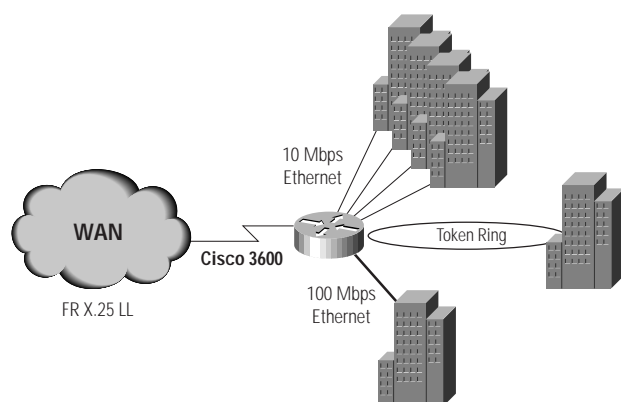Data Sheet

Cisco 3600 Series LAN Connectivity Modules
(NM-1FE-TX, NM-1FE-FX, NM-4E, NM-1E, NM-1E2W, NM-2E2W, NM1E1R2W)

The variety of LAN connectivity modules for the Cisco 3600 platform are designed to accommodate a range of application needs in customer networks. The LAN network module family assures customers that they can choose a LAN connectivity solution that fits their requirements. Available as network modules, LAN connectivity options offer several port densities, media options, and speeds. As modular components, they are easily and inexpensively field-upgradable as customer requirements change.

Figure 1   LAN Connectivity Applications

Available LAN connectivity network modules for the Cisco 3600 series include the following:

Fast Ethernet
• NM-1FE-TX – One-port Fast Ethernet (TX interface)
• NM-1FE-FX – One-port Fast Ethernet (FX interface)

Ethernet
• NM-4E – Four-port Ethernet
• NM-1E – One-port Ethernet
• NM-1E2W – One-port Ethernet plus two WAN interface card slots
• NM-2E2W – Two-port Ethernet plus two WAN interface card slots

Token Ring
• NM-1E1RW – One-port Token Ring, one-port Ethernet plus two WAN interface card slots

Fast Ethernet Connectivity

Figure 2   NM-1FE-TX, NM-1FE-FX, NM-4E, NM-1E

Ideal for a wide range of LAN applications, the Fast Ethernet network modules support many internetworking features and standards. Single port network modules offer autosensing 10/100BaseTX or 100BaseFX Ethernet. The TX version supports virtual LAN (VLAN) deployment.
In customer networks, these modules may be useful for the following:
• Uplink to Fast Ethernet backbones on Catalyst® series switches and other Cisco routers
• VLAN support on the NM-1FE-TX module allows network managers to group users logically rather than by physical location, easing adds, moves, and changes within the network. The Cisco Inter-Switch Link (ISL) protocol enables VLAN traffic communication with Catalyst 5000, 5500, and Catalyst 3000 series switches.

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- The Cisco 3600 can provide inter-VLAN routing services between VLANs on any Catalyst series switch that supports VLANs. The module will offer future support the new 802.1Q VLAN standard.

Cabling—RJ-45 connector for 1FE-TX, fiber connector for 1FE-FX
LEDs—Network Module status indicator, status LEDs for link status, LAN speed, and half/full duplex
Network interfacesOne 10/100 base-TX or FX 100-base only port

Ethernet Connectivity

Five available network modules offer four-port, single-port, and dual-port Ethernet LAN connectivity in the Cisco 3600 series for maximum configuration flexibility as a multifunction platform.

Mixed Media Network Modules
The mixed-media network modules allow administrators to configure an Ethernet port (or two ports) with additional WAN connections using the WAN interface cards on the same module to conserve slot space.

For example, as part of a multifunction solution, a Cisco 3620 platform with a 2E2W can support two Ethernet LANs, together with two serial/ISDN backhaul lines, and still allow multiple serial or ISDN in the same chassis. This solution outperforms the competition in industry-leading price/performance.

Four-Port Ethernet Module
The four-port Ethernet network module provides industry-leading price/performance, enabling high-density Ethernet connectivity. The four-port Ethernet network module offers a lower price point for multifunction solutions that require higher-density Ethernet than the mixed-media network modules.

An example is a Cisco 3640 platform with a 4-port Ethernet network module, 16-port ISDN Basic Rate Interface (BRI), and a 32 port Asynchronous serial network module. This configuration integrates branch office routing requirements with four Ethernet LAN segments and the mixed dial requirements of sync/async serial lines and ISDN.

Single-Port Ethernet Module

A single-port Ethernet network module allows customers to choose a configuration at the right price for their specific applications.

For example, as part of a multifunction solution, a Cisco 3640 platform with a single Ethernet connection to a LAN backbone can also support either six PRI connections to aggregate ISDN lines, or 24 synchronous/asynchronous ports. This solution handily outperforms the competition in industry-leading price/performance.

Cabling—RJ-45 connector
LEDs—Network Module status indicator, status LEDs including send/receive, half/full duplex, and LAN speed indication
Network interfaces—One or four 10BaseT ports

Ethernet Network Module Summary

Table 1 LAN Connectivity Network Modules Functional Comparison:

Number of LAN Ports on Module		Number of WAN Interface Card Slots on Module
Single-Port Ethernet	1	None
Four-Port Ethernet	4	None
Single-Port Ethernet Mixed Media	1	Two WAN interface card slots
Dual-Port Ethernet Mixed Media	2	Two WAN interface card slots
Single-Port Ethernet and Single-Port Token Ring	1/1	Two WAN interface card slots
Single Port Fast Ethernet	1	None

Table 2 Physical Limitation of Serial Modules per Chassis

Physical Characteristics		
Type of Module	Cisco 3640	Cisco 3620
NM-1FE-TX, NM-1FE-FX	Four	Two
NM-4E	Three	Two
NM-1E2W	Four	Two
NM-1E1R2W	Four	Four
NM-2E2W	Four	Two
NM-1E	Three	Two

Table 3 Cisco IOS Software Release Requirements for ISDN BRI
Network Modules

Module Model	Cisco IOS™ Release Number
NM-1FE-TX	11.2.(6)P or later
NM-4E	11.2.(5)P or later
NM-1E	11.2.(5)P or later
NM-1FE-FX	11.3(1)T or later

Table 4 Technical Specifications

	NM-1FE-TX	NM-4E	NM-1E	NM-1FE-FX
Dimensions (H x W x D)	1.55 x 7.10 x 7.2	1.55 x 7.10 x 7.2	1.55 x 7.10 x 7.2	1.55 x 7.10 x 7.2
Weight	2 lbs. Max	2 lbs. Max	2 lbs. Max	2 lbs. Max
Homologation				
Environmental Conditions	Op. temp. 32–104 F (0–40 C), Non. Op temp -13–158 F (-25–70 C)	Op. temp. 32–104 F (0–40 C), Non. Op temp -13–158 F (-25–70 C)	Op. temp. 32–104 F (0–40 C), Non. Op temp -13–158 F (-25–70 C)	Op. temp. 32–104 F (0–40 C), Non. Op temp -13–158 F (-25–70 C)
Relative Humidity	5-95%	5-95%	5-95%	5-95%
Protocols Supported	Full Cisco IOS support by release 11.2			
EMI	Class B EMI	N/A	Class B EMI	Class B EMI

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