLAN, GARP VLAN Registration Protocol (GVRP)
DHCP Relay	Relay of DHCP traffic to DHCP server in different VLAN, Works with DHCP Option 82
IGMP v1/v2 Snooping	IGMP limits bandwidth-intensive multicast traffic to only the requesters. Supports 512 multicast groups
IGMP Querier	IGMP querier is used to support a Layer 2 multicast domain of snooping switches in the absence of a multicast router
IGMP Proxy	IGMP snooping with proxy reporting or report suppression actively filters IGMP packets in order to reduce load on the multicast router
MLD v1/v2 Snooping	Delivers IPv6 multicast packets only to the required receivers
Multicast VLAN Registration (MVR)	It uses a dedicated manually configured VLAN, called the multicast VLAN, to forward multicast traffic over Layer 2 network in conjunction with IGMP snooping.
Layer 3 Switching Specifications	
DHCP Server	Assign IP to DHCP clients
Security	
Secure Sockets Layer (SSL)	SSL encrypts the http traffic, allowing advanced secure access to the browser-based management GUI in the switch
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
Layer 2 Isolation Private VLAN Edge	PVE (also known as protected ports) provides L2 isolation between clients in the same VLAN. Supports multiple uplinks
Port Security	Locks MAC addresses to ports, and limits the number of learned MAC address
IP Source Guard	Prevents illegal IP address from accessing to specific port in the switch
RADIUS/ TACACS+	Supports RADIUS and TACACS+ authentication. Switch as a client
Storm Control	Prevents traffic on a LAN from being disrupted by a broadcast, multicast, or unicast storm on a port
DHCP Snooping	A feature acts as a firewall between untrusted hosts and trusted DHCP servers
Loop Protection	To prevent unknown unicast, broadcast and multicast loops in Layer 2 switching configurations.
QoS	
Hardware Queue	8 hardware queues
Scheduling	Strict priority and weighted round-robin (WRR), Queue assignment based on DSCP and class of service
Classification	Port based, 802.1p VLAN priority based, IPv4/IPv6 precedence / DSCP based, Differentiated Services (DiffServ), Classification and re-marking ACLs
Rate Limiting	Ingress policer, Egress shaping and rate control, Per port

QoS	
Hardware Queue	8 hardware queues
Scheduling	Strict priority and weighted round-robin (WRR), Queue assignment based on DSCP and class of service
Classification	Port based, 802.1p VLAN priority based, IPv4/IPv6 precedence / DSCP based, Differentiated Services (DiffServ), Classification and re-marking ACLs
Rate Limiting	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
Dual Image	Independent primary and secondary images for backup while upgrading
UPnP	The Universal Plug and Play Forum, an industry group of companies working to enable device-to-device interoperability by promoting Universal Plug and Play
Remote Monitoring (RMON)	Embedded RMON agent supports RMON groups 1,2,3,9 (history, statistics, alarms, and events) for enhanced traffic management, monitoring and analysis
SNMP	SNMP version1, 2c and 3 with support for traps, and SNMP version 3 user-based security model (USM)
s-Flow	The industry 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/ HTTPs) and TFTP
NTP	Network Time Protocol (NTP) is a networking protocol for clock synchronization between computer systems over packet-switched
Other Management	HTTP/HTTPs, DHCP Client, Cable Diagnostics, Syslog, IPv6 Management

Technical Specifications-Hardware

	C50-082-30-130	C50-162-30-250	C50-242-30-370
Network Specifications			
Total Gigabit Ports	10	18	26
Gigabit PoE Ports (10M/100M/1G)	8 x 30W PoE	16 x 30W PoE	24 x 30W PoE
SFP Slots (100M/1G)	2	2	2
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	36 Gbps	52 Gbps
Power Specifications			
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
Power Budget	150W	270W	400W
Surge Protection /each PoE Port	6KV	6KV	6kV
Mechanical Specifications			
Dimensions (WxHxD)	220 x 44 x 242.4 mm	442 x 44 x 211 mm	442 x 44 x 211
Weight	1.95KG	3KG	3.1KG
Environmental Specifications			
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
Certifications			
EMC	CE, FCC, VCCI, C-Tick Class A	CE, FCC, VCCI, C-Tick Class A	CE, FCC, VCCI, C-Tick Class A
Safety	EN60950-1, IEC60950-1	EN60950-1, IEC60950-1	EN60950-1, IEC60950-1
Surge	IEC-61000-4-5	IEC-61000-4-5	IEC-61000-4-5

Ordering Information

PoE Switches					
	**C50-082-30-130** • Indoor 8xGbE PoE +2xGbE SFP • 100~240VAC, 130W power budget		**C50-162-30-250** • Indoor 16xGbE PoE +2xGbE SFP • 100~240VAC, 250W power budget		**C50-242-30-370** • Indoor 24xGbE PoE +2xGbE SFP • 100~240VAC, 370W power budget

Optional Accessories

SFP Modules			
 **SFP-SX-X5** Gigabit SFP Transceiver • MMF • 0.5 km • 0°C ~70°C	 **SFP-SX-02** Gigabit SFP Transceiver • MMF • 2 km • 0°C ~70°C	 **SFP-LX-10** Gigabit SFP Transceiver • SMF • 10 km • 0°C ~70°C	 **SFP-LX-40** Gigabit SFP Transceiver • SMF • 40 km • 0°C ~70°C

All specifications are subject to change without notice. Copyright © AETEK INC. All rights reserved. Ver. 2
3F, No.192, 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