

Cisco Catalyst Digital Building Series Switches

The Cisco® Catalyst® Digital Building Series Switch is the industry's most power-efficient switch optimized for low-voltage Power over Ethernet (PoE) deployments and connectivity. The Digital Building Series Switch lays the foundation for powering and converging disparate building subsystems (lighting, HVAC, badging systems, metering, CCTV, access) onto a single IP network, thereby expanding, enabling, and accelerating the Cisco Digital Building ecosystem.

Product overview

Companies today are going digital in an effort to enable new customer experiences, empower workforce innovation, and build innovative business models powered by analytics. Buildings are central to this digital transformation, as buildings are where most traditional businesses run and operate from. For enhanced experiences and improved efficiencies in buildings, owners and facilities managers realize the value in interconnecting various building sub-systems, including lighting, HVAC, security, sensors and audio-video systems, which have historically remained stagnant, disparate and difficult to manage. Although the convergence of these isolated sub-systems is fundamental to digital transformation, it has remained complex and costly to implement thus far.

This complex problem changes their quiet, fanless design and compact footprint, the Cisco Catalyst Digital Building Series Switches offer flexible mounting options and open up a variety of network design and connectivity options. They can be deployed to support a variety of use cases, and are leaps ahead of the last generation of lighting and building technology enablers. Figure 1 shows the Cisco Catalyst Digital Building Switch.

Figure 1. Cisco catalyst digital building switch



Cisco catalyst digital building series switch highlights

- 8 fast Ethernet ports and 2 gigabit copper uplink ports, with line-rate forwarding performance
- Universal Power over Ethernet (Cisco UPOE) and Power over Ethernet Plus (PoE+) support with up to 480W of power budget
- Support for Layer 2 features, optimized for robust connectivity to lighting and other building IoT devices
- Silent operation due to fanless design, which enhances reliability
- Enhanced Limited Lifetime Warranty (E-LLW)

Product features and benefits

The Cisco Catalyst Digital Building Series Switch is the industry’s first purpose-built switch optimized for powering low voltage LED lighting and digital building systems with many unique features. Unlike unmanaged IoT switches, it provides advanced networking features for flexibility, simplicity, security, and scale.

Table 1 lists many of the Cisco Catalyst Digital Building Switch’s features and benefits.

Table 1. Digital building switch features and benefits summary

Feature	Benefits
Switch Reliability and Scale	
Small form factor; fanless design; silent operation	Industry’s first and only semi-ruggedized fanless switch , delivering up to 60W of power/port, ideal for deployment in indoor open workspaces and other areas that require no equipment noise
Increased PoE scale	Provides unprecedented PoE scale, up to 480W of UPOE (2x the power budget in any fanless switch) and 240W of PoE+
Perpetual and Fast UPOE	Industry’s first Perpetual UPOE ensures uninterrupted powering of endpoints during switch upgrade, reboots and configuration changes. Fast UPOE ensures powering of PoE and UPOE endpoints within 5 seconds of power restoration, in case of power losses
System life	This switch comes with the industry’s highest reliability and 10 years of system life
Pre-validated architecture	Cisco supports tested, validated, and integrated lighting solutions , which can reduce deployment risk and speed up the time to value. Proven robust technology, existing network and end-to-end security provide a complete digital building solution
Installation Simplicity	
Flexible mounting options	Supports flexible deployment/mounting options, including rack, electrical cabinet, and in ceiling
Flexible powering options	The switch can be powered through direct wires for 100-277VAC applications or with IEC plugs for 100-240VAC voltage inputs
Automated testing in deployment	Smart defaults and integrated mobile app (available on Android and iOS) greatly reduce the effort in testing the deployment by non-IT trained installers, resulting in lower installation costs
Scalable Configuration and Control	
Configuration at scale	The switch is DNA-ready, and can be used as part of the APIC-EM solution for automated switch deployments. It also supports Network Plug-n-Play (nP) , a secure, scalable solution that accelerates network device deployments by automating the installation/configuration of Cisco IOS® Software, enhancing productivity and user experience, and reducing costs and downtime
Remote upgrades	The switch allows for hassle free upgrades, maintenance, and troubleshooting for lighting and other building networks using over-the-air software change . This is enhanced with the easy offline firmware and configuration upgrades with an SD card using an intuitive mobile app interface
Network management	<ul style="list-style-type: none"> • Cisco Prime™ Infrastructure provides comprehensive network lifecycle management with an extensive library of features that automate initial and day-to-day management. Cisco Prime integrates hardware and software platform expertise and operational experience into a powerful set of workflow-driven configuration, monitoring, troubleshooting, reporting, and administrative tools • Cisco Network Assistant is a PC-based, centralized network management and configuration application for Small and Medium-sized Business (SMB) with up to 250 users. An intuitive GUI lets you easily apply common services across Cisco switches, routers, and access points • Cisco Active Advisor is a cloud-based service that provides essential lifecycle information about your network inventory. Available by itself or as a component of other Cisco network management applications, it helps you reduce your network’s overall risk by keeping you up-to-date about the status of your products

