

Cisco Catalyst 1000 Switch Datasheet



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OVERVIEW

Cisco® Catalyst® 1000 Series Switches are fixed managed Gigabit Ethernet enterprise-class Layer 2 switches designed for small businesses and branch offices. These are simple, flexible and secure switches ideal for out-of-the-wiring-closet and critical Internet of Things (IoT) deployments. Cisco® Catalyst® 1000 operate on Cisco IOS® Software and support simple device management and network management via a Command-Line Interface (CLI) as well as an on-box web UI. These switches deliver enhanced network security, network reliability, and operational efficiency for small organizations.

APPEARANCE

Figure 1. Cisco Catalyst 1000 Series 8 port Switches



Figure 2. Cisco Catalyst 1000 Series 16 port Switches

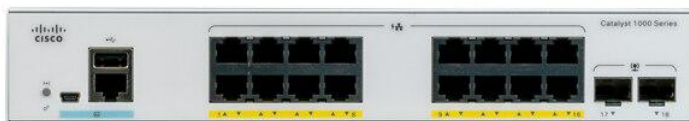


Figure 3. Cisco Catalyst 1000 Series 24 port Switches

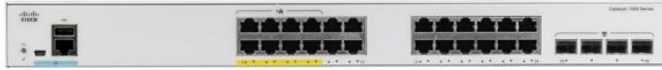


Figure 4. Cisco Catalyst 1000 Series 48 port Switches



PRODUCT HIGHLIGHTS

- 8, 16, 24, or 48 Gigabit Ethernet data or PoE+ ports with line-rate forwarding
- 2 or 4 fixed 1 Gigabit Ethernet Small Form-Factor Pluggable (SFP)/RJ 45 Combo uplinks or 4 fixed 0 Gigabit Ethernet Enhanced SFP (SFP+) uplinks
- Perpetual PoE+ support with a power budget of up to 740W
- CLI and/or intuitive web UI manageability options
- Network monitoring through sampled flow (sFlow)
- Security with 802.1X support for connected devices, Switched Port Analyzer (SPAN), and Bridge Protocol Data Unit (BPDU) Guard
- Compact fanless models available with a depth of less than 13 inches (33 cm)

- Device management support with over-the-air access via Bluetooth, Simple Network Management Protocol (SNMP), RJ-45, or USB console access
- Reliability with a higher Mean Time Between Failures (MTBF) and an enhanced limited lifetime warranty support(E-LLW)

THE CONFIGURATIONS

Table 1. Cisco Catalyst 1000 Series Switch configurations

Switch model	Gigabit Ethernet ports	Uplink interfaces	PoE+power budget	Fanless	Dimensions (WxDxH in inches)	Weight (kg)
C1000-8T-2G-L	8	2 SFP/ RJ-45 combo	\	Y	10.56 x 7.28 x 1.73	1.80
C1000-8T-E-2G-L	8	2 SFP/ RJ-45 combo	\	Y	10.56 x 7.28 x 1.73	1.55
C1000-8P-2G-L	8	2 SFP/ RJ-45 combo	67W	Y	10.56 x 12.73 x 1.73	1.55
C1000-8P-E-2G-L	8	2 SFP/ RJ-45 combo	67W	Y	10.56 x 7.28 x 1.73	1.55
C1000-8FP-2G-L	8	2 SFP/ RJ-45 combo	120W	Y	10.56 x 12.73 x 1.73	2.70
C1000-8FP-E-2G-L	8	2 SFP/ RJ-45 combo	120W	Y	10.56 x 7.28 x 1.73	2.70

