

Highlights

High Performance

Remove bottlenecks and future-proof the network with up to 714.3/357.1 Mpps forwarding rate and 960/480 Gbps throughput

Reliability

The DXS-3600 Series supports dual power supplies and load sharing for AC/DC power, as well as Data Center Bridging features for lossless Ethernet

Energy Saving

Intelligent, removable smart fans and front-to-back airflow unifies airflow direction in the data center and minimizes power consumption of the switch



DXS-3600 Series

Layer 3 Stackable 10G Managed Switches

Features

High Performance and Flexibility

- Two AC/DC hot-swappable power modules for 1+1 power redundancy and load sharing
- Three hot-swappable fan trays with front-toback airflow and N+1 cooling redundancy
- Up to 480G stacking bandwidth with four devices functioning together as a single unit

Data Center Features

- IEEE 802.1Qbb Priority-based Flow Control (PFC)
- IEEE 802.1Qaz Enhanced Transmission Selection (ETS)
- IEEE 802.1Qau Congestion Notification (QCN)

Advanced Features

- MPLS
- · OSPF/BGP/IS-IS
- ERPS (G.8032 v1/v2)
- Three Color Marker

Easy Management

- Web-based GUI, Command Line Interface (CLI)
- RADIUS/TACAS+
- · LLDP/LLDP-MED

OAM

- IEEE 802.3ah Ethernet link OAM
- IEEE 802.1ag
- ITU-T Y.1731

The D-Link DXS-3600 Series Layer 3 Stackable 10G Managed Switches are a set of new, compact, high-performance switches that feature very low latency wire speed 10G Ethernet switching and routing. The 1U height and front-to-back airflow make the DXS-3600 Series suitable for enterprise and campus aggregation network environments. The DXS-3600 Series switches have 8 or 24 fixed 10G SFP+ ports and can accommodate more ports with the addition of an expansion module. The expansion modules not only provide extra 10G SFP+ ports, but also increase flexibility by allowing 120G stacking, 40G uplinks, or low-cost 10GBASE-T connections for different applications.

Convenient Deployment

The DXS-3600 Series provides your network with high-performance 10G Ethernet switching capacities of up to 960 Gbps and forwarding rates of up to 714 Mpps. These switches feature hot-swappable power supplies and fan trays, which enable the switches to have redundant, high-availability architecture. The modular power design allows customers to use AC or DC power sources according to where the switch is deployed. When inserting two power modules, both power modules share the load and help to extend the lifetime of the other. The DXS-3600 Series also features a modular fan design; three fans can back up each other, providing 2+1 redundancy for the system. If a fan fails or the temperature rises, the smart fans will adjust their speed automatically.

Flexible Software

The DXS-3600 Series can be deployed using one of two different software images. The Standard Image (SI) features a wide range of Layer 2, VLAN, multicasting, Quality of Service (QoS), security, data center, and static routing functions. The Enhanced Image (EI) features comprehensive IPv4/v6 routing including RIP, VRRP, OSPF, BGP, and L3 multicasting features such as IGMP, MLD, PIM-DM, SM, SDM, SSM, and DVMRP. The Enhanced Image (EI) also supports L2/L3 MPLS VPN, which enables the DXS-3600 Series to be deployed as the core router of an enterprise environment, or as an aggregation switch in an MPLS environment.



Data Center Features

Data Center Bridging (DCB) is an essential set of enhancements to Ethernet for networking in data center environments. The DXS-3600 Series switches support several core components of Data Center Bridging (DCB) such as IEEE 802.1Qbb, IEEE 802.1Qaz, and IEEE 802.1Qau. IEEE 802.1Qbb (Priority-based Flow Control) provides flow control to ensure there is no data loss during network congestion. IEEE 802.1Qaz (Enhanced Transmission Selection) manages the allocation of bandwidth based on different traffic classes. IEEE 802.1Qau (Congestion Notification) provides congestion management for data flows within network domains to avoid congestion. The DXS-3600 Series switches also support cut-through switching, which reduces latency when transmitting data in a network.

Energy-Efficient

The DXS-3600 Series utilizes front-to-back airflow for increased cooling efficiency, allowing hot and cold isles to be built in the data center and unifying airflow direction when compared to a mix of back-to-front and side-to-side airflow. Modular power supplies provide the option to use AC or DC power inputs, allowing the most efficient choice for the environment to be chosen. The switches also feature built-in smart fans that monitor and detect temperature changes, adjusting the fan speed for maximum efficiency. At lower temperatures, the fans run at a lower speed, reducing both the power consumption and noise output of the switch.