Feature	Benefits
Bluetooth integration	This is the industry's first Bluetooth enabled switch for out-of-band configuration from mobile apps on Android and Apple IOS via a removable radio
Improved web UI	The Cisco Configuration Professional for Catalyst delivers superior management and monitoring of the switch
Software and Security	
Layer 2 features for operational simplicity	<ul style="list-style-type: none"> • IPv6 host support • SNMPv3 for secure configuration, control and information retrieval through appropriate Management Information Base (MIBs) • Link Aggregation Control Protocol (LACP) for creating Ethernet channeling with devices that conform to IEEE 802.3ad • Dynamic Host Configuration Protocol (DHCP) auto-configuration of multiple switches through a boot server • Cisco VLAN Trunking Protocol (VTP), which supports dynamic VLANs and dynamic trunk configuration across all switches • For enhanced traffic management, monitoring, and analysis, the Embedded Remote Monitoring (RMON) software agent, which supports four RMON groups (history, statistics, alarms, and events) • LLDP and LLDP-MED enhancements for easy identification of end-devices
CoAP support	This switch functions as a CoAP Proxy . CoAP is a lightweight IoT protocol enabling not only lighting and sensors, but also HVAC and security systems to interoperate for delivering advanced space analytics
Security and threat defense	<ul style="list-style-type: none"> • 802.1x, Webauth and MACAuth, TACACS+, RADIUS authentication capabilities for secure onboarding of end-devices • Secure boot to make sure that only signed and authorized images can load on the switch • Port-based Access Control Lists (ACLs) to let the switch automatically allow or block packets based on policies for source and destination IP addresses. Rules can be set up differently on a port-by-port basis • PVLAN edge for restricting communication between end devices • Network-as-a-sensor: Along with Cisco Catalyst 3850 as an upstream switch, this switch has Network-as-a-Sensor (NaaS) capabilities to provide broad and deep visibility into network traffic flow patterns and rich threat intelligence information that allows rapid identification of security threats • Network-as-an-enforcer: Along with Cisco Catalyst 3850 as an upstream switch, device profiling and Network-as-an-Enforcer (NaaE) are enabled to dynamically enforce role based security to reduce the overall attack surface, contain attacks, and minimize the time needed to isolate threats when detected using Cisco TrustSec® with Cisco ISE
Power Management	
Switch hibernate and deep sleep mode	Innovative technology that puts the switch in an ultra-low power mode during periods of no PoE usage. The switch can be configured to be in the hibernate mode using CoAP and comes out of this mode using Wake-on-packet. It can also come out of the deep sleep mode with the physical mode button
IEEE 802.3az or energy-efficient Ethernet (EEE)	Ports dynamically sense idle periods between traffic bursts and quickly switch the interfaces into a low-power idle mode, reducing power consumption
System power efficiency	The switch also improves the industry standard on system power efficiency to 90% using innovative power management techniques
Cisco Energy Manager	Integrated with the Cisco Energy Management suite for full energy control and visibility
Power supply	Meets 80-Plus Gold efficiency requirements

Product details

Switch models

The Cisco Catalyst Digital Building Switches are available in two switch models. They vary by the output power/port supported by the model. One model supports Power over Ethernet Plus (PoE+), which guarantees 30W/port of power. The other model supports Universal Power over Ethernet (UPOE), which guarantees double the power, 60W/port.

