



SANCHIT-100 24P LAYER-2 AGGREGATION SWITCH



Centre for Development of Telematics

SANCHIT-100

24P Layer-2 Aggregation Switch

C-DOT's SANCHIT-100 (earlier known as CSX-100) is a Carrier Ethernet Switch/Aggregation Switch, supporting 24 x 10/100/1000BaseT RJ45 electrical ports with PoE/PoE+ support and 4 x 1G/10Gbps optical uplink ports. It is a Layer-2/Layer-3 Managed Ethernet Switch which can be used for interconnecting servers, clients, RAS, routers and other devices used in the internet or intranet.

The SANCHIT-100 can handle traffic up to 24 X 10/100/1000BaseT Ethernet ports and up to 4 X 1G/10G optical ports for trunking, cascading & stacking. It has an inbuilt CPU and supports a Carrier Ethernet switch features as well as all the security and configuration features needed in a L2/L3 switch. CLI and GUI can be accessed through out-of-band management interfaces for configuration and monitoring.

Designed as IP Edge demarcation and aggregation equipment, the SANCHIT-100 effectively delivers carrier-grade connectivity, making it ideal for service providers looking to manage traffic efficiently at the network edge. The switch supports PoE (15.4W) and PoE+ (30W) power option on all the RJ45 ports.

PRODUCT FEATURES AND SPECIFICATIONS

General

- ✓ 24 X 10/100/1000BaseT RJ45 Electrical interfaces
- ✓ 4 X 1/10G uplink optical SFP ports with MACSec support
- ✓ Support of 32K MAC addresses
- ✓ Traffic prioritization (802.1p)
- ✓ Support for IEEE 802.1q priority
- ✓ Rate limiting of bandwidth on the Switch ports
- ✓ Port mirroring / Flow mirroring
- ✓ Traffic shaping
- ✓ Suitable visual indications for healthy/unhealthy conditions and alarms
- ✓ Network Time Protocol (NTP) for synchronizing with a centralized NTP server
- ✓ IEEE 802.3x full duplex flow control
- ✓ Full duplex capabilities on all ports
- ✓ 10Base-T /100Base-T/1000Base-T autosensing ports

- ✓ MAC based VLAN, protocol based VLAN and IP subnet based VLAN
- ✓ Supports Static and LACP Link Aggregation
- ✓ LED Power Reduction support
- ✓ POE/POE+ on all ports
- ✓ POE/POE+ with LLDP
- ✓ Multiple user based privilege levels supported
- ✓ Supports DHCP Snooping and Relay feature
- ✓ ARP Inspection
- ✓ Support for Stacking of two or more Switches

Layer-2 switching

- ✓ 802.1Q VLAN switch: 32K MACs, 4K VLANs
- ✓ Push/pop/translate upto two VLAN tags on ingress and/or egress
- ✓ Policing with leaky bucket storm control and protection from broadcast, flooding and multicast
- ✓ Loop Protection
- ✓ Spanning Tree Protocol
 - Rapid Spanning Tree Protocol (RSTP) support
 - Multiple Spanning Tree Protocol (MSTP) support
- ✓ Multiple Registration Protocol (MRP)
- ✓ Multiple VLAN Registration Protocol (MVRP)
- ✓ VLAN Learning
 - Independent VLAN Learning (IVL)
 - Shared VLAN Learning (SVL)
- ✓ Hardware and Software based Learning
- ✓ 512 TCAM-based QoS, VLAN and Security Profile Classification Entries
- ✓ Voice VLAN
- ✓ VLAN Translation
- ✓ VLAN Trunking

Layer-3 Switching and Multicast

- ✓ Static Routing
- ✓ DSCP based QoS, Translation and Classification Supported

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24P Layer-2 Aggregation Switch

- ✓ 32K Layer 2 Multicast Groups supporting up to 1K port masks
- ✓ 1K IPv4 Multicast Groups Security
- ✓ 32K IPv4/IPv6 Multicast Groups
- ✓ Internet Group Management Protocol version 2 and version 3(IGMPv2/v3) support
- ✓ SDN Enabled
- ✓ Multicast Listener Discovery (MLD) version 1 and version 2 support
- ✓ IGMP Snooping
- ✓ MLD Snooping
- ✓ VRRP

