Exaware

XDC10-54X

The Exaware XDC10-54X switch meets the high-performance, availability, and network-scaling requirements of enterprise and cloud data centers. The XDC10-54X provides full line-rate switching at Layer 2 or Layer 3 across 48 x 10GbE ports and 6 x 100GbE uplinks. The switch can be deployed either as a top-of-rack switch or as part of a 40GbE or 100GbE distributed spine, forming a non-blocking folded-Clos data center fabric. The switch is rack mountable in a standard 19-inch rack.

The XDC10-54X hardware provides the high availability features required for data center operation, including redundant, hot-swappable AC or -48 VDC PSUs, 4+1 redundant fan modules, and front-to-back or back-to-front airflow options. The XDC10-54X is an ideal top-of-rack switch for virtualized data centers with support for VXLAN and NVGRE tunneling functions in hardware. This open network switch is available with Exaware SONiC support.

KEY FEATURES AND BENEFITS

- 48 x SFP+ switch ports, supporting 10GbE (DAC, 10GBASE-SR/LR) or 1GbE (1000BASE-T/SX/LX).
- 6 x 100G QSFP28 switch ports, each supporting 100GbE (DAC, 100GBASE SR4/LR4) or 4 x 25GbE (DAC or fiber breakout cable).
- VXLAN and NVGRE tunneling support in hardware for network virtualization.
- Rack mountable in standard 19" racks.
- Supports hot/cold aisles with front-to-back and back-to-front airflow SKUs.
- All ports on front; PSUs, fan modules on rear.
- Hot-swappable, load sharing, redundant AC or -48 VDC PSUs.
- Hot-swappable 4+1 redundant fan modules.
- Management: Ethernet and console RJ-45 ports; USB storage port.
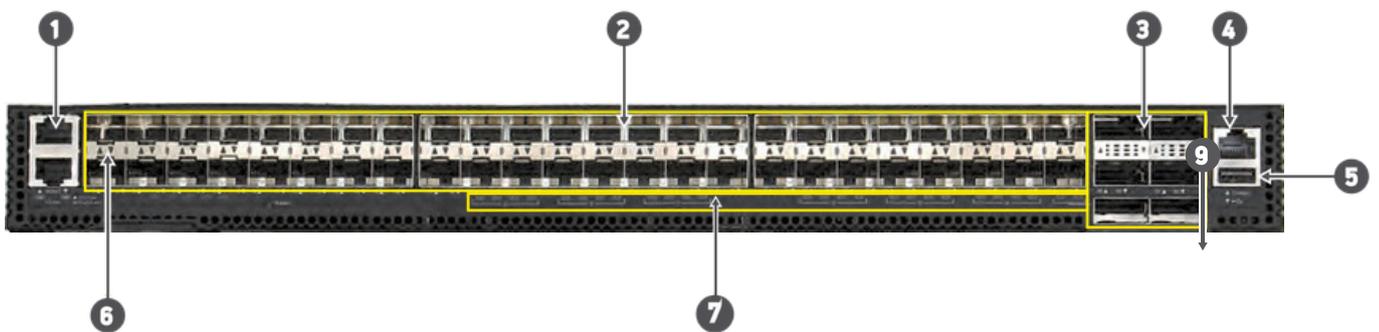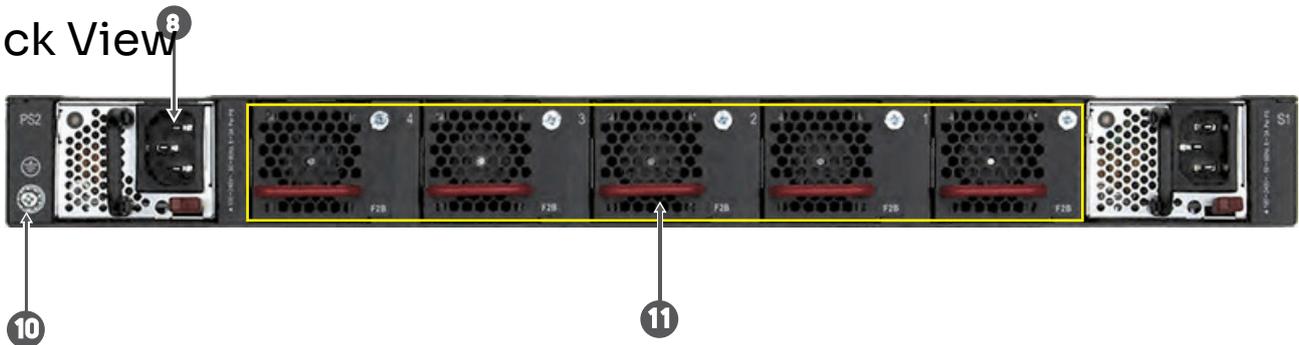- The switch is available with SONiC distribution with support by Exaware.

