# E3210PC



## In-building small cell switch with PoE

The E3210PC is a L2+ managed PoE switch that combines the feature set of Enterprise applications with Mobile Transport and Carrier Ethernet. The E-Series is an ideal solution to complement DZS FiberLAN™ with point-to-point in-building small cell deployments.

### Features & Benefits

+  High switching capacity

+  Fully managed solution

+  Feature rich L2 and L3

+  Synchronization support for Small Cells

+  Ethernet Ring Protection Switching

+  Advanced OAM

+  Active PoE up to 30W per port

+  Green Ethernet

The E3210PC is a managed PoE+ switch that supports PTP timing distribution. The unit has eight Gigabit Ethernet ports with PoE+ 802.3 at/af (240W of total power) on the subscriber side, and two combo Gigabit Ethernet ports (RJ45/SFP) on the network side. The E3210PC delivers excellent switching capacity and performance, and comes with a comprehensive set of enterprise, industrial and carrier grade features. It can be deployed across a wide range of applications including video surveillance, wireless access, small cells and many others. The E3210PC also delivers an outstanding user experience with easy-to-use configuration and management interfaces.

With its low cost of ownership, rich feature content, high performance and and ease-of-use, the E3210PC is an ideal solution for the intersection of enterprise and mobile applications.

## Support for various applications and use cases

The E3210PC provides advanced PoE features such as PoE auto-checking, PoE scheduling, and PoE power delay to allow users to manage powered devices easily.

The E3210PC delivers extensive industrial and carrier grade functionality, including linear (LEPS) and ring (ERPS) protection with ITU-T G.8031, ITU-T G.8032 respectively, and quick restoration times.

Mobile coverage for indoor locations where macrocell signal is low requires the deployment of Small Cells. These Mobile Transport applications have tight requirements for synchronization in frequency and phase. The E3210PC supports IEEE 1588v2 Precision Time Protocol (PTP), a timing standard used to synchronize clocks throughout a packet-based network. PTP can be used to achieve clock accuracy in the sub-microsecond range, making it suitable for measurement and control systems, and Mobile Transport applications.

## Superior reliability through OAM and CFM for service assurance

The E-Series family of switches provides OAM (Operation, Administration and Maintenance) support in accordance with the industry standards IEEE 802.1ag/802.3ah and Y.1731. These standards provide the required mechanisms for network operators to monitor and guarantee that the proper service level requirements are met at all times. A comprehensive set of OAM tools can greatly simplify network management and monitoring, resulting in reduced operational expenditures.

## Lowering total cost of ownership with energy-efficient design

The E-Series portfolio of switches is designed to help companies save power and reduce TCO. The E3210PC supports the Energy Efficient Ethernet (IEEE 802.3az) standard that is widely used for indoor and campus applications to build a greener packet-switched network.
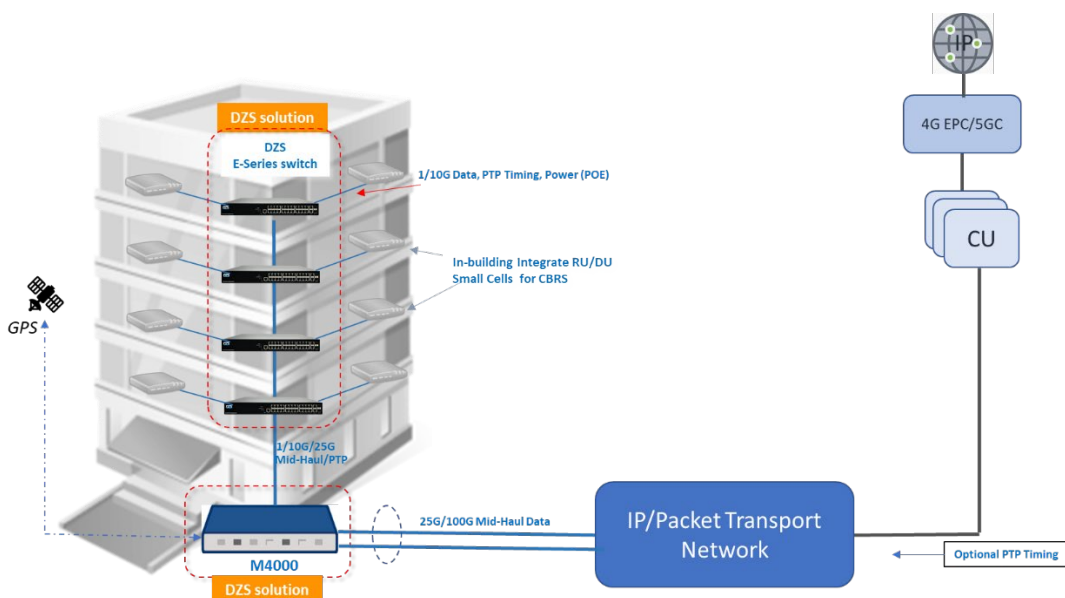
## Product Specifications