Switch model	Gigabit Ethernet ports	Uplink interfaces	PoE+power budget	Fanless	Dimensions (WxDxH in inches)	Weight (kg)
C1000-16T-2G-L	16	2 SFP	\	Y	10.56 x 10.69 x 1.73	1.78
C1000-16T-E-2G-L	16	2 SFP	\	Y	10.56 x 8.26 x 1.73	1.42
C1000-16P-2G-L	16	2 SFP	120W	Y	10.56 x 11.69 x 1.73	2.38
C1000-16P-E-2G-L	16	2 SFP	120W	Y	10.56 x 8.26 x 1.73	1.42
C1000-16FP-2G-L	16	2 SFP	240W	Y	10.56 x 12.14 x 1.73	2.49
C1000-24T-4G-L	24	4 SFP	\	Y	17.5 x 9.45 x 1.73	2.63
C1000-24P-4G-L	24	4 SFP	195W	Y	17.5 x 11.76 x 1.73	3.53
C1000-24FP-4G-L	24	4 SFP	370W	N	17.5 x 13.59 x 1.73	4.6
C1000-48T-4G-L	48	4 SFP	\	N	17.5 x 10.73 x 1.73	3.95
C1000-48P-4G-L	48	4 SFP	370W	N	17.5 x 13.78 x 1.73	5.43
C1000-48FP-4G-L	48	4 SFP	740W	N	17.5 x 13.78 x 1.73	5.82

Switch model	Gigabit Ethernet ports	Uplink interfaces	PoE+power budget	Fanless	Dimensions (WxDxH in inches)	Weight (kg)
C1000-24T-4X-L	24	4 SFP+	\	Y	17.5 x 9.45 x 1.73	2.78
C1000-24P-4X-L	24	4 SFP+	195W	Y	17.5 x 11.76 x 1.73	3.68
C1000-24FP-4X-L	24	4 SFP+	370W	N	17.5 x 13.59 x 1.73	4.6
C1000-48T-4X-L	48	4 SFP+	\	N	17.5 x 10.73 x 1.73	3.95
C1000-48P-4X-L	48	4 SFP+	370W	N	17.5 x 13.78 x 1.73	5.43
C1000-48FP-4X-L	48	4 SFP+	740W	N	17.5 x 13.78 x 1.73	5.82

NETWORK MANAGEMENT

The Cisco Catalyst 1000 Series Switches offer a superior CLI for detailed configuration and administration.

THE ACCESSORIES

Table 2.describes the available accessories.

Part number	Description	Compatibility
CAB-CONSOLE-RJ45	Console Cable 6 Feet with RJ-45	All models
CAB-CONSOLE-USB	Console Cable 6 Feet with USB Type A and mini-B Connectors	All models

PWR-CLP	Power Cable Restraining Clip	All models
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SPECIFICATION

Table 3. Performance specifications

Description	8-port models	16-port models	24-port models (1/10G uplinks)	48-port models (1/10G uplinks)
Console ports				
RJ-45 Ethernet	1	1	1	1
USB mini-B	1	1	1	
USB-A port for storage and Bluetooth console	1	1	1	1
Memory and processor				
CPU	ARM v7 800 MHz	ARM v7 800 MHz	ARM v7 800 MHz	ARM v7 800 MHz
DRAM	512 MB	512 MB	512 MB	512 MB
Flash memory	256 MB	256 MB	256 MB	256 MB
Performance				
Forwarding bandwidth	10 Gbps	18 Gbps	1G: 28 Gbps 10G: 64 Gbps	1G: 52 Gbps 10G: 88Gbps
Switching bandwidth	20 Gbps	36 Gbps	1G: 56 Gbps 10G: 128 Gbps	1G: 104 Gbps 10G: 176 Gbps

Description	8-port models	16-port models	24-port models (1/10G uplinks)	48-port models (1/10G uplinks)
Forwarding rate(64—byte L3 packets)	14.88 Mpps	26.78 Mpps	41.67 Mpps	77.38 Mpps
Unicast MAC addresses	16000	16000	16000	16000
IPv4 unicast direct routes	542	542	542	542
IPv4 unicast indirect routes	256	256	256	256
IPv6 unicast direct routes	414	414	414	414
IPv6 unicast indirect routes	128	128	128	128
IPv4 static routes	16	16	16	16
IPv6 static routes	16	16	16	16
IPv4 multicast routes and IGMP groups	1024	1024	1024	1024
IPv6 multicast groups	1024	1024	1024	1024
IPv4/MAC	600	600	600	600

