

Deliver your voice in real time



# VoIP Solution

**F**or Internet accessing today, data and voice allow to be transmitted at the same time via VoIP devices.

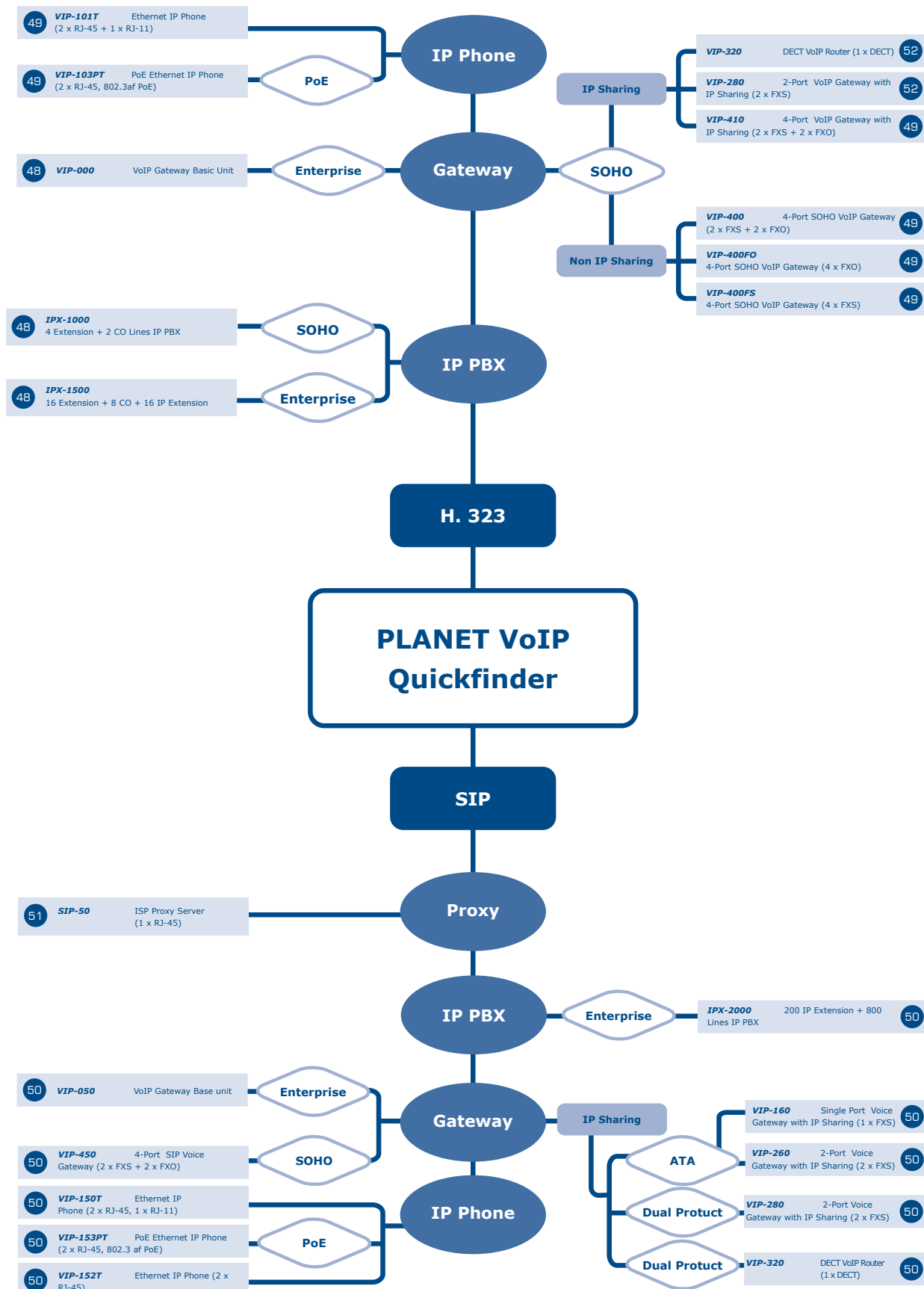
Saving the telecommunication costs of long-distance calls, or international calls, PLANET VIP series are designed to bring the convenience and satisfaction of simple operation while making the calls.

