

Cisco Content Delivery Engine 250

Cisco® Content Delivery Engines (CDEs) are a family of carrier-class appliances that power the Cisco Videoscape™ Distribution Suite (VDS) for Internet and TV streaming products. VDS is an innovative, network-based modular platform for video delivery. Generation 3 CDE 250 models span a wide range of solid state and hard disk models, which extend the performance and features of the Cisco CDE series.

Cisco VDS delivers an exceptional level of scalability and reliability while giving service providers a distinct service-velocity advantage in supporting the next generation of personalized entertainment and interactive media. The Cisco VDS platform combines Cisco CDEs with Cisco Content Delivery Applications (CDAs), software elements that provide ingest, storage, caching, streaming, and other real-time, scalable, and resilient capabilities. Cisco CDEs and CDAs can be flexibly configured to support a variety of networked value-added services that service providers can rapidly deploy to attract and retain subscribers.

Networked Cisco CDEs work together to form a scalable, flexible, and highly available system that allows service providers to rapidly deploy high-value services such as Video on Demand (VoD), Live Streaming, Time-Shift TV (TSTV), and cloud DVR (cDVR).

Cisco CDE and CDA Product Overview

Cisco CDAs can be grouped into the following service types:

- TV Streaming (VDS TV): Content delivery to TV sets through cable or IPTV set-top boxes
- Internet Streaming (VDS IS): Content delivery to IP devices connected to the Internet
- Cisco Visual Quality Experience (VQE): Error repair, statistics gathering, and channel change-time acceleration

Table 1 provides a mapping between the Cisco CDAs and the various CDE models. Cisco CDE 250 models are shown in bold. To obtain detailed information about all Cisco CDAs, please refer to the Cisco CDA product literature.

Table 1. Cisco CDE Models and Supported Cisco Content Delivery Applications

Service Type	Content Delivery Application	Entry-Level	Dense	High-End
TV Streaming (VDS-TV)	Manager	CDE 110-2		
	Content Library (Vault)			CDE 250-2A4
	Content Cache			CDE 250-2G3
	Streamer		CDE 250-2S5*	CDE 250-2S6* CDE 250-2S8* CDE 250-2S9* CDE 250-2S10* CDE 250-2G3
	Integrated Streamer-Vault	CDE 220-2D1		
	TV Playout	CDE 220-2D1		

Service Type	Content Delivery Application	Entry-Level	Dense	High-End
Internet streaming (VDS IS)	Manager	CDE 205		
	Streamer	CDE 205	CDE 250-2M0 CDE 250-2S5*	CDE 250-2S6* CDE 250-2S8* CDE 250-2S9* CDE 250-2S10*
	Service Router	CDE 205		
	Content Acquirer	CDE 205	CDE 250-2M0 CDE 250-2S5*	CDE 250-2S6* CDE 250-2S8* CDE 250-2S9* CDE 250-2S10*
Cisco VQE	VQE Channel Provisioning Tool	CDE 111-2	CDE 250-2V0*	
	VQE Server	CDE 111-2	CDE 250-2V0*	

* These products feature flash memory solid-state drive (SSD) technology and provide common platforms for either TV or Internet streaming applications.

Cisco CDE Features and Benefits

Designed to increase flexibility, Cisco Content Delivery Engines can be grouped into arrays that operate as a single logical system. Service providers can easily expand capacity by attaching additional Cisco CDEs to the array, thereby achieving almost unlimited video storage and streaming capacity. The Cisco Videoscape Distribution Suite employs a hierarchical storage design that allows service providers to maintain huge content libraries while actually simplifying content storage management.

Cisco CDEs adapt automatically to unpredictable and rapidly changing traffic patterns. The platform preserves video programming in a common, shared storage array that is instantly accessible for streaming anywhere in the network. Cisco Intelligent Caching technology automates the distribution of video content between Cisco CDEs by responding dynamically to actual viewer demand and popularity trends. This adaptive content distribution model helps ensure that the content that is most popular at any point in time at each network node is always available in local storage, significantly reducing the bandwidth burden on the network backbone. This flexible architecture and the effectively unlimited scalability of content libraries make the Cisco VDS an attractive solution for efficiently and cost-effectively delivering "long-tail" content, network-based time-shifted programming, and user-generated content. This feature helps increase network scalability while reducing capital expenditures (CapEx) and operating expenses (OpEx).

