

## Cisco Application and Content Networking System (ACNS) Network Module

### Delivering Desktop, DVD and HD Video Streaming to Remote Offices

The Cisco® ACNS Network Module for the Cisco integrated services routers is a powerful [digital media delivery](#) solution that delivers standard to high-definition video quality to the branch office for live streaming events and video on demand (VoD) over IP networks. With Cisco ACNS, organizations from the private or public sectors can deliver effective, high-quality, large-scale corporate communications; on-demand training; and digital signage to remote and dispersed branch offices, schools, and stores, with minimal effect on the network, while taking advantage of investments in converged IP WANs.

### Product Overview

By eliminating redundant digital media streaming traffic traversing a WAN, Cisco ACNS solves the following IT challenges:

- Delaying network upgrades
- Taking advantage of unicast- and multicast-enabled LANs and WANs
- Preventing deployment of local storage and video streaming servers in remote sites

With Cisco ACNS, organizations can overcome the challenges associated with delivering live and on-demand digital media content over IP networks to very large and dispersed audiences and rapidly take advantage of rich content, benefiting in the following ways:

- Enhanced corporate communication and end-user productivity
- Reduced bandwidth usage and system costs
- State-of-the-art tiered architectural design and best scalability available in the industry
- Acceleration of information dissemination and reduced time to market

The latest ACNS Network Module (NME-WAE-502) delivers increased performance and storage capacity allowing more video content to be stored at the branch (Table 1) while introducing support for DVD and high-definition video quality content, typically required for digital signage deployments.

**Table 1.** Video Capacity of Cisco ACNS Network Module Compared to Older Models

Platform	Cisco ACNS Network Module (NM-CE)	Cisco ACNS Network Module (NME-WAE-502)
Hard disk	40–80 GB	120 GB
<b>Solutions<sup>1</sup></b>		
Desktop video	Yes (150–300 hours)	Yes (Up to 750 hours)
DVD video	No	Yes (Up to 40 hours)
HD video	No	Yes (Up to 30 hours)

<sup>1</sup> The number of hours of video stored may greatly vary depending on the selected video bit rate and format.

For additional information about Cisco ACNS, please visit <http://www.cisco.com/go/acns>.

**Integration with the Cisco DMS Solution**

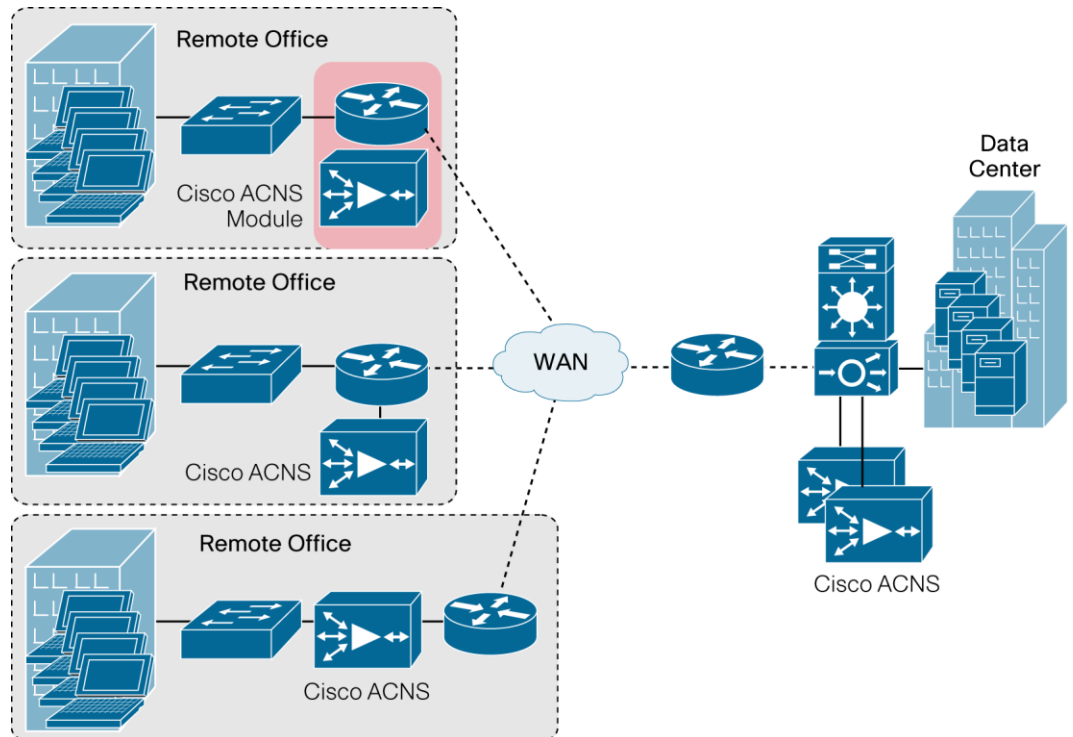
The Cisco Digital Media System (DMS) is an easy-to-use, comprehensive solution that allows organizations to effectively create, manage, and access compelling digital media to be viewed on user desktops or laptops or played on digital signs, which are typically LCD TV screens. This digital media product portfolio comprises the Cisco Digital Media Manager (DMM), the Cisco Digital Video Portal (DVP), the Cisco Digital Media Encoders (DMEs), and the Cisco Digital Media Player (DMP). Cisco DMM manages and publishes digital media and provides tools for you to add and archive media, assign metadata and keywords, preview content and manage workflow, customize the digital video portal interface, and schedule instant and future deployments. Cisco DMS integrates with Cisco ACNS to provide optimal digital deployment across the network.

