

C-DOT Aggregator/L2 switch



Description

C-DOT Aggregator/ managed Layer 2 switch, a next generation switching product, built to address the challenges faced by service providers which provides unmatched level of service edge and carrier ethernet networking features with wire speed performance. The service aware architecture is designed to map data traffic to services, with individual services offering MEF complaint features like classification, policing, scheduling & traffic shaping for providing network based on Provider Bridge(PB), provider backbone bridge (PBB/Customer backbone switch)and provider backbone bridge with traffic engineering(PBB-TE).



Features

- 24 Gigabit Ethernet interfaces in Full Duplex mode(Electrical or Optical)
- Supports Static and LACP link aggregation with other L2 protocols.
- L3 includes Static routing with 32K L2/IPv4/IPv6 multicast groups
- Traffic prioritization (802.1p) & support for IEEE 802.1q priority.
- Traffic shaping & Rate limiting of bandwidth on switch ports.
- Stacking support oof 2 or more aggregators.

Physical Interfaces.

- 24 x 1G ethernet interface in Full Duplex mode (Electrical or Optical)
- 2 x 10G Gigabit Ethernet optical (SFP+) uplink ports.
- 1 x 1G dedicated Management port and serial console.

Packaging.

- 1U high system and can be mounted on a standard 19" rack mount.

Environmental.

- Temperature: Operating (0° C to +50°C), Storage (-10°C to +70°C).
- Humidity: Operating (10% to 95%)

Power Supply.

- Single input AC power supply (Mains).

Application Areas

- Network Interface Devices targeting Corporate Office locations and Cell site, RAS & other devices.
- Carrier Ethernet Access & aggregation switch
- Wireless backhaul targeting cell sites.
- Data Center Switch.

Ordering Information

CAGG-24P-E	CDOT 24 port aggregator (Electrical)
CAGG-24P-O	CDOT 24 port aggregator (Optical)

PRODUCT BRIEF

- L2 switching.
 - Spanning tree protocol.
 - Supports Link Aggregation & trunking features.
 - Loop protection & voice VLAN.
- L3 switching & multicasting.
 - Static routing.
 - Supports DHCP snooping & relay functions.
 - IGMP(v2, v3), MLD(v1, v2) & snooping, ARP inspection.
- Carrier Ethernet features
 - PB, PBB, PBB-TE
 - ELINE, ELAN, ETREE service.
 - OAM & protection switching.
- Security.
 - MAC based authentication.
 - Port based, single & multiple IEEE 802.1x.
 - Network Access Server.
 - ACL, Storm protection, AAA (RADIUS/TACACS+).
 - IP Source guard & MAC binding.
- QoS.
 - Traffic prioritization (802.1p)
 - Policers: port, service, queue & global/ACL, storm policing.
 - Priority: Port, User, input.
- Protection.
 - 1:1, 1:n port protection.
 - Ethernet Ring Protection.
- Monitoring
 - Port Mirroring/Flow mirroring.
 - RMON .
 - Sflow .
- Management
 - Industrial CLI – console port & telnet.
 - SSH, SCP, SNMP v3.
 - GUI interface via HTTPS.

Layer-2 Switch Features

Layer-2 switching features.

- Supports standard IEEE 802.1D STP, IEEE802.1s Rapid STP for faster convergence, IEEE 8-02.1s Multiple STP.
- 802.1Q VLAN switch with 32K MACs & 4K VLANs.
- Push/pop/translate up to 2 VLAN tags on ingress and/or egress.
- VLAN learning: Independent VLAN learning (IVL) and Shared VLAN learning (SVL).
- Hardware and Software based Learning.
- 512 TCAM based QoS, VLAN and Security profile classification entries.
- Voice VLAN.

Carrier Ethernet features.

- Can act as Provider Bridge (PB) switch with 32K MACs and 4K VLANs.
- Can act as Provider Backbone Bridge (PBB)/Customer backbone switch. [16K B-MACs & 4K B-VLANs (Backbone MACs/Backbone VLANs), 16K C-MACs, 4K VLANs (customer MACs/customer Edge VLANs), 4K MAC-in-MAC encapsulations]
- PBB-TE (with 4K Ethernet switched Paths (ESP) & 512 hardware protected ESPs].
- Synchronous Ethernet (SyncE) & L2 IEEE1588 time stamping hardware.
- Performance monitoring & OAM hardware for 4K service points, 512 paths, 32 ports.
- ELINE, ELAN & ETREE MEF services.

QoS.

- Traffic classes (8 active priorities).
- Policers: port, service3, queue and global/ACL.
- Port and queue egress shaper.
- Port default priority.
- User Priority.
- Input Priority mapping.
- Storm Policing.
- Weighted Random Early Detection (WRED).

Security.

- Network Access Server (NAS), ACL for filtering, policing and port copy, Port-based IEEE 802.1x, Single and multiple IEEE 802.1x, MAC based authentication, Guest VLAN, VLAN & QoS assignment, RADIUS account, MAC address limit, Web and CLI authentication, Authorization (15 user levels), IP source guard, IP MAC binding & IP MAC binding dynamic to static.

Management.

- Secure management access via CLI, GUI or MIB through SSH, HTTP server, SNMPv3 respectively.
- CLI – serial console port and telnet.
- Management access filtering HTTPs.
- Software upload through web.
- DNS client /Proxy.
- IPv6 Management.
- IEEE 802.10AB LLDP (Link Layer Discovery Protocol) & LLDP-MED (Media Endpoint Discovery) with discovery filtering.
- Loop detection/restore to default.
- Daylight savings.

Product Performance Parameters

- L2 switching : System switching capacity of 52 Gbps with MAC table size of 32K, 1K layer 2 multicast port masks
- L3 routing : 128 router legs with 4K IPv4/1K ipv6 IP unicast routes and 1K multicast router leg masks.
- QoS : 32K queues with 4K Ingress & 8K Egress QOS mapping table entries & 512 security enforcement rules (ACL).
- Carrier Ethernet : 1K of 4 COS (Class of Services) & 512 of 8 COS bidirectional carrier ethernet connections (E-lines), 4K EVC bidirectional endpoints.