SONiC

Freedom of Choice

Greater Control

Rapid Innovation

SW options

onie

SONiC

Front View

back View

Description

1.	Management ports	7.	40/100 Breakout Mode LEDs
2.	48 x 10G SFP+ Ports	8.	PSU 2
3.	6 x 100G QSFP28 Ports	9.	PSU 1
4.	Console Port	10.	Grounding Point
5.	USB Storage Port	11.	Hot-swappable 4+1 Redundant Fans
6.	Port LED Indicators		

PORTS

- Switch Ports
  - 48 x SFP+ each supporting 10GbE or 1GbE 6 x QSFP28 each supporting 100GbE or 4 x 25GbE
  - Note: When a DAC cable is used in a topology, a link issue may be encountered if the CR4 Auto-Negotiation/Link Training does not turn on. This can be solved by manually enabling CR4 Auto Negotiation/Link Training.
  - Note: Due to a chip limitation, only two QSFP28 ports can support breakout modes at the same time. Ports 49 to 51 and 52 to 54 can only have one port in breakout mode. Currently, the default ports are 51 and 54, which can be changed according to user preference.
- Management Ports on Front Panel:
  - 1 x RJ-45 serial console
  - 1 x RJ-45 100/1000BASE-T management
  - 1 x USB Type
- A storage port Supported Transceivers and Cables:
  - 10GBASE-RJ45 10G-DAC/AOC Cable
  - 40GBASE-SR4/LR4 40G-DAC/AOC Cable
  - 100GBASE-SR4/CWDM4/LR4
  - 100G-DAC/AOC Cable
  - Note: More optics and detailed cabling information can be found at www.exaware.com

KEY COMPONENTS

- Switch Silicon: Broadcom BCM56771 Trident 3
- CPU Modules:

Intel® Atom® C3558 2.2GHz 4-Core x86 processor DDR4: 8GB x 2 SO-DIMM SPI Flash: 16 MB x 2 Storage: m.2 64GB MLC

PERFORMANCE

- Performance
- Switching Capacity: 1.08 Tbps full duplex
- Forwarding Rate: 964.28 Mpps
- Jumbo frames support up to 9K Bytes
- Packet Buffer Size: 32 MB integrated packet buffer
- Subject to NOS: MAC Address: 32 K min./288 K max.

VLAN IDs: 4 K Support 4 K ECMP group
IPv4: 16 K min./168 K max. host entries; 32 K LPM entries with TCAM-only mode
IPv6: 8 K min./100 K max. host entries; IPv6/64=16 K TCAM-only mode

PHYSICAL AND ENVIRONMENTAL

- Dimensions (WxDxH): 44.25 x 47.33 x 4.395 cm (17.42 x 18.63 x 1.73 in)
- Weight: 8.815 kg (19.43 lb), with two PSUs installed
- Fans: Hot-swappable 4+1 redundant fans
- Operating Temperature: 0°C to 40°C (32°F to 104°F)
- Storage Temperature: -40°C to 70°C (-40°F to 158°F)
- Operating Humidity: 5% to 95% non-condensing

www.exaware.com

LEDs

- 10G SFP+ Port LEDs: Link Speed, Link Status, Activity
- 100G QSFP28 Port LEDs: Link Status, Activity
- Ethernet Management Port LED: Link Status, Activity
- System LEDs: PSU1, PSU2, Diagnostic, Fans, Locator

