

AP1810E
Digital E1/T1 VoIP Gateway

High Performance Compact Size Digital VoIP Gateway Solution

Product Overview



AddPac Technology

Sales and Marketing

www.addpac.com

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Product Overview

AP1810E Digital VoIP Gateway

- H.323/SIP Concurrent VoIP Signaling Stack Embedded
- High Performance RISC & Programmable DSP Architecture
- Digital E1/T1 VoIP Gateway Solution
- Various Interface Support : 1E1/T1, 2E1/T1 Module
- Two(2) 10/100Mbps Fast Ethernet (IP Share ,etc)
- High Performance LAN-to-LAN Routing Capability
- G.711/G.726/G.723/G.729, T.38 Fax , VAD, etc
- Powerful Network Protocols (PPPoE, DHCP, Static Routing, etc)
- Firmware Upgradeable Architecture
- SNMS (Smart Network Management System) for Large Scale Deployment
- Advanced Voice QoS Mechanism
- Light and Compact Design with Internal Power Supply
- One(1) VoIP Module Slot

Product Highlights

AP1810E Digital VoIP Gateway

State-of-art Signaling
H.323, SIP
Concurrent VoIP Signaling

SNMS Large Scale VoIP
Gateway Management Support

Light and
Compact Design

Excellent Voice Quality
G.729/G.723/G.726/G.711

High Performance RISC CPU
+ Programmable DSP



Module Type
1-Port, 2-Port Digital
E1/T1 VoIP Cards,
Internal Power Supply

Broadband IP Networking
With dual 10/100Mbps
Fast Ethernet

APOS™Technology
Firmware Upgradeable Architecture

High Performance
LAN-to-LAN Packet Routing
Processing

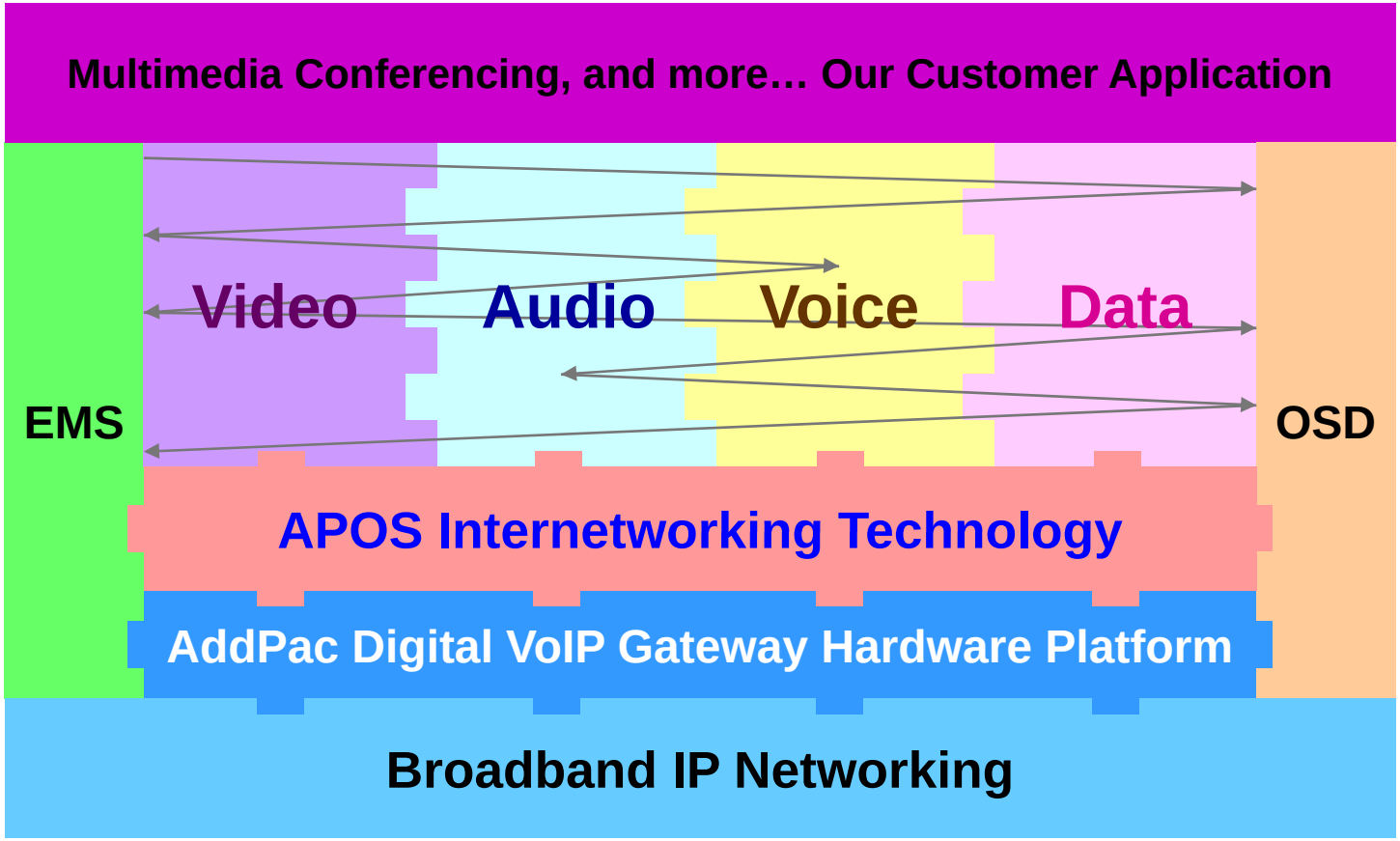
