



Cisco

C1-C6816-X-LE

Datasheet

Product Overview

- Cisco Catalyst 6840-X Series is an advanced backbone switch line built for scalable campus and enterprise networks.
- Designed to address the demands of modern network growth, it is suitable for data centers, campus cores, and distributed environments.
- Key hardware includes up to 40×10G SFP/SFP+ ports per chassis, support for dual 40G uplinks, and table sizes for up to 256,000 FIB entries.
- Distinctive features like full MPLS/VPLS support, advanced multicast, and application visibility set it apart from traditional switches.
- Simplified deployment with integrated 1+1 power redundancy, modular fans, and VSS support reduces potential downtime and ensures continuity.
- The Catalyst 6840-X empowers users to stay efficient, protected, and ready for tomorrow’s technology challenges with proven and robust Cisco architecture.

Product Highlights

- **Flexible Port Configuration:** The device offers four chassis models, ranging from fixed 16x10G up to 40x10G SFP/SFP+, meeting diverse capacity needs.
- **High Scalability:** Supports up to 960Gbps switching capacity, with the ability to double to 1.92Tbps using VSS technology for future growth.
- **Advanced Security Features:** Cisco TrustSec, MACsec encryption, and ISE integration provide enterprise-grade data protection and robust security policies.
- **Integrated Virtualization:** Full support for MPLS, VPLS, L2/L3 VPNs, and VRF-aware applications enables secure traffic segmentation within one unified platform.

Detailed Features



C1-C6816-X-LE

 [Quote](#) | [Help](#)

Component	Specification
Ethernet Ports	16 × 1G SFP/10G SFP+
Switching Capacity	Up to 960Gbps (1.92Tbps with VSS)
Forwarding Rate	Up to 60 Mpps
Form Factor	2RU, rack-mountable
Redundancy	1+1 Power Supply, Removable Fan Tray



Highly Scalable Architecture

The Cisco Catalyst 6840-X Series delivers up to 960Gbps switching, scalable to 1.92Tbps when deployed in VSS mode. Its design enables support for the ever-increasing traffic demands of modern enterprises, ensuring investment protection with significant room for future expansion. This platform flexibility accommodates evolving requirements and delivers consistent high-speed data forwarding for critical infrastructure.

Comprehensive Security Framework

With features like Cisco TrustSec, IEEE 802.1AE MACsec encryption, role-based ACLs, and tight integration with Cisco ISE, security is built in at every layer. The platform also supports Control Plane Policing (CoPP) to mitigate Denial of Service (DoS) risks. These robust measures combine to safeguard enterprise data, devices, and users from internal and external threats.

Versatile Virtualization Capabilities

Layer 2/Layer 3 VPNs, full MPLS, EVN, and VPLS support provide deep network segmentation for diverse departments and services. GRE for IPv4/IPv6, VRF-aware NAT and NetFlow are also integrated, enabling customized security, isolation, and traffic engineering. This approach ensures tailored network services to multiple user groups on a unified architecture.

Advanced Application Visibility

Support for Flexible and Sampled NetFlow allows real-time monitoring of application flows. Hierarchical QoS capabilities prioritize critical business applications, enabling granular usage control and optimized resource allocation. Enhanced network visibility supports better capacity planning and ensures superior user experiences, even for demanding workloads.

Zero-Touch Smart Operations

Cisco Catalyst Instant Access and Smart Install Director empower zero-touch deployment, simplifying the onboarding of new access switches and reducing manual configuration errors. Remote line card integration extends core management across distributed sites, enhancing operational agility and reducing deployment cycles for new locations.

High Availability and Business Continuity

By supporting Virtual Switching System (VSS), the 6840-X provides true switch redundancy with a single management interface. Link failure restoration does not rely on traditional Spanning Tree, minimizing downtime. This delivers continuous network availability crucial for organizations relying on mission-critical applications and real-time connectivity.

Proven Cisco Operating System

Built on the time-tested Cisco Catalyst 6500 Supervisor Engine 2T architecture, the switch leverages more than 15 years of feature maturity and operating system reliability. This platform stability translates to predictable performance, reduced learning curves, and a smoother integration for IT teams familiar with Cisco solutions.

Energy-Efficient and Robust Design

The chassis provides hot-swappable, redundant power and a removable fan tray with four redundant fans, supporting seamless hardware maintenance. Its design is optimized for low power consumption and high cooling efficiency, ensuring long-term sustainability in data center and campus environments where reliability and energy savings matter.

