

# Understanding Fast Ethernet LAN/WAN Interface Card Network Modules

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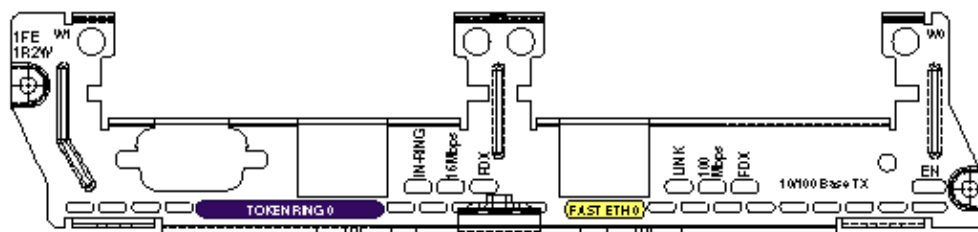
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## Introduction

The Fast Ethernet LAN/WAN interface card (WIC) Network Modules expand the capabilities of the Cisco 2600 and 3600 Series Routers. They provide slots for additional WICs. Some of these Network Modules also include Fast Ethernet or Token Ring ports for LAN connectivity.



## Prerequisites

### Requirements

There are no specific requirements for this document.

### Components Used

This document is not restricted to specific software and hardware versions.

### Conventions

For more information on document conventions, refer to the Cisco Technical Tips Conventions.

## Product Numbers

- NM-1FE2W Network Module with One-Fast Ethernet and Two-WIC slots.

- NM-1FE1R2W Network Module with One Fast Ethernet, One Token Ring and Two WIC slots.
- NM-2FE2W Network Module with Two Fast Ethernet and Two WIC slots.
- NM-2W Network Module with Two WIC slots and no LAN (Ethernet/Fast Ethernet) Ports.

Refer to the Understanding the Ethernet LAN/WAN Interface Card Network Modules for additional information.

## Features

### • Fast Ethernet

- ◆ RJ-45 connector, 100 BaseT only.
- ◆ Supports 10 and 100 Mbps, auto-sensing.
- ◆ Supports full and half duplex.
- ◆ Supports Inter-Switch Link (ISL) and Token Ring ISL in hardware (ISL requires the Cisco IOS® "Plus" feature set).
- ◆ Does not support Fast EtherChannel.
- ◆ Uses the same Fast Ethernet controller as all other Cisco 2600/3600 Fast Ethernet ports.

### • Token Ring

- ◆ RJ-45 and DB-9 connector (only one may be used at a time).
- ◆ Supports full duplex Token Ring.
- ◆ Uses the same Token Ring chip set as the Cisco 2612 and 2613.

### • WIC

- ◆ Supports WAN interface cards (WICs): WIC-1T, WIC-2T, WIC-2A/S, WIC-1B-S/T, WIC-1B-U, WIC-1DSU-56K4, WIC-1DSU-T1, and WIC-1ADSL.
- ◆ Supports Voice/WAN interface cards (VWICs): VWIC-1MFT-E1, VWIC-2MFT-E1, VWIC-2MFT-E1-DI, VWIC-1MFT-T1, VWIC-2MFT-T1, VWIC-2MFT-DI, VWIC-1MFT-G703, and VWIC-2MFT-G703.
  - ◇ Supports a maximum of two channel groups per VWIC. Does not support ISDN PRI.
- ◆ Does not support: WIC36-1B-S/T, WIC36-1B-U, WIC-1B-S/T-LL, and WIC-1ENET.
- ◆ Supports bisync.
- ◆ Supports async with the WIC-2A/S, WIC-2T Cards.
- ◆ Supports 8 Mbps aggregate across 4 ports. Support for speeds above 4 Mbps must use WIC-2T.
- ◆ WICs are not hot swappable. The network modules support hot swap in the Cisco 3660.

### • General

- ◆ There are no configuration rules for these network modules. You can easily exceed the performance of the router with the installation of multiple Fast Ethernet interfaces.
- ◆ Time-Division Multiplexing (TDM) support for TDM enabled chassis (Cisco 2600, 3660).
- ◆ The network modules support hot swap in the Cisco 3660.

## Platform Support

Platform	Cisco 2600	Cisco 2600XM	Cisco 3620, Cisco 3640, Cisco 3660	Cisco 3631	Cisco 2691 Cisco 3725 Cisco 3745
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NM-1FE2W	not supported	not supported	Cisco IOS Software Releases 12.0(7)XK, 12.1(1)T,12.2,12.2T	not supported	All Cisco IOS Software Releases
NM-1FE1R2W	not supported	not supported	Cisco IOS Software Releases 12.0(7)XK, 12.1(1)T,12.2,12.2T	not supported	All Cisco IOS Software Releases
NM-2FE2W	not supported	not supported	Cisco IOS Software Releases 12.0(7)XK, 12.1(1)T,12.2,12.2T	not supported	All Cisco IOS Software Releases
NM-2W	Cisco IOS Software Releases 12.0(7)XK, 12.1(1)T,12.2,12.2T	Cisco IOS Software Release 12.2(8)T1	Cisco IOS Software Releases 12.0(7)XK, 12.1(1)T,12.2,12.2T	not supported	All Cisco IOS Software Releases

**Note:** The Cisco IOS software releases provided are typically the minimum version required to support the platform, module, or feature in question. Use the Software Advisor (registered customers only) to choose appropriate software for your network device, match software features to Cisco IOS and CatOS releases, compare IOS releases, or find out which software releases support your hardware.

## Configuration

Each interface on the Cisco 2600/3600 series is configured as a slot/unit number. Refer to Overview of Cisco Network Modules for more information on how to identify the slot numbers. On the Mixed Media Network Module, the interfaces are addressed as seen in this list:

- The Fast Ethernet interface is **interface fastethernet <slot>/0**.
- The Token Ring interface is **interface tokenring <slot>/0**.
- A serial WIC, a T1 CSU/DSU or a 56/64k channel service unit/data service unit (CSU/DSU) WIC in slot W0 is **interface serial <slot>/0**.
- A BRI-S/T WIC or BRI-U WIC in slot W0 is **interface bri <slot>/0**.
- A serial WIC, a T1 CSU/DSU or a 56/64k CSU/DSU WIC in slot W1 is **interface serial <slot>/0** if slot W0 does not contain a serial port (serial WIC or 56/64k CSU/DSU). If slot W0 has a serial WIC, the serial WIC in slot W1 is **interface serial <slot>/1**.
- A BRI-S/T WIC or BRI-U WIC in slot W1 is **interface bri <slot>/0** if slot W0 does not contain a BRI WIC. If slot W0 has a BRI WIC, the BRI WIC in slot W1 is **interface bri <slot>/1**.
- VWIC interfaces are E1 or T1 controllers. The controller number counts from the lowest WIC slot and lowest controller on the VWIC. For example, **controller e1 <slot>/0**.

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## Related Information

- [OIR Support for Analog and Digital Modem Network Modules](#)
  - [Dial and Access Technology Support Page](#)
  - [Technical Support & Documentation – Cisco Systems](#)
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