Cisco CDEs are also designed for fault-tolerant operation. They can share states and work together as a single logical pool of resources that can be dynamically reallocated across the network's available hardware capacity in response to service requests. In the event of hardware failure, the Cisco VDS immediately delegates the functions being performed by the failed device to other Cisco CDEs in the network. Furthermore, the system automatically discovers the addition or removal of a Cisco CDE and reconfigures itself without service disruption or manual intervention, vastly simplifying maintenance and upgrade operations.

A network populated with Cisco CDEs becomes a platform upon which new services and applications can be layered over time and deployed much more quickly than was possible in the past. The platform unleashes the power of IP networking technology by creating a video infrastructure capable of delivering nonstop availability, high scalability, and low total cost of ownership. Taking advantage of the extensible architecture of the Cisco VDS, operators can deploy on-demand video services today with the knowledge that they can expand their services to support real-time applications and multiple forms of interactive media content delivered to many types of devices.

Features and benefits of the Cisco Content Delivery Engines are summarized in Table 2.

Table 2. Cisco Content Delivery Engines Features and Benefits

Feature	Benefit
Industry-leading MPEG2TSstream density	With up to 8000 MPEG2 standard-definition (SD) streams in a two-rack-unit (2RU) form factor, the Cisco CDE 250 Dense TV Streamer offers industry-leading video streaming density (4000 SD streams per RU). This translates to over 176,000 MPEG2 SD streams served with a single rack, optimizing space requirements and reducing total ownership costs.
Industry-leading HTTP Adaptive Bit Rate stream density	With over 30 Gbps HTTP streaming in a two-rack-unit (2RU) form factor, the Cisco CDE 250 Internet Streamer offers industry-leading video streaming for HTTP Adaptive Bit Rate formats from Apple, Microsoft, and Adobe. This translates to over 660 Gbps served with a single rack, optimizing space requirements and reducing total ownership costs.
High-performance processing	Eight CPU [*] cores promote high performance for computationally intensive tasks such as sustained video streaming operations or per-stream targeted ad insertion.
High-density persistent MPEG2T storage	The Cisco CDE 250 combined with VDS-TV CDA offers a high-end Content Library capable of reliably storing up to 12,000 hours of MPEG2 SD content in a two-rack-unit (2RU) form factor, allowing service providers to expand their content library with a small number of library servers.
High-performance content acquisition	Cisco CDEs combined with VDS-TV CDAs are capable of simultaneously ingesting up to 200 MPEG2 SD streams, providing highly scalable content acquisition of real-time live channels for time-shift TV services.
Flash memory SSD technology	Flash memory SSD technology complements hard-disk-drive (HDD) options for certain Cisco CDE configurations. The technology is used for video cache and transaction logging to lower operating costs and lay the foundation for even better performance and scale.
Solid-State Boot Device	8 GB of compact flash memory helps ensure reliable bootup operations with ample capacity to spare.
Dual-port management access	Two dedicated management ports are available in addition to the ingest, fill, and streaming ports to simplify connectivity and manageability.
High-efficiency redundant power supply	The Cisco CDE 250 base systems support either AC or DC dual, high-efficiency power supplies for lower power consumption and a simplified sparing strategy.
Nonstop service availability	Unique failover and resiliency features help ensure that hardware failures do not bring down the network and cause service outages.
Logical server arrays	VDS-TV resource pooling and load balancing allow Cisco CDEs to be networked into logical server arrays that can provide effectively unlimited amounts of content storage (content library array), content cache (caching node array), and streaming capacity (streamer array) throughout the network.
	Additional streaming or storage capacity can be added to the array without outages or service interruption. The Cisco VDS TV detects the addition or removal of Cisco CDEs from the logical array and optimally load balances the entire resource pool.
	Independent scaling of the content library size and stream count allows flexibility in capital expenditures.
Multifunction capabilities	Cisco CDE models are built on a few selected base systems with minor differences among the available configurations, simplifying personnel training and equipment sparing strategies.
Generation 3 technology	Cisco CDE 250 offers world-class performance through leading-edge server technology, a directly attached storage architecture, and 10-Gigabit Ethernet connectivity.
Generation 3 flexibility	Cisco CDE 250 offers a flexible Cache Storage Bundle structure, supporting storage upgrade paths and server repurposing opportunities.
Generation 3 manageability	Cisco CDE 250 supports lights out management capability through support of the Intel Intelligent Platform Management Interface (IPMI) and a dedicated Ethernet port.

* On all models except Cisco CDE 205, which has four CPU cores.

