

Cisco Voice Interworking Switch Service Module

The Cisco® Voice Interworking Service Module (VISM-PR) is a packet voice module for the Cisco MGX® 8880 Media Gateway and Cisco MGX 8000 Series Multiservice Switches. The Cisco VISM-PR offers robust packet voice functions for service providers and enterprise customers.

Product Overview

The Cisco VISM-PR (Figure 1) offers a field-proven full set of voice-over-IP (VoIP) and voice-over-ATM (VoATM) features, including toll-quality voice, fax, and modem. The Cisco VISM-PR can be deployed in standalone configurations or with softswitches to enable a variety of packet voice services in network architectures using the Media Gateway Control Protocol (MGCP), PacketCable™ Trunking Gateway Control Protocol (TGCP), H.323, and Session Initiation Protocol (SIP). Operators can use the advanced features of the Cisco VISM-PR to rapidly deploy revenue-generating packet voice networks.

The Cisco VISM-PR provides full investment protection for existing Cisco MGX 8000 Series Multiservice Switch customers by providing the ability to add revenue-generating packet voice services to existing multiservice networks.

The Cisco VISM-PR is field proven with deployments in more than 30 countries worldwide and in more than 100 service provider and enterprise networks, providing a range of applications and services.

Figure 1. Cisco VISM-PR (Front Card)



Applications

Features and Benefits

Tables 1 through 5 provide information about the Cisco VISM-PR.

Table 1. Features and Benefits of Cisco VISM-PR

Feature	Benefit
8T1/E1 interfaces per module	<ul style="list-style-type: none"> • Cost-effective entry and scalability
Time-division multiplexing (TDM) interfaces	<ul style="list-style-type: none"> • Direct termination of 8 T1 or 8 E1 interfaces • T3, OC-3, or STM-1 interface connectivity using optional Service Resource Module (SRM)
Packet technology	<ul style="list-style-type: none"> • VoIP and VoATM (ATM Adaptation for AAL1 and AAL2) • Support for standalone and softswitch-based applications
High availability	<ul style="list-style-type: none"> • Cisco MGX platform support for 1:1 common equipment redundancy and 1:N Cisco VISM-PR redundancy
Deployment flexibility	<ul style="list-style-type: none"> • Proven successful deployments with Cisco and partner softswitches worldwide • VoIP and VoATM support with the same hardware and software

Table 2. Overview of Cisco VISM-PR Protocols and Features

Feature	Description
Call control	<ul style="list-style-type: none"> • MGCP, TGCP
Signaling interfaces	<ul style="list-style-type: none"> • Channel Associated Signaling (CAS), Feature Group D (FG-D) support for E911 and operator services, Signaling System 7 (SS7) and Inter-Machine Trunk (IMT), and ISDN Primary Rate Interface (PRI)
Voice compression	<ul style="list-style-type: none"> • G.711, G.723.1, G.726, G.729a/b, Clear Channel
Digital-signal-processor (DSP) features	<ul style="list-style-type: none"> • G.165, G.168-2000 integrated, nonblocking echo cancellation; programmable up to 128 ms • Transparent transcoding between a-law and μ-law encoding • Voice activated detection, silence suppression, and comfort noise generation • Fixed and adaptive jitter buffering • Preprogrammed and configurable support for tone detection and generation • Dual Tone Multi Frequency (DTMF) relay for IP and ATM • DTMF relay to softswitch • CAS signal translation and manipulation • Continuity test support • Bit Error Rate Test (BERT) and loopback test (with optional SRM)
Modem and fax	<ul style="list-style-type: none"> • T.38 Fax Relay (gateway or softswitch controlled) • Fax and modem passthrough
IP	<ul style="list-style-type: none"> • Real-Time Transport Protocol (RTP) and RTP Control Protocol (RTCP) (RFC 1889) • DTMF Relay (RFC 2833) • Resource Reservation Protocol (RSVP) and Call Admission Control (CAC)
ATM	<ul style="list-style-type: none"> • Standards-based AAL2 Adaptation and subcell multiplexing • Support for Constant Bit Rate (CBR), Real-Time Variable Bit Rate (VBR-rt), and Non-Real-Time VBR (VBR-nt) ATM traffic classes
Announcements	<ul style="list-style-type: none"> • Onboard announcement storage and playout
Lawful intercept	<ul style="list-style-type: none"> • Lawful intercept (Communications Assistance for Law Enforcement Act [CALEA]) support for call content
Management interfaces	<ul style="list-style-type: none"> • Simple Network Management Protocol (SNMP) • Command-line interface (CLI) • Telnet • Secure Shell (SSH) protocol • FTP