Description	8-port models	16-port models	24-port models (1/10G uplinks)	48-port models (1/10G uplinks)
security ACEs				
IPv6 security ACEs	600	600	600	600
Maximum active VLANs	256	256	256	256
VLAN IDs available	4094	4094	4094	4094
Maximum STP instances	64	64	64	64
Maximum SPAN sessions	4	4	4	4
MTU-L3 packet	9198 bytes	9198 bytes	9198 bytes	9198 bytes
Jumbo Ethernet frame	10,240 bytes	10,240 bytes	10,240 bytes	10,240 bytes
Dying Gasp	Yes	Yes	Yes	Yes
MTBF in hours (data)	2,171,669	2,165,105	2,026,793	1,452,667
MTBF in hours (PoE)	1,786,412, 1,706,649 (External PS)	706,983	698,220	856,329

Description	8-port models	16-port models	24-port models (1/10G uplinks)	48-port models (1/10G uplinks)
MTBF in hours (Full PoE)	1,706,649	\	698,220	856,329
Environmental				
Operating temperature Seal level	-5 to 50 deg C*			
Up to 5,000ft (1500 m)	-5 to 45 deg C			
Upto 10,000 (3000 m)	-5 to 40 deg C			
Operating altitude	10,000 ft (3,000m)			
Operating relative humidity	5% to 90% at 40C			
Storage temperature	-13 to 158F (-25 to 70C)			
Storage altitude	15,000 ft (4500m)			
Storage relative humidit	5% to 95% at 65C			
<p>*Note:</p> <p>50C operation is supported for short term operation only; GLC-BX-D/U and CWDM optics cannot support 50C operation; Minimum ambient temperature for cold start is at 0C (32F)</p>				

Table 4. Safety and compliance

Safety	UL 60950-1 Second Edition, CAN/CSA-C22.2 No. 60950-1 Second Edition, EN 60950-1 Second Edition, IEC 60950-1 Second Edition, AS/NZS 60950-1, IEC 62368-1, UL 62368-1 GB 4943.1-2011
EMC: Emissions	47CFR Part 15 Class A, AS/NZS CISPR32 Class A, CISPR32 Class A, EN55032 Class A, ICES-003 Class A, VCCI-CISPR32 Class A, EN61000-3-2, EN61000-3-3, KN32 Class A, CNS13438 Class A
EMC: Immunity	EN55024 (including EN 61000-4-5), EN300386, KN35
Environmental	Reduction of Hazardous Substances (RoHS) including Directive 2011/65/EU
Telco	Common Language Equipment Identifier (CLEI) code
U.S. government certifications	TBD

Table 5. Connectors, interfaces, management, standards and RFC compliance.

Ethernet interfaces	10BASE-T ports: RJ-45 connectors, 2-pair Category 3, 4, or 5 Unshielded Twisted Pair (UTP) cabling 100BASE-TX ports: RJ-45 connectors, 2-pair Category 5 UTP cabling 1000BASE-T ports: RJ-45 connectors, 4-pair Category 5 UTP cabling 1000BASE-T SFP-based ports: RJ-45 connectors, 4-pair Category 5 UTP cabling
Indicator LEDs	Per-port status: link integrity, disabled, activity System status: system
Console cables	CAB-CONSOLE-RJ45 Console cable 6 ft. with RJ-45

