

Cisco 2800, 2900, 3800 and 3900 Series Digital Modem PVDM Modules

Q. Please describe the digital modem functions that Cisco® integrated-services-router platforms offer.

A. Starting with Cisco IOS® Software Release 12.4(9)T, you can terminate modem calls using any of the Enhanced Network Module (NME-based) original Integrated Services Router (ISR) platforms (Cisco 2811, 2821, 2851, 3825 and 3845) when using the Cisco Digital Modem PVDM Modules in conjunction with the below Cisco network modules. Note the NM-1CE1T1-PRI and NM-2CE1T1-PRI are not supported on the Integrated Services Router G2:

- Cisco 1-Port Channelized E1/T1/ISDN-PRI Network Module (NM-1CE1T1-PRI)
- Cisco 2-Port Channelized E1/T1/ISDN-PRI Network Module (NM-2CE1T1-PRI)

Starting with Cisco IOS Software Release 12.4(20)T on the original Integrated Services Routers and 15.0(1)M on the Integrated Services Routers Generation 2, you can terminate modem calls with the following:

- Cisco 1-Port Channelized E1/T1/ISDN-PRI HWIC (HWIC-1CE1T1-PRI)
- Cisco 2-Port Channelized E1/T1/ISDN-PRI HWIC (HWIC-2CE1T1-PRI)
- Cisco 2-port VIC card-BRI (NT and TE) (VIC2-2BRI-NT/TE)

The data sheet with details about supported features is available at:

http://www.cisco.com/en/US/products/hw/modules/ps2641/products_data_sheet0900aecd8050918e.html.

Q. What is the feature set or license is required for the ISR Digital Modem PVDM2 Module (PVDM2-xDM)?

A. The PVDM2-xDM modules are supported with the IP Base feature set

Q. What is the maximum digital modem port density that each of the integrated-services-router platforms supports?

A. Table 1 provides density values for each supported platform.

Table 1. Digital Modem Port Densities Supported Through Onboard PVDM Slots

Platform	Port Density
Cisco 2811 and 2911	72 channels
Cisco 2821 and 2921	108 channels
Cisco 2851 and 2951	108 channels
Cisco 3825, 3925, 3845 and 3945	144 channels

Q. What signaling types are supported?

A. Table 2 lists the supported cards and associated signaling types.

Table 2. Supported Modules and Signaling Types

Network Module, WAN Interface Card (WIC), or High-Speed WIC (HWIC)	Support in Cisco IOS Software Release 12.4(9)T and above	Support in Cisco IOS Software Release 12.4(20)T and above	Supported Signaling Types in Cisco IOS Software Release 12.4(20)T and above
HWIC-1CE1T1-PRI	No	Yes	PRI
HWIC-2CE1T1-PRI	No	Yes	PRI

VIC2-2BRI-NT/TE	No	Yes	BRI
NM-1CE1T1-PRI *	Yes	Yes	PRI/CAS, E1 R2
NM-2CE1T1-PRI *	Yes	Yes	PRI/CAS, E1 R2

* NM-xCE1T1-PRI modules are not supported on the Integrated Services Router G2

Q. Is Dialout/EZ supported?

- A.** Yes, Dialout/EZ is supported as a communication port redirector. Details are available at:
http://www.cisco.com/en/US/partner/products/hw/univgate/ps501/products_configuration_example09186a00800a1992.shtml.

Q. Is fax supported on the Cisco 2800/2900/3800/3900 Digital Modem PVDM2 Module (PVDM2-xDM)?

- A.** It supports only sending of faxes; it cannot receive them.

Q. Is Modem Pooling supported?

- A.** Yes. You can pool the Cisco 2800/2900/3800/3900 Digital Modem PVDM2 Module (PVDM2-xDM) modems but not with other types of modems in the chassis. With the Cisco IOS Software Modem Pooling feature, a network administrator can partition the modems into several user-defined modem pools, and the modem pools are associated with various Digital Number Identification Service (DNIS) numbers. When the router receives an incoming modem call, the DNIS information of the call is used to find the proper modem pool from which the modem is then allocated.

Q. Can the Cisco 2800/2900/3800/3900 Digital Modem PVDM2 Module (PVDM2-xDM) coexist with another digital modem network module (NM-xDM) on the same chassis?

- A.** Yes, they can coexist on the same chassis, but they cannot be a part of the same modem pool.

Q. How can I get the firmware version on the modems?

- A.** The modem firmware is bundled with Cisco IOS Software; you can find the version using the following command-line interface (CLI): "show modem version". You can also upgrade the firmware using the "modem firmware slot" CLI.

Q. Will the Cisco 2800/2900/3800/3900 Digital Modem PVDM2 Module (PVDM2-xDM) work in conjunction with 2-port VIC card-BRI (NT and TE) (VIC2-2BRI-NT/TE)?

- A.** Yes, it will work in conjunction with this interface card, and it supports data speeds up to 56 kbps over modem calls only. The voice interface card can support voice on one port and data on another simultaneously, but it does not support both voice and data on the same port.

Q. Does the Cisco 2800/2900/3800/3900 Digital Modem PVDM2 Module support modem recovery?

- A.** Yes. It can detect and mark modems as bad. The "modem recovery threshold" and "modem recovery action" CLI are used to set a threshold before the modem recovery process is performed. You can set the modem recovery action to disable|download|none. Location of modem firmware for downloading is configured using the "modem firmware" command in the global configuration mode.

Q. When should I use the ISR reliability, availability, and serviceability (RAS) functions versus the Cisco AS5350XM Universal Gateway?

- A.** The Cisco 3845 RAS configuration is meant for infrequent or low-density RAS functions. The 8-port Cisco AS5350XM bundle is less expensive than a Cisco 3845 configured with the same RAS density. The part number is AS535XM-8T1-192-D, and details are available at:
http://www.cisco.com/en/US/partner/products/hw/univgate/ps501/prod_eol_notice0900aecd804c6e86.html.

Q. What are the differences between the Cisco AS5000 Series Universal Gateways and integrated-services-router digital modem solutions?

- A.** The following are the differences between the two solutions:

- Cisco AS5000 Universal Gateways support densities up to 1CT3.
- Cisco AS5000 Universal Gateways support Signaling System 7 (SS7) termination.
- Cisco AS5000 Universal Gateways support Multichassis Multilink Point-to-Point Protocol (MLPPP) for grouping multiple Cisco AS5000 chassis.
- Cisco AS5000 Universal Gateways use the Nextport CSMv6 Cisco specific firmware and the Cisco 2800/2900/3800/3900 Digital Modem PVDm2 Modules use CSMv12 firmware, which is global. (The CSMv12 is a central-site modem, and one chipset has 12 channels.)
- Cisco 2800/2900/3800/3900 Digital Modem PVDm2 AT commands, Modemcap S registers, and chatscripts are different from those of the Cisco AS5000 Universal Gateways.



Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

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