Carrier Ethernet

- ✓ Can act as a Provider Bridge (PB) switch with 32K MACs and 4K VLANs
- ✓ Can act as a Provider Backbone Bridge (PBB) switch/ Customer Backbone Switch
- ✓ 16K B-MACs, 4K B-VLANs MACs/Backbone VLANs
- ✓ 16K C-MACs, 4K C-VLANs (Customer Edge-MACs/Customer Edge VLANs)
- ✓ 4K MAC-in-MAC encapsulations
- ✓ PBB-TE switch - includes all PBB features with 4K Ethernet Switched Paths (ESPs) and 512 hardware-protected ESPs
- ✓ OAM hardware for 4K service points, 512 paths, 32 ports
- ✓ Software for OAM and protection switching
- ✓ Layer 2 IEEE 1588 time stamping hardware
- ✓ ELINE, ELAN and ETREE MEF services
- ✓ Performance Monitoring
- ✓ Traffic Policing based on EIR, CIR, MBS

Protection

- ✓ 1:1 port protection
- ✓ 1+1 port protection
- ✓ 1:n port protection
- ✓ Ethernet Ring Protection

Security

- ✓ Network Access Server (NAS)
- ✓ Port-based IEEE 802.1X
- ✓ Single and multiple IEEE 802.1X
- ✓ MAC-based authentication
- ✓ Port based VLAN and QoS assignment
- ✓ MACSEC (802.1AE) on uplink ports
- ✓ Guest VLAN
- ✓ RADIUS authentication and accounting
- ✓ MAC address limit
- ✓ TACACS+
- ✓ Web and CLI Authentication
- ✓ Authorization (15 user levels)
- ✓ ACLs for filtering, policing, and port copy
- ✓ IP source guard
- ✓ IP MAC binding
- ✓ IP MAC binding dynamic to static

Management

- ✓ HTTP Server
- ✓ CLI – console port and Telnet
- ✓ Management access filtering HTTPS
- ✓ SSH
- ✓ TFTP
- ✓ IPv6 Management
- ✓ System/syslog
- ✓ Software Upload through Web
- ✓ SNMP v1, v2c, v3 Agent
- ✓ RMON
- ✓ IEEE 802.10AB-2005 Link Layer Discovery – LLDP and LLDP-MED
- ✓ Discovery filtering, CDP
- ✓ DNS client, Proxy
- ✓ DHCP server, Client
- ✓ Daylight savings
- ✓ Configuration download and upload: XML format

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- ✓ Multiple SNMP trap destinations
- ✓ Software up gradation through CLI/GUI interface
- ✓ Status LEDs for LAN-WAN ports, Board-up and Power
- ✓ Status Monitoring of Power Supplies
- ✓ Fan Status Monitoring
- ✓ Adaptive Fan Control
- ✓ Configuration Rollback

Quality of Service

- ✓ Traffic classes (8 active priorities)
- ✓ Port default priority
- ✓ User priority
- ✓ Input priority mapping
- ✓ QoS control list (QCL mode)
- ✓ Storm Policing
- ✓ Weighted Random Early Detection (WRED)
- ✓ Policers: port, service, queue, and global/ACL
- ✓ Port and queue egress shaper

EMI/EMC

- ✓ CISPR 32 Class A
- ✓ IEC 61000-4-2
- ✓ IEC 61000-4-3

- ✓ IEC 61000-4-4
- ✓ IEC 61000-4-6

Environmental

- ✓ QM333

Power Supply & Cooling

- ✓ Dual redundant 230V AC Power Supply
- ✓ Separate 230V AC Power module for PoE/PoE+ power
- ✓ Fan Tray with 4 Fans, Right to Left air-flow

Form Factor & Dimensions

- ✓ 19" rack mountable, 1U High
- ✓ Dimensions(WXDXH):440mmX578mmX43.6mm

Applications

- ✓ Carrier Ethernet Switch/Aggregation Switch in Service Provider Networks
- ✓ Layer-2/Layer-3 Managed Ethernet Switch with PoE/PoE+ option
- ✓ Campus Networks
- ✓ Office LANs
- ✓ Data Centers (Access Layer)

Ordering Information

- ✓ For PoE Version : CSX-100
- ✓ For non PoE Version : CSX-100-NP



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