Powerful Network Protocol
Support

Powerful Trouble Shooting &
Debugging Feature Support

Advanced Voice
Traffic QoS Mechanism

APOS Technology

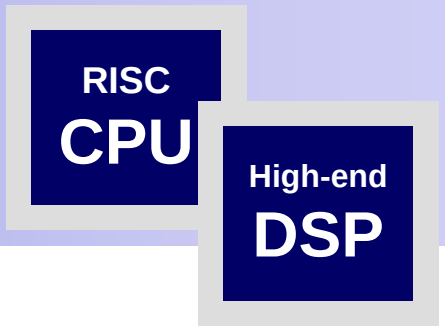
AP1810E Digital VoIP Gateway



- APOS : AddPac Internetworking Operating System
- OSD : On- Screen Display
- EMS : Element Management System

Hardware Specification

AP1810E Digital VoIP Gateway



- **RISC Microprocessor Computing Power**
- **Up to 2-Port Digital VoIP Gateway**
- **One(1) VoIP Module Slot**
  - 1-Port E1/T1 Card, 2-Port E1/T1Card
- **Network Interface**
  -Two(2) 10/100Mbps Fast Ethernet (RJ45)
- **RS232C Console Interface**
- **Run LED, LAN LED, Port LEDs**
- **Internal Power Supply**

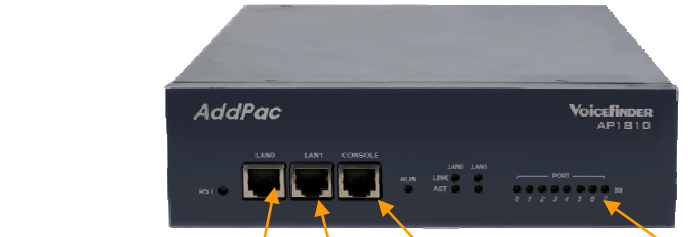
Hardware Specification

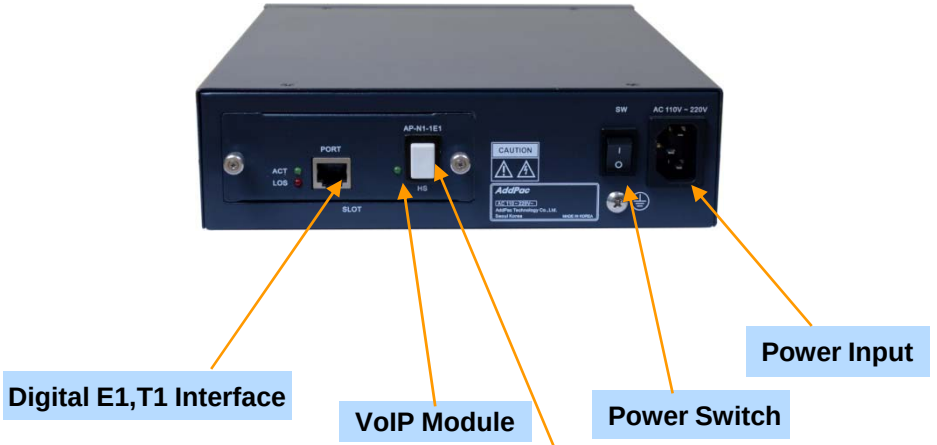
AP1810E Digital VoIP Gateway

Hardware Specifications

AP1810E VoIP Series	Basic Specifications
Voice Interface	One(1) VoIP Module Slot
	AP-N1-1E1, AP-N1-2E1
Ethernet Interface	2-Ports 10/100Mbps Ethernet Interface(RJ-45)
Flash Memory	4Mbyte High-speed Flash Memory
Base Memory	32 Mbyte High-speed SDRAM
Power Requirement	Power Supply Adaptor / VAC 110~220V, 50/60Hz,
Operating Temperature	0ºC ~ 45ºC (32 ºF ~ 122ºF)
Storage Temperature	-40ºC ~ 85ºC (-40ºC ~ 185ºF)
Relative Humidity	5% ~ 95% (Non-condensing)

Network interface Configurations





Hardware Specification

AP1810E Digital VoIP Gateway



AP-N1-1E1
(Digital E1 Module)

