



Cisco

C1-C6832-X-LE

Datasheet



Product Overview

- The Cisco Catalyst 6840-X Series is a 2RU fixed backbone switch designed for next-generation campus and enterprise networks.
- Perfect for SMBs, universities, and distributed branches, the 6840-X meets growing user numbers and bandwidth demands efficiently.
- It features up to 32 x 10G SFP/SFP+ ports, full Layer 3 support, and robust forwarding with hardware-based architecture.
- Advanced features include MPLS, rich IPv4/IPv6 routing, and high-density table support for complex deployments.
- Unified operations and Cisco IOS architecture ensure easy migration, high reliability, and a familiar interface for IT teams.
- Ideal for modern networks, the 6840-X ensures scalability, reliability, and investment protection as digital workloads increase.

Product Highlights

- **Flexible Port Density:** Offers 16, 24, 32, or 40 10G SFP/SFP+ ports, with two models supporting 2x 40G uplink QSFP ports for scalable design.
- **Exceptional Performance:** Up to 960Gbps switching capacity, expandable to 1.92Tbps in VSS mode for demanding enterprise tasks.
- **Comprehensive Security & Virtualization:** Cisco TrustSec®, MACsec, CoPP, ISE, and full MPLS/VPLS segment users securely and efficiently.
- **Zero-Touch, High Availability:** Features like Cisco Instant Access and VSS minimize downtime and simplify management for large or distributed sites.

Detailed Features



C1-C6832-X-LE

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Component	Specification
Subtype	10 Gigabit Ethernet
Total Ports	32 x 1 Gigabit SFP / 10 Gigabit SFP+
Chassis Size	2U rack-mountable
Layer	L3 managed
Backbone Architecture	Fixed backbone switching



Massive Switching Capacity

With support for up to 960Gbps switching throughput and up to 1.92Tbps using VSS technology, the C1-C6832-X-LE delivers performance to reliably meet enterprise backbone and high-bandwidth aggregation needs. Its robust architecture eliminates traffic bottlenecks and supports demanding applications and large-scale environments.

Advanced Security Architecture

Cisco TrustSec® integration ensures network-wide 802.1AE MACsec encryption and role-based access controls. Control Plane Policing (CoPP) protects against DoS attacks. Coupled with Cisco ISE, administrators can enforce policies for end-to-end enterprise security and compliance requirements.

Comprehensive Virtualization Support

Integrated L2/L3 VPN, full MPLS, EVN, and VRF-aware NAT enable fine-grained network segmentation. GRE tunneling and VPLS empower organizations to extend networks securely and flexibly, meeting diverse multi-tenant, QoS, and policy isolation needs.

Enhanced Application Awareness

Flexible and Sampled NetFlow provides rich traffic visibility and real-time monitoring. Hierarchical QoS technology ensures granular prioritization for critical applications, improving performance and user experience across varied deployments.

Smart Operations for Simplified Management

Cisco Catalyst Instant Access allows downstream switches to function like remote line cards, streamlining architecture and deployment. Smart Install Director supports zero-touch deployment for rapid provisioning at scale, reducing administrative overhead in distributed environments.

High Availability with Virtual Switching System

By combining two Catalyst 6840-X switches into a VSS, organizations achieve hitless failover, centralized management, and eliminate First Hop Redundancy Protocols. Spanning Tree Protocol reliance is also removed, ensuring seamless recovery from link failures and maximizing uptime.

Extensive L2/L3 Services Suite

The switch delivers a full array of network protocols STP support, NAT, VLAN, ACL, VRF-Lite, multicast routing and tunneling to give advanced control for campus, core and edge networking needs, ensuring flexible architecture design possibilities.

Scalable Investment Protection

With 3000+ software features, proven OS stability, and compatibility with the broader Cisco Catalyst family, C1-C6832-X-LE secures customer investments, enabling smooth progression as network demands and technologies evolve.

