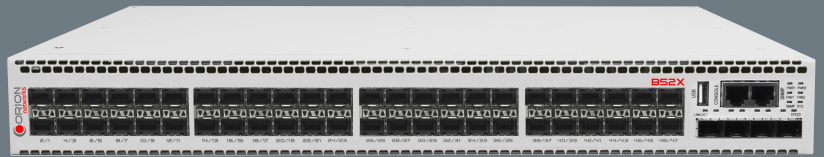# B52X Optical Ethernet Switch

Product Overview

Orion B52X is a new generation Carrier-grade Ethernet aggregation device, is complied with CE 2.0 standards to deliver EPL, EVPL, EP-LAN, EVP-LAN, E-Access services based on three major characteristics, Multi-CoS, Interconnected and Managed.

The switch plays an important role to accelerate large-scale deployment and provide diversified access solutions thanks to its high bandwidth provision (10G) and performance. In addition, this switch also provides with standardized protection mechanisms (ITU G.8031&G.8032). Furthermore, B52X can guarantee Carrier Ethernet service and performance via good SLA L2/L3 (jitter, delay, packet loss) functionality and make network more reliable thanks to its compliance with IEEE 802.3ah, IEEE 802.1ag and ITU-T Y.1731

Product Description

The Orion Networks© B52X Switch supports a number of key features:

- **Performance and Scalability** With high switching capacity, B52X switch supports wire-speed switching . Ethernet connectivity of B52X is accomplished via a hot-pluggable SFP transceiver which supports distance up to 300 meters over multimode fiber and 10 to 80km over single-mode fiber (Distance depends on the chosen optical module)

- **Full Optical Port –** B52X supports abundant optical connection ports to construct full optical network and increase the performance of networks. B52X includes 48 x 100/1000M SFP ports and 4 x 1/10G SFP+ ports.

- **Carrier Ethernet QoS -** IEEE802.1p based QoS is supported in terms of 8 queues per port, SP/WRR/SP+WRR, bandwidth control, IGMP snooping, and multicast VLAN registration (MVR) to save bandwidth and optimize corresponding services.

- **High Reliability** - 4 10Gigabit uplink ports, which could be designed to offer redundant uplinks with various ring protection applications, effectively raised the expansibility and performance of network. Redundant hot-swappable power modules increase protection fault tolerance

Features

Switching mode	Store and forward mode 16Mbit switching buffer Supports jumbo frame
Packet Forwarding	MTU: 12288 bytes DLF Control
MAC Address Table	MAC address auto learning/add/remove/searching/statistic/aging MAC address aging time configuration (10-1000000 seconds) Up to 32K MAC addresses
VLAN	IEEE 802.1Q VLAN: 4K active VLANs Flexible QinQ VLAN mapping
Link Aggregation	Up to 3 link aggregation groups and 4 ports per group Load balancing based on IP and MAC address
Digital Diagnostic	Supports SFP digital diagnostic
STP	STP, RSTP & MSTP Supports 64 instances, 256 STG
OAM	IEEE802.3ah OAM including discovery, link performance, remote loopback, fault detection & performance stats per OAM standards OAM Active/Passive mode Supports OAM MIB Variable Get function and OAM Event function Supports extended OAM
QoS	Supports port/CoS/DSCP mapping Supports SP, WRR and SP+WRR scheduling Up to 8 queues per port Support hierarchical bandwidth profile in the ingress direction Rewriting of 802.1p CoS/DSCP
ACL	ACL based on VLAN, CoS, MAC, EtherType, IPv4, IPv6, or user-define combinations
Routing	Supports static routing and default gateway
Flow Control	IEEE 802.3x in full duplex mode Back pressure in half duplex mode Support port-based configurations
Storm Control	Broadcast, Multicast, DLF storm control
Statistics	Support port, port dynamic statistics

Features

Multicast	1K multicast addresses Static multicast group IGMP Snooping V1/V2/V3 Multicast filtering & unknown multicast discard Supports MVR
LLDP	Supports discovery remote based on link layer Supports getting remote basic information
Security	Supports RADIUS, TACACS+ Supports port security IP Source Guard Supports MAC address and port bonding Supports dynamic ARP Inspection Supports PPPoE agent and DOT1x.

Specifications

Performance	Switching fabric: 176 Gbs
Capacity	128MB DDRAM 32MB flash
Physical interface	NNI: 4 x 10GE SFP+ UNI: 48 x 100BASE-FX/1000Base-X SFP SNMP interface: 1 x RJ45 Console interface: 1 x RJ45
Power Specs	AC: 100~240V DC: 36V ~ 72V Max power consumption: 95W
Usage Conditions	Operating temp: -5~50℃ (23~122℉); Storage temp: -25~60℃ (-13~140℉); Humidity: 10~90% non condensing
Dimensions	360(L) x 440(W) x 44(H) mm
Weight	7 kg

Compliances

Standards & Protocols	IEEE802.1Q (VLAN), 802.3ad (LAG), 802.1ad (QinQ), 802.1ag (CFM), 802.1D (STP), 802.1w (RSTP), 802.1s(MSTP), 802.1p (QoS/CoS Priority), 802.1x (Security), 802.3x Flow Control, 802.3ah OAM G.8031 (ELPS), G.8032 (ERPS), Y.1731 IETF RFC 2865 (RADIUS), 2819 (RMON), MEF 6, 9, 10, 14, 16, 36 (CE1.0-certified, CE2.0-compliant), Safety Ce certified, UL and RoHS compliant, EMI Class A

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