



# Cisco 3800 Series Cards and Modules

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This document provides links to resources for understanding, installing, and configuring cards and modules for the Cisco 3800 series integrated services routers. Use this document in HTML format on Cisco.com.

See the following sections:

- [Advanced Integration Modules, page 1](#)
- [Interface Cards, page 2](#)
- [Network Modules, page 4](#)
- [Packet Voice DSP Modules, page 7](#)



**Note**

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For information about small-form-factor pluggable (SFP) modules, refer to [Installing SFP Modules in Cisco 3800 Series Routers](#).

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## Advanced Integration Modules



**Note**

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To see which Cisco 3800 series routers support each AIM, refer to the [Cisco 3800 Series Integrated Services Routers](#) data sheet.

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[Table 1](#) lists the advanced integration modules (AIMs) for Cisco 3800 series routers.

**Table 1**      **Advanced Integration Modules for the Cisco 3800 Series Integrated Services Routers**

<a href="#">AIM-ATM</a>	High-performance ATM SAR <sup>1</sup> AIM
<a href="#">AIM-CUE</a>	Cisco Unity Express voice-mail AIM (includes license for 12 mailboxes)
<a href="#">AIM-COMPR4</a>	16-Mbps data compression AIM
<a href="#">AIM-COMPR4</a> <<replace with AIM-IPS>>	Cisco Intrusion Prevention System (CIPS) supported AIM



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**Table 1** *Advanced Integration Modules for the Cisco 3800 Series Integrated Services Routers (continued)*

<a href="#">AIM-VPN/EPII-PLUS</a>	Enhanced-performance DES <sup>2</sup> /3DES/AES <sup>3</sup> VPN <sup>4</sup> encryption/compression AIM
<a href="#">AIM-VPN/HPII-PLUS</a>	High-performance DES/3DES/AES VPN encryption/compression AIM

1. SAR = segmentation and reassembly
2. DES = Data Encryption Standard
3. AES = Advanced Encryption Standard
4. VPN = Virtual Private Network

## Interface Cards

Table 2 lists the interface cards for the Cisco 3800 series routers. The table includes the following categories:

- [Serial WAN Interface Cards, page 2](#)
- [Channel Service Unit/Data Service Unit \(CSU/DSU\) WAN Interface Cards, page 2](#)
- [ISDN BRI WAN Interface Cards, page 2](#)
- [DSL WAN Interface Cards, page 2](#)
- [Analog Modem WAN Interface Cards, page 3](#)
- [T1, E1, and G.703 Multiflex Trunk Voice and WAN Interface Cards, page 3](#)
- [Voice Interface Cards, page 3](#)
- [Ethernet Switch High-Speed WAN Interface Cards and Accessories, page 3](#)
- [Gigabit Ethernet High-Speed WAN Interface Card, page 3](#)

**Table 2** *Interface Cards for the Cisco 3800 Series Integrated Services Routers*

<b>Serial WAN Interface Cards</b>	
<a href="#">WIC-1T</a>	1-port serial WAN interface card
<a href="#">WIC-2T</a>	2-port serial WAN interface card
<a href="#">WIC-2A/S</a>	2-port asynchronous/synchronous serial WAN interface card
<b>Channel Service Unit/Data Service Unit (CSU/DSU) WAN Interface Cards</b>	
<a href="#">WIC-1DSU-T1-V2</a>	Updated 1-port T1/fractional-T1 DSU/CSU WAN interface card
<a href="#">WIC-1DSU-56K4</a>	1-port 4-wire 56/64-kbps CSU/DSU WAN interface card
<b>ISDN BRI WAN Interface Cards</b>	
<a href="#">WIC-1B-U-V2</a>	1-port ISDN BRI WAN interface card with integrated NT1—U interface
<a href="#">WIC-1B-S/T-V3</a>	1-port ISDN BRI WAN interface card—S/T interface
<b>DSL WAN Interface Cards</b>	
<a href="#">WIC-1ADSL</a>	1-port ADSL-over-POTS WAN interface card
<a href="#">WIC-1ADSL-DG</a>	1-port ADSL-over-POTS with dying gasp WAN interface card
<a href="#">WIC-1ADSL-I-DG</a>	1-port ADSL-over-ISDN with dying gasp WAN interface card
<a href="#">WIC-1SHDSL</a>	1-port G.shdsl WAN interface card (two-wire only)
<a href="#">WIC-1SHDSL-V2</a>	1-port G.shdsl WAN interface card (two- or four-wire)