Technical Specifications

Product Specifications

Feature	Value
Device Type	Switch - 32 ports - L3 - managed
Enclosure Type	Desktop, rack-mountable 2U
Subtype	10 Gigabit Ethernet
Ports	32 x 1 Gigabit SFP/ 10 Gigabit SFP+
Forwarding Performance	up to 120 Mpps
Switching Capacity (Full Duplex)	up to 160 Mbps
IPv4 Routing	up to 120 Mpps
IPv6 Routing	up to 60 Mpps
Layer 2 Bridging	up to 120 Mpps
IPv4 Routes	256000
IPv6 Routes	128000
NetFlow Entries	1000000



Feature	Value
IPv4 Routes (Multicast)	128000
IPv6 Routes (Multicast)	64000
Virtual Interfaces (VLANs)	4094
Domains	16000
ACL Entries	64000
Logical Interfaces	128000
MAC Address Table Size	128K entries
Jumbo Frame Support	9216 bytes
Routing Protocol	IGMPv2, IGMP, PIM-SM, PIM-DM, IGMPv3, GRE, MSDP, MLDv2, MLD, MPLS, PIM-SMv6, PIM-DMv6
Remote Management Protocol	RMON, SMON
Features	NAT support, VLAN support, traffic shaping, DoS attack prevention, IPv6 support, Class-Based Weighted Fair Queuing (CBWFQ), Weighted Random Early Detection (WRED), PIM snooping, Spanning Tree Protocol (STP) support, tunneling, Access Control List (ACL) support, Quality of Service (QoS), Virtual Route Forwarding-Lite (VRF-Lite), reset button, Unicast Reverse Path Forwarding (URPF), IPv4 support, Deficit Weighted Round Robin (DWRR), Shaped Round Robin (SRR), Port Security, Remote Switch Port Analyzer (RSPAN), NetFlow, Management Information Base (MIB), Flexible NetFlow (FNF), Multicast Source Discovery Protocol (MSDP), 802.1x authentication, DiffServ Code Point (DSCP) support, MACsec support, Virtual Private LAN Service (VPLS), Control plane protection (CoPP), Label Distribution Protocol (LDP), Location ID Separation Protocol (LISP), Instant Access (IA), Virtual Switching System (VSS)
Compliant Standards	IEEE 802.1x, IEEE 802.1ae
RAM	4 GB
Interfaces	32 x 10GBase-X SFP+ 1 x management (LAN) RJ-45 1 x serial (console) RJ-45 1 x USB Type A 1 x console (mini-USB) Type B 1 x management SFP
Power Device	Internal power supply - hot-plug
Installed Qty	0 (installed) / 2 (max)
Power Redundancy	Optional
Power Redundancy Scheme	1+1 (with optional power supply)



Feature	Value
Compliant Standards	CISPR 22 Class A, EN55024, EN55022 Class A, EN50082-1, EN 61000-6-1, UL 60950-1 Second Edition, FCC Part 15 A, AS/NZS 3548 Class A, AS/NZS 60950, EN 60950-1 Second Edition, IEC 60950-1 Second Edition, GR-1089-CORE, CAN/CSA C22.2 No. 60950, VCCI Class A, ETS 300 386, ETSI 300 019
Software Included	Cisco IOS Advanced Enterprise Services, Cisco IOS IP Services
OS Required	Cisco IOS 15.2(2)SY
Width	17.4 in
Depth	21.5 in
Height	3.5 in
Weight	33.95 lbs
Min Operating Temperature	32 °F
Max Operating Temperature	104 °F
Humidity Range Operating	5 - 90% (non-condensing)
Min Storage Temperature	-4 °F
Max Storage Temperature	149 °F
Humidity Range Storage	5 - 90% (non-condensing)

Product Comparison

Feature	C1-C6832-X-LE	C1-N3K-C3172PQ	C9300-24S-A
Port Type	32 x 1GE/10GE SFP+	48 x 1GE SFP + 6 x 40GE QSFP+	24 x GE SFP
Switching Capacity	960 Gbps (1.92 Tbps VSS)	1.2 Tbps	128 Gbps
Forwarding Rate	120 Mpps	900 Mpps	95.23 Mpps
Layer 3 Routing	Yes	Yes	Yes
Stacking/ Virtual System	VSS Supported	NX-OS Virtualization	StackWise-480
Redundant Power	1+1 Hot-Swap Supported	Yes	Yes



Feature	C1-C6832-X-LE	C1-N3K-C3172PQ	C9300-24S-A
Advanced Security (MACsec, TrustSec)	Yes	No	Yes
Size (RU)	2U	1U	1U

Accessories

Category	Accessories
Included Accessories	- Power Adapter - Mounting Bracket - Console Cable
Optional Accessories	- SFP Transceiver - 40G QSFP Module - Spare Power Supply



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References

[1] Cisco. (2016). Cisco Catalyst 6840-X Series Switches Data Sheet. Retrieved from <https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-6840-x-switch/datasheet-c78-734470.html>