

Opti-X Hardware Reference

QUICK REF



	2x10GX	4x10GX*	1x10+12GX	ETH 12GX	ETH 24GT	ETH 24GX	2x10+24GX*	ETH48GT	ETH48GX*
Switch Layer 2	Wire Speed	Wire Speed	Wire Speed	Wire Speed	Wire Speed	Wire Speed	Wire Speed	Wire Speed	Wire Speed
Switch Layer 3	Wire Speed	Wire Speed	Wire Speed	Wire Speed	Wire Speed	Wire Speed	Wire Speed	Wire Speed	Wire Speed
QoS	L2-L4	L2-L4	L2-L4	L2-L4	L2-L4	L2-L4	L2-L4	L2-L4	L2-L4
MPLS	LER/LSR	LER/LSR	LER/LSR	LER/LSR	Not Available	LER/LSR	LER/LSR	Not Available	LER/LSR
PoE	N/A	N/A	N/A	N/A	24 Ports*	N/A	N/A	N/A	N/A
Packet Buffer	128 MB	128 MB	128 MB	128 MB	128 MB	128 MB	128 MB	128 MB	128 MB
Physical Ports	2x10G (XFP)	4x10G (XFP)	12x1000Base-X (SFP) + 1 x 10Gig (XFP)	12 x 1000Base-X (SFP)	24 x 10/100/1000 Base-TX	24 x 1000Base-X (SFP)	24x1000Base-X (SFP) + 2x10Gig (XFP)	48 x 10/100/1000 Base-TX	48 x1000 Base-X
Switch Fabric (Int)	40 Gbit/s	80 Gbit/s	44 Gbit/s	24 Gbit/s	48 Gbit/s	48 Gbit/s	192 Gbit/s	96 Gbit/s	96 Gbit/s
Flash	64 MB	64 MB	64 MB	64 MB	64 MB	64 MB	64 MB	64 MB	64 MB
SDRAM	256 MB	256 MB	256 MB	256 MB	128MB	128 MB	256 MB	256 MB	256 MB
MAC address table	512k	512k	512k	512k	16k	512k	512k	16k	512k
L3 hosts (IPv4)	32k	16k	32k	32k	8k	32k	16k	8k	16k
L3 hosts (IPv6)	16k	8k	16k	16k	4k	16k	8k	4k	8k
L3 Routes (IPv4)	240k	512k	240k	240k	12k	240k	512k	12k	512k
L3 Routes (IPv6)	240k	512k	240k	240k	6k	240k	512k	6k	512k
L2 Multicast groups	1k	1k	1k	1k	1k	1k	1k	1k	1k
L3 Multicast (IPv4)	4k	4k	4k	4k	2k	4k	4k	2k	4k
L3 Multicast (IPv6)	1k	256	1k	1k	512	1k	256	512k	256
Filters Rules	4k	4k	4k	4k	4k	4k	4k	2k	256k
Meters	4k	4k	4k	4k	2k	4k	4k	2k	2k
Counters	4k	4k	4k	4k	2k	4k	4k	2k	2k

Note: * POE option is not yet available

MPLS	VPWS - L2 VPN over MPLS (Draft Martini)
	LER / LSR Support
	Label Distribution Protocol (LDP)
	Mapping between 802.1p and EXP Field of MPLS
	BGP/VPN - L3 VPN over MPLS (RFC 2547/4364)
	VPLS – Virtual LAN Services
Management	Resource Reservation Protocol-Traffic Engineering (RSVP-TE)
	Command Line Interface (CLI) via SSH, Telnet and Console
	Web Server with SSLv3
	SNMP v1/v2c/v3
	RMON grupos 1, 2, 3 and 9
	Configuration of ACLs with multiple comparisons and actions
	Network diagnosing tools for (telnet, traceroute and Ping)
	Cabling diagnostics tools
	Up to 2 firmwares flash, with upgrade via TFTP or HTTP/HTTPS
	4 Flash settings with upload and download via TFTP or HTTP / HTTPS
	Link OAM (EFM – IEEE 802.3ah)
	Link Layer Discovery Protocol (LLDP – IEEE 802.1AB)
	Static or dynamic IP address (DHCP / BOOTP)
	DHCP relay with option 82
SNMP filters for controlling access to Web, Telnet and SSH	
Security	IEEE 802.1x Port authentication with guest Vlan, restricted Vlan and Vlan assignment
	MAC addresses configuration limit per port and VLAN
	Local and Remote Syslog
	Authentication, authorization and accounting with RADIUS & TACACS +
	E-mail notification (SMTP)
	Mechanisms for protecting against attacks from Denial of Service (DoS)
	SNTP
VLAN	Tagging for up to 4096 simultaneous VIDs (IEEE 802.1Q)
	MAC-based, IP-Subnet based, Protocol-based (IEEE 802.1v)
	Q-in-Q double tagging
	Private VLAN
	Dynamic VLAN (GVRP)
Link Aggregation	32 logical groups, with up to 8 ports in each active group
	Static or dynamic way settings LACP (IEEE 802.3ad)
	Configuration criterion for load balancing .

Auto-negotiation	Speed, duplex mode, flow control and MDI/MDIX
	Backpressure in half duplex; PAUSE (IEEE 802.3x) in full duplex
	Classic Spanning Tree (IEEE 802.1D)
Flow Control	Rapid Spanning Tree (IEEE 802.1w)
	Per-VLAN Rapid Spanning Tree
	Multiple Spanning Tree (IEEE 802.1s)
	BPDU Guard, EAPsv1, Link flap detection, Loopback detection
Protection	8 queues per port
	TCI tagging (IEEE 802.1p)
	IP Precedence/TOS or DSCP/TOS
	Source/Destination IP or MAC
	TCP ports ou UDP ports
	Generic L2-L7 filter match
	Rate Shapping (Ingress and Egress), communications granularity of 64 Kbit/s per port and flow via definition of CIR and PIR
	Weighted Round Robin, Weighted Fair Queuing, Strict priority or combination of these techniques and algorithms for scheduling queues
	Dual WRED configurations, one for in-profile and one for out-of-profile
	QoS (marking, classification and prioritization)
Head of Line Blocking protection	
Up to 9Kb Jumbo Frame support	
IGMP (v1/v2/v3). Snooping Query functionality may be used	
Ageing global Layer 2 or by VLAN	
Additional Layer 2 Functionality	Layer 2 Protocol Tunneling
	Traffic Monitor per port and / or flow of packets
	Additional Layer 3 Functionality
RIP v1/v2, OSPF v2 and BGP v4	
Redundancy via VRRP	
PIM (SM, DM and SD)	
Proxy ARP	