# **Gear Net Technologies**



#### C6880-X Datasheet

Overview Get a Quote

Cisco Catalyst Switch C6880-X Chassis with fixed configuration. The Cisco Catalyst 6880-X Series offers primary features and benefits, including:

- •Platform Scalability: The platform supports up to 220Gbps slot capacity per port-card. It supports up to 2Tbps of switching capacity, which doubles up to 4Tbps with VSS technology.
- Security: Support for Cisco TrustSec (CTS), to provide IEEE 802.1AE MACsec encryption and role-based ACL, CoPP to prevent DoS attacks and Cisco ISE to safeguard and manage end-to-end security for the enterprise.
- Virtualization: Comprehensive suite of Virtualization features including L2/L3 VPN, full MPLS, EVN, VRF aware applications for NAT Netflow, GRE for v4/v6, L2 extensions with VPLS etc. to segment different user groups and serve unique security/QoS policy requirements of each of these diverse user groups.
- Application Visibility and Control (AVC): Supports enhanced application monitoring such as Flexible and Sampled NetFlow for intelligent and scalable application monitoring.
- •Smart Operations: The Cisco Catalyst 6880-X supports Catalyst Instant Access\*, which allows an Instant Access Client to act as a remote line card of the Cisco Catalyst 6880-X, as well as Smart Install Director, which provides zero-touch deployment of access switches.
- •High Availability: Two Cisco Catalyst 6880-X Series Switches can be combined into a VSS. In addition to high-availability VSS, provides ease of operation by providing a single point of management, eliminating the need for First Hop Routing Protocol (FHRP) and removing the reliance on Spanning Tree Protocol (STP) for link failure restoration.
- \* Support of Catalyst Instant Access is available on 15.1(2) SY2 and later releases.

#### **Quick Specs**

Figure 1 shows the appearance of C6880-X.



Table 1 shows the Quick Specs.

Product Code	<u>C6880-X</u>
Number of port card slots	4
Switching Capacity	Up to 2Tbps
Inches	8.75x 17.35 x 23
Centimeters	22.23 X 44.07 X 58.42
Rack units (RU)	4.85

#### The Modules, Cards, Licenses

Table 2 shows the recommended elements for the C6880-X.

Category	Model	Description
SFP 10G Options	SFP-10G-SR-S	10GBASE-SR SFP Module, Enterprise-Class
	SFP-10G-ZR	Cisco 10GBASE-ZR SFP10G Module for SMF
	SFP-10G-LR	10GBASE-LR SFP+ Module for SMF 10 Gbps
GLC Options	GLC-ZX-SMD	1000BASE-ZX SFP transceiver module, SMF, 1550nm, DOM
	GLC-BX-D	1000BASE-BX SFP, 1490NM
Line Cards	C6880-X-16P10G	Cisco Catalyst 6880-X Multi Rate Port Card (XL Tables) More
Accessories	CAB-CONSOLE-RJ45	Console Cable 6ft with RJ45 and DB9F

### **Compare to Similar Items**

Table 3 shows the comparison of C6880-X and C6880-X-LE.

Attribute	C6880-X-LE	C6880-X
MAC entries	128K	128K
Routes	256K (IPv4) 128K (IPv6)	2048K (IPv4) 1024K (IPv6)
ACL entries	64K shared for QoS/Security	256K shared for QoS/Security
NetFlow entries	512K (per module slot) Up to 2.5M per system	1024K (per module slot) Up to 5M per system
Multicast routes	128K (IPv4) 128K (IPv6)	128K (IPv4) 128K (IPv6)
IPv4 routing	In hardware Up to 300 Mpps**	In hardware Up to 300 Mpps**
IPv6 routing	In hardware Up to 150 Mpps**	In hardware Up to 150 Mpps**
L2 bridging	In hardware Up to 300 Mpps**	In hardware Up to 300 Mpps**
Jumbo frame support	Up to 9216 bytes (For bridged and routed pkts.)	Up to 9216 bytes (For bridged and routed pkts.)
VLAN	4K	4K
Bridge domains	16K	16K
MPLS	In hardware (up to 8192 VRFs at 300 Mpps**)	In hardware (up to 8192 VRFs at 300 Mpps**)
Logical interfaces	128K	128K
EtherChannel hash	8 bits	8 bits
VPLS	In hardware (up to 150 Mpps**)	In hardware (up to 150 Mpps**)
GRE	In hardware (up to 150 Mpps**)	In hardware (up to 150 Mpps**)
NAT	Hardware assisted	Hardware assisted
Onboard memory	2GB***	4GB
Ingress buffers	1.25MB per 10G port in 2:1 mode 2.5MB per 10G port in 1:1 mode (10MB per Port ASIC)	1.25MB per 10G port in 2:1 mode 2.5MB per 10G port in 1:1 mode (10MB per Port ASIC)

Egress buffers	24MB per 10G port in 2:1 mode 48MB per 10G port in 1:1 mode (192MB per MUX FPGA)	24MB per 10G port in 2:1 mode 48MB per 10G port in 1:1 mode (192MB per MUX FPGA)
Oversubsription	16P 10G at 2:1 in oversubscription mode (default) for base module and port cards 8P 10G at 1:1 in performance mode (configurable) for base module and port cards	

#### **Get more information**

Do you have any question about the C6880-X?

