

# Cisco IOS Software Release 12.2(4)YB

## Introduction

This product bulletin describes the new features introduced in Cisco IOS® Software Release 12.2(4)YB.

## New Features

### **Cisco 1700 Integrated V.90 Modem WAN Interface Cards**

The one- and two-port analog modem WAN interface cards (part numbers WIC-1AM and WIC-2AM) are now available for the Cisco 1700 Modular Router platform. The addition of these WIC cards expands the already extensive range of WAN interface cards currently available for this router. The interface cards provide cost-effective basic telephone service connectivity to allow remote router management, asynchronous dial-on-demand routing (DDR) and dial backup, dial- and fax-out modem access, and low-density remote access server (RAS) services.

Combined with the Cisco 1700 Series of routers, the WIC-1AM and WIC-2AM cards provide:

- An integrated solution for ease of deployment and management
- Enhanced remote management capabilities
- A cost-effective alternative to leased lines or ISDN
- On-demand dial backup for critical WAN links

### **Cisco 1700 T1/E1 Multiflex Voice/WAN Interface Cards (VWICs)**

With this release, the following T1/E1 Multiflex VWICs are introduced onto the Cisco 1751 and Cisco 1760 Modular Router platform.

VWIC-1MFT-E1  
VWIC-2MFT-E1  
VWIC-1MFT-T1  
VWIC-2MFT-T1  
VWIC-1MFT-G703  
VWIC-2MFT-G703  
VWIC-2MFT-T1-DI  
VWIC-2MFT-E1-DI

Prior to the IOS 12.2(4)YB, these cards are supported on Cisco 2600 and Cisco 3600 routers only.

T1/E1 Multiflex VWICs combine the accessibility of a WIC and the functionality of a voice interface card (VIC), delivering a multiservice solution that offers the integration of voice and data over a single circuit. By supporting VWICs, new markets requiring the use of channelized WAN circuits were opened for the Cisco 1751 and 1760 platforms. Along with these VWICs, the signaling protocol Common Channel Signaling (CCS), T1 Channel Associate Signaling, T1/E1 PRI, E1 R2 and PRI QSIG are supported in Cisco IOS Software Release 12.2(4)YB as well.



T1/E1 multiflex cards provide the following services:

- Fractional T1/E1 data service (support maximum two channel groups per module)
- Channelized T1/E1 voice service (support maximum 30 DS0 channels)
- T1/E1 Drop and Insert service across two ports within the same VWIC
- T1/E1 PRI service (voice only)
- E1 Structured (G.704) and Unstructured (G.703) service

### **Quality of Service for Virtual Private Network**

The quality of service (QoS) for virtual private networks (VPNs) feature provides a solution for ensuring Cisco IOS QoS services operate in conjunction with tunneling and encryption on an interface. Cisco IOS Software can classify packets and apply the appropriate QoS service before the data is encrypted and tunneled. The QoS for VPN feature allows users to look inside a packet so that packet classification is based on original port numbers and on source and destination IP addresses. This allows service providers and enterprises to treat mission-critical or multiservice traffic with higher priority across their networks while using VPNs for secure transport.

The QoS for VPNs feature is designed for tunnel interfaces. When the new feature is enabled, the QoS features on the output interface classify packets before encryption, allowing traffic flows to be adjusted in congested environments. The result is more effective packet tunneling.

QoS for VPNs is supported for Generic Routing Encapsulation (GRE), IP in IP (IPIP) tunnels, Layer 2 Tunneling Protocol (L2TP), Layer 2 Forwarding (L2F), Point to Point Tunneling Protocol (PPTP), and IPSec.

The QoS for VPNs feature, which is enabled by the `qos pre-classify` command.

To verify that the QoS for VPNs feature has been successfully enabled on your router, use the `show interfaces` or `show crypto map` commands.

### **New Features for the Cisco 1760 Modular Access Routers**

With this release, the following WIC and Voice features are supported on the Cisco 1760 modular access router:

- Symmetric High Bit Rate Digital Subscriber Line (G.shdsl) WIC
- Survivable Remote Site Telephony (SRST) version 2
- Cisco IOS Telephony Service (ITS)
- Call Admission Control for VoIP call
- Diffserv for voice signaling traffic
- G.728 Code Support
- TCL scripting for interactive voice response (IVR)
- RTSP enhanced IVR
- T.37 Fax Store and Forward
- Session Initiation Protocol (SIP) 2.0 features\*
- Media Gateway Control Protocol (MGCP) 1.0 features\*
- Modem Pass through over VoIP

Please refer to Cisco IOS software 12.2(4)XM release:

<http://www.cisco.com/univercd/cc/td/doc/product/software/ios122/122relnt/1700/rn1700xm.htm#xtocid14>



### **Software Maintenance Support**

Maintenance for these features will be available on future 12.2X special releases until the code is incorporated into the *sixth* maintenance software release of 12.2T.