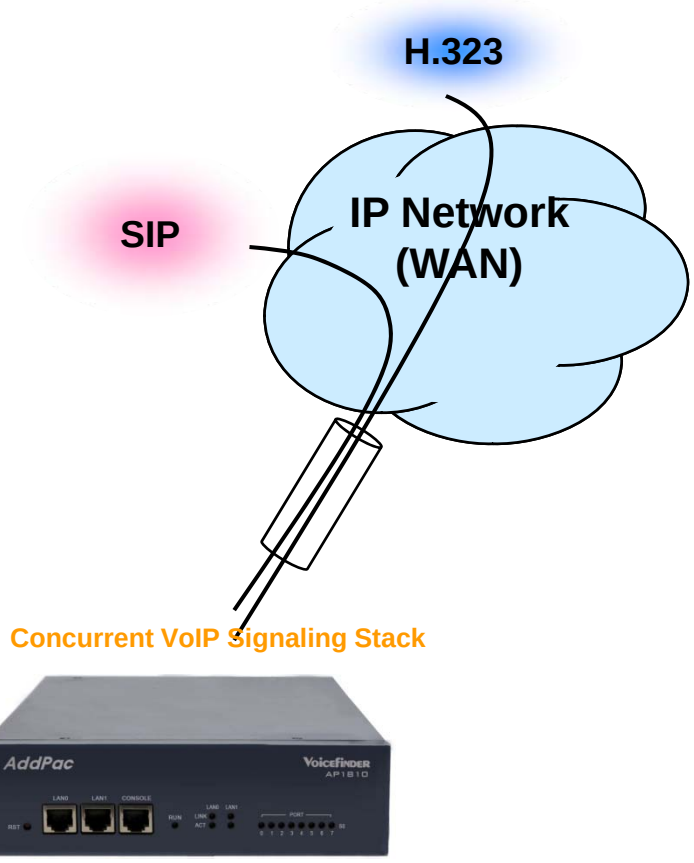


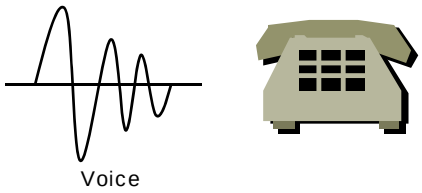
AP-N1-2E1
(Digital 2E1 Module)

VoIP (Voice over IP) Service

AP1810E Digital VoIP Gateway

- **H.323, SIP Dual VoIP Signaling Stack**
- **H.323**
  - **ITU-T Standard H.323 v3 Support**
  - **Support H.245 Tunneling**
  - **Including H.235 Security Features**
- **SIP**
  - **IETF RFC3261 or RFC2543 SIP Standard**





VoIP (Voice over IP) Service

AP1810E Digital VoIP Gateway

- **H.323**
  - Fast connect, normal connect support
  - H.245 tunneling support
  - Q.931 response message setting for inbound VoIP calls
  - H.245 logical channel open timing selection function
  - Start H.245 procedure support
  - DTMF / Hook flash relay with H.245 alphanumeric / signal
  - Secondary gatekeeper support
  - Gatekeeper assignment according to the domain name
  - Gatekeeper discovery with multicast
  - Lightweight RRQ support
  - Signaling TCP port assignment
  - Resource threshold setting with RAI
  - H.235 clear-token, crypto-token support
  - canMapAlias support
  - Technical prefix (supported prefix) support
  - Public IP assignment in NAT environment

- **SIP**
  - Gateway-based / Endpoint-based registration support
  - Secondary proxy-server assignment function
  - SIP signaling port change function
  - SIP proxy server assignment according to the domain name
  - T.38 real-time fax relay support
  - DTMF relay support with RFC2833 / OPTION message
  - Re-INVITE support

