Data Sheet

Cisco Enterprise Content Delivery Network Solution—Cisco Content Engines

Above:
Cisco 500 Series Content Engine and Cisco 7300 Series Content Engine

Cisco Content Networking Product Portfolio

The Cisco® Enterprise Content Delivery Network (ECDN) solution, running Cisco Application and Content Networking System (ACNS) Software, enables organizations of all sizes to reduce costs, drive productivity, and increase revenues by extending strategic applications from the data center to the branch, including:

- Content and application acceleration
- Access management and security
- Video streaming
- Corporate communications
- E-learning
- Point-of-sale kiosks and video displays
- Software and file distribution

Cisco ACNS Software combines the technologies of demand-pull caching and pre-positioning for accelerated delivery of Web applications, objects, files, and streaming media which runs on Cisco content engines and content engine network modules, the Cisco Content Distribution Manager (CDM), and Cisco content routers.

Together with Cisco content delivery hardware platforms, intelligent Cisco ACNS Software provides the following business-critical functions:

- Content edge delivery using the Cisco Content Engine or Cisco 2600/3600/3700 Series Content Engine Network Module to avoid WAN congestion by storing and delivering content at the network edge
- Central management capabilities using the Cisco CDM appliance
- Content routing capabilities using the Cisco Content Router for HTTP routing and the Cisco Web Cache Control Protocol (WCCP) embedded in routers and switches with Cisco IOS® Software

For ready-to-use live and on-demand streaming, customers can combine the Cisco ECDN solution with the Cisco IP/TV® 3400 Series Video Server, which captures and delivers standards-based MPEG video with synchronized presentations, program creation, scheduling, and interactive QuestionManager features.

In the data center, Cisco content engines can be used with the Cisco CSS 11000 Series Content Services Switch (CSS) and the Cisco Catalyst® 6500 Series Content Switch Module (CSM) for reverse proxy caching, which offloads expensive back-end Web servers.

Cisco CE-510-K9 Content Engine

The Cisco 510 Content Engine requires a single IDE hard disk. Customers can optionally purchase a second IDE hard disk; however, there is no external storage expandability beyond two internal disk drives. Optionally, the Cisco Content Engine 510 can be configured with either a Fibre Channel adapter for interfacing with SANs or an MPEG video decoder for baseband video capability. Due to the availability of only a single PCI slot either the Fibre Channel adapter or MPEG decoder can be installed in the Cisco 510 Content Engine, but not both. (Part number CE-510-K9.)

Cisco CE-565-K9 Content Engine

The Cisco 565 Content Engine requires two internal SCSI hard disks. No additional internal hard disks can be added to the product. For storage expandability and higher caching performance, a Cisco Storage Array 7 can be connected to the Cisco 565 Content Engine SCSI connector. Optionally the Cisco 565 Content Engine can be configured with either a Fibre Channel adapter for interfacing with SANs or an MPEG video decoder for baseband video capability. Due to the availability of a single PCI slot, either the Fibre Channel adapter or MPEG decoder can be installed in the Cisco 565 Content Engine, but not both. (Part number CE-565-K9.)

Through a CLI configuration the Cisco 565 Content Engine can be changed into a CDM or a content engine. There is no additional licensing or customer cost to make this change. (See Table 1.)

Cisco CE-7305-K9 Content Engine

The Cisco 7305 Content Engine requires two internal SCSI hard disks. In addition, up to four hard disks can be added to the product for a total of six internal disks. For storage expandability and higher caching performance, a Cisco Storage Array 14 can be connected to the Cisco 7305 Content Engine SCSI connector. Optionally the Cisco 7305 Content Engine can be configured with a Fibre Channel adapter for interfacing with SANs. (Part number CE-7305-K9.)

Through a CLI configuration the Cisco 7305 Content Engine can be changed into a CDM or a content engine. There is no additional licensing or customer cost to make this change. (See Table 1.)

Cisco CE-7325-K9 Content Engine

The Cisco 7325 Content Engine requires six internal SCSI hard disks. No additional internal hard disks can be added to the product. For storage expandability and higher caching performance, an SA-14 storage array can be connected to the Cisco 7325 Content Engine SCSI connector. Optionally the Cisco 7325 Content Engine can be configured with a Fibre Channel adapter for interfacing with SANs.