Stacking with DXS-3600-EM-Stack (DXS-3600-32S only) and DXS-3600-EM-4QXS module (DXS-3600-32S & 16S)

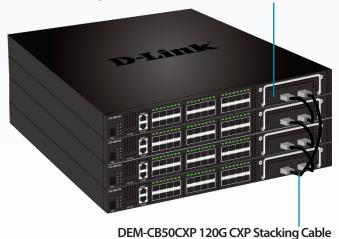
DXS-3600-32S with stacking module to build a physical stacking architecture that provides:

- Up to 96 10G SFP+ ports
- Up to 480G stacking bandwidth
- High redundancy and reliability

DXS-3600-32S or 16S with 40G QSFP+ expansion module to build a physical stacking architecture that provides:

- · Longer distance stacking by connecting 40G transceivers and fiber cables
- Up to 160G stacking bandwidth
- High redundancy and reliability

Stacking with DXS-3600-EM-Stack module



DXS-3600-EM-4QXS, the 40G QSFP+ module



DEM-CB100QXS/300QXS, the 40G QSFP+ to QSFP+ DAC

Technical Specifications		
Model	• DXS-3600-32S	• DXS-3600-16S
General		
Interfaces	• 24 fixed SFP+ 10G ports with one expansion slot	8 fixed SFP+ 10G ports with one expansion slot
Console Port	• RJ-45 console port for a	out-of-band management
Management Port	• 10/100/1000 BASE-T RJ-45 Ethernet	for out-of-band remote management
SD Card Slot	• 1	slot
Performance		
Switching Capacity	• 960 Gbps	• 480 Gbps
Max. Forwarding Rate	• 714.28 Mpps	• 357.14 Mpps
Packet Buffer Memory	• 9 MB	
MAC Address Table	• 1	28K



Physical		
• 100 to 240 V AC, 50/60 Hz		
Maximum Power Consumption	• 116.8 W (without expansion module) • 160.4 W (with DXS-3600-EM-4QXS)	• 74.3 W (without expansion module) • 105.3 W (with DXS-3600-EM-4QXS)
Standby Power Consumption	• 88.2 W	• 69.9 W
Heat Dissipation (Max.)	 398.29 BTU/hr (without expansion module) 546.96 BTU/hr (with DXS-3600-EM-4QXS) 	 253.36 BTU/hr (without expansion module) 359.07 BTU/hr (with DXS-3600-EM-4QXS)
Heat Dissipation (Standby)	• 300.76 BTU/hr	• 238.36 BTU/hr
Dimensions (W x L x H)	• 440 x 506 x 44 m	m (17.32 x 19.92 x 1.73 in)
Weight	• 10.71 kg (23.6 lbs)	• 9.89 kg (21.8 lbs)
Operating Temperature	• 0 to 45	°C (32 to 113 °F)
Storage Temperature	• -40 to 70) °C (-40 to 158 °F)
Operating Humidity	• 0%	6 to 95% RH
Storage Humidity	• 0%	6 to 95% RH
Certifications		
Safety	• CB, cUL, LVD	
EMI/EMC	• FCC, CE	E, C-Tick, IC, VCCI
Standard Image (SI) Fe	atures	
Stackability	DXS-3600-32S with: DXS-3600-EM-Stack expansion module: 480G stacking bandwidth DXS-3600-EM-4QXS expansion module: 160G stacking bandwidth DXS-3600-16S with: DXS-3600-EM-4QXS expansion module: 160G stacking bandwidth	 Virtual Stacking/Clustering of up to 32 units Supports D-Link Single IP Management Physical Stacking Up to 480G stacking bandwidth Up to 4 switches in a stack Ring/chain topology support
L2 Features	MAC Address Table 128K entries Flow Control 802.3x Flow Control when using full-duplex Back Pressure when using half-duplex HOL Blocking Prevention Spanning Tree Protocol 802.1D STP 802.1w RSTP 802.1s MSTP Supports Root Restriction Jumbo Frame Up to 12,000 bytes Multi-Chassis Link Aggregation Group (MLAG)	 802.1AX Link Aggregation Max. 32 groups per device, 12 ports per group ERPS (Ethernet Ring Protection Switching) Port Mirroring Supports One-to-One, Many-to-One Supports Mirroring for Tx/Rx/Both Supports 4 mirroring groups Flow Mirroring Supports One-to-One, Many-to-One Supports Mirroring for Rx Supports 4 mirroring groups RSPAN mirroring Loopback Detection L2 Protocol Tunneling
L2 Multicast Features	L2 Multicast Filtering Forwards all groups Forwards all unregistered groups Filters all unregistered groups MLD Snooping MLD v1/v2 Snooping Supports 4K groups Host-based MLD Snooping Fast Leave	 IGMP Snooping IGMP v1/v2/v3 Snooping Supports 4K IGMP groups Supports 1K static multicast addresses IGMP per VLAN Host-based IGMP Snooping Fast Leave PIM Snooping