#### Detailed Information

For more detailed information about the platforms and features of Cisco IOS Software Release 12.2(4)YB, reference the following document:

Release Notes for Cisco 1700 series platforms for Cisco IOS Software Release 12.2(4)YB at:

<http://www.cisco.com/univercd/cc/td/doc/product/software/ios122/122relnt/1700/rn1700yb.htm>

#### Life Span

12.2(4)YB will be sold until the *sixth* maintenance release of Cisco IOS Software Release 12.2T.

#### Support

Cisco IOS Software Release 12.2(4)YB is supported by the Cisco Systems Product Support Policy found at:

<http://www.cisco.com/warp/customer/437/27.html>

#### Supported Hardware Platforms

The Cisco Modem WIC is supported on the following platforms: Cisco 1720, 1721, 1751, and 1760

The T1/E1 Multiflex VWICs are supported on the following platforms: Cisco 1751 and 1760

Image product numbers and descriptions are listed below:

Table 1 12.2(4)YB Image List

Number	Software Product Description	Image	Product Code	WIC-1AM & WIC-2AM	T1/E1 Multi Flex VWICs	VPN-QoS	Cisco 1760 WIC-1 SHDSL	Voice features* on Cisco 1760	Flash	DRAM
1	Cisco 1700 IOS IP/ADSL/IPX/AT/IBM/VOICE/FW/IDS PLUS IPSEC 56	c1700-bk8no3r2sv3y7-mz	S17Q7HVK8-12204YB	Yes	No	Yes	Yes	No	32MB	64MB
2	Cisco 1700 IOS IP/ADSL/IPX/AT/IBM/VOX/FW/IDS PLUS IPSEC 56	c1700-bk8no3r2sv8y7-mz	S17Q7V8K8-12204YB	Yes	Yes	Yes	Yes	Yes	32MB	64MB
3	Cisco 1700 IOS IP/ADSL/IPX/AT/IBM/FW/IDS PLUS IPSEC 56	c1700-bk8no3r2sy7-mz	S17Q7HK8-12204YB	Yes	No	Yes	Yes	No	16MB	64MB
4	Cisco 1700 IOS IP/ADSL/IPX/AT/IBM/VOICE/FW/IDS PLUSIPSEC3DES	c1700-bk9no3r2sv3y7-mz	S17Q7HVK9-12204YB	Yes	No	Yes	Yes	No	32MB	64MB
5	Cisco 1700 IOS IP/ADSL/IPX/AT/IBM/VOX/FW/IDS PLUS IPSEC 3DES	c1700-bk9no3r2sv8y7-mz	S17Q7V8K9-12204YB	Yes	Yes	Yes	Yes	Yes	32MB	64MB
6	Cisco 1700 IOS IP/ADSL/IPX/AT/IBM/FW/IDS PLUS IPSEC 3DES	c1700-bk9no3r2sy7-mz	S17Q7HK9-12204YB	Yes	No	Yes	Yes	No	16MB	64MB
7	Cisco 1700 IOS IP/ADSL/IPX/AT/IBM PLUS	c1700-bnr2sy7-mz	S17Q7P-12204YB	Yes	No	No	Yes	No	16MB	48MB
8	Cisco 1700 IOS IP/IPX/AT/IBM	c1700-bnr2y-mz	S17Q-12204YB	Yes	No	No	No	No	8MB	32MB
9	Cisco 1700 IOS IP/ADSL/VOICE/FW/IDS PLUS IPSEC 56	c1700-k8o3sv3y7-mz	S17C7HVK8-12204YB	Yes	No	Yes	Yes	No	16MB	64MB
10	Cisco 1700 IOS IP/ADSL/VOX/FW/IDS PLUS IPSEC 56	c1700-k8o3sv8y7-mz	S17C7V8K8-12204YB	Yes	Yes	Yes	Yes	Yes	16MB	64MB
11	Cisco 1700 IOS IP/ADSL/FW/IDS PLUS IPSEC 56	c1700-k8o3sy7-mz	S17C7HK8-12204YB	Yes	No	Yes	Yes	No	16MB	48MB
12	Cisco 1700 IOS IP/ADSL/VOICE PLUS IPSEC 56	c1700-k8sv3y7-mz	S17C7VK8-12204YB	Yes	No	Yes	Yes	No	16MB	64MB
13	Cisco 1700 IOS IP/ADSL/VOX PLUS IPSEC 56	c1700-k8sv8y7-mz	S17C7V8K8-12204YB	Yes	Yes	Yes	Yes	Yes	16MB	64MB
14	Cisco 1700 IOS IP/ADSL PLUS IPSEC 56	c1700-k8sy7-mz	S17C7K8-12204YB	Yes	No	Yes	Yes	No	16MB	48MB

Table 1 12.2(4)YB Image List (Continued)