Table 2 compares the available switch models and list the software package that ships by default with each model and how much PoE power is available for the downlink ports.

Table 2. Cisco catalyst digital building series switch models and default software

Model	Ethernet Ports	PoE Output Ports	Available PoE Power	Uplinks	Default Software
CDB-8U	8 x 10/100 Fast Ethernet UPOE	8	480W	2 x 10/100/1000	LAN Lite
CDB-8P	8 x 10/100 Fast Ethernet PoE+	8	240W	2 x 10/100/1000	LAN Lite

Switch software

Cisco Catalyst Digital Building Series switches ship with the LAN Lite version of Cisco IOS[®] Software, which is optimized for Layer 2 deployments. For more information for the features supported in LAN Lite, refer to the Cisco feature navigator at

<https://tools.cisco.com/ITDIT/CFN/jsp/index.jsp>.

Licensing and software policy

Customers with Cisco Catalyst LAN Lite software feature sets will receive updates and bug fixes designed to maintain the compliance of the software with published specifications, release notes, and industry standards compliance as long as the original end user continues to own or use the product for up to one year from the end-of-sale date for this product, whichever occurs earlier. This policy supersedes any previous warranty or software statement and is subject to change without notice.

Product specifications

Table 3 provides hardware specifications for the Cisco Catalyst Digital Building Series Switches.

Table 3. Cisco catalyst digital building series switch hardware specifications

Description	Specification	
Performance	Forwarding bandwidth	2.8 Gbps
	Switching bandwidth (full-duplex capacity)	5.6 Gbps
	Flash memory	256 MB
	Memory DRAM	512 MB
	Max VLANs	64
	VLANIDs	1-4094
	Maximum Transmission Unit (MTU)	Up to 1500 bytes
	MAC entries	8192
	Port channels	6
	Queues	4 egress queues/port
	Buffers	1K
	ACLs	180 MAC, IPv4 and IPv6
	Bootup time	35 sec.
	Forwarding Rate 64-Byte Packet Cisco Catalyst Digital Building Series	
	CDB-8U	4.2 mpps
	CDB-8P	4.2 mpps
Connectors and cabling	<p>Cisco Catalyst Digital Building Series Ethernet interfaces:</p> <ul style="list-style-type: none"> • 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 	
Power connectors	<ul style="list-style-type: none"> • The Cisco Catalyst Digital Building Series Switches utilize a proprietary power connector on the switch itself to make installation, upgrades, and maintenance fast and easy, as well as enabling up to 277VAC operation. The internal power supply is an autoranging AC power supply • Customers utilizing the direct-wire Catalyst Digital Building Flex Mount can provide 100V – 277VAC input voltage. • Customers utilizing the C14 Catalyst Digital Building Flex Mount, or the Catalyst Digital Building 5-slot Rack Mount can utilize 100V – 240VAC input voltage • The C14 Catalyst Digital Building Flex Mount and the Catalyst Digital Building 5-slot Rack Mount can be ordered with a variety of country-specific power cords 	
Indicators	<p>Per-port status: link integrity, disabled, activity, speed, PoE Status</p> <p>System status: system, power saving mode</p>	