L3 Features	ARP 512 Static ARP Supports Gratuitous ARP	IP InterfaceSupports 256 interfacesLoopback InterfaceIPv6 Neighbor Discovery (ND)
L3 Routing	Static Routing Max. 1K IPv4 entries Max. 512 IPv6 entries Supports secondary route Supports Equal Cost/Weighted Cost multi-path route	Default Routing
VLAN	802.1Q 802.1v Protocol-based VLAN Double VLAN (Q-in-Q) Port-based Q-in-Q Selective Q-in-Q Port-based VLAN MAC-based VLAN Subnet-based VLAN Private VLAN	VLAN Group Max. 4K static VLAN groups Max. 4094 VIDs GVRP Up to 4K dynamic VLANs VLAN Translation ISM VLAN (Multicast VLAN) Private VLAN VLAN VLAN Trunking
AAA	802.1X Authentication Supports port-based access control Supports host-based access control Dynamic VLAN assignment Identity-driven policy (VLAN/ACL/QoS) assignment Web-based Access Control (WAC) Supports port-based access control Supports host-based access control Dynamic VLAN Assignment Identity-driven Policy (VLAN/ACL/QoS) Assignment	 MAC-based Access Control (MAC) Supports port-based access control Supports host-based access control Dynamic VLAN Assignment Identity-driven Policy (VLAN/ACL/QoS) Assignment Guest VLAN Compound Authentication Microsoft NAP Supports 802.1X NAP Supports DHCP NAP RADIUS and TACACS+ authentication Authentication Database Failover Trusted Host
QoS (Quality of Service)	802.1p Quality of Service (QoS) 8 queues per port Queue handling Strict Weighted Round Robin (WRR) Strict + WRR Round Robin (RR) Weighted Deficit Round Robin (WDRR) QoS based on: 802.1p Priority Queues DSCP IP address MAC address VLAN IPv6 Traffic Class IPv6 Flow Label TCP/UDP port	Bandwidth Control Port-based (ingress/egress, min. granularity 8 Kb/s) Flow-based (ingress/egress, min. granularity 8 Kb/s) Per queue bandwidth control (min. granularity 8 Kb/s) Three Color Marker trTCM srTCM Congestion Control WRED Support for following actions: Remark 802.1 p priority tag Remark TOS/DSCP tag Bandwidth Control Committed Information Rate (CIR)
Access Control List (ACL)	ACL based on: 802.1p priority VLAN MAC address EtherType IP address DSCP Protocol type TCP/UDP port number IPv6 Traffic Class IPv6 Flow Label	 Max. ACL entries: 1792 ingress ACL rules 1K egress ACL rules 3KVLAN Access Maps Time-based ACL