H.323, SIP (Session Initialization Protocol) replace the traditional circuit switch analog voice with lower costs and offer toll quality voice communication with the growing of Internet.

- Toll quality voice communication over Internet
- H.323, SIP protocols for installation flexibility
- Diversity in installation from ITSP, enterprises, SoHo, to personal environments
- Standard compliance with third party Telephony Gateway, Gate-keeper, Proxy Servers
- Easy configuration and management

# VoIP Solution

## Quickfinder



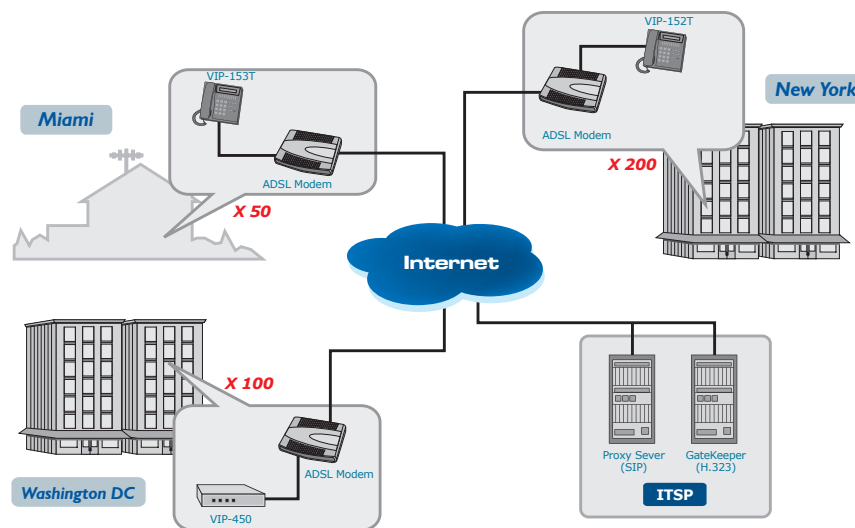
## Applications

### ITSP Service Provider Solution

ISP/ITSP provides the Internet connection with VoIP to be an optional package for the residential users or communities. As ISP provides the Internet connectivity and ITSP provides the voice services, phone number is translated for those home users.

When the IP phones direct point to the proxy server or H.323 gatekeeper in the ITSP billing center, building a pure voice network is an easy job of placing a phone to the customer side.

For example, the ITSP offers services for communities with 200 users in Miami, Washington and New York where people can make calls to each other. As long as voice gateways are installed, users can make a local PSTN call without doubt.

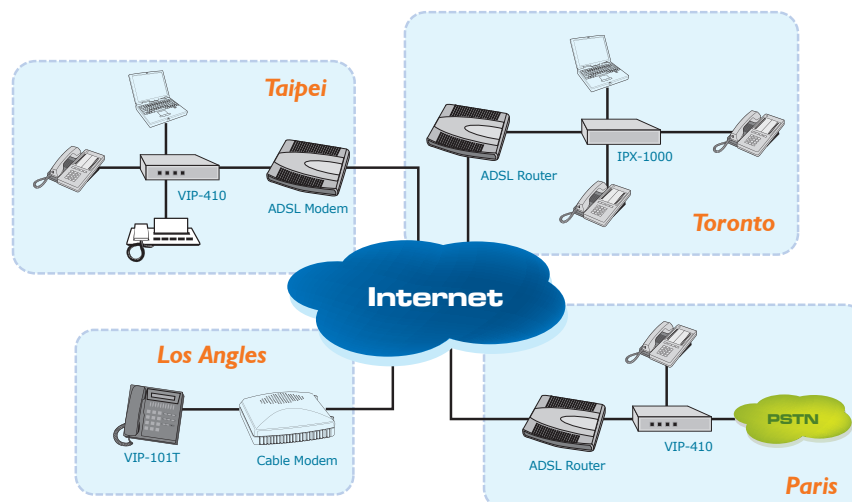


### Home Users-Peer to Peer

Home users can install the VoIP equipments themselves and call to each other through Internet. This is quite suitable for those who have friends or relatives worldwide.

