



SANCHIT-200 48P (OPTICAL) LAYER-2/LAYER-3 AGGREGATION SWITCH



Centre for Development of Telematics

SANCHIT-200

48P (Optical) Layer-2/Layer-3 Aggregation Switch

SANCHIT-200 is a Layer-2/Layer-3 Managed Ethernet Switch/Aggregation Switch, supporting 48 X 1G optical SFP ports for interconnecting servers, clients, RAS, routers and other devices used in the internet or intranet as well as 4 x 1G/10G optical uplink ports for trunking/cascading. MACSec option is supported on all the 52 ports.

SANCHIT-200 is suitable for use as a Layer-2/Layer-3 Managed Ethernet Switch, in Enterprise and Campus networks as well as Access/Aggregation Switch in Service Provider Networks and in Data Centers (Access layer). The MACSec support option on all ports makes it ideal for use in Secure Networks. The switch also supports all the security and configuration features needed in a L2/L3 Managed switch. CLI and GUI can be accessed through out-of-band management interfaces for configuration and monitoring.

PRODUCT FEATURES AND SPECIFICATIONS

Main Features

- ✓ 48 x 1G Optical Ethernet interfaces in Full Duplex Mode and 4 X 1G/10G optical interfaces for uplinks (Flexible speed Network Interfaces supported on uplink ports with 4 x 1G or 10G optical)
- ✓ Managed Layer2/Layer3 Switch
- ✓ MACSec support on 48 x 1G optical ports and 4 x 1G/10G optical Uplink ports
- ✓ Switching capacity of up to 180Gbps
- ✓ Ethernet Ring Protection Support
- ✓ Standard and secured Management interfaces using CLI, console, SSH
- ✓ Digital Diagnostic Monitoring (DDM) support for monitoring fiber optic transceivers
- ✓ Redundant, hot-swappable AC power supply
- ✓ Form-factor: 1U, 19" Rack compliant
- ✓ Ideal for campuses and access/aggregation networks, secure networks

General

- ✓ 48 x 1GbE Optical interfaces and 4 x 1G/10G optical interfaces for uplinks
- ✓ MACSec support on 48 x 1G optical ports as well as 4 x 1G/10G uplink ports
- ✓ Supports 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 for all speeds
- ✓ MAC based VLAN, protocol based VLAN and IP subnet based VLAN
- ✓ Supports Static and LACP Link Aggregation
- ✓ Support Jumbo frames
- ✓ LED Power Reduction support
- ✓ Multiple user based privilege levels supported
- ✓ Supports DHCP Snooping and Relay feature
- ✓ ARP Inspection

Layer-2 switching

- ✓ 802.1Q VLAN switch
- ✓ 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

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48P (Optical) Layer-2/Layer-3 Aggregation Switch

Classification Entries

- ✓ Voice VLAN
- ✓ VLAN Translation
- ✓ VLAN Trunking

Layer-3 Switching and Multicast

- ✓ Static Routing for IPV4 and IPV6
- ✓ DSCP based QoS, Translation and Classification Supported
- ✓ 32K Layer 2 Multicast Groups supporting up to 1K port masks
- ✓ 2K IPv4 Multicast Groups
- ✓ 512 IPv6 Multicast Groups
- ✓ Internet Group Management Protocol version 2 and version 3(IGMPv2/v3) support
- ✓ Multicast Listener Discovery (MLD) version 1 and version 2 support
- ✓ IGMP Snooping
- ✓ MLD Snooping
- ✓ VRRP
- ✓ BGP
- ✓ OSPF v.2/v.3
- ✓ RIPv1, RIPv2
- ✓ RIPvng

OAM

- ✓ Software for OAM and protection switching
- ✓ Loop Back
- ✓ Link Trace
- ✓ Alarm Indication Signal (AIS)
- ✓ Continuity Check and Remote Defect Indication (CC and RDI)
- ✓ Automatic Protection Switching (APS)
- ✓ Performance Monitoring

Protection

- ✓ 1:1 port protection G.8031
- ✓ Ethernet Ring Protection G.8032 v2

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
- ✓ Loop detection/ restore to default
- ✓ DNS client, Proxy
- ✓ DHCP server, Client

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48P (Optical) Layer-2/Layer-3 Aggregation Switch

- ✓ Daylight savings
- ✓ Configuration download and upload: XML format
- ✓ Multiple SNMP trap destinations
- ✓ Software up gradation through CLI/GUI interface
- ✓ Status LEDs for LAN-WAN ports, System Up
- ✓ 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

Timing and Synchronization

- ✓ NTPv4 client
- ✓ IEEE 1588v2 PTP

EMI/EMC

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

- ✓ IEC 61000-4-3
- ✓ IEC 61000-4-4
- ✓ IEC 61000-4-5
- ✓ IEC 61000-4-6
- ✓ IEC 61000-4-11

Environmental

- ✓ QM333
- ✓ Operating Temperature: 0°C to +50°C
- ✓ Storage Temperature: -5°C to +60°C
- ✓ Operating Humidity: 5% to 95%

Power Supply & Cooling

- ✓ Dual redundant 230V AC Power Supply
- ✓ Hot-swappable Fan tray with 4 fans, front to back air-flow

Form Factor

- ✓ 19" rack mountable, 1U High chassis

Applications

- ✓ Access/Aggregation Switch (optical interfaces) in Service Provider Networks
- ✓ Layer-2/Layer-3 Managed Ethernet Switch, with MACSec option on all ports for Secure Networks
- ✓ Enterprise Networks
- ✓ Campus Networks

Ordering Information

- ✓ SANCHIT-200



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