Security	Port Security Supports up to 12K MAC addresses per port/system Broadcast/Multicast/Unicast Storm Control D-Link Safeguard Engine DHCP Server Screening IP-MAC-Port Binding (IMPB) Dynamic ARP Inspection IP Source Guard DHCP Snooping IPv6 Snooping DHCPv6 Guard IPv6 Route Advertisement (RA) Guard	 IPv6 ND Inspection ARP Spoofing Prevention Max. 64 entries Traffic Segmentation SSL Supports v3 Supports IPv4/v6 access Supports TLS 1.2 SSH Supports IPv4/v6 access Bupports IPv4/v6 access Bupports IPv4/v6 access BPDU Attack Protection
Management	Web-based GUI CLI Telnet Server/Client TFTP Client FTP Client FTP Client SNMP Supports v1/v2c/v3 SNMP Trap	DOS Attack Prevention DNS Resolver CPU Monitoring MTU Setting Traceroute & Ping LLDP/LLDP-MED DNS Relay SMTP DHCP Auto Configuration SNTP
	 System Log DHCP Client DHCP Server DHCP Relay options 12, 60, 61, 82 Multiple Image Multiple Configuration Flash File System 	RCP (Remote Copy Protocol) RMONv1 RMONv2 Trusted Host Password encryption Debug command IPv6 Stateless Address Auto-configuration (SLAAC) D-Link Discover Protocol (DDP)
Enhanced Image (EI) Additional Features	
L3 Multicasting	Multicast Table Size: 2K IGMP v1, v2c, v3 PIM-SM IPv4/IPv6 PIM-DM Multicast Source Discovery Protocol (MSDP)	PIM-Sparse-Dense ModePIM-SSMDVMRP v3MLD v1/v2
MPLS	Label Distribution Protocol (LDP) PHP (Penultimate hop popping) Virtual Private Wire Service (VPWS) Virtual Private LAN Service (VPLS)	 BGP/MPLS VPN Multiprotocol extensions for BGP4 Virtual Routing Forwarding (VRF) LSP MPLS Ping/Traceroute VCCV Ping/Traceroute
L3 Features	IPv6 Tunneling Static ISATAP GRE 6to4	• VRRP v2/v3
L3 VPN	MPLS/BGP L3 VPN MP-BGP	VRF aware application



L3 Routing

- Supports 16K hardware routing entries shared by IPv4/IPv6
 - Max. 16K IPv4 entries
 - Max. 8K IPv6 entries
 - Supports 8K hardware L3 forwarding entries shared by IPv4/IPv6
 - Max. 8K IPv4 entries
 - · Max. 4K IPv6 entries

 - RIP v1/v2
 - RIPng

 - OSPF v2
 - OSPF v3
 - OSPF Passive Interface
 - Stub/NSSA Area
 - OSPF Equal Cost Route
 - BGP v4/v4+
 - IS-IS
 - IS-ISV6

- Route Redistribution
- Default Route
- Static Route
- OSPF v2/v3
- BGP
- IP Directed Broadcast
- Policy Based Route
- Bidirectional Forwarding Detection (BFD)
- Supports OSPF
- Supports VRRP
- VRF Lite
- IPv4 Static Route
- RIPv1/v2
- OSPFv2/v3
- BGPv4
- IPv4 PIM-DM/SM/SSM

MIB & RFC Standards

- RFC1213 MIB II
- RFC1907 SNMP v2 MIB
- RFC5519 IGMP v3 MIB
- RFC1724 RIP v2 MIB
- RFC2021 RMONv2 MIB
- RFC1643, RFC2358, RFC2665 Ether-like MIB
- RFC4836 802.3 MAU MIB
- RFC4363 802.1p MIB
- RFC2618 RADIUS Authentication Client MIB
- RFC4292 IP Forwarding Table MIB
- RFC2932 IPv4 Multicast Routing MIB
- RFC2934 PIM MIB for IPv4
- RFC2620 RADIUS Accounting Client MIB
- RFC2925 Traceroute MIB
- RFC2925 Ping MIB
- RFC1850 OSPF MIB
- RFC1112, RFC2236, RFC3376, RFC4541 IGMP Snooping
- RFC4363 802.1v
- RFC2338 VRRP
- RFC1058, RFC1388, RFC1723, RFC2453, RFC2080 RIP
- RFC1370 Applicability Statement for OSPF
- RFC1765 OSPF Database Overflow
- RFC2328 OSPF v2
- RFC2740 OSPF for IPv6
- RFC3101 OSPF Not-So-Stubby Area (NSSA) option; makes RFC1587 obsolete
- RFC2328 makes RFC2178 obsolete
- RFC2178 makes RFC1583 obsolete
- RFC1771, RFC1997, RFC2439, RFC2796, RFC2842, RFC2918 BGP
- RFC3973 PIM-DM
- RFC5059 PIM-SM
- RFC3569, RFC4601, RFC4608, RFC4607, RFC4604 PIM SSM
- RFC3376 IGMP
- RFC2475 Priority Queue Mapping
- RFC2475, RFC2598 Class of Service (CoS)