As the topology illustrated, people in Taipei can freely call to Toronto, Paris, and Los Angles any time with the Internet Access fee instead of international calls charged by seconds.

Both ends could be fixed IP address or dynamic IP address, in the public network or private network behind a NAT router.



# VoIP Solution

## Product Brief

Model		IPX-1500	IPX-1000	IPX-2000	VIP-101T	VIP-103PT	VIP-153T	VIP-153PT
Product Description		IP PBX			IP Phone			
Voice Standard	H.323	✓	✓	-	✓	✓	-	-
	SIP	-	-	✓	-	-	✓	✓
	Voice Port	24 (16 EXT/8CO)	6 (4 EXT/2CO)	8 (8CO)	1	1	1	1
Voice Interface		16 x FXS + 8 FXO	4 x FXS + 2 x FXO	8 x FXO	Handset			
Ethernet	LAN	8	4	1	2	2	2	2
	WAN	1	1	1	-	-	-	-
	NAT IP Sharing	✓	✓	✓	-	-	-	-
	Power over Ethernet	-	-	-	-	✓	-	✓
Voice Codec	G.711 (64k)	-	-	✓	✓	✓	✓	✓
	G.729a/b(8k)	✓	✓	✓	✓	✓	✓	✓
	G.723.1 (5.3k/6.3k)	✓	✓	✓	✓	✓	✓	✓
Audio	VAD	✓	✓	✓	✓	✓	✓	✓
	CNG	✓	✓	✓	✓	✓	✓	✓
	ECN, G.168, A.165	✓	✓	✓	✓	✓	✓	✓
	Jitter buffer	✓	✓	✓	✓	✓	✓	✓
Management	LCD/Keypad	✓	✓	-	✓	✓	✓	✓
	Console	-	-	-	-	-	-	-
	HTTP	✓	✓	✓	✓	✓	✓	✓
	Telnet	-	-	-	✓	-	✓	-
Call Features	PLAR	✓	✓	-	-	-	-	-
	H.323 fast startup	✓	✓	-	✓	✓	-	-
	Call forward/transfer	✓	✓	✓	✓	(call transfer)	✓	(call transfer)
	Call wait/call on hold	✓	✓	✓	✓	-	✓	-
	T.30/T.38 fax over IP	-	-	-	-	-	-	-
Operating mode	Peer to Peer	✓	✓	✓	✓	✓	✓	✓
	Gatekeeper	✓	✓	-	✓	✓	-	-
	SIP Proxy	-	-	✓	-	-	✓	✓
Networking Features	PPPoE/DHCP client	✓	✓	✓	✓	✓	✓	✓
	Dynamic DNS	✓	✓	✓	✓	-	✓	-
	SNTP	✓	✓	✓	✓	✓	✓	✓
	NAT compatibility	✓	✓	✓	✓	✓	✓	✓
	Firmware upgrade	✓	✓	✓	✓	✓	✓	✓
	ToS	✓	✓	✓	✓	-	✓	-
	DHCP server	✓	✓	✓	-	-	-	-
	Virtual Server	✓	✓	-	-	-	-	-
RTP Port change	✓	✓	-	✓	✓	✓	✓	



# VoIP Solution

## Internet Telephony PBX System

### H.323 IP PBX

#### IPX-1000, IPX-1500

With years of Internet telephony and router manufacturing experiences, the IPX-1000/1500 is a full-function PBX system with extra built-in features, such as auto-attendant, voicemail, VoIP, and various Internet access features. IPX-1000/1500 provides a solid, uniform platform for both voice communications as well as data network communications. Based on state-of-the-art embedded technology, IPX-1000, comes with 2 CO lines and 4 extension lines, offers a seamlessly integrated solution for the telecommunication needs in modern times. And IPX-1500 with 8 Co lines, 16 extensions and 16 IP extensions.

