



# 3-Slot, 24 FE + 2 GbE Dual-Media L2 Managed Switch

## FEATURES

- Supports 3 slots hot swappable 8-port 10/100M TP module and/or 100M fiber module; 2 GbE dual-media ports (TP/SFP), which the SFP slots support 1000M fiber module only
- Non-blocking, store-and-forward and shared-memory L2 managed switch
- Supports auto-negotiation for configuring speed and duplex mode
- Supports 802.3x flow control for full-duplex ports
- Supports collision-based and carrier-based back-pressure for half-duplex ports
- 256-entry Multicast Address table
- Any ports can be disable mode, force mode, or auto-polling mode
- Per-port ingress/egress rate control with 64K/128K/256K (up to 100Mbps) resolution
- Supports Head of Line (HOL) blocking prevention
- Supports broadcast storm filtering
- 8K MAC addresses with automatic learning and aging
- Auto-aging with programmable inter-age time
- Supports 802.1p Class of Service with 4-level priority queuing
- Supports port sniffer function with 3 modes (TX Monitor, RX Monitor, or TX-RX pair Monitor mode)
- Supports port-based VLAN, 802.1Q tag-based VLAN with 256 entries
- Efficient self-learning and address recognition mechanism enables forwarding rate at wire speed
- Web-based management provides the ability to completely manage the switch from any web browser
- SNMP/Telnet interface delivers complete in-band management
- Supports IEEE 802.1d Spanning Tree Protocol (STP)
- Supports IEEE 802.1w Rapid Spanning Trees (RSTP)
- Supports IEEE 802.1X port-based network access control
- Supports IP Multicasting to implement IGMP Snooping function
- Supports 802.3ad port trunking with flexible load distribution and failover function
- Supports ingress port security mode for VLAN Tagged and Untagged frame process
- Supports SNMP, MIB2, and RMON sampling with sampled packet error indication



## TECHNICAL SPECIFICATIONS

- **Model:** CES2326B
- **Standards:** IEEE 802.3ab / 802.3z / 802.3u / 802.3x
- **Connectors / Slots:**
  - Front Panel**
    - 3 slots for Fast Ethernet modules (Ports 1-24)
    - 2 Gigabit Dual-Media (TP/SFP) ports (Ports 25-26)
    - [ The Dual-Media ports can only use one medium at a time, not both. ]
  - Rear Panel**
    - One (1) RS-232 DB-9 Male Console Port
    - [ Settings: Baud Rate=57600, Data Bits=8, Stop Bits=1, Parity=N, Flow Control=none ]
- **Add-On Modules (Sold Separately):**
  - For FE Slots**
    - MT08 — 8 ports 10/100Base-TX, RJ-45 (auto MDI/MDI-X selection)
    - MF08SC — 8 ports Multimode 100Base-FX, Duplex-SC
    - MF08ST — 8 ports Multimode 100Base-FX, Duplex-ST
    - MF08SC20 — 8 ports Singlemode/20km 100Base-FX, Duplex-SC
    - MF08DB3.20 — 8 ports Singlemode/20km 100Base-FX, Simplex-SC 1310nm
    - MF08DB5.20 — 8 ports Singlemode/20km 100Base-FX, Simplex-SC 1550nm
    - [ MF08DB3.20 & MF08DB5.20 must be used in pair, i.e. if one end uses MF08DB3.20, then the other end must use MF08DB5.20 ]
  - For SFP Slots**
    - DX-SFP.SX — 1000Base-SX Multi-Mode SFP Duplex-LC, 850nm
    - DX-SFP.L10 — 1000Base-LX Single-Mode 10km SFP Duplex-LC, 1310nm
    - DX-SFP.L40 — 1000Base-LX Single-Mode 40km SFP Duplex-LC, 1310nm
- **Data Transfer Rate:** 10/100 or 10/100/1000 Mbps (auto-negotiation or forced-mode selectable by software) for FE or GbE TP, 100 Mbps for FE Fbier, and 1000 Mbps for GbE SFP Fiber
- **Cable / Max Distance:** Single-Mode Fiber 9/125µm, 10~40km (depends on SFP fiber module) Multi-Mode Fiber 50/125µm or 62.5/125µm, 220m Category 5 or above Unshielded Twisted-Pair (UTP), 100m
- **Duplex Mode:** Full for 1000Base-SX/LX/T, and Full/Half (auto-sense or forced-mode selectable by software) for 10/100Base-TX
- **MAC Address and Self-learning:** 8 K addresses table entries, 256 VLAN Table entries, 256 IP multicast table entries
- **Buffer Memory:** Embedded 256 KB packet buffer, & 128 KB control memory
- **Flow Control:** IEEE 802.3x compliant for Full-duplex Backpressure flow control for Half-duplex



- **Diagnostic LEDs:**  
Per Unit — POWER, CPURUN, ACT(LEDSET), FDX(LEDSET), SPD(LEDSET)  
Per FE Port — LINK/ACT, FDX, SPD  
Per GbE Port — LINK/ACT, FDX, SPD
- **Power Requirement:** 100~240V AC, 50/60Hz, max 45W consumption
- **Operating Temperature:** 0° to 40° C
- **Humidity:** 5% to 90%
- **Dimension:** 44 x 442 x 281 mm (H x W x D), 19" Rack-Mountable with brackets
- **EMI Rating:** FCC Class A, CE Mark

**MANAGEMENT SOFTWARE SPECIFICATIONS**

- **System Configuration**  
Auto-negotiation supports on 10/100Base-TX ports; Web browser or Console interface can set transmission speed (10/100Mbps) and operation mode (Full/Half duplex) on each port; enable/disable any ports, set VLAN group(s), set trunk connection.
- **Management Agent**  
SNMP supports; MIB II, Bridge MIB, RMON MIB.
- **Spanning Tree Algorithm**  
IEEE 802.1D
- **VLAN Function**  
Port-based / 802.1Q Tagged, allowed up to 256 active VLANs in one switch.
- **Trunk Function**  
Ports trunk connections allowed.
- **IGMP**  
IP Multicast Filtering by passively snooping on the IGMP Query.
- **Bandwidth Control**  
Supports by-port Egress/Ingress rate control.
- **Quality of Service (QoS)**  
Referred as Class of Service (CoS) by the IEEE 802.1P standard  
Four queues per port  
Packet transmission schedule using Weighted Round Robin (WRR)  
User-defined weight  
Classification of packet priority can be based on either a VLAN tag on packet or user-defined
- **Port Security**  
Limits number of MAC addresses learned per port; static MAC addresses stay in the filtering table.
- **Internetworking Protocol**  
Bridging: 802.1D Spanning Tree  
IP Multicast: IGMP Snooping  
IP Multicast Packet Filtering  
Maximum of 256 active VLANs and IP Multicast sessions.
- **Network Management**  
One RS-232 port as local control console  
Telnet remote control console  
SNMP agent: MIB-2 (RFC1213), Bridge MIB (RFC1493), RMON MIB (RFC1757), Ethernet-like MIB (RFC1643)  
Web Browser supports based on HTTP Server, and  
CGI parser TFTP software-upgrade capability.