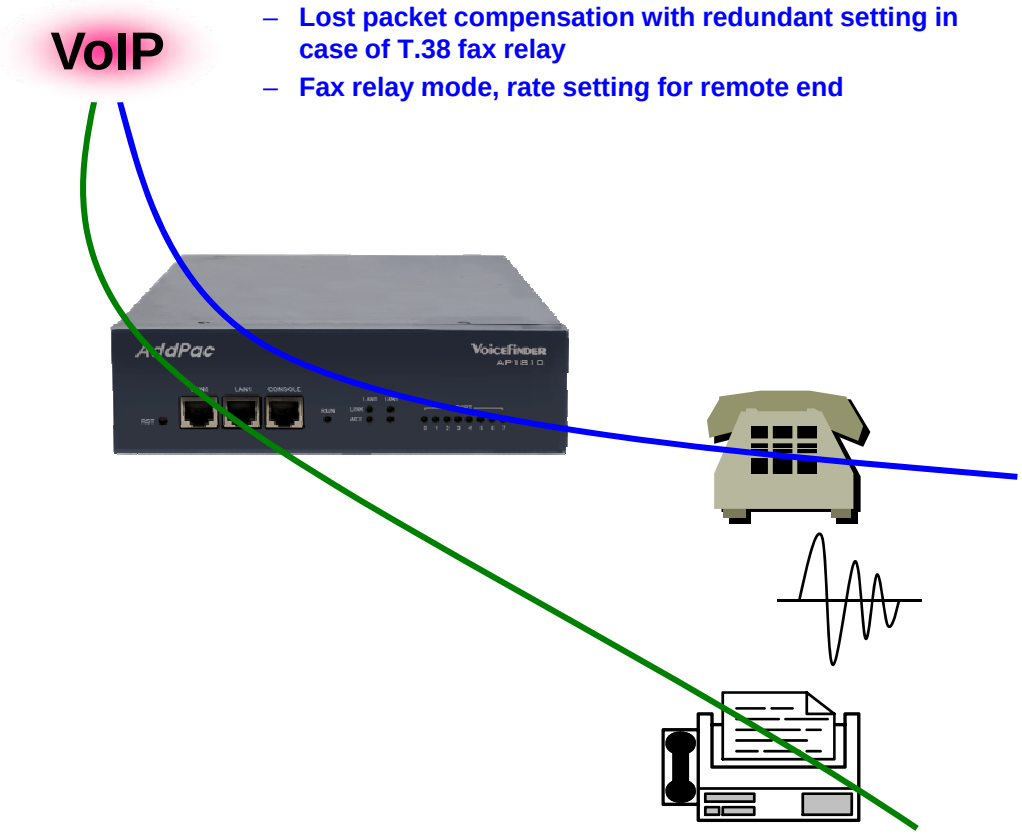


VoIP (Voice over IP) Service

AP1810E Digital VoIP Gateway

- **Voice Codec**
  - G.711 A-Law, G.711 U-Law
  - G.726 r16, G.726 r32
  - G.729A
  - G.723.1 r63, G.723.1 r53
  - VAD (Voice Activity Detection) function support
  - DTMF relay support (H.323, SIP, MGCP common) based on RFC2833
- **RTP**
  - Redundant RTP packet transmission in case of severe packet loss
  - Dynamic jitter buffer management and RPT packet jitter and loss compensation with heuristic & DSP error concealment
  - Static jitter buffer setting support
  - Voice frame per RTP packet number control for each codec
  - In-band ring-back tone support
  - Virtual ring-back tone support
  - Tone parameter change support

- **FAX**
  - Fax relay mode supporting T.38, inband-T.38, bypass mode
  - Lost packet compensation with redundant setting in case of T.38 fax relay
  - Fax relay mode, rate setting for remote end

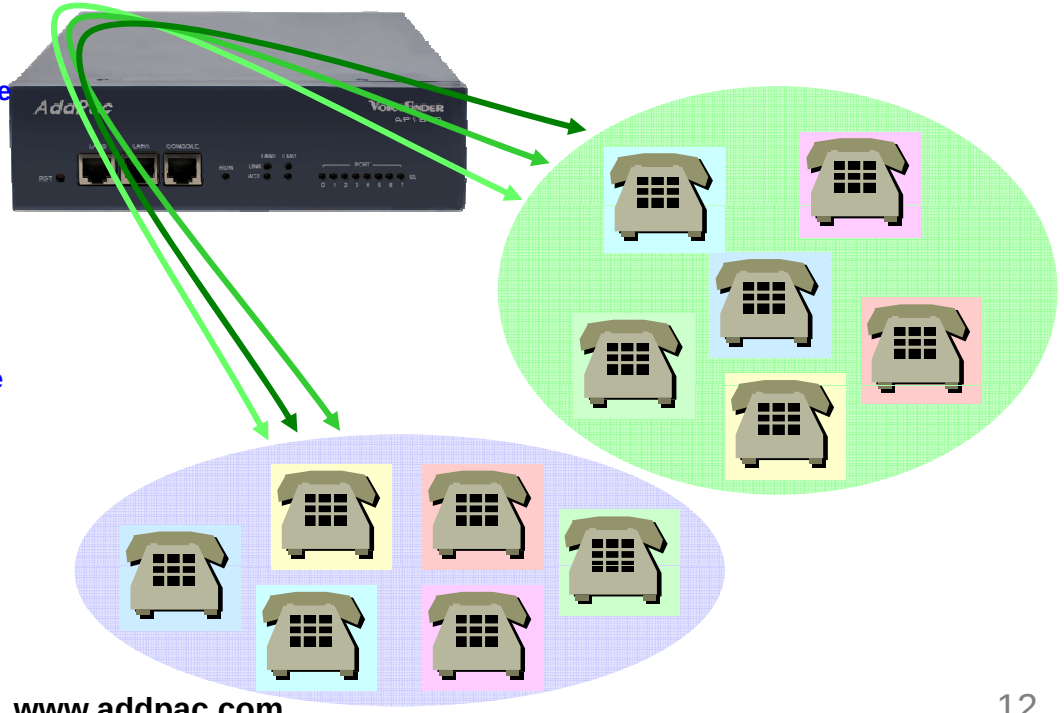


VoIP (Voice over IP) Service

AP1810E Digital VoIP Gateway

- **VoIP Call Controls**
  - Hot line connection function with PLAR (Private Line Auto Ring Down)
  - Leased line emulation function
  - Connection monitoring function
  - Fault tolerant with Redundancy and Call Distribution among Gateways for load balancing
  - Call attempt with IP address
  - H.323, SIP, MGCP inbound call connection for each voice port
  - Multiple E.164 setting for one voice port
  - One E.164 or digit pattern can be assigned to more than one voice port
  - Hunting with Longest match/ priority/ sequence/ random
  - One stage call setup by Digit forwarding
  - Call barring with specific digit patterns
  - Calling and called number conversion for PSTN outbound calls
  - PSTN rerouting in case of VoIP call attempt failure