Table 3. Product Specifications for Cisco VISM-PR

Feature	Description
Chassis compatibility	<ul style="list-style-type: none"> • Cisco MGX 8880 Media Gateway • Cisco MGX 8850 Multiservice Switches • Cisco MGX 8830 Multiservice Switches
Physical specifications	<p>Front Card</p> <ul style="list-style-type: none"> • Height: 7.25 in. (184.1 mm) • Depth: 16.14 in. (409.9 mm) • Weight: 3.0 lb (1.4 kg) <p>Back Card</p> <ul style="list-style-type: none"> • Height: 7 in. (177.8 mm) • Depth: 4.125 in. (104.7 mm) • Weight: 0.6 lb (0.29 kg) <p>Environmental</p> <ul style="list-style-type: none"> • Operating temperature: 32° to 104°F (0° to 40°C) • Operating (noncondensing): 10 to 85 percent
Power consumption	67W per module
Compliance	<p>Safety</p> <ul style="list-style-type: none"> • UL 1950 3rd Ed./CSA C22.2 No. 950 (covers United States and Canada) • IEC 60950 (covers EU for CE marking) <p>EM/ESD</p> <ul style="list-style-type: none"> • 47 CFR Part 15: 2002 • CISPR22: 1997 • EN55022: 1998 • EN61000-3-2: 2000 • EN61000-3-3: 1995 • EN300386: 2001 • VCCI: V-3/2000.04 • EN300386: 2001 • EN50082-1: 1997 • EN61000-6-1: 2001 Central Office Equipment [USA] • GR1089: Issue 2: Rev1: 1999 • GR1089: Issue 3: October 2002 <p>T1</p> <ul style="list-style-type: none"> • TIA-968-A 2002 (USA) • CS-03 Issue 8 1996 (Canada) <p>E1</p> <ul style="list-style-type: none"> • RTTE Directive (1999/5/EC) 1999 (CE)
Telcordia CLEI	<ul style="list-style-type: none"> • GR-485-CORE – CLEI coding • GR-383-CORE – CLEI code label • GR-209-CORE – PCN Process

Table 4. TDM Interfaces for Cisco VISM-PR

	T1	E1
Port speed	1.544 Mbps	2.048 Mbps
Number of interfaces	8	8
Port media	100-ohm twisted pair	120-ohm twisted pair
Port connector	RJ-48	RJ-48 or SMB
Line coding	Binary 8-Zero Substitution (B8ZS) or Alternate Mark Inversion (AMI)	High Density Bipolar Order 3 Encoding or AMI
Line framing	ANSI T1.408 Extended Superframe format line framing and clear channel	ITU-T G.704 16 frame multiframe line framing and clear channel

Table 5. Availability and Ordering Information for Cisco VISM-PR

Product Description	Part Number	
	Front Card	Back Card
Cisco VISM-PR with 8 T1 interfaces	MGX-VISM-PR-8T1	AX-RJ48-8T1, AX-R-RJ48-8T1
Cisco VISM-PR with 8 E1 interfaces	MGX-VISM-PR-8E1	AX-RJ48-8E1, AX-R-RJ48-8E1 AX-SMB-8E1, AX-R-SMB-8E1

For More Information

For more information about Cisco service and support programs and benefits, go to:

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