

Cisco Catalyst Digital Building Series Switches



General

Q What are the Cisco® Catalyst® Digital Building Series Switches?

A The Digital Building Series Switches are purpose-built switches that deliver low-voltage Power over Ethernet (PoE) connectivity for smart building and lighting deployments. The switches expand the vision for the Cisco Digital Buildings and lay the foundation for converging disparate building systems, including lighting, BMS, and surveillance onto a single IP-based network.

Q What is the Cisco Digital Building?

A The Cisco Digital Building is a framework that brings together industry ecosystem partners by linking building services over a single, converged IP network. It transforms the unobtrusive infrastructure across your facilities into a secure, distributed, and standards-based architecture that delivers building intelligence at the edge of the network. The result is a building that is not only smart, but also transparently and securely connected. For more information, see <http://www.cisco.com/go/digitalbuilding>.

Q How are the Cisco Catalyst Digital Building Series Switches related to the Digital Buildings?

A The Cisco Catalyst Digital building series switches are a new line of Cisco switches that are custom-built to enable and expand the vision of the Digital Building. These switches support an innovative feature set that is optimized to Digital Building deployments.

Q What is new in the Cisco Catalyst Digital Building Series Switches?

A The Cisco Catalyst Digital Building Series Switches support a number of features that will enable lighting and building deployments at scale:

- Innovative design for deployments in smart lighting and building
- Innovations in PoE, including perpetual and fast PoE
- High reliability with >10-year system life
- System power efficiency with innovative power management standby mode
- IP30-grade ruggedized chassis for protection in building construction environments
- Plenum rating for deploying in ceiling spaces
- Easy day-zero deployment with intuitive Apple iOS and Android mobile application

Q How are the Cisco Catalyst Digital Building Series Switches different from the Cisco Catalyst 2960 and 3850 line of switches?

A The Cisco Catalyst 2960 and 3850 are enterprise-grade switches with full Layer 2 and Layer 3 capabilities for enterprise IT deployments in the campus and branch; the Digital Building Switches in contrast, are optimized for Layer 2 Internet of Things (IoT) access for smart building and lighting deployments.

Q How are the Digital Building Series Switches different from the Industrial Ethernet line of switches?

A The Digital Building Series Switches are optimized for IoT deployments in the carpeted enterprise space, whereas the Industrial Ethernet switches are ruggedized with higher environmental tolerances for IoT deployments in industrial environments.

Hardware

Q Which switch models are supported in the Cisco Catalyst Digital Building Series Switches?

A Table 1 shows the different switch models available. All switch models are shipped from the factory with the appropriate switch license and feature set.

Table 1. Available Switch Models

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

Q Do these switches run at line-rate performance?

A Yes, the Cisco Catalyst Digital Building Series Switches support full line-rate performance.

Q Do the Cisco Catalyst Digital Building Series Switches support Small Form-Factor Pluggable (SFP)-capable ports?

A No.

Q How much PoE power/port do the Cisco Catalyst Digital Building Series Switches support?

A While the CDB-8U switch model supports full UPOE with up to 60W/port on each port, the CDB-8P switch model supports full PoE+ with up to 30W/port on each port.

Q Are the Cisco Catalyst Digital Building Series Switches fanless?

A Yes, the Digital Building Series Switches are fanless, which enables higher reliability and long system life.

Q How does cooling work on the Cisco Catalyst Digital Building Series Switches?

A The Digital Building Series Switches have a heat sink to help with heat dissipation and achieve cooling by convection.

Q What is the noise level on the Cisco Catalyst Digital Building Series Switches?

A These switches are silent and produce ambient noise levels during operation.

Q What is the function of the mode button on the front panel of these switches?

A The mode button is used for resetting the switch, entering express setup mode, selecting or changing an LED mode, turning on LEDs, and manually waking up the switch from hibernation mode.

Q What are the mounting options on the Cisco Catalyst Digital Building Series Switches?