**Table 2**      *Interface Cards for the Cisco 3800 Series Integrated Services Routers (continued)*

<b>Analog Modem WAN Interface Cards</b>	
WIC-1AM	1-port analog modem WAN interface card
WIC-2AM	2-port analog modem WAN interface card
<b>T1, E1, and G.703 Multiflex Trunk Voice and WAN Interface Cards</b>	
VWIC-1MFT-T1	1-port RJ-48 multiflex trunk voice/WAN interface card—T1
VWIC-2MFT-T1	2-port RJ-48 multiflex trunk voice/WAN interface card—T1
VWIC-2MFT-T1-DI	2-port RJ-48 multiflex trunk voice/WAN interface card—T1 with drop and insert
VWIC-1MFT-E1	1-port RJ-48 multiflex trunk voice/WAN interface card—E1
VWIC-2MFT-E1	2-port RJ-48 multiflex trunk voice/WAN interface card—E1
VWIC-2MFT-E1-DI	2-port RJ-48 multiflex trunk voice/WAN interface card—E1 with drop and insert
VWIC-1MFT-G703	1-port RJ-48 multiflex trunk voice/WAN interface card—G.703
VWIC-2MFT-G703	2-port RJ-48 multiflex trunk voice/WAN interface card—G.703
<b>Voice Interface Cards</b>	
VIC-2DID	2-port DID <sup>1</sup> voice/fax interface card
VIC-1J1	1-port digital voice interface card (J1) for Japan <b>Note</b> VIC-1J1 must be installed in an NM-HDV or NM-HDV2.
VIC-4FXS/DID	4-port FXS <sup>2</sup> or DID voice interface card
VIC2-2FXS	2-port voice interface card—FXS
VIC2-2FXO	2-port voice interface card—FXO <sup>3</sup> (universal)
VIC2-4FXO	4-port voice interface card—FXO (universal)
VIC2-2E/M	2-port voice interface card—E&M <sup>4</sup>
VIC2-2BRI-NT/TE	2-port voice interface card—BRI S/T (NT and TE)
<b>Ethernet Switch High-Speed WAN Interface Cards and Accessories</b>	
HWIC-4ESW	4-port single-wide 10/100BASE-T Ethernet switch high-speed WAN interface card
HWIC-D-9ESW	9-port double-wide 10/100BASE-T Ethernet switch high-speed WAN interface card
HWIC-4ESW-POE	4-port Ethernet switch high-speed WAN interface card with Power over Ethernet Bundle: HWIC-4ESW with ILPM-4
HWIC-D-9ESW-POE	9-port Ethernet switch high-speed WAN interface card with Power over Ethernet Bundle: HWIC-D-9ESW with ILPM-8
<b>Gigabit Ethernet High-Speed WAN Interface Card</b>	
HWIC-1GE-SFP	Cisco Gigabit Ethernet high-speed WAN interface card

1. DID = Direct Inward Dial
2. FXS = Foreign Exchange Station
3. FXO = Foreign Exchange Office
4. E&M = ear and mouth

## Network Modules

Table 3 lists the network modules for the Cisco 3800 series routers. The table includes the following categories:

- [Ethernet Switching Network Modules, page 4](#)
- [LAN and WAN Interface Card \(WIC\) Network Modules, page 4](#)
- [Serial Connectivity Network Modules, page 5](#)
- [Clear-Channel T3/E3 Network Module, page 5](#)
- [Channelized T1/E1 and ISDN Network Modules, page 5](#)
- [ATM Network Modules, page 5](#)
- [Digital Dial-Up and Remote Access Network Modules, page 5](#)
- [Analog Dial-Up and Remote Access Network Modules, page 5](#)
- [Voice Network Modules and Accessories, page 6](#)
- [Extension Modules, page 7](#)
- [Application Network Modules, page 7](#)
- [Alarm Monitoring and Control Network Modules and Accessories, page 7](#)
- [Circuit Emulation over IP \(CEoIP\) Network Modules, page 7](#)

