ECS3510-10PD

L2 Fast Ethernet Standalone PoE PD Switch

Product Overview

The Edge-Core ECS3510-10PD is a high-performance Fast Ethernet Layer 2 switch featuring 10 ports; 8 10/100 PoE PD ports and 2 combo Gigabit Ethernet RJ-45/SFP (Small Form Factor Pluggable , SFP with dual speed 100Base-FX/BX and 1000Base-SX/LX/ZX) ports. The ECS3510-10PD is ideal for operator to deploy ETTH (Ethernet To The Home) network providing down/upload 100M/100Mbps high speed for triple play service. By utilizing PoE power feeding method via any of the 8 front access port PD feature , the ECS3510-10PD is able to continually provide service without stop. ECS3510-10PD is also available for 48V DC power input.

Key Features and Benefits

Performance and Scalability

It's a great entry level managed with 5.6Gbps switching capacity delivers wire-speed switching performance on all ports connecting end stations and users to the corporate networks.

There are two combo ports for Gigabit Ethernet uplink flexibility, allowing copper or fiber uplink.

Various optional Gigabit Ethernet SFP transceivers can be chosen for different distance fiber uplink.

Continuous Availability

IEEE 802.1w Rapid Spanning Tree Protocol provides a loop-free network and redundant links to the core network with rapid convergence, to ensure faster recovery from failed links, enhancing overall network stability and reliability.

IEEE 802.1Q VLAN-segmented Broadcast Domains reduces broadcast traffic and increase LAN security and performance

IEEE 802.3ad Link Aggregation Control Protocol (LACP) increases bandwidth by automatically aggregating several physical links together as a logical trunk and provides load balancing and fault tolerance for uplink connection.

Broadcast storm control prevents faulty end stations from degrading overall system performance.

Comprehensive QoS

Traffic is prioritized according to 802.1p, DSCP, IP precedence and TCP/UDP port number, giving optimal performance to real-time applications such as voice and video.

Asymmetric bidirectional rate-limiting, per port or per traffic class, preserves network bandwidth and allowing maximum control of network resources.

Enhanced Security

Port Security secures the access to a switch port based on MAC address , limit the total number of devices from using a switch port and protects from MAC flooding attacks.

IEEE 802.1X port based access control ensures all users are authorized before being granted access to the network. User authentication is carried out using any standards-based RADIUS server.

Access Control Lists (ACLs) restrict access to sensitive network resources by denying packets based on source and destination MAC addresses, IP addresses and TCP/UDP ports. This is done by hardware, so the switching performance is not compromised

Shell (SSH) and Secure Sockets Layer (SSL/HTTPS) encrypt network management information via telnet and web, provides secure network management.

TACACS+/RADIUS Authentication enables centralized control of the switch and restricts unauthorized users from altering the configuration of the switch.

IP Source Guard is enabled on a trunk port with a large number of VLANs that have DHCP snooping enabled, you might run out of ACL.

DHCP snooping provides security by filtering run-trusted DHCP messages and by building and maintaining a DCHP snooping binding table.

Simple Management

Embedded user friendly web interface helps users quickly and simply configure switches. SNMP V1/V2 are supported to be managed by network management station. Telnet and SSH provides safe and easy manage for network administrator. The SMC new smart switch can support management function both in IPv4 and IPv6.

Cable diagnostics for diagnose any cable faults (Short, Open etc..) and feedback a distance to the fault.

802.3af PoE PD feature

Each of the ECS3510-10PD front access port is able to accept 802.3af 48VDC power input and to boot up as normal operation. By utilizing the feature, ECS3510-10PD is flexible to work in the environment that finds no proper AC/DC power source. The power delivery pair supports both data pair (1,2,3,6) and spare pair (4,5,7,8).