POWER

- PSUs: 2 redundant, load-sharing, hot-swappable AC or -48 VDC
- Input Voltage: 100-240 VAC at 50-60 Hz. -48 to -72 VDC.
- Max Power: 356 W

REGULATORY

- Electromagnetic Compatibility:
  - CE Mark
  - EN55032
  - CISPR 32
  - AS/NZS
  - CISPR 32
  - EN55024
  - CISPR 24
  - CISPR 35
  - EN 61000-3-3
  - EN 61000-3-2
  - FCC 47
  - CFR Part 15b Class A
  - VCCI Class A
  - BSMI Class A
  - CNS 13438 CCC

SAFETY

EN60950, UL60950 EN62368, UL62368 CCC BSMI, CNS 14336-1

ENVIRONMENTAL

NEBS GR63-CORE (Pre-test)
WEEE Standards: The switches complied with the following WEEE standards: Waste Electrical and Electronic Equipment (WEEE Directive 2002/96/EC)
RoHS 2.0 Compliant Taiwan RoHS CNS 15663 Country of Origin: Taiwan (TAA Compliant)

WARRANTY

Please check www.exaware.com for the warranty terms in your country.

SOFTWARE

- Switch is loaded with Open Network Install Environment (ONIE) software installer
- Compatible with SONiC support by Exaware.

Layer 2

- DHCP Snooping
- IGMP Snooping
- LAG (LACP)
- LLDP
- MAC Aging
- MC-LAG
- MSTP
- Port Mirroring
- QinQ (802.1Q Tunneling)
- STP/PVST
- TPID Configuration
- VLAN Translation
- VLAN/VLAN Trunk

Layer 3

- BGP
- BGP Graceful Restart
- BGP Graceful Restart Helper
- BGP Multi-protocol
- BGP Unnumbered Links
- Critical Resource Monitoring
- ECMP
- EVPN/VxLAN
- VPN Multihoming
- IPv6
- IS-IS
- NAT
- OSPF
- Proxy ARP
- Static Anycast Gateway
- VRF
- VRRP
- VxLAN

Security Features

- COPP
- Ingress/Egress ACL Permit/Deny
- Port MAC Security
- RADIUS
- TACACS+

QoS

- Asymmetric PFC
- CoS
- Differentiated Services (DiffServ)
- DSCP
- ECN
- Egress Port Shaping (port, queue)
- Ingress ACL-based Mirroring (ERSPAN)
- PFC-WD
- PFC Watermark
- Port Rate Limiting
- Priority Flow Control (PFC)
- WRED

Management and Monitoring Features

- CLI/SSH
- DHCPv6 Relay

- Dynamic Port Breakout
- Everflow
- Fast Reload
- Kubernets
- Management VRF
- MTU Setting
- NTP
- Object Track for Port Interface
- OpenSSH/SCP/SFTP
- PINS
- Platform Monitoring
- Port Speed Setting
- RoCEv2
- Sensor Transceiver Monitoring
- sFlow
- SNMP/SNMPv2
- Telemetry Support
- Thermal Monitor
- Warm Reboot
- Zero Touch Provisioning (ZTP)