Generation 3 Content Delivery Engines: Cisco CDE 250 Models

The latest generation of Cisco Content Delivery Engines, the Cisco CDE 250, employs leading-edge server technology to deliver higher scalability, performance, and flexibility in a dense 2RU design. A multitier product structure provides flexibility at the storage system level while simplifying the underlying server product across all applications. Each Cisco CDE 250 storage bundle is optimized for the Cisco Content Delivery Applications (CDAs) that are supported on it, as shown in Table 3. The 10-Gigabit Ethernet I/O uses Enhanced Small Form-Factor Pluggable (SFP+) modules to support both fiber and copper media on a per-port basis.

Table 3 provides a high-level summary of all Cisco CDE Generation 3 models. For information about Cisco CDE Generation 2 platforms, please refer to the Cisco CDE Generation 2 data sheet.

Table 3. Cisco CDE 250 Models

Platform	Rack Units	Processor	Memory	I/O	Model Name	Storage Capacity (GB)
CDE 250	2 RU	2 quad-core Westmere CPUs	48 GB	<ul style="list-style-type: none"> • 4 TX Gigabit Ethernet • 4 SFP 10 Gigabit Ethernet • 2 TX Gigabit Ethernet Management 	CDE 250-2S5	1,500 GB useable* (12 x 160-GB SSD)
					CDE 250-2S6	3,000 GB useable* (24 x 160-GB SSD)
					CDE 250-2S8	6,000 GB useable* (24 x 300 GB SSD)
					CDE 250-2S9	6,000 GB useable* (12 x 600 GB SSD)
					CDE 250-2S10	12,000 GB useable* (24 x 600 GB SSD)
					CDE 250-2G3	14,400 GB useable (24 x 600-GB SAS)
					CDE 250-2M0	8,000 GB useable (16 x 500-GB SATA)
					CDE 250-2V0	200 GB useable (1x 200-GB SSD)
					CDE 250-2A4	24,000 GB useable (24 x 1-TB SAS)

* 20 percent of drive capacity reserved for administrative functions.

Cisco CDE 250 Specifications

The Cisco CDE 250 (Figure 1) is a versatile platform that is available in the following models, each optimized for particular content delivery applications:

- **Model CDE 250-2S5:** Cisco VDS-TV and VDS-IS Streamer with flash memory SSD technology
- **Model CDE 250-2S6:** Dense Cisco VDS-TV and VDS-IS with flash memory SSD technology
- **Model CDE 250-2S8:** Very Dense Cisco VDS-TV and VDS-IS with flash memory SSD technology
- **Model CDE 250-2S9:** Very Dense CiscoVDS-TV and VDS-IS with flash memory SSD technology
- **Model CDE 250-2S10:** Ultra Dense CiscoVDS-TV and VDS-IS with flash memory SSD technology
- **Model CDE 250-2G3:** High-End TV Caching Node and high-end Cisco TV Streamer
- **Model CDE 250-2M0:** VDS-IS Internet Streamer or Acquirer with hard disk storage technology
- **Model CDE 250-2V0:** VQE Server or tools
- **Model CDE 250-2A4:** High-End TV Content Library (Vault) with hard disk storage technology

Figure 1. Cisco Content Delivery Engine CDE 250



All configurations are available with AC or DC redundant power supplies. All servers support four Gigabit Ethernet copper (fixed) ports and four 10-Gigabit Ethernet ports with SFP+ media modules. See Table 4 for specifications.

Table 4. Technical Specifications for Cisco CDE 250

Description	Cisco CDE 250
Rack units	2
Storage	Refer to the model-specific details in Tables 5-13
Memory	48-GB DRAM
Network interfaces	Four 10/100/1000BASE-T Four 1000/10 Gigabit Ethernet and SFP media modules SFP+ options: <ul style="list-style-type: none"> • Short-reach (SR) fiber optic - 850 nm • Long-reach (LR) fiber optic - 1310 nm • CX-1 Twinax copper - 1, 3, and 5 m
Management interfaces	Two 10/100/1000BASE-T
Other interfaces	Console port; 2 USB ports
Compact flash memory	8 GB
Optical drive	Remote; USB-attached DVD (optional)
Power	100 to 240 VAC or -48 VDC redundant power supplies included in all models
Power rating	800 W peak
Power consumption	550 W nominal (unless otherwise stated in model-specific details in Tables 5-13)
Operating humidity range	8 to 90 percent non-condensing
Non-operating humidity range	5 to 95 percent non-condensing
Operating temperature	41 to 104°F (5 to 40°C)
Non-operating temperature	-40 to 158°F (-40 to 70°C)
Altitude	0 to 13,123 ft (0 to 4000 m)
Dimensions (H x W x D)	3.5 x 17.2 x 25.5 in. (8.9 x 43.7 x 64.8 cm)
Weight (fully configured)	52 lbs (23.59 kg)
Approvals: Safety	UL/CSA 60950-1
Approvals: EMC	FCC Part 15 (CFR 47) Class A EMC Directive 89/336/EEC EMC Directive 2004/108/EC EN55022: 2006 EN55024: 1998, A1:2001, A2:2003 EN61000-3-2: 2006 EN61000-3-3: 1995, A1:2001, A2:2005
NEBS standards (under test)	NEBS Level 2 (unless otherwise stated in model-specific details in Tables 5-13)
Mean Time Between Failure (MTBF)	77,000 hours (unless otherwise stated in model-specific details in Tables 5-13)

