Cisco 2600/3600 10/100 Ethernet/Token Ring Mixed Media NMs

ALLOWS NEW AND CURRENT CUSTOMERS OF THE 2600 AND 3600 TO BENEFIT FROM THE INCREASED PERFORMANCE AND DENSITY CAPABILITIES DELIVERED BY THIS NEW RANGE OF NMS. FEATURES ALSO INCLUDE NEW AUTO-SENSING 10/100 FAST ETHERNET PORTS AND NEW TDM CAPABILITIES.

Figure 1   10/100 Mixed media NMs

Introduction

Four new NMs are now available to add additional performance and LAN/WAN density to the entire 2600/3600 series of multi-service routers:

NM-1FE2W	1 10/100 Ethernet 2 WAN Card Slot Network Module
NM-2FE2W	2 10/100 Ethernet 2 WAN Card Slot Network Module
NM-1FE1R2W	1 10/100 Ethernet 1 4/16 Token Ring 2 WAN Card Slot NM
NM-2W	2 WAN Card Slot Network Module (no LAN)

These 4 new NMs expand the flexibility of the modular 2600/3600 routers by providing additional features, combined with an increase in network module interface density and performance.

These NMs enhance the range of NMs and WICs to over 80 modular components now available for the 2600/3600 multiservice platforms.

Features

- Supported on complete range of Cisco 2600 and 3600 series Multiservice platforms
- Supports all available WICs and VWICs (see below for a complete list)
- Greater Network Module Slot efficiency than currently available (see Table 2)
- Increase WIC density in Cisco 2600 series
- Support for up to 8Mb throughput on a WIC interface
- 10/100 autosensing full/half duplex FE LAN versions for 3600 series (full and half duplex)
- Full and half duplex Token Ring Support (3600 only)
- TDM enabled

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The New NMs support the following WICs AND VWICs:

- WIC-1B-S/T
- WIC-1B-U
- WIC-1DSU-56K4
- WIC-1DSU-T1
- WIC-1T
- WIC-2T
- WIC-2A/S
- VWIC-1MFT-T1*
- VWIC-1MFT-E1*
- VWIC-1MFT-T1-DI*
- VWIC-1MFT-E1-DI*
- VWIC-2MFT-E1*
- VWIC-2MFT-T1*
- VWIC-2MFT-T1-DI*
- VWIC-2MFT-E1-DI*

*VWICs in data mode only

The following table summarized the major enhancements over the current legacy mixed media NMs:

Feature	Legacy Mixed Media NMs	New 10/100 Mixed Media NMs
Max T1/E1 WIC connections	2	4
VWIC Support	Limited	Full
WIC Support	Limited	Full
WIC Throughput	2Mb	8Mb
TDM Support	No	Yes
Ethernet Support	10Mb	10/100Mb
G.703 WIC Support*	No	Yes
Full Duplex Token Ring	No	Yes

* FCS 2HW/00

The Maximum Number of NMs that can be utilized in each of the 2600/ 3600 families is as follows:

	2600	3620	3640	3660
NM-1FE2W	N/A	2	4	6
NM-2FE2W	N/A	2	4	6
NM-1FE1R2W	N/A	2	4	6
NM-2W	1	1	3	6

The following tables details some typical configurations and benefits of these new Combo NMs:

Configuration	Without New Combo NMs	With New Combo NMs
2620 with 2 BRI and Serial backup	2620+2BRI WIC+4T NM	2620+2BRI WIC+NM-2W+1T WIC
Comments:	No Expansion, only 1 port of 4T NM being utilized	Free WIC Slot
3620 with FE LAN and 2 serial connections	3620+1FE NM+ 1E2W NM+ 1T WIC+1T WIC	3620+1FE2W+2T WIC
Comments:	No expansion. 10Mb Ethernet port not utilized	One free NM and WIC slot
3640 with 2 FE LAN and 8 BRI with 2 Serial backup	3640+FE NM+FE NM+8BRI NM+1E2W+ 1T WIC+1T WIC	3640+2FE2W+8BRI NM+2T WIC
Comments:	No expansion. 10Mb Ethernet port not utilized	Two free NM and one free WIC slot
3660 with 4 FE LAN with 8Mb serial backup	3660+2 FE NMs+4T NM	3660+2FE2W+2TWIC
Comments:	3 Slots remaining	5 Slots remaining

Orderability, Availability, Compatibility, Minimum Software, and Memory Requirements

10/100 Mixed media Network Modules Product Numbers and Description
The minimum level of IOS is IOS 12.0(7)XK or 12.1(1)T

Product Number	Description
NM-1FE2W	1 10/100 Ethernet 2 WAN Card Slot Network Module
NM-2FE2W	2 10/100 Ethernet 2 WAN Card Slot Network Module
NM-1FE1R2W	1 10/100 Ethernet 1 4/16 Token Ring 2 WAN Card Slot NM
NM-2W	2 WAN Card Slot Network Module (no LAN)

Available 1QCY00

10/100 Mixed media Network Modules platforms supported, Cisco IOS® Release, Memory and Maximum Number Supported:

Product	Cisco IOS Software version required	IOS Feature Sets required	Minimum DRAM Memory +	Maximum supported
Cisco 2600 series	12.0(7)XK	Any Cisco IOS Feature Sets	32 MB	1
Cisco 3620	12.0(7)XK	Any Cisco IOS Feature Set	32 MB	2*
Cisco 3640	12.0(7)XK	Any Cisco IOS Feature Sets	32 MB	4*
Cisco 3660	12.0(7)XK	Any Cisco IOS Feature Sets	32 MB	6

* Only 1 of the NM-2W is supported in the 3620, and only 3 NM-2W are supported in the 3640

\+ Each NM requires 700-1.5Mb of I/O Mem.

Physical Specifications

Standards and Compliance Support

Product Specifications	
Dimensions	1.55 x 7.10 x 7.2 in (H x W x D)
Weight	2.5lbs. Maximum
Environmental conditions	Operating temp. 32 -104 F (0 -40 C)
	Nonoperating temp. -13 to -158 F (-25 to -70 C)
Power Requirements	15 watts Maximum
Relative humidity	5 to 95%
MTBF	**NM-2W -** 1,720,096 hours **NM-1FE2W -** 846,192 hours **NM-2FE2W -** 569,302 hours **NM-1FE1R2W -** 507,634 hours
Protocols supported	Full Cisco IOS software as of 12.0(7)XK
WIC Performance	Up to 8Mb/s per WIC (with just 1 WIC installed)
EMI	FCC Part 15 Class B - CISPR 22 Class B
Cabling	WAN cables dependant on WICs. LAN interfaces have 10/100BaseT cables for Ethernet and STP/UTP cables for Token Ring
LEDs	Token ring 4/16 speed indication. Ethernet 10/100 Speed Indication. Link and full Duplex LEDS

Product Specifications	
Network interfaces	Compatible with all existing network modules and WICS supported by Cisco 2600/3600 family

Supported Management Information Base (MLBs)

These new NMs support the standard Management Information Base (MIBs):

For descriptions of supported MIBs and how to use MIBs, see the Cisco MIB web site at:

http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml

Regulatory Approvals

• UL 1950

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