

AP-CD701
1-Port CDMA Gateway

High Performance CDMA Gateway Solution



Preliminary Product Overview

(Without notice, following described technical spec. can be changed)

AddPac Technology

Sales and Marketing

www.addpac.com

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AP-CD701 1-Port CDMA Gateway

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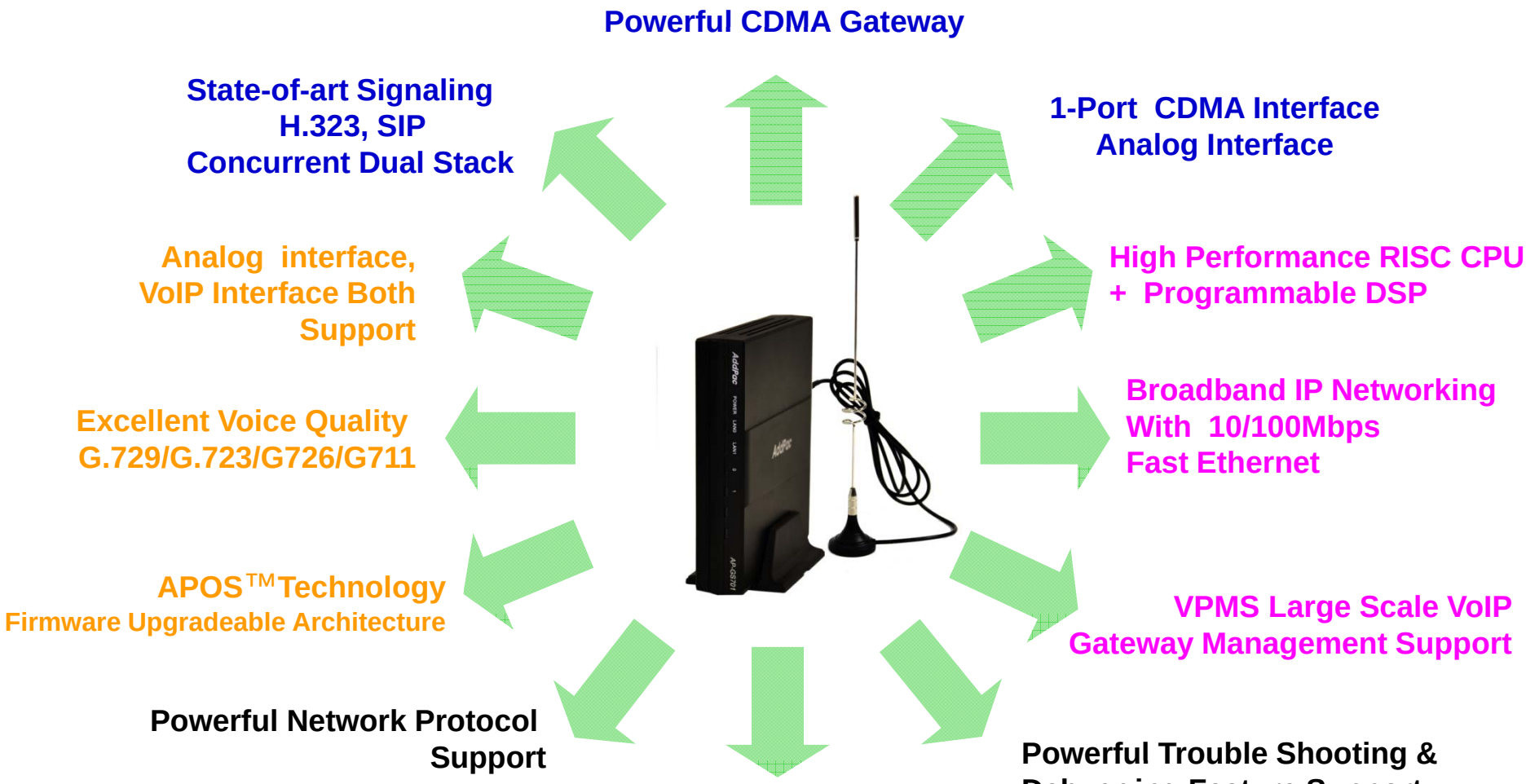
Product Overview

AP-CD701 1-Port CDMA Gateway

- Analog Interface (FXS, FXO)/VoIP Interface(LAN) Both Support
- 1-Port CDMA, Analog Interface
- H.323/SIP Dual Concurrent Stack Embedded
- High Performance RISC & Programmable DSP Architecture
- One(1) 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
- VPMS (VoIP Plug&Play Management System) for Large Scale Deployment
- Advanced Voice QoS Mechanism
- Light and Compact Design with External Power Supply