For more information about the DMS product offering, visit: <http://www.cisco.com/go/video>.

**Product Line**

The Cisco ACNS Network Module belongs to the Cisco Wide Area Application Engine (WAE) family of network modules (NME-WAE) and appliances that host the Cisco ACNS Software. Addressing various customer needs based on branch size, bandwidth availability, and usage patterns, the Cisco WAE product line is designed to scale to very large enterprisewide deployments. The Cisco WAE appliances are deployed symmetrically as edge devices at branches and as "root" devices at the data center, as shown in Figure 1. You can manage all appliances and network modules supported by Cisco ACNS from the same central management console, called the Cisco Central Distribution Manager (CDM), which must run on a dedicated midrange or high-end appliance. For more details about the Cisco WAE appliances, please refer to the Cisco WAE appliance datasheet at: <http://www.cisco.com/go/waas>.

**Figure 1.** Cisco ACNS Deployment Architecture



## Cisco ACNS Software License Options

The following optional Cisco ACNS Software licenses offer additional feature capabilities for deployment on the Cisco ACNS Network Module:

- The Windows Media Streaming license option provides unicast stream splitting for Windows Media streams, live broadcasts, and prepositioned digital media content, providing better end-user experience compared to standard HTTP progressive download.
- The Real streaming license option provides unicast stream splitting for Real video and audio streams, live broadcasts, and prepositioned digital media content, providing better end-user experience compared to standard HTTP progressive download.
- The Multicast Distribution license allows you to distribute digital media content over IP Multicast-enabled LAN or WAN (for example, a satellite environment).

## Product Specifications

The ACNS network module is available with the Cisco NME-WAE-502 model (Figure 2), offering edge functions and helping enterprises eliminate redundant video streaming traffic over the WAN.

**Figure 2.** Cisco ACNS Network Module



Table 2 gives specifications of the Cisco ACNS Network Module.

**Table 2.** Cisco ACNS Network Module Specifications

Feature	Specifications
<b>RAM</b>	1 GB
<b>Hard Disk</b>	120 GB
<b>Router Platforms</b>	Cisco 2811, 2821, 2851, 3825, and 3845 routers
<b>Cisco IOS® Software (on router)</b>	Cisco IOS Software Release 12.4(9)T or later
<b>Cisco ACNS License Options</b>	<ul style="list-style-type: none"> <li>• Windows Media streaming license</li> <li>• Real Streaming license</li> <li>• Multicast content distribution license</li> </ul>
<b>Cisco ACNS Software</b>	Cisco ACNS Software 5.5.7 or later
<b>Internal Network Interfaces</b>	10/100/1000 Gigabit Ethernet connectivity to router backplane
<b>External Network Interfaces</b>	10/100/1000 Gigabit Ethernet
<b>Flash Memory</b>	64-MB Compact Flash memory

