

RVS IPVgate-20P

PRI VoIP Gateway Router



Integrating digital
enterprise class
telephony, fax, and
data, with standard
SIP support



- 30/23 lines (1 PRI E1/T1) over any broadband Internet connection, using SIP
- Operates as VoIP access gateway (CPE) or VoIP termination gateway (Media Gateway)
- Multilayered Quality-of-Service (QoS) to ensure business-quality telephone calls
- Built-in VPN (IPSec) server to create enterprise virtual networks
- Fully interoperable with leading vendors' SIP-based equipment

IPVgate-20P is a cost-effective, cutting-edge, standalone ISDN PRI device, which can serve as VoIP Access Gateway or VoIP Trunking Gateway, fully interoperable with leading soft switches and SIP servers.

IPVgate-20P is part of RAD VoIP System (RVS) that includes a class-5 softswitch, CPEs and media gateways (IPVgate family), a sophisticated management system (IPVsuite-200) and prepaid/postpaid billing solutions (IPVsuite-Billing).

The device employs superior voice technology for connecting digital PBX systems to IP-based telephony networks, as well as for integrating into new IP-based PBX architecture.

IPVgate-20P is designed to be the most efficient voice and data solution for businesses that would like to empower their existing digital PBX with VoIP access service. IPVgate-20P utmost availability of service can be achieved by its network backup capabilities of ADSL and WAN.

IPVgate-20P comprises two E1/T1 PRI (RJ-45) interfaces. One interface is connected to the PBX and the other one to the PSTN as a backup (if required by the end user). The unit allows up to 30/23 (E1/T1) concurrent VoIP or PSTN calls.



IPVgate-20P

PRI VoIP Gateway Router

A call is routed to the PSTN backup when power failure occurs or if the IP network is not functioning/responding. In addition, a predefined table configuration guarantees the routing of special subscribers through the PSTN.

In order to ensure proper clock synchronization, IPVgate-20P can either generate locally a TDM clock and provide it to the PBX or synchronize to a clock received directly from the PSTN and relay this clock to the PBX.

IPVgate-20P can also be used as an E1/T1 PRI termination SIP media gateway.

VPN

Branch offices can be easily and securely connected to the HQ office using the built-in VPN IPSec server/client. Utilizing a 3DES encryption algorithm and up to 10 tunnels per device, IPVgate-20P transparently connects the enterprise LANs to a single virtual WAN.

ISDN

Compliant with most ISDN PBXs, IPVgate-20P generates Q.931 signaling and provides supplementary services such as Time, DDI (Direct Dialing Inward), MSN (Multiple Subscriber Numbering), CLIR (Caller-ID Restriction), CLIP (Caller-ID Presentation) and AOC (Advice of Charge). AOC variations, such as AOC metering, AOC currency, AOC at start of call, AOC during call, and AOC at end of call are also supplied.

An additional dual-purpose Sync/Backup PRI interface allows cascading of units and clock synchronization, which is essential for qualitative PBX operation.

FAILSAFE SUPPORT

IPVgate-20P performs SIP fail backup by DNS number resolving.

When a central SIP server fails to respond, IPVgate-20P accesses the operator or Enterprise DNS server to resolve the IP address of the VoIP trunking gateway or of another end-point device.

Utilizing its backup line (connected to Telco lines) the unit can switch all phone calls to regular telephony upon broadband connectivity failure.

IPVgate-20P is equipped with an integrated ADSL modem and provides ADSL line monitoring and re-routing of all traffic to a backup router upon connectivity failure via the additional Ethernet WAN interface.