**Table 3** Network Modules for the Cisco 3800 Series Integrated Services Routers

<b>Ethernet Switching Network Modules</b>	
<a href="#">NM-16ESW</a>	16-port 10/100 EtherSwitch network module
<a href="#">NM-16ESW-1GIG</a>	16-port 10/100 EtherSwitch network module with 1 GE <sup>1</sup> (1000BASE-T) port
<a href="#">NM-16ESW-PWR</a>	16-port 10/100 EtherSwitch network module with inline power support
<a href="#">NM-16ESW-PWR-1GIG</a>	16-port 10/100 EtherSwitch network module with inline power and 1 GE (1000BASE-T) port
<a href="#">NMD-36ESW</a>	36-port 10/100 EtherSwitch high-density service module (HDSM)
<a href="#">NMD-36ESW-2GIG</a>	36-port 10/100 EtherSwitch HDSM with 2 GE (1000BASE-T) ports
<a href="#">NMD-36ESW-PWR</a>	36-port 10/100 EtherSwitch HDSM with inline power support
<a href="#">NMD-36ESW-PWR-2G</a>	36-port 10/100 EtherSwitch HDSM with inline power and 2 GE (1000BASE-T) ports
<b>LAN and WAN Interface Card (WIC) Network Modules</b>	
<a href="#">NM-1FE-FX-V2</a>	1-port Fast Ethernet (100BASE-FX interface), version 2 (no WIC slots)
<a href="#">NM-1GE</a>	1-port Cisco Gigabit Ethernet network module (no WIC slots)
<a href="#">NM-2W</a>	2-WIC-slot network module (no LAN ports)
<a href="#">NM-1FE1R2W</a>	1-port 10/100 Ethernet 1-port 4/16 Token Ring 2-WIC-slot network module
<a href="#">NM-1FE2W</a>	1-port 10/100 Ethernet 2-WIC-slot network module
<a href="#">NM-2FE2W</a>	2-port 10/100 Ethernet 2-WIC-slot network module
<a href="#">NM-1FE2W-V2</a>	1-port 10/100 Ethernet 2-WIC-slot network module, version 2
<a href="#">NM-2FE2W-V2</a>	2-port 10/100 Ethernet 2-WIC-slot network module, version 2

**Table 3** Network Modules for the Cisco 3800 Series Integrated Services Routers (continued)

<b>Serial Connectivity Network Modules</b>	
NM-1HSSI	1-port High-Speed Serial Interface (HSSI) network module
NM-4T	4-port serial network module
NM-4A/S	4-port asynchronous/synchronous serial network module
NM-8A/S	8-port asynchronous/synchronous serial network module
NM-16A/S	16-port asynchronous/synchronous serial network module
NM-16A	16-port asynchronous serial network module
NM-32A	32-port asynchronous serial network module
<b>Clear-Channel T3/E3 Network Module</b>	
NM-1T3/E3	1-port clear-channel T3/E3 network module
<b>Channelized T1/E1 and ISDN Network Modules</b>	
NM-1CE1T1-PRI	1-port channelized E1/T1/ISDN-PRI network module
NM-2CE1T1-PRI	2-port channelized E1/T1/ISDN-PRI network module
NM-4B-S/T	4-port ISDN BRI network module—S/T interface
NM-4B-U	4-port ISDN BRI network module with integrated Network Termination 1 (NT1)—U interface
NM-8B-S/T	8-port ISDN BRI network module—S/T interface
NM-8B-U	8-port ISDN BRI network module with integrated NT1—U interface
<b>ATM Network Modules</b>	
NM-1A-T3	1-port DS3 ATM network module
NM-1A-E3	1-port E3 ATM network module
NM-4T1-IMA	4-port T1 ATM network module with IMA <sup>2</sup>
NM-4E1-IMA	4-port E1 ATM network module with IMA
NM-8T1-IMA	8-port T1 ATM network module with IMA
NM-8E1-IMA	8-port E1 ATM network module with IMA
<b>Digital Dial-Up and Remote Access Network Modules</b>	
NM-6DM	6-digital-modem network module
NM-12DM	12-digital-modem network module
NM-18DM	18-digital-modem network module
NM-24DM	24-digital-modem network module
NM-30DM	30-digital-modem network module
<b>Analog Dial-Up and Remote Access Network Modules</b>	
NM-8AM-V2	8-port analog modem network module with v.92
NM-16AM-V2	16-port analog modem network module with v.92