### Capacity

+ 38.68 Mp/s
+ 52 Gb/s
+ MAC Table size 8K
+ Max Frame 9216 Bytes

### Interfaces

+ Fixed 8-port 1G RJ45
+ Fixed 2-port 1G Combo RJ45/SFP
+ 1-port of GE Out-of-Band MGMT

### Management

+ SNMP 1, 2c, 3
+ HTTP/HTTPS/SSH
+ S-Flow
+ UPnP
+ Dual Firmware bank
+ NTP
+ Syslog
+ IPv6 Management
+ RMON
+ HW/SW Monitoring/Watchdog

### QoS

+ 8 Hardware Queues
+ Scheduling SP and WRR
+ Queue assignment based on DSCP/CoS
+ Classification
  > Port based
  > 802.1p VLAN priority based
  > IPv4/IPv6 precedence / DSCP based
  > DiffServ
  > Classification and re-marking ACLs
+ Rate Limiting
  > Ingress policer
  > Egress shaping and rate control
  > Per port

### PoE Support

+ IEEE 802.3af/at
+ PoE Scheduling, Auto-Checking
+ Power Delay

### Layer 2 Capabilities

+ Standard Spanning Tree 802.1d
+ Rapid Spanning Tree (RSTP) 802.1w
+ Multiple Spanning Tree (MSTP) 802.1s
+ IEEE 802.3ad LACP
+ Up to 5 groups / 4 ports per group
+ Port-based VLAN
+ 802.1Q tag-based VLAN
+ MAC-based VLAN
+ Management VLAN
+ Private VLAN Edge (PVE)
+ Q-in-Q (double tag) VLAN
+ Voice VLAN
+ GARP VLAN Registration Protocol (GVRP)
+ DHCP Relay
+ DHCP Option 82
+ IGMP v1/v2/v3 Snooping
+ Supports 1024 multicast groups
+ IGMP Querier
+ IGMP Proxy
+ IGMP snooping with proxy reporting
+ IGMP Report suppression
+ MLD v1/v2 Snooping
+ Multicast VLAN Registration (MVR)
+ LLDP
+ Port Mirroring

### Carrier Ethernet

+ ITU-T G.8031 ELPS
+ ITU-T G.8032 ERPS
+ IEEE 802.3ah OAM
+ IEEE 802.1ag CFM
+ ITU-T Y.1731 PM
+ IEEE 1588v2 PTP

### Layer 3 Capabilities

+ IPv4 Static Routing
+ IPv6 Static Routing
+ DHCP Client/Server
+ DHCPv6 Client

### Security

+ Secure Shell (SSH)
+ Secure Sockets Layer (SSL)
+ IEEE 802.1X RADIUS Authentication
+ IGMP-RADIUS based 802.1X
+ RADIUS Dynamic VLAN assignment
+ Layer 2 Isolation Private VLAN Edge (PVE)
+ Port Security - Fixed MAC
+ IP Source Guard
+ RADIUS/ TACACS+
+ Storm Control
+ DHCP Snooping
+ ACLs (256 entries, drop, rate limit)
+ ACL Classifiers:
  > S/D MAC addr, S/D IP addr
  > VLAN ID, Protocol, port, DSCP
  > IP precedence, S/D TCP/ UDP port
  > 802.1p, Ethernet type, ICMP, TCP flag
+ Loop Protection

### Physical and Environmental

+ Dimensions (WxHxD):
  > 442 mm x 44 mm x 211 mm
+ Weight: < 4kg
+ Operating Temperature:
  > -31 to 104°F (0 to 40°C)
+ Storage Temperature:
  > -4 to158°F (-20 to 70°C)
+ Operating humidity:
  > 10 to 90% non-condensing
+ Altitude: <10,000 ft (<3000 m)
+ AC power: 100 to 240VAC, 50/60 Hz
+ Maximum power consumption: 240 W
+ OOB management: 10/100/1000Base-T (RJ45)

### Regulation and Compliance

+ IEC/EN 62368-1
+ UL 62368-1
+ EN 55032/35 / EN61000
+ AS/NZS CISPR 32
+ FCC Part 15B / + ICES-003
+ CE certification

# Ordering Information

| Base Unit | |
|---|---|
| E3210PC-AC-NA | 8XGE POE + 2X1G COMBO PTP SINGLE AC PWR, NA POWER CORD |
| E3210PC-AC-EU | 8XGE POE + 2X1G COMBO PTP SINGLE AC PWR, EU POWER CORD |
| E3210PC-AC-UK | 8XGE POE + 2X1G COMBO PTP SINGLE AC PWR, UK POWER CORD |
| E3210PC-AC-00 | 8XGE POE + 2X1G COMBO PTP SINGLE AC PWR, NO POWER CORD |

| Module | Description |
|---|---|
| **1GE Optical Module** | |
| SFP-GE-SX-DLC | Wavelength: 850 nm,  Reach: 550 m,  Mode: multi-mode |
| SFP-GE-LX-1310-DLC-E | Wavelength: 1310 nm,  Reach: 10 km,  Mode: single-mode |