- RFC2597, RFC2598 QoS Flow Actions
- RFC2697, RFC2698 Three Color Marker, RFC2093, RFC2904, RFC2095, RFC2906 AAA
- RFC1321, RFC2144, RFC2313, RFC2420, RFC2841, RFC3394 Encryption
- RFC2289 One-Time
- RFC3580 802.1X
- RFC2866 RADIUS Accounting
- RFC2138, RFC2139, RFC2865, RFC2618 RADIUS Author. for Management Access
- RFC1492 TACACS+ Auth. for Management Access
- RFC2068, RFC2616 Web-based GUI
- RFC854 Telnet Server
- RFC783, RFC1350 TFTP Client
- RFC1157, RFC1901, RFC1908, RFC2570, RFC2574, RFC2575, RFC3411-17 SNMP
- RFC3164 System Log
- RFC2819 RMON v1
- RFC951, RFC1542, RFC2131, RFC3046 BootP/DHCP Client
- RFC1769 Time Setting
- RFC2131 DHCP Server
- RFC1191 MTU Setting
- RFC1065, RFC1066, RFC1155, RFC1156, RFC2578 MIB Structure
- RFC1215 MIB Traps Convention
- RFC4188 Bridge MIB
- RFC1157, RFC2571-2576, RFC3411-3415, RFC3418 SNMP MIB
- RFC1901-1908,RFC1442, RFC2578 SNMP v2 MIB
- RFC2737 Entity MIB
- RFC768 UDP
- RFC791 IP
- RFC792 ICMP
- RFC793 TCP
- RFC826 ARP
- RFC1338, RFC1519 CIDR
- RFC2716, RFC3748 EAP
- RFC2571, RFC2572, RFC2573, RFC2574 SNMP



Part Number	Description
DXS-3600-32S/SI	• 24 fixed SFP+ ports with one expansion slot and Standard Image, one AC power supply, and three fan trays (front-to-back airflow) included
DXS-3600-16S/SI	8 fixed SFP+ ports with one expansion slot and Standard Image, one AC power supply, and three fan trays (front-to-back airflow) included
DXS-3600-32S/EI	24 fixed SFP+ ports with one expansion slot and Enhanced Image, one AC power supply, and three fan trays (front-to-back airflow included
DXS-3600-16S/EI	8 fixed SFP+ ports with one expansion slot and Enhanced Image, one AC power supply, and three fan trays (front-to-back airflow) included
DXS-3600-32S-SE-LIC	DXS-3600-325 Standard Image to Enhanced Image License
DXS-3600-16S-SE-LIC	DXS-3600-16S Standard Image to Enhanced Image License
DXS-3600-EM-4XT	• 4 x 10GBASE-T expansion module
DXS-3600-EM-8T	8 x 10/100/1000BASE-T expansion module
DXS-3600-EM-4QXS	• 4 x 40G QSFP+ expansion module
DXS-3600-EM-8XS	• 8 x 10G SFP+ expansion module
DXS-3600-EM-Stack	• 2 x 120G CXP physical stacking module
DXS-PWR300AC	300 W AC modular power supply with front-to-back airflow
DXS-PWR300DC	300 W DC modular power supply with front-to-back airflow
DXS-3600-FAN-FB	Fan tray with front-to-back airflow
Optional Managemen	t Software
DV-700-N25-LIC	• D-View 7 - 25 Node License
DV-700-N50-LIC	• D-View 7 - 50 Node License
DV-700-N100-LIC	• D-View 7 - 100 Node License
DV-700-N250-LIC	• D-View 7 - 250 Node License
DV-700-N500-LIC	• D-View 7 - 500 Node License
DV-700-N1000-LIC	• D-View 7 - 1000 Node License
DV-700-P5-LIC	• D-View 7 - 5 Probe License
DV-700-P10-LIC	• D-View 7 - 10 Probe License
DV-700-P25-LIC	• D-View 7 - 25 Probe License
DV-700-P50-LIC	• D-View 7 - 50 Probe License
	D-View 7 - 100 Probe License