Description	Specification		
Dimensions (H x W x D)	Cisco Catalyst Digital Building Switch Series	Inches	Centimeters
	CDB-8U	2.75 x 8.72 x 11.07	6.98 x 22.15 x 28.12
	CDB-8P	2.75 x 8.72 x 11.07	6.98 x 22.15 x 28.12
Weight	Cisco Catalyst Digital Building Switch Series	Pounds	Kilograms
	CDB-8U	9.65	4.38
	CDB-8P	9.65	4.38
	CDB-MNT-FLEX-DIR=	3.55	1.61
	CDB-MNT-FLEX-C14=	3.55	1.61
	CDB-MNT-RACK5-C14= (Total wt. for 2 units/Flex mount)	16 1.74	7.26 0.78
Environmental ranges	Cisco Catalyst Digital Building Switch Series		
	Operating [*] temperature up to 5000 ft (1524 m)	-5°C to +50°C ^{**}	+23°F to +122°F
	Operating [*] temperature up to 10,000 ft (3048 m)	-5°C to +45°C	+23°F to +113°F
	Storage temperature up to 15,000 ft (4572 m)	-25°C to +70°C	-13°F to +158°F
	Operating altitude	Up to 3048 m	Up to 10,000 ft
	Storage altitude	Up to 4000 m	Up to 15,000 ft
	Operating relative humidity	5% to 95% noncondensing	
	Storage relative humidity	5% to 95% noncondensing	
[*] Minimum ambient temperature for cold start is 0°C (+32°F). ^{**} Operation above 40°C may impact service life.			
Mean Time Between Failures (MTBF)	Cisco Catalyst Digital Building Series	MTBF (hours)	
	CDB-8U	710,270	
	CDB-8P	910,260	

Table 4 describes the power specifications for the Cisco Catalyst Digital Building Series Switches

Table 4. Power specifications for Cisco catalyst digital building series switches

Description	Specification				
AC/DC input voltage and current	I/P Voltage		I/P Current		
			115VAC	230VAC	
				277VAC	
Power rating	Watts				
	CDB-8U	600W			
	CDB-8P	310W			
[*] Switch dissipation only (excludes PoE, which is dissipated at the end device).					
Power supply characteristics	Capacity		% Load	Efficiency (115 VAC)	Power Factor (pf)
	CDB-8U	545W (80-Plus Gold)	20	88%	0.985
			50	91%	0.995
			100	91%	0.995
	CDB-8P	280W (80-Plus Gold)	20	87%	0.982
			50	90%	0.994
			100	90%	0.994

Description	Specification				
		Capacity	% Load	Efficiency (230 VAC)	Power Factor (pf)
CDB-8U	545W (80-Plus Gold)	20	89%	0.840	
		50	93%	0.958	
		100	93%	0.958	
CDB-8P	280W (80-Plus Gold)	20	87%	0.835	
		50	91%	0.951	
		100	91%	0.951	

Table 5 shows switch management and standards support.

Table 5. Management and standards support for Cisco catalyst digital building series switch

Description	Specification
SNMP MIB Supported	<ul style="list-style-type: none"> BRIDGE-MIB CISCO-BRIDGE-EXT-MIB CISCO-CDP-MIB CISCO-CONFIG-COPY-MIB CISCO-ENVMON-MIB CISCO-ERR-DISABLE-MIB CISCO-FLASH-MIB CISCO-IF-EXTENSION-MIB CISCO-IGMP-FILTER-MIB CISCO-LAG-MIB CISCO-MEMORY-POOL-MIB CISCO-PAGP-MIB CISCO-PING-MIB CISCO-PORT-STORM-CONTROL-MIB CISCO-PROCESS-MIB CiscopowerEthernetMIB CISCO-ENTITY-SENSOR-MIB ciscoPowerEthernetExtMIB ciscoPoePdMIB CISCO-STP-EXTENSIONS-MIB CISCO-SYSLOG-MIB CISCO-TCP-MIB CISCO-UDLD-MIB CISCO-VLAN-IFTABLE-RELATIONSHIP-MIB CISCO-VLAN-MEMBERSHIP-MIB CISCO-VTP-MIB ENTITY-MIB ETHERLIKE-MIB IEEE8021-PAE-MIB IEEE8023-LAG-MIB IF-MIB SNMPv2-MIB TCP-MIB UDP-MIB
Standards	<ul style="list-style-type: none"> IEEE 802.1D Spanning Tree Protocol IEEE 802.1p CoS Prioritization IEEE 802.1Q VLAN IEEE 802.1s IEEE 802.1w IEEE 802.1X IEEE 802.1ab (LLDP) IEEE 802.3ad IEEE 802.3x full duplex on 10BASE-T, 100BASE-TX, and 1000BASE-T ports Bluetooth Ver 4.0 IEEE 802.3af and IEEE 802.3at 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 10Gigabit Ethernet IEEE 802.1ax
RFC compliance	<ul style="list-style-type: none"> 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 1981 - Maximum Transmission Unit (MTU) Path Discovery IPv6 RFC 2068 - HTTP RFC 2131 - DHCP RFC 2138 - RADIUS RFC 2233 - IF MIB v3 RFC 2373 - IPv6 Aggregatable Addr RFC 2460 - IPv6 RFC 2461 - IPv6 Neighbor Discovery RFC 2462 - IPv6 Autoconfiguration RFC 2463 - ICMP IPv6