Cisco Content Engine Product Function Matrix

A new feature of Cisco ACNS Software Version 5.0 is the capability of configuring certain hardware as a content engine, content router, or CDM. All products will ship directly from the factory as a content engine and in some cases the content engine can be changed into a content router or CDM with a command-line interface (CLI) command (Table 1).

Note that the product can only have a single function (content engine, content router, or CDM) and cannot be configured to perform all functions simultaneously. Existing hardware (Cisco Content Distribution Manager models 4650and 4630, Content Engine models 507, 560, 590, and 7320, and Content Router-4430) will operate with Cisco ACNS Software Version 5.0 but cannot be reconfigured, as described in Table 1.

Table 1 Cisco Content Engine Product Function Matrix

	Cisco NM-CE-BP-X	Cisco CE-510-K9	Cisco CE-565-K9	Cisco CE-7305-K9	Cisco CE-7325-K9
CDM			X	X	
Content Router			X	X	
Content Engine	X	X	X	X	X

Table 2 lists the hardware platforms supported by Cisco ACNS Software Version 5.0.

Table 2 Hardware Platforms Supported by Cisco ACNS Software Version 5.0

Supported Hardware Platforms	Descriptions
NM-CE-BP-40GB	Content Engine Network Modules for the Cisco 2600, 3600 and 3700 multiservice access platforms with 40-GB IDE hard drive.
NM-CE-20GB	Content Engine Network Modules for the Cisco 2600, 3600 and 3700 multiservice access platforms with 20-GB IDE hard drive.
NM-CE-SCSI	Content Engine Network Modules for the Cisco 2600, 3600 and 3700 multiservice access platforms with SCSI adapter for external storage.
CE-510-K9	Entry-level edge delivery platform for small branch offices. Configurable only to be a content engine.
CE-565-K9	Mid-range edge delivery platform for regional offices or larger branch offices. Configurable to be a CDM, content router, or content engine.
CE-7305-K9	High-end data-center delivery platform. Configurable to be a CDM, content router, or content engine.
CE-7325-K9	Ultra high-end large data-center delivery platform. Configurable only to be a content engine.
SA-7	7-slot Cisco storage array, 7 SCSI-LVD disks, single AC power for Cisco 560, 590, and 7320 content engines; Cisco 4630 and 4650 Content Distribution Managers; Cisco Content Engine Models 565, 7305 and 7325.
SA-14	14-slot Cisco storage array, 14 SCSI-LVD disks, single AC power for Cisco Content Engine models 7305, 7325, 7320, and Cisco Content Distribution Manager 4650.
Hardware Options and Spares	
FIBER-CHNL-1PORT (=)	Fibre Channel host bus adapter card for use with Cisco Content Engine models 510, 565, 7305, and 7325.
CE-VIDEO-1P (=)	MPEG video decoder card for use with Cisco Content Engine 510 and Cisco Content Engine 565 to allow for AV output.
CE-510-DISK-40GB (=)	40-GB IDE disk for Cisco Content Engine 510.
Hardware Options and Spares (Continued)	

Table 2 Hardware Platforms Supported by Cisco ACNS Software Version 5.0 (Continued)