Conventional telephony features such as auto attendant, voicemail, call forwarding, CO line usage logging, and toll restriction in IPX-1000/1500 not only maintain the existing telephony system, but also introduce the new infrastructure into the communication field. Besides, IPX-1000/1500 provides router service, IP sharing (NAT), firewall, DHCP server and QoS support to meet all the demands in your office network.

- VoIP quality with QoS (Quality of Service) support
- Off-net calling capability, call restriction, call access control
- Intuitive, ease-of-use web management



IPX-1000



IPX-1500

#### Ordering Information

IPX-1000	Internet Telephony PBX System (4 extension lines, 2 CO lines)
IPX-1500	Internet Telephony PBX System (16 extension lines, 8 CO lines, 16 IP extensions)

### SIP IP PBX

#### IPX-2000

Based on the experience of Internet PBX system-the IPX-2000 not only inherits advantages from traditional PBX system (auto-attendant, IVR, voicemail...etc.), but also enhances superior features, such as voicemail-to-mail, IP extension, and call conferencing.

Based on state-of-the-art embedded technology, the IPX-2000 provides a solid, uniform platform for voice communications as well as data network communications. The IPX-2000 is an ideal choice of cost saving solution for SOHO and SMB.

The newly introduced IP extension; IPX-2000 provides 8 CO lines, 200 IP extensions to bring the Maximum convenience and functionality for your office communication network.

- Call transfer, call hold, call waiting, 3-way call conference
- Auto-attendant, Voicemail, IVR, Voicemail-to-mail
- Built-in SIP proxy, IP extension support
- Auto-config, call admission control, CDR
- Standards, and various field applications compliant



IPX-2000

#### Ordering Information

IPX-2000	Internet Telephony PBX System (200 extensions, 8 x PSTN lines)
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## H.323 Voice Gateway+IP Phone

### H.323 Voice Gateway

#### VIP-400/400FS/400FO, VIP-000

Via different combinations of telephony interface (FXS interface, FXO interface) VIP-400 series voice gateways offer the best combinations for SOHO cost-effective VoIP solutions, VIP-000 is able to give customers more flexibility on port numbers and interface choices: two expansion slots are for choice of 4-Port FXO and 4-Port FXS modules.

Furthermore, VIP-400/400FS/400FO/VIP-000 are now able to support DDNS service, which brings great convenience to establish voice communications in a dynamic IP environment. Collaborate connection agents (PPPoE, or DHCP clients), VIP series built-in DDNS client can help those who don't have static IP address to map dynamic IP address to an easy-to-remember URL, and this will allow the third party voice gateways to connect to VIP much easier than ever.

- Standards compliant & Surpassing voice quality
- VoIP, FoIP and Network conversion
- Domain name call & DDNS supports
- Modular design for flexible VoIP deployment (VIP-000)



VIP-400



VIP-000



VIP-FXO



VIP-FXS

#### Ordering Information

VIP-400	4-Port Internet Telephony Gateway (2 x FXS + 2 x FXO)
VIP-400FS	4-Port Internet Telephony Gateway (4 x FXS)
VIP-400FO	4-Port Internet Telephony Gateway (4 x FXO)
VIP-000	8-Port Internet Telephony Gateway

#### Available Modules for VIP-000

VIP-FXS	4-Port FXS module
VIP-FXO	4-Port FXO module

### H.323 IP Phone

#### VIP-101T, VIP-103PT

Based on ITU-H.323 standards, the PLANET VIP-101T supports multiple protocols and interoperates with major other-vendor VoIP hardware and systems as well as the PLANET VoIP family. As a feature-rich IP Phone, the VIP-101T fulfills your needs. It's simple to use, and has additional features such as: built-in PPPoE/DHCP and DDNS clients, a 2x24 dot matrix LCD display, hands-free speakerphone, 100-number phonebook, 10 direct-dial hotkeys, 10-set last number redial, 8 one-touch function keys, incoming message indicator, and user-intuitive web administration system.