Description	Specification
	<ul style="list-style-type: none"> ● RFC 1166 - IP Addresses ● RFC 1256 - Internet Control Message Protocol (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 7252 - CoAP ● RFC 2474 - Differentiated Services (DiffServ) Precedence ● RFC 2597 - Assured Forwarding ● RFC 2598 - Expedited Forwarding ● RFC 2571 - SNMP Management ● RFC 3046 - DHCP Relay Agent Information Option ● RFC 3376 - IGMP v3 ● RFC 3580 - 802.1X RADIUS
Note: RFC, MIB and standards compliance is dependent on Cisco IOS Software level.	

Table 6 shows safety and compliance information.

Table 6. Safety and compliance support

Description	Specification
Safety standards	<ul style="list-style-type: none"> ● UL 60950-1 ● CAN/CSA 22.2 No. 60950-1 ● EN 60950-1 ● IEC 60950-1 ● CE Marking ● GB 4943 ● IEC 60825 ● UL 2043 ● UL 2108
Electromagnetic emissions certifications	<ul style="list-style-type: none"> ● FCC Part 15, CFR 47, Class A, North America ● EN 55022 (CISPR22) and EN 55024 (CISPR24), CE marking, European Union ● AS/NZS, Class A, CISPR22:2004, or EN55022, Australia and New Zealand ● VCCI Class A, V-3/2007.04, Japan ● KCC (formerly MIC, GB17625.1-1998) Class A, KN24/KN22, Korea
Environmental	Reduction of Hazardous Substances (ROHS) 6

Ordering information

To place an order, consult Table 7 for ordering information and visit [Cisco Commerce Workspace](#).

Table 7. Ordering information for Cisco catalyst digital building series switch

Cisco Catalyst Digital Building Series Switches	
Part Number	Description
CDB-8U	Cisco Catalyst Digital Building Switch, 8 x FE, 480W UPOE, Uplinks: 2 x 1G copper, LAN Lite.
CDB-8P	Cisco Catalyst Digital Building Switch, 8 x FE, 240W PoE+, Uplinks: 2 x 1G copper, LAN Lite.
Cisco Catalyst Digital Building Series Accessories	
Part Number	Description
CDB-MNT-FLEX-C14=	Flexible mount* spare part with IEC C14 power junction box (One mount needed per switch to power the switch).
CDB-MNT-FLEX-DIR=	Flexible mount* spare part with direct-wired junction box (One mount needed per switch to power the switch).
CDB-MNT-RACK5-C14=	5-RU 19" rack mount chassis spare part for 5 switches (Flexible mounts above are NOT required if switches to be mounted on this rack mount chassis).

* Available as a spare unit too.

Warranty information

Cisco Catalyst Digital Building Series Switches come with an enhanced limited lifetime hardware warranty that includes 90 days of Cisco Technical Assistance Center (TAC) support and next-business-day hardware replacement free of charge (see Table 8 for details).