A The Digital Building Series Switches come with a number of flexible mounting options for sturdy rack, in-ceiling, and electrical cabinet installations:

- CDB-MNT-FLEX-C14: flexible ceiling mount with IEC C14 input power connector
- CDB-MNT-FLEX-DIR: flexible ceiling mount with direct wired input power connector
- CDB-MNT-RACK5-C14: rack mounting unit that enables mounting in a 19" rack; allows up to five switches to be mounted on one rack mount unit

Q What are the input power options on the Cisco Catalyst Digital Building Series Switches?

A The Digital Building Series Switches support modular powering with the power junction boxes on the mounting units. There are different mounts for IEC C14 and direct wired.

Q Can the Cisco Catalyst Digital Building Series Switches be mounted beside each other?

A Yes, the Digital Building Series Switches can be mounted beside each other with the flexible ceiling-mounting units. This simplifies the powering of these switches in ceiling spaces. Mounting them beside each other is recommended over on-top of each other as the switches will not overheat.

Q What is the function of the SD card slot on the front panel of these switches?

A The SD card slot allows you to boot the switch from the configuration and image stored on a swappable SD card on the switch. The SD card allows simple recovery of the switch.

Software

Q Do the Cisco Catalyst Digital Building Series Switches run Cisco IOS® Software?

A Yes, Digital Building Series Switches run Cisco IOS Software and support command line interfaces (CLIs) similar to those available in standard Cisco IOS Software.

Q What are the software licensing options for the Cisco Catalyst Digital Building Series Switches?

A The Digital Building Series Switches ship with the Cisco IOS Software LAN Lite fixed software license.

Q What are some of the primary software features supported on the Cisco Catalyst Digital Building Series Switches with Cisco IOS Software LAN Lite software?

A Following are some of the primary software features supported on the Digital Building Series Switches:

- Layer 2: 802.1d STP, 802.1w RSTP, 802.1s MSTP, LLDP, VLAN, dynamic VLAN, 802.1p, 802.1q, 802.3ad LACP, Etherchannel, VTPv2, DTP, UDLD, static and dynamic MAC addressing
- IPv6: IPv6 host capabilities, IPv6 MLDv1 and v2 snooping, IPv6 ACL
- Manageability: SNMPv1, v2, v3; various MIBs; Device Manager
- Security: port security, MAC aging, MAC filtering, trunk port security, PVLAN edge, IEEE 802.1x, 802.1x MAC-Auth-Bypass, TACAC+, MAC RADIUS, STP: BPDU filtering, STP: root guard, SPAN, DHCP snooping, ACL
- QoS: 4 egress queues, 802.1p priority, strict priority queuing, WRR, storm control

Q What is the system bootup time on the Cisco Catalyst Digital Building Series Switches?

A The Digital Building Series Switches take up to 35 seconds to boot up.

Q What is Perpetual UPOE, and how does it make PoE more reliable?

A Perpetual UPOE allows the Cisco Catalyst Digital Building Series Switches to provide uninterrupted power to a powered-down device even when the switch is booting. You can connect any PoE-powered device (for example, a light fixture or IP surveillance camera) to the switch port and reload the switch. The PoE-powered device will continue to work and get last negotiated power.

Q What is Fast UPOE?

A Fast UPOE allows the Cisco Catalyst Digital Building Series Switches to provide the prenegotiated PoE or UPOE power to a powered-down device within 5 seconds of system power restoration. This makes sure that the powered-down devices can power up quickly after a power outage.

Q How do the Cisco Catalyst Digital Building Series Switches enable energy efficiency?

A The Digital Building Series Switches support the following for energy efficiency and control:

- Switch hibernation mode: Innovative technology that puts the switch in an ultralow-power mode during system standby.
- System power efficiency: Advances the industry standard on system power efficiency to 90 percent using innovative power management techniques.
- Meets 80-Plus Gold Efficiency requirements.
- Energy sensors for PoE loads and AC mains.
- Integration with the Cisco Energy Management suite for full energy control and visibility.
- IEEE 802.3az Energy Efficient Ethernet.

Q How does the switch enter switch hibernation mode?