VIP-103PT is the 802.3af Power over Ethernet (PoE) IP Phone; meanwhile, VIP-103PT is H.323 v2/v3/v4 compliant with H.235 security support. The VIP-103PT feature high-quality speakerphone technology; also include an easy-to-use speaker on/off button and call hold/transfer buttons for various voice services. The VIP-103PT can effortlessly deliver toll voice quality equivalent to the regular PSTN connections utilizing cutting-edge Quality of Service, echo cancellation, comfort noise generation and voice compensation technology. The new VIP-103PT interoperates with major other-vendor VoIP hardware and systems as well as the traditions of PLANET VoIP family.

- Feature-rich keypad
- Standards, and various field applications compliant
- Domain name call & DDNS supports



VIP-101PT



VIP-103PT

#### Ordering Information

VIP-101T	IP Phone (2 x RJ-45, 1 x RJ-11 PSTN)
VIP-103PT	Power over Ethernet H.323 IP Phone (2 x RJ-45)

# VoIP Solution

## SIP Voice Gateway+IP Phone+Phone Adapter

### SIP SOHO Voice Gateway

#### VIP-450, VIP-160/260, VIP-050

To meet the next generation Internet telephony service demands, PLANET delivers VIP-450, VIP-160/260 to meet future voice services and applications. VIP-450 is reliable, efficient, TOC-saving, widely interoperable, as well as scalable and manageable solution for your VoIP networks. VIP-160/260 provides more cost-effective, and easy-to-use SIP telephony solutions.

VIP-450 not only inherits traditions of quality voice communications and real-time fax data over IP networks, but also saves the manpower in VoIP networks deployment. With optimized SIP architecture, PLANET VIP-450 is your best choice for P2P voice chat. Moreover, VIP-160/260, ideal cost-saving solutions for ITSP, provides IP sharing feature to share the Internet resources.

PLANET VIP-050, 2-modular slot design with built-in PPPoE/DHCP/DDNS clients, is able to establish up to 8 concurrent VoIP connections. VIP-050 is SIP version 2 (RFC3261) compliant, and supports converting telephony protocols (SS7, Analog (FXS/FXO)) into packet switching network between making and receiving calls via voice gateways or PBX system in heterogeneous signal-switching environment.



VIP-260



VIP-450



VIP-050

#### Ordering Information

VIP-050	8-Port SIP Internet Telephony Gateway
VIP-160	1-Port SIP Internet Telephony Gateway with IP Sharing (1 x FXS)
VIP-260	2-Port SIP Internet Telephony Gateway with IP Sharing (2 x FXS)
VIP-450	4-Port SIP Internet Telephony Gateway (2 x FXS + 2 x FXO)

### SIP IP Phone, Phone Adapter

#### VIP-150T/153T/150PT, VIP-156/156PE/158

VIP-150T offers intelligent phone features, and powerful voice processing power, effortlessly deliver toll voice quality equivalent to regular PSTN connections utilizing cutting-edge Quality of Service, echo cancellation, comfort noise generation and voice compensation technology.

As feature-rich IP Phones, the VIP-153T/VIP-153PT fulfills your needs. They are simple to use, and have additional features such as: built-in PPPoE/DHCP clients, password-protected machine management, LCD menu display, hands-free speakerphone, last number redial, incoming message indicator, and user-intuitive web administration system.

The VIP-156 and VIP-156PE is Analog Telephone Adapter (ATA) that idea to turn regular analog phone into up-to date VoIP phone. The ATA is plus an Ethernet port for connection to a broadband modem or router.

Moreover, the VIP-153PT/VIP-156PE have 802.3af PoE feature supported to enhance flexibility and convenience in your VoIP deployment.