Table 8. Enhanced limited lifetime hardware warranty

Cisco Enhanced Limited Lifetime Hardware Warranty	
Device covered	Applies to Cisco Catalyst Digital Building CDB-8U and CDB-8P switches.
Warranty duration	As long as the original customer owns the product.
EoL policy	In the event of discontinuance of product manufacture, Cisco warranty support is limited to 5 years from the announcement of discontinuance.
Hardware replacement	Cisco or its service center will use commercially reasonable efforts to ship a replacement for next-business-day delivery, where available. Otherwise, a replacement will be shipped within 10 working days after receipt of the RMA request. Actual delivery times might vary depending on customer location.
Effective date	Hardware warranty commences from the date of shipment to customer (and in case of resale by a Cisco reseller, not more than 90 days after original shipment by Cisco).
TAC support	Cisco will provide during business hours, 8 hours per day, 5 days per week basic configuration, diagnosis, and troubleshooting of device-level problems for up to a 90-day period from the date of shipment of the originally purchased Cisco Catalyst Digital Building product. This support does not include solution-level or network-level support beyond the specific device under consideration.
Cisco.com access	Warranty allows guest access only to Cisco.com.

Your formal warranty statement, including the warranty applicable to Cisco software, appears in the Cisco information packet that accompanies your Cisco product. We encourage you to review carefully the warranty statement shipped with your specific product before use. Cisco reserves the right to refund the purchase price as its exclusive warranty remedy.

Adding a Cisco technical services contract to your device coverage provides access to the Cisco Technical Assistance Center (TAC) beyond the 90-day period allowed by the warranty. It also can provide a variety of hardware replacement options to meet critical business needs, as well as updates for licensed premium Cisco IOS Software, and registered access to the extensive Cisco.com knowledge base and support tools.

For additional information about warranty terms, visit <https://www.cisco.com/go/warranty>.

Cisco and partner services

Enable the innovative, secure, intelligent edge using personalized services from Cisco and our partners. Through a discovery process that begins with understanding your business objectives, we help you integrate the next-generation Cisco Catalyst fixed switches into your architecture and incorporate network services onto those platforms. Sharing knowledge and leading practices, we support your success every step of the way as you deploy, absorb, manage, and scale new technology. Choose from a flexible suite of support services (Table 9), designed to meet your business needs and help you maintain high-quality network performance while controlling operational costs.

Table 9. Technical services available for Cisco catalyst digital building series switches

Technical Services
<p>Cisco SMARTnet[®] Service</p> <ul style="list-style-type: none"> • Around-the-clock, global access to the Cisco Technical Assistance Center (TAC) • Unrestricted access to the extensive Cisco.com knowledge base and tools • Next-business-day, 8x5x4, 24x7x4, and 24x7x2 advance hardware replacement and onsite parts replacement and installation available • Ongoing operating system software updates within the licensed feature set • Proactive diagnostics and real-time alerts on Smart Call Home-enabled devices <p>Cisco Smart Foundation Service</p> <ul style="list-style-type: none"> • Next business day advance hardware replacement as available • Business hours access to SMB TAC (access levels vary by region)

Technical Services

- Access to Cisco.com SMB knowledge base
- Online technical resources through Smart Foundation Portal
- Operating system software bug fixes and patches

Cisco Focused Technical Support Services

- 3 levels of premium, high-touch services are available
 - Cisco High-Touch Operations Management Service
 - Cisco High-Touch Technical Support Service
 - Cisco High-Touch Engineering Service
- Valid Cisco SMARTnet[®] or SP Base contracts on all network equipment are required

Cisco Capital

Financing to help you achieve your objectives

Cisco Capital[®] financing can help you acquire the technology you need to achieve your objectives and stay competitive. We can help you reduce CapEx, accelerate your growth, and optimize your investment dollars and return-on-investment. Cisco Capital financing gives you flexibility in acquiring hardware, software, services, and complementary third-party equipment, with the option of just one predictable payment. Cisco Capital[®] is available in more than 100 countries. [Learn more](#).

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