Technical Specifications

Product Specifications

Feature	Value
Device Type	Switch - 16 ports - L3 - managed
Enclosure Type	Desktop, rack-mountable 2U
Subtype	10 Gigabit Ethernet
Ports	16 x 1 Gigabit SFP/ 10 Gigabit SFP+
Forwarding Performance	up to 60 Mpps
Switching Capacity (full duplex)	up to 180 Mpps
IPv4 Routing Performance	up to 60 Mpps
IPv6 Routing Performance	up to 30 Mpps



Feature	Value
Layer 2 Bridging Performance	up to 60 Mpps
Capacity - IPv4 routes	256000
Capacity - IPv6 routes	128000
NetFlow Entries	512000
IPv4 Multicast Routes	128000
IPv6 Multicast Routes	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 Protocols	IGMPv2, IGMP, PIM-SM, PIM-DM, IGMPv3, GRE, MSDP, MLDv2, MLD, MPLS, PIM-SMv6, PIM-DMv6
Remote Management Protocols	RMON, SMON
Compliant Standards	IEEE 802.1x, IEEE 802.1ae
RAM	4 GB
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)
Width	17.4 in
Depth	21.5 in
Height	3.5 in
Weight	22.24 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-C6816-X-LE	C1-C6840-X-LE-40G	C1-WSC3850-24XS-S
Ethernet Ports	16 x 1G SFP/10G SFP+	40 x 10G SFP+/2 x 40G QSFP	24 x 10G SFP+
Switching Capacity	Up to 960Gbps (1.92Tbps with VSS)	1.92Tbps	480Gbps
Redundancy	1+1 Power Supply, Removable Fan Tray	1+1 Power Supply, Removable Fan Tray	Redundant Power Supply (optional)
Layer 3 Support	Full IPv4/IPv6 routing, MPLS/VPLS	Full IPv4/IPv6 routing, MPLS/VPLS	IPv4/IPv6 static, OSPF, EIGRP, BGP
Virtualization	MPLS, VPLS, VRF-aware, GRE	MPLS, VPLS, VRF-aware, GRE	No VPLS, basic GRE support
High Availability	VSS, single point management	VSS, single point management	StackWise-480
MAC Table Size	128K entries	128K entries	32K entries
Form Factor	2RU, Rack-mountable	2RU, Rack-mountable	1RU, Rack-mountable
Application Visibility	NetFlow, Hierarchical QoS	NetFlow, Hierarchical QoS	Flexible NetFlow

Accessories

Category	Accessories
Included Accessories	- Power Supply Module - Rack Mount Kit - Console Cable
Optional Accessories	- SFP/SFP+ Transceiver Modules - Redundant Power Supply - QSFP 40G Uplink Module



Support & Warranty



24/7 Online
Service



3-Year Premium
Warranty



Professional
Technical Support



100% Low Price
Guarantee



100% Quality
Assurance



100% Money
Back Guarantee

About Us



Router-switch.com, headquartered in Hong Kong since 2002, has been a trusted global leader in ICT distribution for 23 years. We provide cutting-edge networking, cybersecurity, data center, and AI solutions to meet evolving business needs. Our wide range includes products from top brands like Cisco, Arista, Aruba, Fortinet, Mellanox, and Huawei, ensuring access to the latest technology and innovations.

18,000+

global customers

600,000+

end-users

200+

countries & regions

23

years experience

500+

global vendors

100,000+

SKUs available

700+

local sales experts

50-98%

off global list prices

Contact Us

Email

High Connectivity: sales@router-switch.com

Expert Technical Support: ccie-support@router-switch.com

Cooperative Partnerships: ccie-support@router-switch.com

Phone

USA: +1-626-655-0998

Hong Kong: +852-25925389 / +852-25925411

Follow Us

Facebook: [@Routerswitchdotcom](https://www.facebook.com/Routerswitchdotcom)

LinkedIn: [Router-switch.com](https://www.linkedin.com/company/router-switch.com)

X: [@routerswitchcom](https://twitter.com/routerswitchcom)

Instagram: [@routerswitchdotcom](https://www.instagram.com/routerswitchdotcom)

Global Footprint

Global Warehouses & Service Centers Across Continents.



Global Branches

Headquarters (Hong Kong)

Rm 605, 6/F, Fa Yuen Comm Bldg, 75-77 Fa Yuen St, Mongkok, Kowloon, Hong Kong, China

USA Branch

3592 Rosemead Blvd, B #220, Rosemead, CA 91770, USA

Shenzhen Branch

Jingfeng Building, 1001 Shangbu South Road, Futian District, Shenzhen, China

UK Branch

Third Floor, 207 Regent Street, London W1B 3HH, UK



References

[1] Cisco. (2018). Cisco Catalyst 6840-X Series Switches Datasheet. Retrieved from <https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-6840-x-switch/datasheet-c78-734470.html>