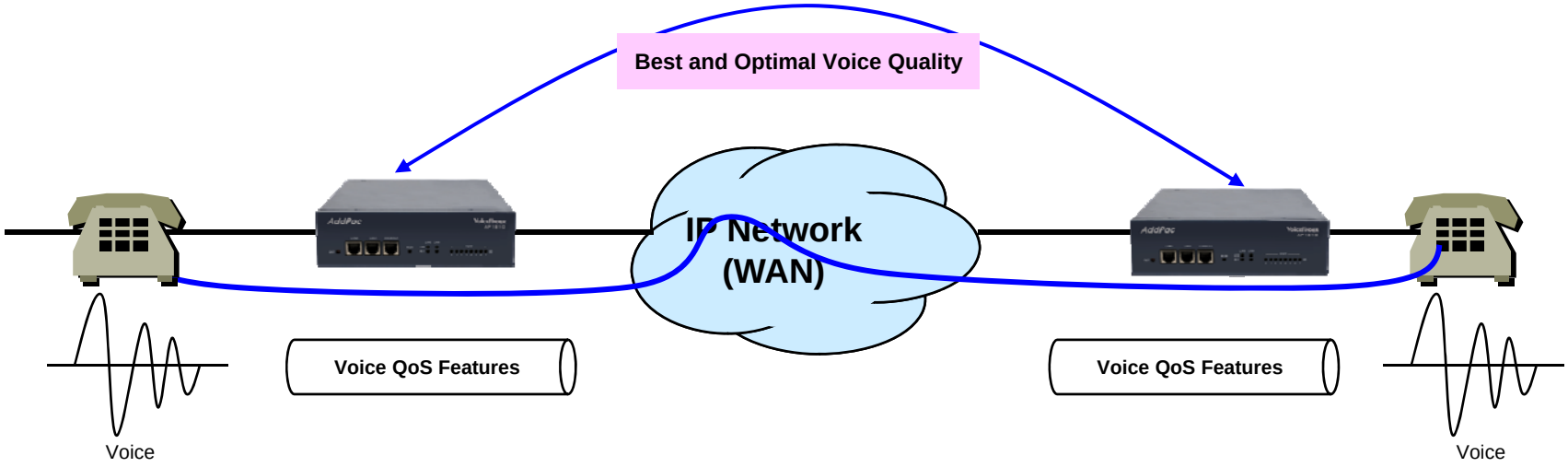
- **VoIP Call Controls (cont.)**
  - Call transfer for internal calls
  - Call pickup for internal calls
  - Calling and called number conversion for VoIP outbound calls
  - Calling and called number conversion for VoIP inbound calls
  - Fax broadcasting call control



Advanced QoS Features

AP1810E Digital VoIP Gateway

- **Enhances Transmit Voice QoS Features**
  - Voice Traffic Priority Queuing
  - QoS Service Profiling
  - Providing Virtual Network Transmit Algorithm
  - Real-time Voice Traffic QoS Support
  - RTP Packet Transmit Interval Control
  - Supporting RTP Packet Redundancy Scheme
  - IP Header Control such as ToS, Diffserv
- **Enhances Receive Voice QoS Features**
  - Dynamic Jitter Buffer Management
  - Error Concealment
  - Support T.38 FAX Data Error Recovery Scheme