Supported Hardware Platforms	Descriptions
CE-565-DISK-36GB (=)	36-GB Ultra2 SCSI disk for Cisco Content Engine 565.
CE-510-DISK-80GB (=)	80-GB IDE disk for Cisco Content Engine 510.
CE-565-DISK-72GB (=)	72-GB IDE disk for Cisco Content Engine 565.
CE73XX-DISK-72GB (=)	72-GB Ultra2 SCSI disk for Cisco Content Engine models 7305 and 7325.
Older Hardware Platforms Part numbers	
CE-507-K9	Entry-level edge delivery platform for small branch offices.
CE-507AV-CDN-K9	Cisco 507 AV Content Engine plus composite baseband video and audio decoder (NTSC and Phase Altering Line [PAL]).
CE-560-K9	Mid-range edge delivery platform for regional offices or larger branch offices.
CE-560AV-CDN-K9	Cisco 560 Content Engine plus composite baseband video and audio decoder (NTSC and PAL).
CE-590-K9	High-end data-center delivery platform.
CE-590-DC-K9	High-end data-center delivery platform, DC power.
CE-7320-K9	Ultra high-end large data-center or service-provider delivery platform.
CE-7320-DC-K9	Ultra high-end large data-center or service-provider delivery platform, DC power.
CR-4430-K9	Cisco content router for added redundancy to Cisco CDM.
CDM-4630-K9	Entry-level Cisco CDM for small enterprise deployments and departmental pilots.
CDM-4650-K9	High-end Cisco CDM for medium and large enterprise deployments.
SA6-SHF-6DISK-AC	6-slot Cisco storage array, 6 SCSI-LVD disks, single AC power for Cisco 560 and 590 content engines and Cisco 4630 and 4650 content distribution managers.
CE-DISK-18GB-507-X	Extra 18-GB Ultra2 SCSI disk drive for Cisco 507 Content Engine (configurable option).
CDN1-DISK-18GB=	Spare 18-GB Ultra2 SCSI disk drive for Cisco 507 Content Engine.

Table 3 lists the Cisco Content Engine hardware platforms and network modules supported by Cisco ACNS Software Version 5.0.

Table 3 Hardware Platforms and Network Modules Supported by Cisco ACNS Software Version 5.0

Supported Hardware Platforms	Descriptions
NM-CE-BP-20G-K9(=)	Content engine network module, basic performance, 20-GB IDE hard disk
NM-CE-BP-40G-K9(=)	Content engine network module, basic performance, 40-GB IDE hard disk
NM-CE-BP-SCSI-K9(=)	Content engine network module, basic performance, SCSI controller (requires external SCSI disk array such as the Cisco SA-6 Storage Array)
EM-CE-20G=	Expansion module, 20-GB IDE, field upgrade
EM-CE-40G=	Expansion module, 40-GB IDE, field upgrade
EM-CE-SCSI=	Expansion module, SCSI controller, field upgrade
MEM-CE-256U512D	512 MB dynamic RAM (DRAM) factory upgrade for NM-CE-BP
MEM-CE-256D=	256 MB DRAM field upgrade
MEM-256CF-4.2-K9=	256 MB compact Flash memory, Cisco ACNS Software Release 4.2 recovery image
MEM-256CF-5.0-K9=	256 MB Compact Flash with ACNS 5.0 recovery image, 3DES

Hardware Specifications

Table 4 lists new hardware platform specifications for Cisco content engines and storage arrays.

Table 4 New Hardware Platform Specifications for Cisco Content Engines and Storage Arrays

	Cisco CE-510	Cisco CE-565	Cisco CE-7305	Cisco CE-7325	Cisco SA-7 and Cisco SA-14
CPU	One 1.7 GHz Intel Pentium 4 processor with 128 KB Layer 2 cache	One 1.7 GHz Intel Pentium 4 processor with 128 KB Layer 2 cache	One 2.4 GHz Intel Pentium 4 Prestonia processor with 512 KB Layer 2 cache	Two 2.4 GHz Intel Pentium 4 Prestonia processors with 512 KB Layer 2 cache	–
System Bus	400 MHz system bus (100 MHz Front Side Bus [FSB] at four data transfers per cycle)	400 MHz system bus (100 MHz FSB at four data transfers per cycle)	400 MHz system bus (100 MHz FSB at four data transfers per cycle)	400 MHz system bus (100 MHz FSB at four data transfers per cycle)	–
Synchronous DRAM (SDRAM)	512 MB	1 GB	2 GB	4 GB	–
Maximum System Storage (with Storage Array if Applicable)	80 GB IDE	396 GB Ultra2 SCSI	936 GB Ultra2 SCSI	936 GB Ultra2 SCSI	252 or 504 GB Ultra2 SCSI
Baseline Internal Storage	40 GB IDE	72 GB Ultra2 SCSI	144 GB Ultra2 SCSI	432 GB Ultra2 SCSI	252 or 504GB Ultra2 SCSI
Maximum Internal Storage	80 GB IDE	72 GB Ultra2 SCSI	432 GB Ultra2 SCSI	432 GB Ultra2 SCSI	252 or 504 GB Ultra2 SCSI
External Storage Array Support	No	Yes	Yes	Yes	–
Network Interfaces	Two 10/100/ 1000BASE-T	Two 10/100/ 1000BASE-T	Two 10/100/ 1000BASE-T	Two 10/100/ 1000BASE-T	–
Flash Memory	128MB	128MB	128MB	128MB	–
MPEG Decoder (Option)	Yes MPEG-1, 2 DB-15 audio connector BNC composite video output 7-pin DIN S-video output	Yes MPEG-1, 2 DB-15 audio connector BNC composite video output 7-pin DIN S-video output	No	No	–