Flash Memory Streamer (Cisco Model CDE 250-2S5)

The Cisco CDE 250 model 2S5 is designed for a dense Cisco Streamer Application; TV or Internet streaming are supported on this platform. It supports complete flash memory storage and up to four SFP+ media modules for use in the 10-Gigabit Ethernet ports.

In all cases, two 10/100/1000BASE-T interfaces are available for management functions. Table 5 shows the hardware bundle for the CDE 250-2S5.

Table 5. Cisco CDE 250 Model 2S5 Configuration

Description	Cisco CDE 250-2S5
Storage	1536 GB (12 x 160-GB SSD)
Power consumption	450 W nominal
Hardware Redundant Array of Independent Disks (RAID)	Yes
Internal log drives	Dual 100-GB SSD flash memory

Dense Flash Memory Streamer (Cisco Model CDE 250-2S6)

The Cisco CDE 250 model 2S6 is designed for a high-end Cisco Streamer Application; TV or Internet streaming are supported on this platform. The Cisco CDE 250-2S6 supports complete flash memory storage and up to four SFP+ media modules for use in the 10-Gigabit Ethernet ports.

In all cases, two 10/100/1000BASE-T interfaces are available for management functions. Table 6 shows the hardware bundle for the CDE 250-2S6.

Table 6. Cisco CDE 250 Model 2S6 Configuration

Description	Cisco CDE 250-2S6
Storage	3072 GB (24 x 160-GB SSD)
Power consumption	450 W nominal
Hardware RAID	Yes
Internal log drives	Dual 100-GB SSD flash memory

Very Dense VDS-TV and VDS-IS Flash Streamer (Cisco Model CDE 250-2S8)

The Cisco CDE 250 model 2S8 is designed for a very dense Cisco Streamer Application; TV or Internet streaming are supported on this platform. The Cisco CDE 250-2S8 supports complete flash memory storage and up to four SFP+ media modules for use in the 10-Gigabit Ethernet ports.

In all cases, two 10/100/1000BASE-T interfaces are available for management functions. Table 7 shows the hardware bundle for the CDE 250-2S8.

Table 7. Cisco CDE 250 Model 2S8 Configuration

Description	Cisco CDE 250-2S8
Storage	7200 GB (24 x 300 GB SSD)
Power consumption	450 W nominal
Hardware RAID	Yes
Internal log drives	Dual 100-GB SSD flash memory

Very Dense VDS-TV and VDS-IS Flash Streamer (Cisco Model CDE 250-2S9)

The Cisco CDE 250 model 2S9 is designed for a very dense Cisco Streamer Application; TV or Internet streaming are supported on this platform. The Cisco CDE 250-2S9 supports complete flash memory storage and up to four SFP+ media modules for use in the 10-Gigabit Ethernet ports.

In all cases, two 10/100/1000BASE-T interfaces are available for management functions. Table 8 shows the hardware bundle for the CDE 250-2S9.

Table 8. Cisco CDE 250 Model 2S9 Configuration

Description	Cisco CDE 250-2S9
Storage	7200 GB (12 x 600 GB SSD)
Power consumption	450 W nominal
Hardware RAID	Yes
Internal log drives	Dual 100-GB SSD flash memory

Ultra Dense VDS-TV and VDS-IS Flash Streamer (Cisco Model CDE 250-2S10)

The Cisco CDE 250 model 2S10 is designed for a very dense Cisco Streamer Application; TV or Internet streaming are supported on this platform. The Cisco CDE 250-2S10 supports complete flash memory storage and up to four SFP+ media modules for use in the 10-Gigabit Ethernet ports.