Network Protocols

AP1810E Digital VoIP Gateway

Basic Network Protocols

- ARP, IPv4, TCP, UDP, ICMP, SCTP, IGMP, MLD

Routing Protocol

- IPv4 : Static

Service Protocol

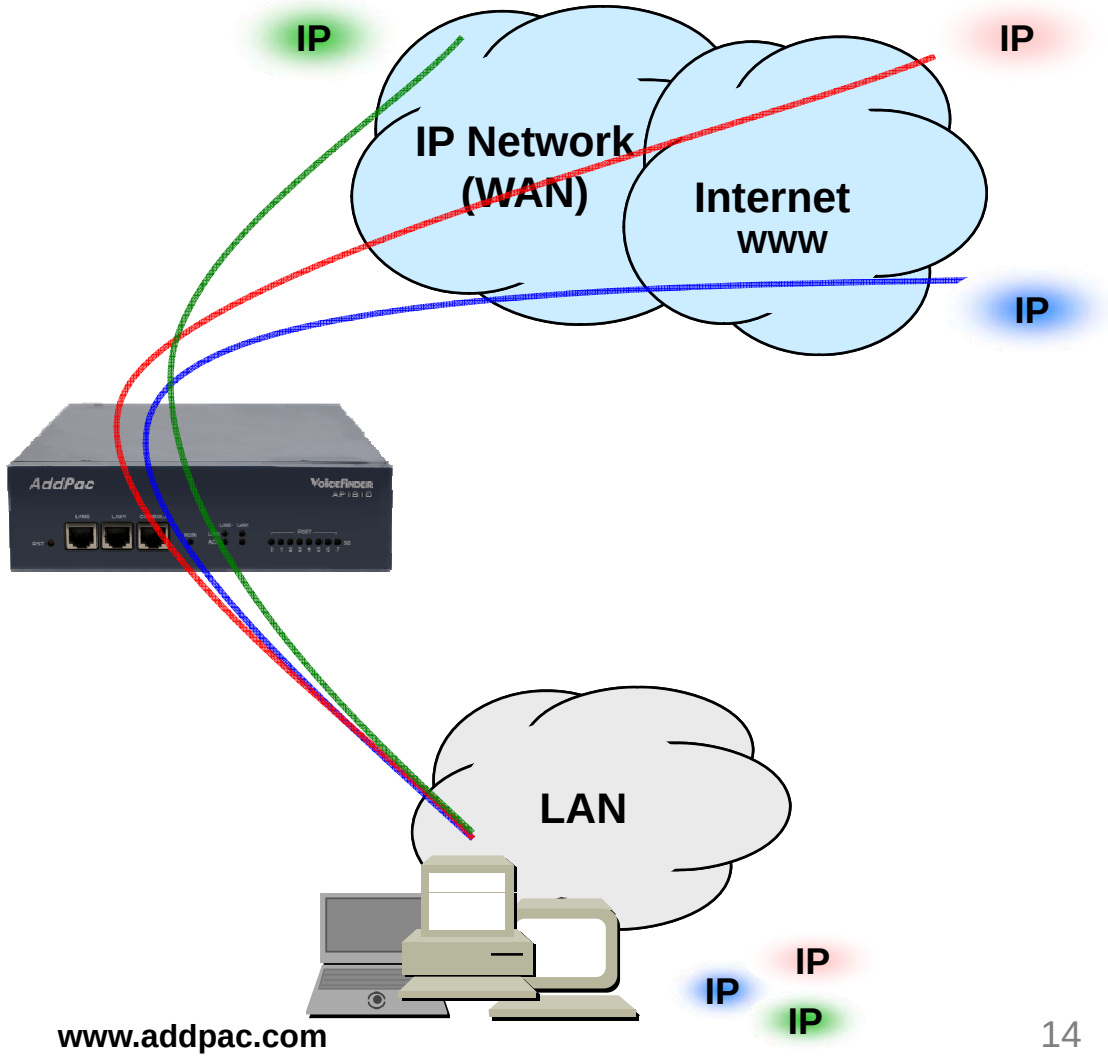
- FTP, Telnet, TFTP, DHCP Server/Relay, SNMP Server
- CDP (Cisco Discovery Protocol)
- DNS Resolver , DDNS(nsupdate)
- Bridge
- Syslog

IPv4 Address Configuration

- Fixed (Static)
- DHCP
- PPPoE

Miscellaneous

- Cisco Style CLI
- Standard & Extended IPv4 Access List
- Multi-level User Account Management
- IP accounting
- STUN Client