- Feature-rich keypad, IP Phone
- Ideal for IP PBX integration, service provider installation
- SIP 2.0 (RFC3261) compliant
- SIP outbound proxy, SIP STUN sever support
- Dynamic IP address assignment, and Proxy/Peer-to-Peer voice communications
- Intuitive, ease-of-use web management, keypad management



VIP-150T



VIP-153T



VIP-156PE

#### Ordering Information

VIP-150T	SIP IP Phone (2 x RJ-45, 1 x RJ-11 PSTN)
VIP-150PT	SIP PoE IP Phone (2 x RJ-45, 802.3af PoE)
VIP-153T	SIP IP Phone (2 x RJ-45)
VIP-156	Analog Telephone Adapter (2 x RJ-45, 1 x RJ-11)
VIP-156PE	PoE Analog Telephone Adapter (2 x RJ-45, 1 x RJ-11, 802.3af PoE)
VIP-158	Analog Telephone Adapter with PSTN Connectivity (2 x RJ-45, 2 x RJ-11)

## SIP Proxy Server/Multi-purpose Voice Gateway

### SIP Proxy Server

#### SIP-50

Based on the Session Initiation Protocol (SIP), the SIP-50 SIP Proxy provides a smart call authentication, call routing capabilities to maximize network performance in both corporation and Internet voice networks.

The SIP-50 provides the SIP client registration, authentication, administration and management for all the SIP compliant endpoints. Furthermore, the NAT transversal capability to serve both the public and private network environments. SIP-50 can detect and configure the network address information of calling parties. It will also support call routing to provide connectivity to calling parties that are not part of the same VoIP network. This advanced call routing algorithm enables the SIP-50 providing load balancing and more flexibility in the VoIP deployment.

- SIP 2.0 (RFC3261) standard compliant
- SIP supplemental service support-Call Waiting, Call Transfer, Call Conferencing support
- Built-in calling prefix routing for inter SIP proxy communications
- Auto NAT user detection, stateful RTP proxy
- External RADIUS Authentication, Authorization and Accounting support



SIP-50

### DECT Voice Gateway/ADSL 2+2 IAD

#### VIP-462DG, IAD-200/200W

VIP-462DG is an advanced embedded telephony gateway and IP sharing device providing powerful integration of the traditional voice traffic and the Internet data traffic. VIP-462DG is designed to provide standard Internet telephony service and access service save long-distance telephony cost. The AW-646 is equipped with digital signal processors (DSPs) that convert analog and digital voice into IP packets for transport through the IP network using standard coders/decoders (codecs), including G.711, G.723.1 and G.729.A.

The PLANET 802.11g Wireless ADSL 2/2+ VoIP Router, IAD-200W and ADSL 2/2+ VoIP Router, IAD-200, The product supports PPPoA

(RFC 2364-PPP over ATM Adaptation Layer 5), RFC 1483 encapsulation over ATM (bridged or routed), PPP over Ethernet (RFC 2516), and IPoA (RFC 1577) to establish a connection with ISP. The IAD-200/IAD-200W provide DHCP server support, virtual server, DMZ support, VPN PPTP/IPSec pass through, and URL filtering capability and rich firewall features to protect your network from being accessed by outside users. All is managed via the user-friendly web interface.

- SIP 2.0 (RFC 3261) compliant
- IEEE 802.11g compliant (VIP-462DG, IAD-200W)
- IP sharing, SPI firewall, DDNS, DMZ, ALG support
- Up to 5 DECT handset registration (VIP-462DG)
- G.723, G.729, G.711 voice codec
- Acoustic echo cancellation (AEC), Voice activity detection (VAD), DTMF relay support



VIP-462DG



IAD-200

#### Ordering Information

SIP-50	ISP Proxy Server (1 x RJ-45)
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#### Ordering Information