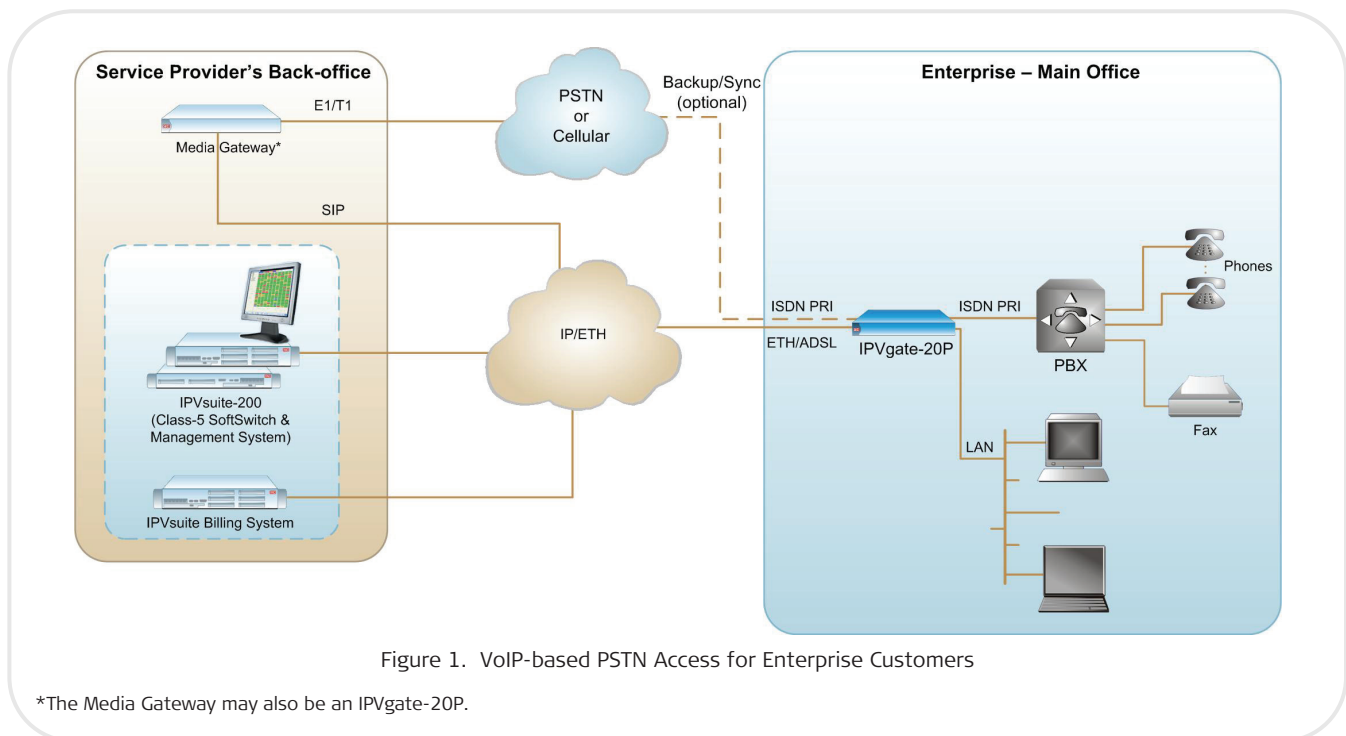


Figure 1. VoIP-based PSTN Access for Enterprise Customers

*The Media Gateway may also be an IPVgate-20P.

Specifications

NETWORK INTERFACES

WAN

Ethernet 10/100BaseTX and ADSL

LAN

Ethernet 10/100BaseTX

Connectors

Ethernet: RJ-45

ADSL: RJ-11

Data Transfer Protocols

IPv4

Router with NAT/NAPT

Static Route

RIP II

DHCP client/Server

SNTP

DMZ

PPPoE/PPTP

PPPoA, IPoATM (for ADSL interface)

PRI INTERFACE

PRI Protocols

Layer 1: I.430

Layer 2: Q.921, LAP-D (I.441)

Layer 3: Q.931 (I.451)

Country Variance:

North America: National ISDN-2

Euro ISDN: ETSI NET 3, NET 5

France: VN2, VN3

Germany: 1TR6

Austria: TSO13.1

Telephony

30/23 digital lines (1 PRI E1/T1) terminated in RJ-45 connector

PRI backup line (to PSTN)

PRI synchronization line for cascading

Call progress tones per country

(dial-tone, busy tone, ringing tone)

ISDN supplementary services:

- DDI (dial into/from extension) support
- Digit stripping
- MSN (Multiple Subscriber Numbering)
- Advice of Charge (AOC):
AOC-S, AOC-D, AOC-E
- Caller-ID, Time & AOC display
- CLIR, CLIP support

VOICE OVER IP

SIPv2 based (RFC 3261)

SDP (RFC 3264)

UDP/RTP packets (RFC 1889)

Silence Suppression

Echo Cancellation G.168

Voice Activity Detection (VAD)

Comfort Noise Generation (CNG)

Dynamic Jitter Buffer

Fax/Modem

T.38 compliant Group 3 fax relay

Fax bypass

Modem pass-through

Compression Algorithms

G.711

G.723.1

G.729A

QoS

Diffserv

ToS

Upstream priority

ATM QoS UBR/CBR/VBR

Multiple PVCs

SECURITY

VPN

IPSec server/client with Tunnel IP-filtering

Firewall

Stateless, port level IP-filtering SSLv3

MANAGEMENT

Quick-install Web page

Remote ADSL line quality monitoring

Fully managed by IPvSuite-200 integrated management and provisioning system

RS-232 port for basic configuration

Telnet

FTP server

SYSLOG

Remote update/upgrade

GENERAL

Power

100–240 VAC, 50/60 Hz

Physical

Height: 4.37 cm (1.7 in)

Width: 44 cm (17.3 in)

Depth: 24 cm (9.4 in)

Weight: 3 kg (6.6 lb)

Environment

Operating Temperature: 5° to 40°C

(41° to 104°F)

Storage Temperature: -25° to 70°C

(-77° to 158°F)

Humidity: Up to 90%, non-condensing

IPVgate-20P

PRI VoIP Gateway Router

Ordering

IPVgate-20P/*

Legend

- * PRI interface:
- E1 E1
- T1 T1






SUPPLIED ACCESSORIES

- Power cord (VAC)
- E1/T1 RJ-45 regular cable
- E1/T1 RJ-45 cross-cable

OPTIONAL ACCESSORIES

- CBL-DB9F-DB9M-STR**
- Control port cable

Table 1. IPVgate Family Comparison Table

	IPVgate-20L 	IPVgate-20A 	IPVgate-20B 	IPVgate-30 	IPVgate-20P 
Uplink Ports	ADSL2+ or ETH	ADSL2+, ETH or SFP	ADSL2+ or ETH	ADSL2+, ETH or SFP	ADSL and ETH
User Ports	2 FXS	2/4 FXS	2/4 BRI, 1 FXS (Fax)	8/20 SIP Clients, 2 FXS	1 PRI E1/T1
LAN Ports	4 (ETH Switch)	4 (ETH Switch)	4 (ETH Switch)	4 (ETH Switch)	1
Simultaneous Calls	2	2/4	4/8	2/4 External calls	30/23
PSTN Backup Line	-	-	+	-	+
PBX Sync Ports	N/A	N/A	+	N/A	+
WiFi Option	+	+	+	+	-
PSTN Termination GW	-	-	-	-	+
VPN (IPsec/3DES)	-	+	+	+	+
VLAN Tagging	+	+	+	+	-
PBX Features	-	Basic (4-FXS model only)	-	Advanced (IP-PBX)	-

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