Number	Software Product Description	Image	Product Code	WIC-1AM & WIC-2AM	T1/E1 Multi flex VWICs	VPN-OoS	Cisco 1760 WIC-1 SHDSL	Voice features* on Cisco 1760	Flash	DRAM
15	Cisco 1700 IOS IP/ADSL/VOICE/FW/IDS PLUS IPSEC 3DES	c1700-k9o3sv3y7-mz	S17C7HVK9-12204YB	Yes	No	Yes	Yes	No	16MB	64MB
16	Cisco 1700 IOS IP/ADSL/VOX/FW/IDS PLUS IPSEC 3DES	c1700-k9o3sv8y7-mz	S17C7V8K9-12204YB	Yes	Yes	Yes	Yes	Yes	16MB	64MB
17	Cisco 1700 IOS IP/ADSL/FW/IDS PLUS IPSEC 3DES	c1700-k9o3sv7y7-mz	S17C7HK9-12204YB	Yes	No	Yes	Yes	No	16MB	64MB
18	Cisco 1700 IOS IP/ADSL/VOICE PLUS IPSEC 3DES	c1700-k9sv3y7-mz	S17C7VK9-12204YB	Yes	No	Yes	Yes	No	16MB	64MB
19	Cisco 1700 IOS IP/ADSL/VOX PLUS IPSEC 3DES	c1700-k9sv8y7-mz	S17CV8K9-12204YB	Yes	Yes	Yes	Yes	Yes	16MB	64MB
20	Cisco 1700 IOS IP/ADSL PLUS IPSEC 3DES	c1700-k9sv7y7-mz	S17C7K9-12204YB	Yes	No	Yes	Yes	No	16MB	48MB
21	Cisco 1700 IOS IP/ADSL/IPX/VOICE/FW/IDS PLUS	c1700-no3sv3y7-mz	S17B7HPV-12204YB	Yes	No	No	Yes	No	16MB	64MB
22	Cisco 1700 IOS IP/ADSL/IPX/VOX/FW/IDS PLUS	c1700-no3sv8y7-mz	S17B7HPV8-12204YB	Yes	Yes	No	Yes	Yes	16MB	64MB
23	Cisco 1700 IOS IP/ADSL/IPX/FW/IDS PLUS	c1700-no3sv7y7-mz	S17B7HP-12204YB	Yes	No	No	Yes	No	16MB	48MB
24	Cisco 1700 IOS IP/IPX	c1700-ny-mz	S17B-12204YB	Yes	No	No	No	No	8MB	32MB
25	Cisco 1700 IOS IP/ADSL/VOICE/FW/IDS PLUS	c1700-o3sv3y7-mz	S17C7HV-12204YB	Yes	No	No	Yes	No	16MB	64MB
26	Cisco 1700 IOS IP/ADSL/VOX/FW/IDS PLUS	c1700-o3sv8y7-mz	S17C7HV8-12204YB	Yes	Yes	No	Yes	Yes	16MB	64MB
27	Cisco 1700 IOS IP/FW/IDS	c1700-o3y7-mz	S17CH-12204YB	Yes	No	No	No	No	8MB	32MB
28	Cisco 1700 IOS IP/VOICE PLUS	c1700-sv3y7-mz	S17CVP-12204YB	Yes	No	No	Yes	No	16MB	48MB
29	Cisco 1700 IOS IP/ADSL/VOICE PLUS	c1700-sv3y7-mz	S17C7VP-12204YB	Yes	No	No	Yes	No	16MB	64MB
30	Cisco 1700 IOS IP/VOX PLUS	c1700-sv8y7-mz	S17CV8P-12204YB	Yes	Yes	No	Yes	Yes	16MB	48MB
31	Cisco 1700 IOS IP/ADSL/VOX PLUS	c1700-sv8y7-mz	S17C7V8P-12204YB	Yes	Yes	No	Yes	Yes	16MB	64MB
32	Cisco 1700 IOS IP/ADSL PLUS	c1700-sv7y7-mz	S17C7P-12204YB	Yes	No	No	Yes	No	16MB	48MB

Table 1 12.2(4)YB Image List (Continued)

Number	Software Product Description	Image	Product Code	WIC-1AM & WIC-2AM	T1/E1 Multi flex VWICs	VPN-OoS	Cisco 1760 WIC-1 SHDSL	Voice features* on Cisco 1760	Flash	DRAM
33	Cisco 1700 IOS IP	c1700-y-mz	S17C-12204Y B	Yes	No	No	No	No	8MB	32MB
34	Cisco 1700 IOS IP/ ADSL	c1700-y7-mz	S17C7-12204 YB	Yes	No	No	Yes	No	8MB	32MB
35	Cisco 1710 IOS IP/ IPX/AT/IBM/FW/IDS PLUS IPSEC 3DES	c1710-bk9no 3r2sy-mz	S171QHK9-1 2204YB	Yes	No	Yes	No	No	16MB	48MB
36	Cisco 1710 IOS IP/ FW/IDS PLUS IPSEC 3DES	c1710-k9o3s y-mz	S171CHK2-12 204YB	Yes	No	Yes	No	No	8MB	32MB

**\* Voice features include:**

Survivable Remote Site Telephony (SRST) version 2  
 Cisco IOS Telephony Service (ITS)  
 Call Admission Control for VoIP call  
 Diffserv for voice signaling traffic  
 G.728 CODEC Support  
 TCL scripting for interactive voice response (IVR)  
 RTSP enhanced IVR  
 T.37 Fax Store and Forward  
 Session Initiation Protocol (SIP) 2.0 features  
 Media Gateway Control Protocol (MGCP) 1.0 feature  
 Modem pass through over VoIP



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