Table 4 New Hardware Platform Specifications for Cisco Content Engines and Storage Arrays (Continued)

	Cisco CE-510	Cisco CE-565	Cisco CE-7305	Cisco CE-7325	Cisco SA-7 and Cisco SA-14
Fibre Channel Adapter (Optional)	Bus type: fiber-optic media (short-wave 50 micron) Bus transfer rate: 200 Mbps maximum at half duplex and 400 Mbps at full duplex	Bus type: fiber-optic media (short-wave 50 micron) Bus transfer rate: 200 Mbps maximum at half duplex and 400 Mbps at full duplex	Bus type: fiber-optic media (short-wave 50 micron) Bus transfer rate: 200 Mbps maximum at half duplex and 400 Mbps at full duplex	Bus type: fiber-optic media (short-wave 50 micron) Bus transfer rate: 200 Mbps maximum at half duplex and 400 Mbps at full duplex	–
Power	200W AC	200W AC	Hot-swappable redundant AC (DC available mid-2003)	Hot-swappable redundant AC (DC available mid-2003)	AC (DC available mid-2003)
Rack Units	1RU	1RU	2 RU	2 RU	3 RU
External Connectors	One serial port	One serial port One Ultra160 SCSI port (dual-channel integrated controller)	One serial port One Ultra320 SCSI port (dual-channel integrated controller)	One serial port One Ultra320 SCSI port (dual-channel integrated controller)	One Ultra160 SCSI port (dual-channel integrated controller)
Available PCI Expansion Slots	One 66/100/133-MHz 64-bit PCI-X slot on the system board	One 66/100/133-MHz 64-bit PCI-X slot on the system board	Two 133-MHz 64-bit PCI-X not hot-pluggable and Two 100-MHz 64-bit PCI-X not hot-pluggable (low profile) One 33-MHz 32-bit PCI not hot-pluggable	Two 133-MHz 64-bit PCI-X not hot-pluggable and Two 100-MHz 64-bit PCI-X not hot-pluggable (low profile) One 33-MHz 32-bit PCI not hot-pluggable	–
Height	1.72 in. (43.7 mm)	1.72 in. (43.7 mm)	3.36 in. (85.4 mm)	3.36 in. (85.4 mm)	5.0 in. (127.5 mm)
Width	17.3 in. (440 mm)	17.3 in. (440 mm)	17.46 in. (443.5 mm)	17.46 in. (443.5 mm)	17.5 in. (444 mm)
Depth	16.75 in. (425.5 mm)	16.75 in. (425.5 mm)	27.48 in. (698.0 mm)	27.48 in. (698.0 mm)	20.4 in. (519 mm)
Weight	Maximum weight: 28 lb (12.7 kg)	Maximum weight: 28 lb (12.7 kg)	Maximum weight: 62 lb (28.1 kg)	Maximum weight: 62 lb (28.1 kg)	76 lb (34.5 kg)

Table 4 New Hardware Platform Specifications for Cisco Content Engines and Storage Arrays (Continued)