	CAB-CONSOLE-USB Console cable 6 ft. with USB Type A and mini-B connectors		
Power	<p>Use the supplied AC power cord to connect the AC power connector to an AC power outlet</p> <p>Models have external power supply</p>		
Management	BRIDGE-MIB CISCO-CABLE-DIAG-MIB CISCO-CDP-MIB CISCO-CLUSTER-MIB CISCO-CONFIG-COPY-MIB CISCO-CONFIG-MAN-MIB CISCO-DHCP-SNOOPING-MIB CISCO-ENTITY-VENDORTYPE-OID-MIB CISCO-ENVMON-MIB CISCO-ERR-DISABLE-MIB CISCO-FLASH-MIB CISCO-FTP-CLIENT-MIB CISCO-IGMP-FILTER-MIB CISCO-IMAGE-MIB CISCO-IP-STAT-MIB CISCO-LAG-MIB CISCO-MAC-NOTIFICATION-MIB CISCO-MEMORY-POOL-MIB	CISCO-PORT-QOS-MIB CISCO-PORT-SECURITY-MIB CISCO-PORT-STORM-CONTROL-MIB CISCO-PRODUCTS-MIB CISCO-PROCESS-MIB CISCO-RTTMON-MIB CISCO-SMI-MIB CISCO-STP-EXTENSIONS-MIB CISCO-SYSLOG-MIB CISCO-TC-MIB CISCO-TCP-MIB CISCO-UDLDP-MIB CISCO-VLAN-IFTABLE CISCO-VLAN-MEMBERSHIP-MIB CISCO-VTP-MIB ENTITY-MIB ETHERLIKE-MIB IEEE8021-PAE-MIB	IF-MIB INET-ADDRESS-MIB OLD-CISCO-CHASSIS-MIB OLD-CISCO-FLASH-MIB OLD-CISCO-INTERFACES-MIB OLD-CISCO-IP-MIB OLD-CISCO-SYS-MIB OLD-CISCO-TCP-MIB OLD-CISCO-TS-MIB RFC1213-MIB RMON-MIB RMON2-MIB SNMP-FRAMEWORK-MIB SNMP-MPD-MIB SNMP-NOTIFICATION-MIB SNMP-TARGET-MIB SNMPv2-MIB

	CISCO-PAGP-MIB CISCO-POE-EXTENSIONS-MIB	IEEE8023-LAG-MIB	TCP-MIB UDP-MIB
Standards	IEEE 802.1D STP IEEE 802.1p CoS Prioritization IEEE 802.1Q VLAN IEEE 802.1s IEEE 802.1w IEEE 802.1X IEEE 802.1ab LLDP Bluetooth v4.0	IEEE 802.3ad IEEE 802.3af and IEEE 802.3at IEEE 802.3ah (100BASE-X single/multimode fiber only) IEEE 802.3x full duplex on 10BASE-T, 100BASE-TX, and 1000BASE-T ports IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX	IEEE 802.3ab 1000BASE-T IEEE 802.3z 1000BASE-X RMON I and II standards SNMP v1, v2c, and v3 IEEE 802.3az IEEE 802.3ae 10 Gigabit Ethernet IEEE 802.1ax
RFC compliance	RFC 768 - UDP RFC 783 - TFTP RFC 791 - IP RFC 792 - ICMP RFC 793 - TCP RFC 826 - ARP RFC 854 - Telnet RFC 951 - Bootstrap Protocol (BOOTP) RFC 959 - FTP RFC 1112 - IP Multicast and IGMP RFC 1157 - SNMP v1 RFC 1166 - IP Addresses	RFC 1256 - ICMP Router Discovery RFC 1305 - NTP RFC 1492 - TACACS+ RFC 1493 - Bridge MIB RFC 1542 - BOOTP extensions RFC 1901 - SNMP v2C RFC 1902-1907 - SNMP v2 RFC 1981 - Maximum Transmission Unit (MTU) Path Discovery IPv6 RFC 2068 - HTTP RFC 2131 - DHCP RFC 2138 - RADIUS RFC 2233 - IF MIB v3	