ECS3510-10PD Product Specifications

Features

Physical Ports

8 RJ-45 10/100Base-T ports
2 Combo Gigabit (RJ-45/SFP) ports
(Both SFP ports support dual speed 100Base-FX/BX and 1000Base-SX/LX/ZX)
1 RJ-45 to RS-232 console cable

Performance

Switching Capability: 5.6Gbps
Forwarding Rate: 3.97Mpps
Packet Buffer Size: 4Mb
MAC Address Table: 8K

L2 Features

Auto-negotiation for port speed and duplex mode
Flow Control:
- IEEE 802.3x for full duplex mode
- Back-Pressure for half duplex mode

Spanning Tree Protocol:
- IEEE 802.1D Spanning Tree Protocol (STP)
- IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
- IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
- Loopback Detection
- Auto Edge Port
- BPDU Filter/ Guard
- Root Guard

VLANs:
- Supports IEEE 802.1Q VLANs
- Supports 4K VLANs
- Port-based VLANs
- IEEE 802.1v Protocol-based VLANs
- Private VLAN
- GVRP
- Supports QinQ
- Supports Voice VLAN

Link Aggregation:
- Static Trunk
- IEEE 802.3ad Link Aggregation Control Protocol
- Trunk groups: 12; 2~8 ports per FE trunk; 2 ports per GE trunk

IGMP Snooping:
- IGMP v1/v2 /v3 snooping
- IGMP v1/v2 querier support
- IGMP Immediate Leave
- IGMP Filtering/Throttling
- IGMP SNP Leave Proxy
- IGMP v1/v2/v3 Proxy

MVR (Multicast VLAN Registration)
QinQ
Select QinQ
Supports jumbo frames up to 10KB
G.8032

IPv6 Features

IPv4/IPv6 Dual Protocol stack
IPv6 Address Types Stack: Unicast
ICMPv6
ICMPv6 Redirect (Host)
IPv6 Path MTU Discovery
Stateless Auto configuration
IPv6 Neighbor Discovery
SNMP over IPv6
HTTP over IPv6
SSH over IPv6
IPv6 Telnet Support
IPv6 DNS Resolver
IPV6 Radius+ Support
IPv6 TACACS+ Support
IPv6 Syslog Support
IPv6 SNTP Support
IPv6 SMTP Support
IPv6 TFTP Support
Remote IPv6 Ping
IPv6 ACL

QoS Features

Priority Queues: 4 hardware queues per port
Traffic classification based on IEEE 802.1p CoS, IP Precedence, DSCP, TCP/UDP port number
Supports WRR and Strict scheduling
Rate Limiting (Ingress and Egress, per port base)
- FE: Resolution 64Kbps ~ 100Mbps
- GE: Resolution 64Kbps ~ 1000Mbps

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Security Features

Static Port Security (MAC-based)
Dynamic Port Security (MAC-based)
MAC Limitation per port
Supports IEEE 802.1X port based (single host & multiple host)
Supplicant support
EAPOL transparent
VLAN Assignment
QoS Assignment
Dynamic VLAN Assignment, Auto QoS, Auto ACL
MAC authentication & Web authentication
Guest VLAN
AAA
HTTPS & SSL
L2/L3/L4 Access Control List
SSH (v1.5/v2.0)
Link Detection
MAC Filter

Management Features

Switch Management:
- CLI via console port or Telnet
- WEB management
- SNMP v1, v2, v3

Firmware & Configuration:
- TFTP & HTTP
- Dual runtime and configuration files
- Auto upgrade - TFTP

Supports RMON (groups 1, 2, 3 and 9)
Supports BOOTP, DHCP client for IP address assignment
Supports DHCP Snooping & Snooping option 82
Supports DHCP Dynamic Provision (Via option 66,67)
Supports DHCP Relay option 82*
Supports SNTP
Event/Error Log/Syslog, SMTP
Supports LLDP (802.1ab)
Support IP Source Guard
IP Clustering (up to 36)
LLDP
Port Mirror, VLAN Mirror & MAC Based Mirror
Cable Diagnostics
Port Utilization
ATC
Delay reload

Mechanical

Dimensions (W x D x H): 19.5 cm x 11.5 cm x 3.6 cm
Weight : 0.68kg (1.5 lbs)
LED Indicators: Port, Uplink, System, Diagnostic

Power Supply

Power supply
- 36 to 60 VDC, 0.373 A

Power consumption
- 32W Maximum

Maximum Current
- 0.373 A @ 36 VDC

Environmental Specifications

Temperature:
- 0℃ to 45℃ (Standard Operating)
- -40℃ to 70℃ (Non-Operating)

Humidity: 10% to 90% (Non-condensing)

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