Standards Compliance

- RFC792 ICMP Specifications
- RFC1157 Simple Network Management Protocol (SNMP)
- RFC1213 MIB-II Specifications
- RFC1213 Management Information Base for Network Management of TCP/IP-based internets: MIB-II
- RFC1267 Border Gateway Protocol 3 (BGP-3)
- RFC1771 A Border Gateway Protocol 4 (BGP-4)
- RFC1772 Application of the Border Gateway Protocol in the Internet
- RFC1901 Introduction to Community-based SNMPv2
- RFC1902 Structure of Management Information for Version 2 of the Simple Network Management Protocol (SNMPv2)
- RFC1905 Protocol Operations for Version 2 of the Simple Network Management Protocol (SNMPv2)
- RFC1907 SNMP MIB Specifications
- RFC1965 AS Confederations for BGP
- RFC1966 BGP Specifications
- RFC1981 Path MTU Discovery for IP version 6
- RFC1997 BGP Communities Attribute
- RFC2011 IP MIB Specifications
- RFC2012 Management Information Base for the Transmission Control Protocol (TCP)
- RFC2013 SNMPv2 Management Information Base for the User Datagram Protocol using SMIv2
- RFC2068 HTTP Specifications
- RFC2101 IPv4 Address Behaviour Today
- RFC2138 RADIUS Specifications
- RFC2270 Using a Dedicated AS for Sites Homed to a Single Provider
- RFC2283 Multiprotocol Extensions for BGP-4
- RFC2328 OSPF Specifications
- RFC2370 OSPF Opaque LSA Option Specifications
- RFC2373 IP Version 6 Addressing Architecture
- RFC2374 An IPv6 Aggregately Global Unicast Address Format
- RFC4760 Multiprotocol Extensions for BGP-4
- RFC7348 Virtual eXtensible Local Area Network (VXLAN): A Framework for Overlaying Virtualized Layer 2 Networks over Layer 3 Networks
- IEEE802.1D Spanning Tree Protocol
- IEEE802.1p Priority tagging implementation idea
- IEEE802.1AB Link Layer Discovery Protocol
- IEEE802.1ad QinQ, VLAN Stacking
- IEEE802.3ad Link aggregation (LAG), bound mode 4 (LACP)

Base Model: XDC10-54X; Intel®Atom® C3558 processor 4-Core; 48-Port 10G SFP+ with 6x100G QSFP28 uplinks; ONIE Software Installer.

Model Number	PSU	Airflow	Region (Power Cord)
XDC10-54X-A-AC-F-US	Dual AC PSUs	Front-to-Back Airflow	N. America
XDC10-54X-A-AC-B-US	Dual AC PSUs	Back-to-Front Airflow	N. America
XDC10-54X-A-AC-F-EU	Dual AC PSUs	Front-to-Back Airflow	EU
XDC10-54X-A-AC-B-EU	Dual AC PSUs	Back-to-Front Airflow	EU
XDC10-54X-A-AC-F-UK	Dual AC PSUs	Front-to-Back Airflow	UK
XDC10-54X-A-AC-B-UK	Dual AC PSUs	Back-to-Front Airflow	UK
XDC10-54X-A-AC-F-JP	Dual AC PSUs	Front-to-Back Airflow	JP
XDC10-54X-A-AC-B-JP	Dual AC PSUs	Back-to-Front Airflow	JP
XDC10-54X-A-48V-F	Dual -48V DC PSUs	Front-to-Back Airflow	
XDC10-54X-A-48V-B	Dual -48V DC PSUs	Back-to-Front Airflow	
XDC10-54X-A-PSU-AC-F	400 W AC Power Supply	Front-to-Back Airflow	
XDC10-54X-A-PSU-AC-B	FRU 400 W AC Power Supply	Back-to-Front Airflow	
XDC10-54X-A-FAN-F	FRU Fan Module	Front-to-Back Airflow	
XDC10-54X-A-FAN-B	Fan Module	Back-to-Front Airflow	

Part Number	Description
XDC10-CNOS-1Y	SONiC support & maintenance - 1 year
XDC10-CNOS-3Y	SONiC support & maintenance - 3 years
XDC10-CNOS-5Y	SONiC support & maintenance - 5 years

For More Information

To find out more about Exaware Routing products and solutions, visit www.exaware.com

About Exaware Routing LTD. Exaware Routing LTD is providing end-to-end networking solutions for the data center, enterprise and telco/ISP networks - including HW, SW, management systems, support and professional services. Exaware Routing LTD delivers the software and systems that transform the way the world connects and serves customers and partners worldwide. Additional information can be found at www.exaware.com. To purchase Exaware Routing solutions, please contact your Exaware Routing LTD representatives through https://www.exaware.com/contact-us.