In all cases, two 10/100/1000BASE-T interfaces are available for management functions. Table 9 shows the hardware bundle for the CDE 250-210.

Table 9. Cisco CDE 250 Model 2S10 Configuration

Description	Cisco CDE 250-2S10
Storage	14,400 GB (24 x 600 GB SSD)
Power consumption	450 W nominal
Hardware RAID	Yes
Internal log drives	Dual 100-GB SSD flash memory

High-End Cisco VDS-TV Caching Node and Streamer (Cisco Model CDE 250-2G3)

The Cisco CDE 250 model 2G3 is designed for both the Cisco Content Cache Application and the Cisco TV Streaming Application. It supports a flash memory logging system and high-performance, high-capacity Serial Attached SCSI (SAS) HDD storage. It supports up to four SFP+ media modules for use in the 10-Gigabit Ethernet ports.

In all cases, two 10/100/1000BASE-T interfaces are available for management functions. Table 10 shows the hardware bundle for the CDE 250-2G3.

Table 10. Cisco CDE 250 Model 2G3 Configuration

Description	Cisco CDE 250-2G3
Storage	14,400 GB (24 x 600-GB SAS)
Power consumption	600 W nominal
Hardware RAID	Yes
Internal log drives	Dual 100-GB SSD flash memory

Cisco VDS-IS Content Acquirer and Streamer (Cisco Model CDE 250-2M0)

The Cisco CDE 250 model 2M0 is designed for both the Cisco VDS-IS Content Acquirer and Streamer functions. It supports a large 8-TB Serial Advanced Technology Attachment (SATA) HDD storage array, and up to four SFP+ media modules for use in the 10-Gigabit Ethernet ports.

In all cases, two 10/100/1000BASE-T interfaces are available for management functions. Table 11 shows the hardware bundle for the CDE 250-2M0.

Table 11. Cisco CDE 250 Model 2M0 Configuration

Description	Cisco CDE 250-2M0
Storage	8000 GB (16 x 500-GB SATA)
Power consumption	600 W nominal
Hardware RAID	No
Internal log drives	No

Cisco CDS-VQE Server and Tools (Cisco Model CDE 250-2V0)

The Cisco CDE 250 model 2V0 is designed for both the Cisco CDS-VQE Server and Tools Server functions. It supports a 200-GB SSD flash-based system drive to manage application data and logging, and up to four SFP+ media modules for use in the 10-Gigabit Ethernet ports. The quad-1GENIC is also supported for VQE payload.

In all cases, two 10/100/1000BASE-T interfaces are available for management functions. Table 12 shows the hardware bundle for the CDE 250-2V0.

Table 12. Cisco CDE 250 Model 2V0 Configuration

Description	Cisco CDE 250-2V0
Storage	200 GB (1 x 200-GB SSD)
Power consumption	450 W nominal
Hardware RAID	No
Internal log drives	No

High-End Content Library (Vault) Server (Cisco Model CDE 250-2A4)

The Cisco CDE 250 model 2A4 is designed for Content Library applications in a TV streaming environment. It supports a flash memory logging system and high-performance, high-capacity Serial Attached SCSI (SAS) HDD storage. It supports up to four SFP+ media modules for use in the 10-Gigabit Ethernet ports.

In all cases, two 10/100/1000BASE-T interfaces are available for management functions. Table 13 shows the hardware bundle for the CDE 250-2A4.

Table 13. Cisco CDE 250 Model 2A4 Configuration

Description	Cisco CDE 250-2A4
Storage	24,000 GB (24 x 1-TB SAS)
Power consumption	600 W nominal
Hardware RAID	Yes
Internal log drives	Dual 100-GB SSD flash memory

Ordering Information: Cisco CDE 250

Tables 14 and 15 list the Cisco CDE 250 products and part numbers required to place an order. For other Cisco CDE models, please consult the Cisco CDE Generation 2 data sheet.

Cisco CDE 250 is ordered as a tiered set of part numbers (PIDs):

- **Tier 1:** CDE250-K9, the main server
- **Tier 2:** Hardware Cisco CDE Configuration Bundle (for example, CB-48-HVY-2WPL)
- **Tier 3:** Storage Bundle (for example, SB-12F160)

Examples of product orders:

- **Example 1:** Product CDE 250-2S6 equals CDE250-K9 plus CB-48-HVY-2WPL plus SB-24F160 plus SFP plus power supply options
- **Example 2:** Product CDE 250-2M0 equals CDE250-K9 plus CB-48-XVR-2WPL plus SB-16A500 plus SFP plus power supply options

Before you place an order, please check the availability of the part number by checking the [Cisco Global Price List](#). To place an order, visit the [Cisco Ordering Home Page](#) and refer to Tables 11 and 12.

