DATA SHEET—SPRING 2004

CISCO MULTIPROCESSOR WAN APPLICATION MODE

The Cisco® Multiprocessor WAN Application Module (MWAM) provides high-performance, scalable distributed service processing for the Cisco Catalyst® 6500 Series switches and Cisco 7600 Series routers (Figure 1). Cisco MWAM enables service providers to deploy, provision, and manage value-added services at the network edge. This innovative service module delivers the most comprehensive set of edge aggregation services for fixed-line and mobile operators worldwide.

Cisco MWAM is a line card supported on the Cisco Catalyst 6500 Series and Cisco 7600 Series platforms to deliver the performance, density, and scalability required for comprehensive IP service delivery in large-scale deployments. It combines subscriber management functions with tier-1-class routing to enable service providers to deliver new, competitive IP services to their subscribers.

Cisco Catalyst 6500 Series switches and Cisco 7600 Series routers are the industry-leading edge devices that deliver robust, high-performance features for a range of service provider edge and enterprise metropolitan-area network (MAN) and WAN applications. Coupled with the broadest set of interfaces and innovative adaptive network processing technology, the Cisco Catalyst 6500 Series switches and the Cisco 7600 Series routers lead the industry with integrated Ethernet and private-line aggregation capabilities. This unique combination enables operators to improve operational efficiency at the network edge while maximizing return on investment.

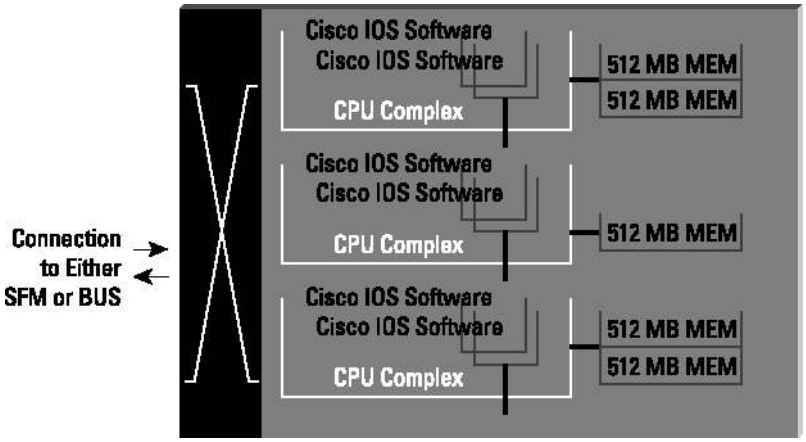
Figure 1. Figure 1

HIGHLY SCALABLE ARCHITECTURE

Each Cisco MWAM card includes three processor complexes, each containing two CPUs designed to run as individual Cisco IOS® Software-based routers (Figure 2). Each complex is connected to the chassis backplane through a Gigabit Ethernet channel. The interfaces used by these Cisco IOS instances are Gigabit Ethernet 802.1Q trunk ports, which carry virtual LAN (VLAN) encapsulated traffic to and from the network. Two processor complexes have access to 1 GB of memory and the third has access to 512 MB.

Figure 2. Figure 2

Cisco MWAM Architecture



SYSTEM REQUIREMENTS

- Cisco IOS Software Release 12.2(14)ZA on the Cisco Catalyst 6500 Supervisor 2 with Multilayer Switch Feature Card 2 (MSFC2)
- Cisco IOS Software Release 12.2(14)ZA on the Cisco 7600 Supervisor 2 with MSFC2
- Cisco Catalyst 6500 Switch or Cisco 7600 Router
- Cisco IOS Software Release for Cisco MWAM application software
- One chassis slot

APPLICATIONS

Several applications have been or will soon be migrated to Cisco MWAM to increase session density, improve management capabilities, and reduce complexity of configuration. These include:

- Cisco Packet Data Serving Node (PDSN)—Code-Division Multiple Access (CDMA) Packet Gateway
- Cisco Home Agent (HA)—Mobile IP Agent
- Cisco Gateway GPRS Support Node (GGSN)—General Packet Radio Service (GPRS) Packet Gateway
- Cisco Service Selection Gateway (SSG)—Service Creation and Management Gateway

Currently each Cisco MWAM card must be configured with a single application. Multiple Cisco MWAM cards with different applications can be implemented within a chassis.

BENEFITS OF CISCO MWAM ARCHITECTURE

Integrated Module

Installed inside a chassis with enhanced processing and memory capabilities, the Cisco MWAM allows increased session density compared to traditional solutions. This is of critical importance where rack space is at a premium.

Supports Future Versions

The flexible Cisco IOS Software-based approach of the Cisco MWAM means that the solution will be able to meet future requirements without requiring a system overhaul. Multiple Cisco MWAMs can be added to the chassis to meet growing demands.

Lower Cost of Ownership

Because the Cisco MWAM is integrated in the chassis, there are fewer devices to manage, and capacity can be increased by adding new cards rather than new systems.

Refer to Table 1 for ordering information, to Table 2 for CPU and memory specifications, and to Table 3 for physical specifications.

Table 1. Ordering Information

Product Number	Description
WS-SVC-MWAM-1	Cisco Multiprocessor WAN Application Module
WS-SVC-MWAM-1=	Cisco Multiprocessor WAN Application Module (spare)

Table 2. CPU and Memory Specifications

Specification	Description
CPU	Six 700-MHz MIPS CPUs
Flash memory	1 DIMM supporting 64 MB
SDRAM	• 5 DIMM supporting 512 MB • 2 processor complexes with 2 DIMM each • 1 processor complex with 1 DIMM

Table 3. Physical Specifications

Specification	Description
Dimensions (H x W x D)	1.18 x 15.51 x 16.34 in. (30 x 394 x 415 mm)
Weight	Minimum: 3 lb (1.36 kg) Maximum: 5 lb (2.27 kg)
Environmental conditions	
Operating temperature:	32 to 104°F (0 to 40°C)
Storage temperature:	40 to 167°F (–40 to 75°C)
Relative humidity:	10 to 90%, noncondensing

Operating altitude:	–60 to 4000m

REGULATORY COMPLIANCE

Safety

- UL 1950
- CSA C22.2 No. 950-95
- EN60950
- EN60825-1
- TS001
- CE Marking
- IEC 60950
- AS/NZS3260

EMI

- FCC Part 15 Class A
- ICES-003 Class A
- VCCI Class B
- EN55022 Class B
- CISPR22 Class B
- CE Marking
- AS/NZS3548 Class B

NEBS

- SR-3580 - NEBS: Criteria Levels (Level 3 compliant)
- GR-63-CORE - NEBS: Physical Protection
- GR-1089-CORE - NEBS: EMC and Safety
- ETSI
- ETS-300386-2 Switching Equipment

Telecommunications

- ITU-T G.610
- ITU-T G.703
- ITU-T G.707
- ITU-T G.783 Sections 9–10
- ITU-T G.784
- ITU-T G.803

- ITU-T G.813
- ITU-T G.825
- ITU-T G.826
- ITU-T G.841
- ITU-T G.957 Table 3
- ITU-T G.958
- ITU-T I.361
- ITU-T I.363
- ITU I.432
- ITU-T Q.2110
- ITU-T Q.2130
- ITU-T Q.2140
- ITU-T Q.2931
- ITU-T O.151
- ITU-T O.171
- ETSI ETS 300 417-1-1
- TAS SC BISDN (1998)
- ACA TS 026 (1997)
- BABT /TC/139 (Draft 1e)

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