A Switch hibernation mode is a unique Cisco innovation that puts the switch in ultralow-power deep sleep mode during periods of nonoperation such as nights and weekends. The switch can enter the hibernation mode using the following mechanisms:

- CoAP
- RTC clock

Q How does the switch exit the switch hibernation mode?

A The switch can exit the hibernation mode using the following mechanisms:

- Wake on packet
- RTC clock
- Mode button

Management

Q Can the Cisco Catalyst Digital Building Series Switches be managed using Cisco Prime® Infrastructure?

A Yes, Cisco Prime Infrastructure supports management of these switches.

Q Do the Cisco Catalyst Digital Building Series Switches support a web management option?

A Yes, the Digital Building Series Switches support a new and improved web management interface called the Cisco Configuration Professional for Switches.

Q Can the Cisco Catalyst Digital Building Series Switches be managed with APIC-EM?

A Yes, APIC-EM can be used to manage the Digital Building Series Switches. For more information about APIC-EM, see <http://www.cisco.com/c/en/us/products/cloud-systems-management/application-policy-infrastructure-controller-enterprise-module/index.html>.

Q Do the Cisco Catalyst Digital Building Series Switches support network Plug-n-Play (PnP) for day-zero installation?

A Yes, the Digital Building Series Switches support the network PnP application on APIC-EM for day-zero configuration and installations.

Installation

Q Can the Cisco Catalyst Digital Building Series Switches be deployed during building construction without the full IT network in place?

A Yes, the Digital Building Series Switches can be installed, configured, and tested during building construction without the IT network in place.

Q How do Cisco Catalyst Digital Building Series Switches simplify day-zero installation?

A The Digital Building Series Switches support the following to simplify day-zero installation:

- Smart manufacturing defaults such that basic functionality works without any additional configuration
- Custom Apple iOS and Google Android mobile application for out-of-band configuration, troubleshooting, and reporting to optimize these tasks for a non-IT professional
- Network PnP for configuration as part of an IT network
- Cisco Configurator Professional for configuration from a web tool

Q How does the Cisco Catalyst Digital Building mobile application communicate with the switches?

A The mobile application communicates with the switches using the following out-of-band communication mechanisms:

- Wireless interface using Bluetooth
- Wired interface with lightning to RJ-45 for Apple iOS devices or micro USB to RJ-45 for Android devices

Q Do the Cisco Catalyst Digital Building Series Switches natively support Bluetooth?

A No, the switches don't support an in-built Bluetooth radio. However for day-zero installation, Bluetooth can be supported with a Bluetooth USB dongle.

Q Can Cisco Catalyst Digital Building Series Switches be installed by a professional with limited networking or IT expertise?

A Yes, the digital building installation workflow is simplified such that a non-IT professional can install it. The mobile app automates configuration and allows the electrician to connect, validate, and troubleshoot issues with power, cabling, basic configuration, and connectivity.

Q Is the Cisco Catalyst Digital Building mobile app available on Apple iOS platforms?

A Yes, the Cisco Catalyst Digital Building mobile app is available for download from the Apple app store.

Q Is the Cisco Catalyst Digital Building mobile app available on Android platforms?

A Yes, the Cisco Catalyst Digital Building mobile app is available for download from the Android Play store.

Q How does the day-zero mobile app help electricians and other non-IT installers?

A The day-zero installer app automatically connects and validates the devices connected to a switch. It automates the installation process and requires little to no training. It helps the installer check cabling and connectivity and make sure that the lights are installed correctly and allows them to capture the status of the installation in a report that can be stored and emailed.

Q What is the label printing function on the Cisco Catalyst Digital Building mobile application?

A The label printing function in digital building mobile application allows the app to wireless connect to a label printer and print out port labels for interface connected to Catalyst Digital Building Series Switch. These labels can be put on the wires to help map endpoints connected to the switch.

Q Which label printers are compatible with the day-zero Cisco Catalyst Digital Building mobile app?

A Brother PT E550W label printers are compatible with the Digital Building mobile app.