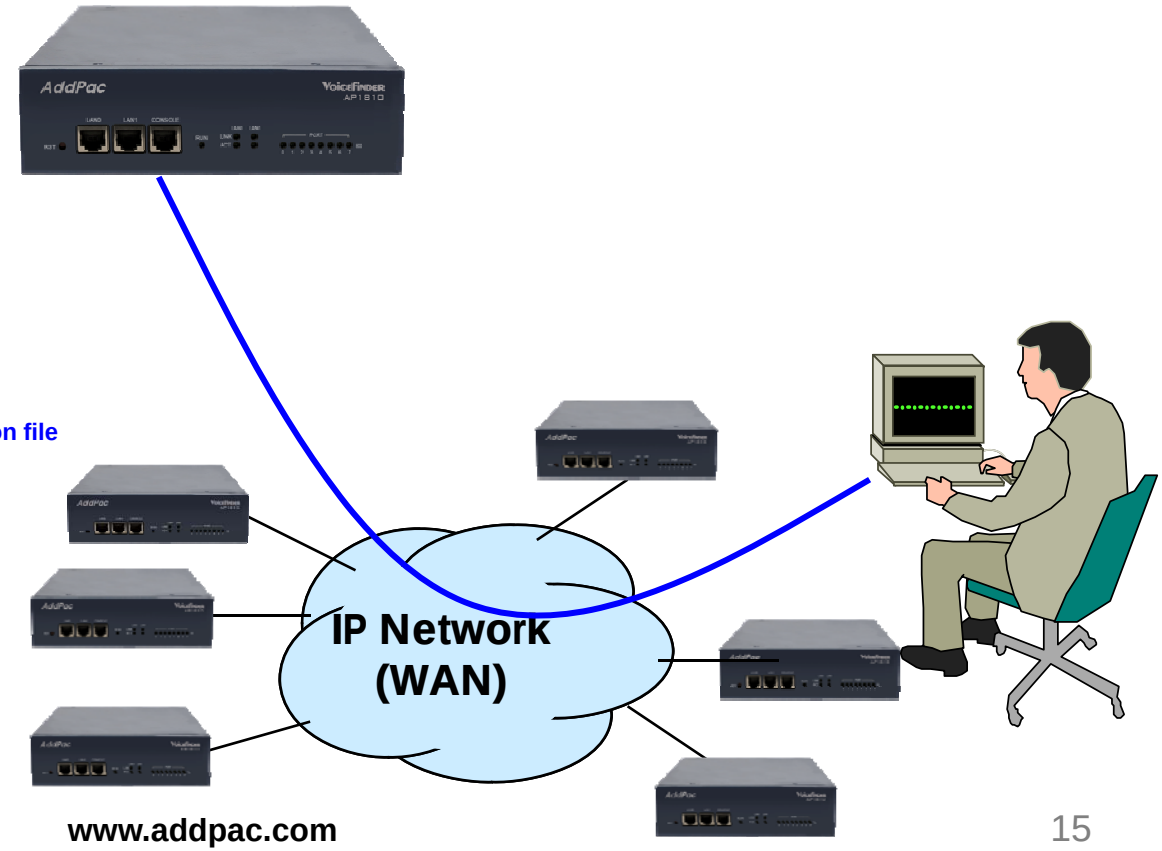


Network Management

AP1810E Digital VoIP Gateway

- **SNMP**
  - Standard Simple Network Management Protocol(SNMP) Agent support
  - MIB v1 and v2 Support
- **Web-based Management**
  - Smart Easy Setup
  - Standard Voice Interface
  - Standard PSTN Back-up Interface
- **Watch-dog Function**
  - Hardware, Software watch-dog services
- **Remote Management**
  - Telnet
  - Rlogin
- **Auto Upgrade Service**
  - HTTP server based APOS image and configuration file auto-upgrade support
- **Batch Job Function**
  - Text based script downloading

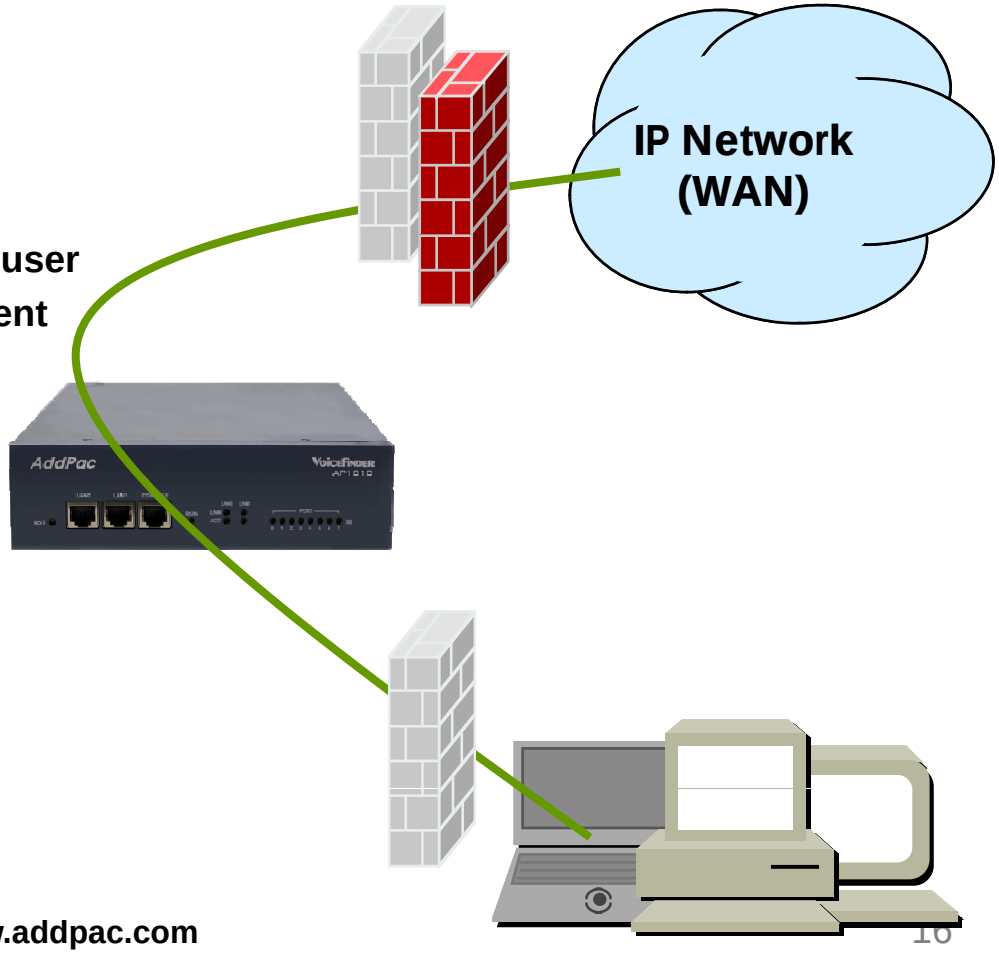
- **Interoperable with AP-VPMS Service**
  - AddPac VoIP Plug & Play Management System (AP-VPMS)