Feature	Specifications		
<b>Physical Dimensions</b>	<ul style="list-style-type: none"> <li>• Dimensions (H x W x D): 1.55 x 7.10 x 7.2 inches (3.9 x 18.0 x 18.3 centimeters)</li> <li>• Weight: 1.5 pounds (0.7 kilograms) maximum</li> </ul>		
<b>Operating Environment</b>	<ul style="list-style-type: none"> <li>• Operating temperature: 41 to 104°F (5 to 40°C)</li> <li>• Nonoperating and storage temperature: –40 to 158°F (–40 to 70°C)</li> <li>• Operating humidity: 5 to 85% (noncondensing)</li> <li>• Operating altitude: –197 to 6,000 ft (–60 to 1800m)</li> </ul>		
<b>Safety</b>	<ul style="list-style-type: none"> <li>• UL 60950-1, Second Edition Safety of Information Technology Equipment-Safety-Part 1: General Requirements (USA); plastic materials that are exposed to the end user shall meet the requirements of fire enclosure (UL94V-1) as defined in UL 60950</li> <li>• CSA 60950-1, Second Edition, Safety of Information Technology Equipment-Safety-Part 1: General Requirements (Canada)</li> <li>• IEC 60950-1, Second Edition, Safety of Information Technology Equipment-Safety-Part 1: General Requirements, including all national deviations as specified in the current CB Bulletin</li> <li>• EN 60950-1, Second Edition, Safety of Information Technology Equipment-Safety-Part 1: General Requirements (European Union) incorporating all Deviations, as applicable</li> <li>• GB 4943-95, Safety of Information Technology Equipment (including Electrical Business Equipment) (standard for China, equivalent to IEC 60950)</li> </ul>		
<b>EMC</b>	<table border="0"> <tr> <td style="vertical-align: top;"> <p>Emission:</p> <ul style="list-style-type: none"> <li>• 47 CFR Part 15 Class A</li> <li>• CISPR22 Class A</li> <li>• EN300386 Class A</li> <li>• EN55022 Class A</li> <li>• EN61000-3-2</li> <li>• EN61000-3-3</li> <li>• SD/EMI (India)</li> <li>• KN22 (Korea)</li> <li>• VCCI Class I</li> <li>• AS/NZS CISPR 22 Class A</li> </ul> </td> <td style="vertical-align: top; padding-left: 20px;"> <p>Immunity:</p> <ul style="list-style-type: none"> <li>• CISPR24</li> <li>• EN300386</li> <li>• EN50082-1</li> <li>• EN55024</li> <li>• SD/EMI (India)</li> <li>• KN22 (Korea)</li> <li>• EN61000-6-1</li> </ul> </td> </tr> </table>	<p>Emission:</p> <ul style="list-style-type: none"> <li>• 47 CFR Part 15 Class A</li> <li>• CISPR22 Class A</li> <li>• EN300386 Class A</li> <li>• EN55022 Class A</li> <li>• EN61000-3-2</li> <li>• EN61000-3-3</li> <li>• SD/EMI (India)</li> <li>• KN22 (Korea)</li> <li>• VCCI Class I</li> <li>• AS/NZS CISPR 22 Class A</li> </ul>	<p>Immunity:</p> <ul style="list-style-type: none"> <li>• CISPR24</li> <li>• EN300386</li> <li>• EN50082-1</li> <li>• EN55024</li> <li>• SD/EMI (India)</li> <li>• KN22 (Korea)</li> <li>• EN61000-6-1</li> </ul>
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## Ordering Information

Cisco WAAS Network Module hardware part numbers and related Cisco ACNS Software options are listed in Table 4.

**Table 3.** Part Numbers for Cisco ACNS Network Modules and Software

Product Part Number	Product Description
NME-WAE-502-K9	Cisco ACNS Network Module for Cisco 2800 and 3800 Series ISR – 1 GB RAM, 120 GB HDD.
NME-WAE-502-K9=	Cisco ACNS Network Module for Cisco 2800 and 3800 Series ISR – 1 GB RAM, 120 GB HDD (Spare)
SF-ACNS-5.5-NME-K9	Cisco ACNS 5.5 SW image for Network Modules
SF-WMSLIC-100M	100 Mbs Windows Media License for ACNS 5.5 or higher
SF-NM-RCPS	RealSystem v9 combined proxy/server for Cisco NM-CE
SF-CE-510-TL-5.0	Multicast Client for ACNS 5 on CE-510-K9 CE-507-K9 NM-CE-BP
SF-WMSLIC-100M=	100 Mbs Windows Media License for ACNS 5.5 or higher (Spare)
SF-NM-RCPS=	RealSystem v9 combined proxy/server for Cisco NM-CE (Spare)
SF-CE-510-TL-5.0=	Multicast Client for ACNS 5 on CE-510-K9 CE-507-K9 NM-CE-BP (Spare)

## WCCP Support

Web Cache Control Protocol (WCCP) is a free software feature in Cisco IOS Software that runs on Cisco routers including the Cisco 1800, 2600, 2800, 3600, 3700, 3800, and 7000 Series, and Cisco

switches such as the Cisco Catalyst® 4500, 4900, and 6500 Series.

## Service and Support

Cisco offers a wide range of services programs to accelerate customer success. These innovative services programs are delivered through a unique combination of people, processes, tools, and partners, resulting in high levels of customer satisfaction. Cisco services help you protect your network investment, optimize network operations, and prepare your network for new applications to extend network intelligence and the power of your business. For more information about Cisco Services, refer to [Cisco Technical Support Services](#) or [Cisco Advanced Services](#).

## For More Information

For more information about Cisco WAAS and Cisco WAE solutions, visit <http://www.cisco.com/go/waas> or contact your local Cisco account representative.

For more information about Cisco integrated services routers, visit <http://www.cisco.com/go/isr> or contact your local Cisco account representative.



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