	Cisco CE-510	Cisco CE-565	Cisco CE-7305	Cisco CE-7325	Cisco SA-7 and Cisco SA-14
Power					
Universal Input	Input voltage low range 100–127 VAC Input voltage high range 200–240 VAC	Input voltage low range 100–127 VAC Input voltage high range 200–240 VAC	Input voltage low range 100–127 VAC Input voltage high range 180–265 VAC	Input voltage low range 100–127 VAC Input voltage high range 180–265 VAC	Input voltage low range 90–136 VAC Input voltage high range 198–257 VAC
Maximum Power	200W (115 to 230 VAC)	200W (115 to 230 VAC)	200W (115 to 230 VAC)	200W (115 to 230 VAC)	
Operating Environment					
Operational Temperature	50 to 95ºF (10 to 35ºC)	50 to 95ºF (10 to 35ºC)	50 to 95ºF (10 to 35ºC)	50 to 95ºF (10 to 35ºC)	50 to 95ºF (10 to 35ºC)
Nonoperational Temperature	–40 to 140ºF (–40 to 60ºC)	–40 to 140ºF (–40 to 60ºC)	–40 to 140ºF (–40 to 60ºC)	–40 to 140ºF (–40 to 60ºC)	–40 to 140ºF (–40 to 60ºC)
Humidity	Nonoperating: 8 to 80%	Nonoperating: 8 to 80%	Nonoperating: 8 to 80%	Nonoperating: 8 to 80%	Nonoperating: 8 to 80%
Altitude	Maximum altitude: 2133 m (7000 ft)	Maximum altitude: 2133 m (7000 ft)	Maximum altitude: 2133 m (7000 ft)	Maximum altitude: 2133 m (7000 ft)	Maximum altitude: 2133 m (7000 ft)
Compliance	CE marking	CE marking	CE marking	CE marking	CE marking
Safety	UL 1950 CSA-C22.2 No. 950 EN 60950 IEC 60950	UL 1950 CSA-C22.2 No. 950 EN 60950 IEC 60950	UL 1950 CSA-C22.2 No. 950 EN 60950 IEC 60950	UL 1950 CSA-C22.2 No. 950 EN 60950 IEC 60950	UL 1950 CSA-C22.2 No. 950 EN 60950 IEC 60950
EMC	FCC Part 15 (CFR 47) Class A ICES-003 Class A EN 55022 Class A with UTP cables CISPR22 Class A with UTP cables ASNZ 3548 Class A with UTP cables VCCI Class A with UTP cables EN 55024 EN 50082-1	FCC Part 15 (CFR 47) Class A ICES-003 Class A EN 55022 Class A with UTP cables CISPR22 Class A with UTP cables ASNZ 3548 Class A with UTP cables VCCI Class A with UTP cables EN 55024 EN 50082-1	FCC Part 15 (CFR 47) Class A ICES-003 Class A EN 55022 Class A with UTP cables CISPR22 Class A with UTP cables ASNZ 3548 Class A with UTP cables VCCI Class A with UTP cables EN 55024 EN 50082-1	FCC Part 15 (CFR 47) Class A ICES-003 Class A EN 55022 Class A with UTP cables CISPR22 Class A with UTP cables ASNZ 3548 Class A with UTP cables VCCI Class A with UTP cables EN 55024 EN 50082-1	FCC Part 15 (CFR 47) Class A ICES-003 Class A EN 55022 Class A VCCI Class A

Cisco Web Cache Control Protocol Support

The Cisco Web Cache Control Protocol (WCCP) is a free feature in Cisco IOS Software that runs on the following Cisco platforms: Cisco 7x00 Series Router; Cisco uBR72xx Universal Broadband Router; Cisco 6400 Series Node Route Processor; Cisco Catalyst 6x00 Multilayer Switch Feature Card; Cisco Catalyst 5x00 Route Switch Module; Cisco AS5800 Access Server; Cisco AS5300 Universal Gateway; Cisco 4x00/M; Cisco MC3810 Multipoint Controller; and Cisco 3600, 2600, 2500, 1700, and 1600 series routers.

WCCP v2 is available in the following and later Cisco IOS Software releases: 12.2, 12.2(x)T, 12.1, 12.0(3+)T, 12.0(11+)S, and 12.1(13)E.

WCCP v1 is available in the following Cisco IOS Software releases: 12.2, 12.2(x)T, 12.1, 12.0, 12.0T, 12.0S, 11.1(18+)CC/CA, and 11.2(13+)P.

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Additional Resources

For more information about ordering, visit:

http://www.cisco.com/public/ordering_info.shtml

For more information about the Cisco 2600/3600/3700 Content Engine Network Module, visit:

http://www.cisco.com/en/US/products/hw/routers/ps282/products_data_sheet09186a008010fb9f.html

For more information about Cisco ACNS Software, visit:

http://www.cisco.com/en/US/products/sw/conntsw/ps491/index.html

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