VIP-462DG	802.11g SIP VoIP Router (1 x WAN, 4 x LAN, 1 X FXS, 1 x FXO, DECT)
IAD-200	ADSL 2/2+ SIP VoIP Router (1 x RJ-11, 1 x FXS, 1 x PSTN, 1 x LAN)
IAD-200W	802.11g ADSL 2/2+ SIP VoIP Router (1 x RJ-11, 1 x FXS, 1 x PSTN, 1 x LAN)

# VoIP Solution

## H.323/SIP VoIP Router and Trunk Gateway

### H.323/SIP VoIP Router

#### VIP-320, VIP-280

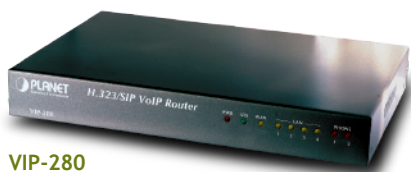
PLANET VIP-320/VIP-280, H.323/SIP VoIP Router, provides high quality voice communications, Internet sharing capabilities with other LAN users. Besides, PLANET VIP-320/VIP-280 is capable of handling both SIP and the H.323 calls. Up to 4 registrations to the SIP proxy or H.323 Gatekeeper. The VIP-320/VIP-280 also provide Virtual server, SPI firewall protection, and DMZ support; with these features, users may now enjoy high quality voice calls and secure Internet access without interfering with routine activities.

In addition, VIP-320 offers DECT interface for cordless telephony communications. With built-in DECT & GAP Compatible base, up to 8 DECT handsets can be registered to the VIP-320 so that voice communications can be established easily from anywhere in the living space.

- Up to 4 Gatekeepers/Proxy server registrations
- Voice Activity Detection (VAD)/G.168 Echo cancellation
- G.723.1/G. 729/G.711 a-law/u-law voice codec
- H.235 security/SIP outbound proxy support
- DDNS/Access control/System backup/restore



VIP-320



VIP-280

### E1/T1 Internet Telephony Trunk Gateway

#### VIP-2100, VIP-2400

To provide more flexibility, functionalities, and calling capacity in VoIP deployment, the PLANET VIP-2100/2400 E1/T1 trunk gateways present an easy, cost-effective solution to amplify the power of Voice over IP (VoIP). PLANET VIP-2100 and 2400 is not only a VoIP trunk gateway but also a universal VoIP gateway.

The VIP-2100 processes the incoming calls in between H.323, SIP and PSTN, with intelligent call routing mechanism, the VIP-2100/2400 are able to route calls between the PBX, the PSTN, and the VoIP network, to achieve the best combination of cost and quality.

PLANET VIP-2000 series trunk gateways can be implemented in the complicated, inhomogeneous telephony service environment, such as SIP + H.323, SIP+H.323 and PSTN enabled network. Furthermore, VIP-2100/2400 supports PSTN and VoIP (H.323/SIP) side prepaid and postpaid service. This provides a built-in practical internal AAA service for small deployment and also an external RADIUS interface for ITSP installation.

- Concurrent SIP/H.323 voice communications
- ITU-T H.323 v3 and H.450 supplementary service compliance
- SIP RFC 2543/3261 standard compliance
- SIP/H.323 T.38 fax relay
- VoIP to VoIP call conversion-SIP to H.323, SIP to SIP, H.323 to H.323
- External RADIUS Authentication, Authorization and Accounting
- Built-in IVR & call-flow controller for PSTN/VoIP calls



VIP-2100

#### Ordering Information

VIP-320	H.323/SIP VoIP Router with DECT (1 x WAN, 2 x LAN, 1 x RJ-11 PSTN, DECT)
VIP-280	H.323/SIP VoIP Router (1 x WAN, 4 x LAN,, 2 x FXS)

#### Ordering Information

VIP-2100	E1/T1 Internet Telephony Trunk Gateway (2 x RJ-45, 1 x E1/T1)
VIP-2400	E1/T1 Internet Telephony Trunk Gateway (2 x RJ-45, 4 x E1/T1)