Table 14. Ordering Information

Product	Model Number	Part Number	Product Description
CDE 250	(2RU Base System)	CDE250-K9	2RU Content Delivery Engine base system, 8-GB Boot Flash
	(HVY Chassis Bundle)	CB-48-HVY-2WPL	CDE Bundle, 48 GB, 1x Quad Copper, 2x Dual 10 GE, 3x SAS HBA, 1x RAID HBA, 200-GB Logging Drives Supports models: 2S5, 2S6, 2G3
	(XVR Chassis Bundle)	CB-48-XVR-2WPL	CDE Bundle, 48 GB, 1x Quad Copper, 2x Dual 10 GE, 3x SAS HBA Supports models: 2M0, 2V0
	CDE 250-2S5	SB-12F160	Storage Bundle, 12x 160-GB 2.5-in. SSD, 1 CDA
	CDE 250-2S6	SB-24F160	Storage Bundle, 24x 160-GB 2.5-in. SSD, 1 CDA
	CDE 250-2S8	SB-24F300	Storage Bundle, 24x 300GB-GB 2.5-in. SSD, 1 CDA
	CDE 250-2S9	SB-12F600	Storage Bundle, 12x 600GB 2.5-in. SSD, 1 CDA
	CDE 250-2S10	SB-24F600	Storage Bundle, 24 x 600GB 2.5-in. SSD, 1 CDA
	CDE 250-2G3	SB-24S600	Storage Bundle, 24x 600GB 2.5-in. SAS, 1 CDA
	2S5 - 2S6 Upgrade	SB-UP-12F160-10LI=	Storage Bundle, 12x 160-GB 2.5-in. SSD, 10 Stream Upgrade License
	CDE 250-2M0	SB-16A500	Storage Bundle, 16x 500-GB 2.5-in. SATA, 1 CDA
	CDE 250-2V0	SB-1F200	Storage Bundle, 1x 200-GB 2.5-in. SSD, 0CDA
	CDE 250-2A4	SB-24S1T	Storage Bundle, 1 x 1-TB 2.5 in. SAS, 1 CDA

Table 15. Hardware Options and Spares: Cisco CDE 250

Product	Part Number	Product Description
CDE 250	CDE3-PWR-900W-AC	AC power supply for CDE 250
	CDE3-PWR-710W-DC	DC power supply for CDE 250
	CDE3-PWR-900W-AC=	Spare AC power supply for CDE 250
	CDE3-PWR-710W-DC=	Spare DC power supply for CDE 250
	CDE3-SSD-MLC-160=	Spare 160-GB SSD,SFF for CDE 250

Product	Part Number	Product Description
	CDE3-SSD-MLC-300=	Spare 300-GB SSD, SFF for CDE 250
	CDE3-SSD-MLC-600=	Spare 600-GB SSD, SFF for CDE 250
	CDE3-HDD-SATA-500=	Spare 500-GB SATA Drive, SFF for CDE 250
	CDE3-HDD-SAS-600=	Spare 600-GB SAS Drive, SFF for CDE 250
	CDE3-SSD-EMLC-200=	Spare 200-GB SSD, eMLCSFF for CDE 250 Model 2V0
	CDE3-HDD-SAS-1T=	Spare 1 TB SAS drive, SFF for CDE 250
	CDE3-ACC-DVD=	Spare external USB-DVD drive unit, USB powered
	CDE3-ACC-RAK216=	Spare rack mount kit to fit CDE 250 chassis
10-GE SFP+ Modules	CDE2-SFP-1WSR=	SFP+, 10-GE SR Optical Module, 850 nm (fiber) CDE 250 Compatible
	CDE2-SFP-1WLR=	SFP+, 10-GE LR Optical Module, 1310 nm (fiber) CDE 250 Compatible
	CDE2-SFP-1WCX=	SFP+, 10-GE, Passive Twinax Cable Harness, 1 m length (copper)
	CDE2-SFP-3WCX=	SFP+, 10-GE, Passive Twinax Cable Harness, 3 m length (copper)
	CDE2-SFP-5WCX=	SFP+, 10-GE, Passive Twinax Cable Harness, 5 m length (copper)

Service and Support

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For More Information

For more information about the Cisco Content Delivery System or the Cisco Content Delivery Engines, visit <http://www.cisco.com/go/cds>.



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