Optional 10G SFP+ Transceivers	
DEM-431XT	10GBASE-SR SFP+ transceiver (w/o DDM), 80 m: OM1 & OM2 MMF, 300 m: OM3 MMF
DEM-431XT-DD	• 10GBASE-SR SFP+ transceiver (with DDM), 80 m: OM1 & OM2 MMF, 300 m: OM3 MMF
DEM-432XT	• 10GBASE-LR SFP+ transceiver (w/o DDM), 10 km
DEM-432XT-DD	• 10GBASE-LR SFP+ transceiver (with DDM), 10 km
DEM-433XT	• 10GBASE-ER SFP+ transceiver (w/o DDM), 40 km
DEM-433XT-DD	• 10GBASE-ER SFP+ transceiver (with DDM), 40 km
DEM-434XT	• 10GBASE-ZR SFP+ transceiver (w/o DDM), 80 km
DEM-435XT	• 10GBASE-LRM SFP+ transceiver (w/o DDM), 220 m: OM1 & OM2 MMF, 300 m: OM3 MMF
DEM-435XT-DD	• 10GBASE-LRM SFP+ transceiver (with DDM), 220 m: OM1 & OM2 MMF, 300 m: OM3 MMF
DEM-436XT-BXU	• 10GBASE-LR BiDi SFP+ transceiver (w/o DDM) 20 km, Tx: 1270 nm, Rx: 1330 nm
DEM-436XT-BXD	• 10GBASE-LR BiDi SFP+ transceiver (w/o DDM) 20 km, Tx: 1330 nm, Rx: 1270 nm
Optional 1G SFP Transc	reivers
DEM-310GT	• 1000BASE-LX SFP transceiver, single-mode fiber, 10 km, 3.3 V operating voltage
DEM-311GT	• 1000BASE-SX SFP transceiver, multi-mode fiber, 550 m, 3.3 V operating voltage
DEM-312GT2	• 1000BASE-SX SFP transceiver multi-mode fiber, 2 km, 3.3 V operating voltage
DEM-314GT	• 1000BASE-LHX SFP transceiver, single-mode fiber, 50 km, 3.3 V operating voltage
DEM-315GT	• 1000BASE-ZX SFP transceiver, single-mode fiber, 80 km, 3.3 V operating voltage
DEM-330T	• 1000BASE-BX WDM SFP transceiver, single-mode fiber, 10 km, 3.3 V operating voltage, Tx: 1550 nm, Rx: 1310 nm
DEM-330R	• 1000BASE-BX WDM SFP transceiver, single-mode fiber, 10 km, 3.3 V operating voltage, Tx: 1310 nm, Rx: 1550 nm
DEM-331T	• 1000BASE-BX WDM SFP transceiver, single-mode fiber, 40 km, 3.3 V operating voltage, Tx:1550 nm, Rx: 1310 nm
DEM-331R	• 1000BASE-BX WDM SFP transceiver single-mode fiber, 40 km, 3.3 V operating voltage, Tx: 1310 nm, Rx: 1550 nm
DGS-712	• 1000BASE-TX SFP transceiver
Optional 40G QSFP+ Tr	ansceivers
DEM-QX01Q-SR4	40GBASE-SR4 transceiver, multi-mode, OM3: 100 m/OM4: 150 m
DEM-QX10Q-LR4	40GBASE-SR4 transceiver, single-mode, 10 km
Optional 10G SFP+ Dire	ect Attach Cables
DEM-CB100S	• 10G SFP+ to SFP+ 1 m Direct Attach Cable
DEM-CB300S	• 10G SFP+ to SFP+ 3 m Direct Attach Cable
DEM-CB700S	• 10G SFP+ to SFP+ 7 m Direct Attach Cable
DEM-CB100QXS	• 40G QSFP+ to QSFP+ 1 m Direct Attach Cable

DEM-CB300QXS	• 40G QSFP+ to QSFP+ 3 m Direct Attach Cable
DEM-CB100QXS-4XS	• 40G QSFP+ to 4x10G SFP+ 1 m Direct Attached Cable
Optional 120G CXP Direct Attach Cables	
DEM-CB50CXP	CXP to CXP 50 cm Stacking Cable
10G Ethernet Adapter	
DXE-810S	Single Port 10G SFP+ PCI Express Adapter
DXE-810T	Single Port 10GBASE-T RJ-45 PCI Express Adapter
DXE-820T	Dual Port 10GBASE-T RJ-45 PCI Express Adapter

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