**Table 3** Network Modules for the Cisco 3800 Series Integrated Services Routers (continued)

<b>Voice Network Modules and Accessories</b>	
NM-HD-1V	1-slot IP communications voice/fax network module
NM-HD-2V	2-slot IP communications voice/fax network module
NM-HD-2VE	2-slot IP communications enhanced voice/fax network module
NM-HDA-4FXS	4-port FXS <sup>3</sup> high-density analog (HDA) voice/fax network module
EM-HDA-4FXO	4-port FXO <sup>4</sup> expansion module
EM-HDA-8FXS	8-port FXS expansion module
NM-HDV2	IP communications high-density digital voice/fax network module
NM-HDV2-1T1/E1	1-port T1/E1 IP communications high-density digital voice/fax network module
NM-HDV2-2T1/E1	2-port T1/E1 IP communications high-density digital voice/fax network module
NM-HDV	High-density voice network module (no VWIC <sup>5</sup> , no PVDMs <sup>6</sup> )
NM-HDV-1T1-12	1-port 12-channel T1 voice/fax network module Bundle: NM-HDV with one (1) VWIC-1MFT-T1 and one (1) PVDM-12
NM-HDV-1T1-24	1-port 24-channel T1 voice/fax network module Bundle: NM-HDV with one (1) VWIC-1MFT-T1 and two (2) PVDM-12s
NM-HDV-1T1-24E	1-port 24-channel enhanced T1 voice/fax network module Bundle: NM-HDV with one (1) VWIC-1MFT-T1 and four (4) PVDM-12s
NM-HDV-2T1-48	2-port 48-channel T1 voice/fax network module Bundle: NM-HDV with one (1) VWIC-2MFT-T1-DI and four (4) PVDM-12s
NM-HDV-1E1-12	1-port 12-channel E1 voice/fax network module Bundle: NM-HDV with one (1) VWIC-1MFT-E1 and one (1) PVDM-12
NM-HDV-1E1-30	1-port 30-channel E1 voice/fax network module Bundle: NM-HDV with one (1) VWIC-1MFT-E1 and three (3) PVDM-12s
NM-HDV-1E1-30E	1-port 30-channel enhanced E1 voice/fax network module Bundle: NM-HDV with one (1) VWIC-1MFT-E1 and five (5) PVDM-12s
NM-HDV-2E1-60	2-port 60-channel E1 voice/fax network module Bundle: NM-HDV with one (1) VWIC-2MFT-E1-DI and five (5) PVDM-12s
NM-HDV-1J1-30	1-port 30-channel J1 high-density voice network module Bundle: NM-HDV with one (1) VIC-1J1 and three (3) PVDM-12s
NM-HDV-1J1-30E	1-port 30-channel enhanced J1 high-density voice network module Bundle: NM-HDV with one (1) VIC-1J1 and five (5) PVDM-12s
NM-HDV-FARM-C36	Network module 36-port DSP <sup>7</sup> farm bundle: HDV transcoding/conferencing DSP farm equipped with two (2) DSP SIMMs
NM-HDV-FARM-C54	Network module 54-port DSP farm bundle: HDV transcoding/conferencing DSP farm equipped with three (3) DSP SIMMs
NM-HDV-FARM-C90	Network module 90-port DSP farm bundle: HDV transcoding/conferencing DSP farm equipped with five (5) DSP SIMMs

**Table 3** Network Modules for the Cisco 3800 Series Integrated Services Routers (continued)

<b>Extension Modules</b>	
<a href="#">EVM-HD-8FXS/DID</a>	High-density analog and digital extension module for voice and fax
<a href="#">EM-4BRI-NT/TE</a>	4-port BRI S/T digital voice/fax expansion module
<a href="#">EM-HDA-8FXS</a>	8-port FXS analog voice/fax expansion module
<a href="#">EM-HDA-6FXO</a>	6-port FXO analog voice/fax expansion module
<a href="#">EM-HDA-3FXS/4FXO</a>	3-port FXS 4-port FXO analog voice/fax expansion module
<b>Application Network Modules</b>	
<a href="#">NM-CE-BP-40G-K9</a>	Cisco Content Engine network module, basic performance, 40-GB IDE hard disk
<a href="#">NM-CE-BP-80G-K9</a>	Cisco Content Engine network module, basic performance, 80-GB IDE hard disk
<a href="#">NM-CE-BP-SCSI-K9</a>	Cisco Content Engine network module, basic performance, SCSI controller (requires external SCSI disk array such as the Cisco SA-6)
<a href="#">VNM-CIDS-K9</a>	Cisco Intrusion Detection System network module
<a href="#">NM-CUE</a>	Cisco Unity Express voice-mail network module (includes license for 12 mailboxes)
<a href="#">NM-NAM</a>	Cisco Network Analysis Module for branch routers
<b>Alarm Monitoring and Control Network Modules and Accessories</b>	
<a href="#">NM-AIC-64</a>	Alarm monitoring and control network module
<b>Circuit Emulation over IP (CEoIP) Network Modules</b>	
<a href="#">NM-CEM-4SER</a>	4-port serial CEoIP network module
<a href="#">NM-CEM-4TE1</a>	4-port T1/E1 CEoIP network module

1. GE = Gigabit Ethernet
2. IMA = inverse multiplexing over ATM
3. FXS = Foreign Exchange Station
4. FXO = Foreign Exchange Office
5. VWIC = voice/WAN interface card
6. PVDM = packet voice digital signal processor (DSP) module
7. DSP = digital signal processor

## Packet Voice DSP Modules

Table 4 lists packet voice digital signal processor (DSP) modules for the Cisco 3800 series routers.

**Table 4** Packet Voice DSP Modules (PVDMs) for the Cisco 3800 Series Integrated Services Routers

<a href="#">PVDM2-8</a>	8-channel packet fax/voice DSP module
<a href="#">PVDM2-16</a>	16-channel packet fax/voice DSP module
<a href="#">PVDM2-32</a>	32-channel packet fax/voice DSP module
<a href="#">PVDM2-48</a>	48-channel packet fax/voice DSP module
<a href="#">PVDM2-64</a>	64-channel packet fax/voice DSP module

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