Contact us now via <u>Live Chat</u> or <u>sales@gntme.com.</u>

# Specification

C6880-X Specification	
QoS Features and Scalability	
Feature	C6880-X
Layer-3 classification and marking access control entries (ACEs)	256K shared for QoS/Security
Aggregate traffic rate-limiting policers	16,348
Flow-based rate-limiting method; number of rates	Per source address, destination address, or full flow; 64 rates
Layer 2 rate limiters	20 ingress/6 egress
MAC ACLs featuring per-port/per VLAN granularity	Yes
Distributed policers	Yes
Shared uFlow policers	Yes
Egress uFlow policers	Yes
Packet or byte policers	Yes
Per port per VLAN	Yes
COS and DSCP based Queue mapping	Yes
Deficit Weighted Round Robin Scheduler (DWRR) and Weighted Random Early Detection Scheduler (WRED)	Yes
Receive and Transmit Queues	Default: 1p7q4t Configurable: 2p6q4t
Security Features and Scalability	
Port security	Yes
IEEE 802.1x and 802.1x extensions	Yes
VLAN and router ACLs and port ACLs	Yes
1:1 mask ratio to ACE values	Yes
Security ACL entries	256K shared for QoS/Security
CPU rate limiters (DoS protection)	57
uRPF check (IPv4/IPv6)	Up to 16

Number of interfaces with unique ACI	46k
Number of interfaces with unique ACL	16k
RPF interfaces	16
Private VLANs	Yes
MAC ACLs on IP	Yes
Layer 2 and Layer 3 Cisco TrustSec (Security Group Tagging & Security Group Access Control List)	Yes
IEEE 802.1ae (MACsec) Layer 2 encryption in hardware	Yes
CPU HW rate limiters by PPS or BPS	Yes
CoPP for multicast	L2 and L3 support
CoPP for exceptions (MTU, TTL)	Yes
CoPP exceptions NetFlow support	Yes
ACL labels	16K
Port ACL	8K
ACL dry run	Yes
Hitless ACL changes	Yes
MPLS and Virtualization Features	
VSS*	Yes
Label imposition/disposition (MPLS-PE), swapping (MPLS-P)	Yes
Label Distribution Protocol (LDP)	Yes
MPLS VPN	Yes
VRF Lite	Yes
EVN	Yes
QoS mechanisms using experimental (EXP) bits	Yes
MPLS-RSVP-TE	Yes
MPLS differentiated services (diffserv)-aware traffic engineering (MPLS-DS-TE)	Yes
MPLS traceroute	Yes
EoMPLS	Yes
EoMPLS tunnels	16k
IPv4 and IPv6 in IPv6 tunneling	Yes
IPv6 in IPv4 tunnelling (Intra-Site Automatic Tunnel Addressing Protocol [ISATAP], 6to4, GRE	Yes
QoS support for uniform, short pipe and pipe mode tunnel	Yes
Native VPLS in HW	Yes
Native L2 over multipoint GRE	Yes
VRF-aware operational contexts	Yes
VPN NetFlow support	Yes

VPN aware NAT	Yes
VRF-lite scalability	VLAN reuse per subinterface
Per VPN interface statistics	Yes
Netflow and Multicast Features	
Netflow support in hardware	Yes
Flexible Netflow	Yes
Sampled Netflow	Yes
Ingress/Egress Netflow	Yes
Ingress and Egress replication in hardware	Yes
IGMPv3 snooping in hardware	Yes
IPv6 MLDv2 snooping in hardware	Yes
PIM registers in hardware	Yes
Label Switched Multicast (LSM)	Yes
Base System Scalability	
MAC entries	128K
Routes	2048K (IPv4) 1024K (IPv6)
ACL entries	256K shared for QoS/Security
NetFlow entries	1024K (per module slot) Up to 5M per system
Multicast routes	128K (IPv4) 128K (IPv6)
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Software Packaging	
Software License	IP Services     Advanced Enterprise Services
Software compatibility	15.1(2)SY1 and later releases*

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