Security Management

AP1810E Digital VoIP Gateway

- **IP packet filtering**
- **IP access list**
- **User authentication function**
  - **Password Authentication Protocol (PAP)**
  - **Challenge Handshake Authentication Protocol (CHAP)**
- **Enable/Disable specific protocols**
- **Auto-square connect of Telnet session**
- **Account Management function for multi-level user**
- **SNMP/TELNET/FTP/HTTP/TFTP port assignment function**
- **SNMP/TELNET/FTP access list management**
- **Boot mode security checking function**



Standard Application

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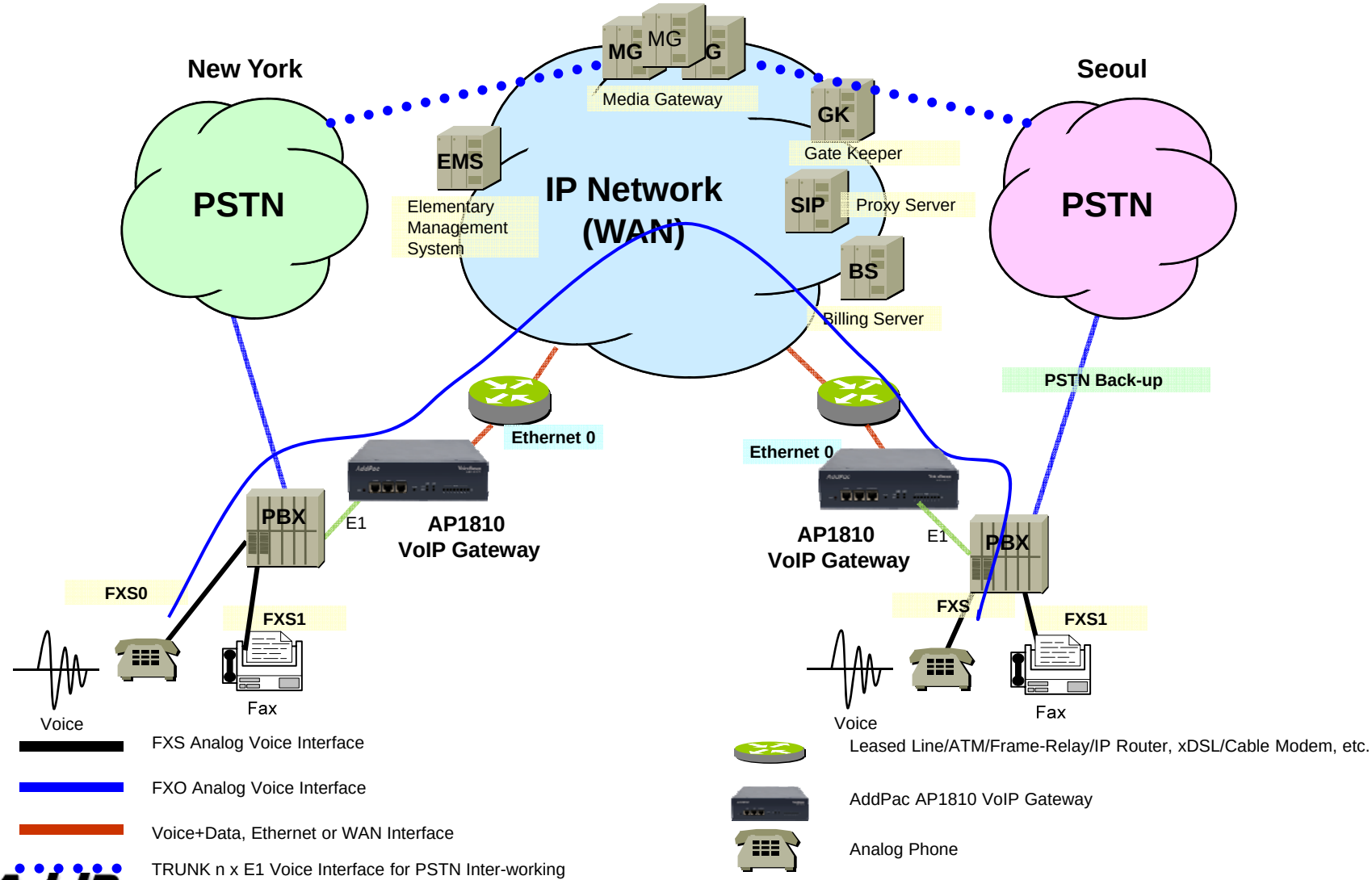

Ordering Information

- **AP1810E Digital VoIP Gateway Hardware**
  - AP1810E Digital VoIP Gateway Main Body
  - RISC Microprocessor with High-end Programmable DSP Architecture
  - 2-ports 10/100Mbps Fast Ethernet(RJ45)
  - Option Module : AP-N1-E1, AP-N1-2E1, etc
  - Including Network Cable & Internal Power Supply, etc.
- **Built-in APOS Internetworking Software for AP1810E**
- **Including 1 Year Hardware Warranty**
- **Product Documents**
  - Install and Operation Guide (PDF)
- **Pricing**
  - AddPac Technology Regional Sales Manager
  - Authorized Sales and Marketing Representatives
  - Please Contact www.addpac.com

Thank you!

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