ORDERING INFORMATION

Table 6. Ordering information

Switches	
Product number	Product description
Cisco Catalyst 1000 Series Switches with 2x 1GSFP and RJ-45 combo uplinks	
C1000-8T-2G-L	8x 10/100/1000 Ethernet ports, 2x 1G SFP and RJ-45 combo uplinks
C1000-8T-E-2G-L	8x 10/100/1000 Ethernet ports, 2x 1G SFP and RJ-45 combo uplinks, with external PS
C1000-8P-2G-L	8x 10/100/1000 Ethernet PoE+ ports and 67W PoE budget, 2x 1G SFP and RJ-45 combo uplinks
C1000-8P-E-2G-L	8x 10/100/1000 Ethernet PoE+ ports and 67W PoE budget, 2x 1G SFP and RJ-45 combo uplinks, with external PS
C1000-8FP-2G-L	8x 10/100/1000 Ethernet PoE+ ports and 120W PoE budget, 2x 1G SFP and RJ-45 combo uplinks
C1000-8FP-E-2G-L	8x 10/100/1000 Ethernet PoE+ ports and 120W PoE budget, 2x 1G SFP and RJ-45 combo uplinks, with external PS
Cisco Catalyst 1000 Series Switches with 2x 1G SFP uplinks	
C1000-16T-2G-L	16x 10/100/1000 Ethernet ports, 2x 1G SFP uplinks
C1000-16T-E-2G-L	16x 10/100/1000 Ethernet ports, 2x 1G SFP uplinks with external PS
C1000-16P-2G-L	16x 10/100/1000 Ethernet PoE+ ports and 120W PoE budget, 2x 1G SFP uplinks
C1000-16P-E-2G-L	16x 10/100/1000 Ethernet PoE+ ports and 120W PoE budget, 2x 1G SFP uplinks with external PS

C1000-16FP-2G-L	16x 10/100/1000 Ethernet PoE+ ports and 240W PoE budget, 2x 1G SFP uplinks
Cisco Catalyst 1000 Series Switches with 4x 1G SFP uplinks	
C1000-24T-4G-L	24x 10/100/1000 Ethernet ports, 4x 1G SFP uplinks
C1000-24P-4G-L	24x 10/100/1000 Ethernet PoE+ ports and 195W PoE budget, 4x 1G SFP uplinks
C1000-24FP-4G-L	24x 10/100/1000 Ethernet PoE+ ports and 370W PoE budget, 4x 1G SFP uplinks
C1000-48T-4G-L	48x 10/100/1000 Ethernet ports, 4x 1G SFP uplinks
C1000-48P-4G-L	48x 10/100/1000 Ethernet PoE+ and 370W PoE budget ports, 4x 1G SFP uplinks
C1000-48FP-4G-L	48x 10/100/1000 Ethernet PoE+ ports and 740W PoE budget, 4x 1G SFP uplinks
Cisco Catalyst 1000 Series Switches with 4x 10G SFP+ uplinks	
C1000-24T-4X-L	24x 10/100/1000 Ethernet ports, 4x 10G SFP+ uplinks
C1000-24P-4X-L	24x 10/100/1000 Ethernet PoE+ ports and 195W PoE budget, 4x 10G SFP+ uplinks
C1000-24FP-4X-L	24x 10/100/1000 Ethernet PoE+ ports and 370W PoE budget, 4x 10G SFP+ uplinks
C1000-48T-4X-L	48x 10/100/1000 Ethernet ports, 4x 10G SFP+ uplinks
C1000-48P-4X-L	48x 10/100/1000 Ethernet PoE+ ports and 370W PoE budget, 4x 10G SFP+ uplinks
C1000-48FP-4X-L	48x 10/100/1000 Ethernet PoE+ ports and 740W PoE budget, 4x 10G SFP+ uplinks

WHERE TO BUY

Want to buy this series of products? please contact:

- Tel: +1-626-239-8066 (USA) +852-3050-1066 / +852-3174-6166
- Fax: +852-3050-1066 (Hong Kong)
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SOURCES

<https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-1000-series-switches/nb-06-cat1k-ser-switch-ds-cte-en.html>