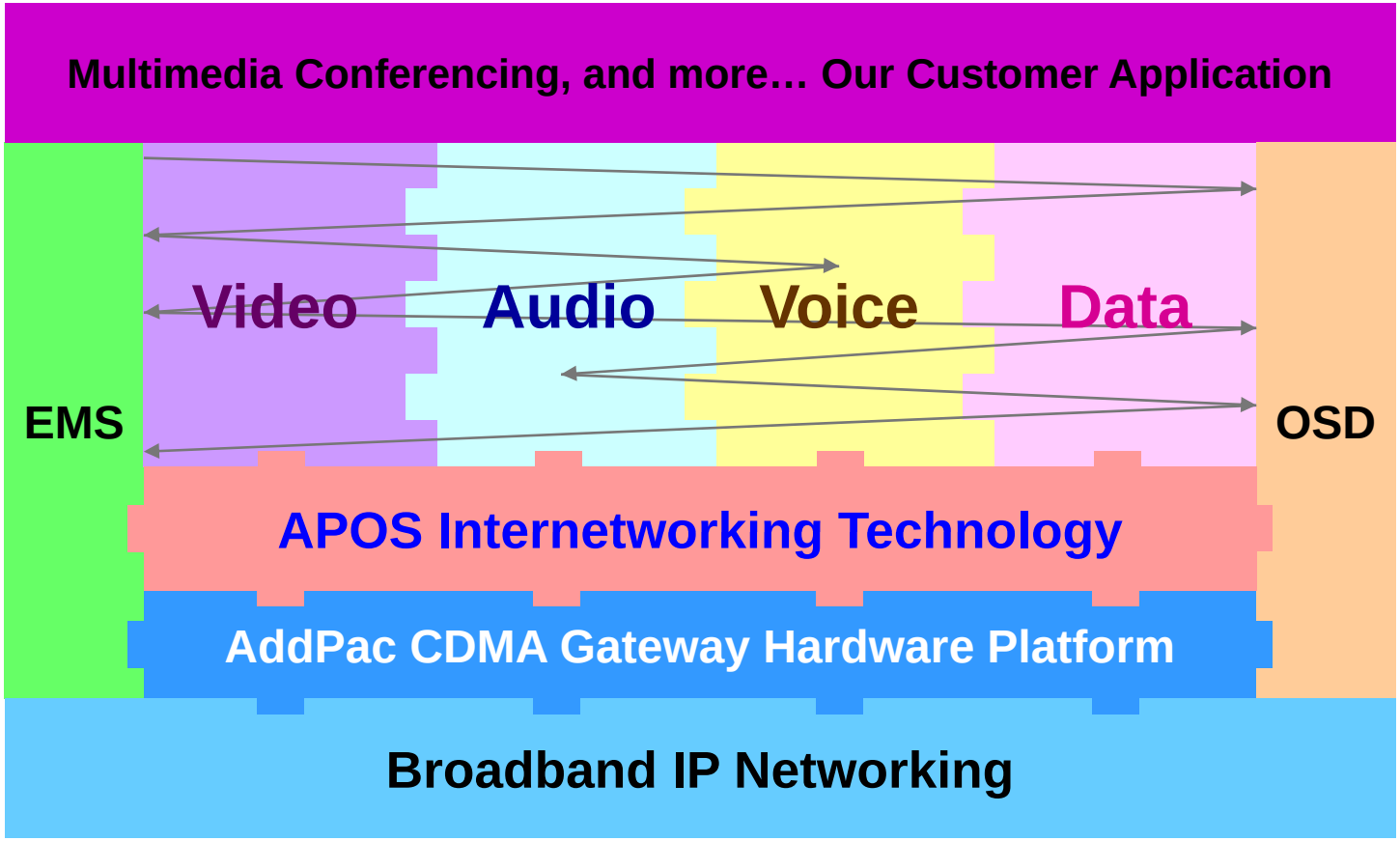
Product Highlights

AP-CD701 1-Port CDMA Gateway



APOS Technology

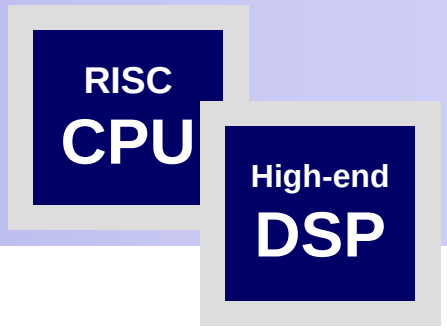
AP-CD701 1-Port CDMA Gateway



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

Hardware Specification

AP-CD701 1-Port CDMA Gateway



- RISC Microprocessor Computing Power
- 1-Port CDMA Gateway
- 1-Port RUIM Card Slot
- 1-Port Antenna Interface
- VoIP Gateway Interface
  - One(1) FXS Port : Model B
  - One(1) FXO Port : Model C
  - One(1) FXS + One(1) FXO Port : Model E
- Network Interface for VoIP Direct Interface
  - Two(2) 10/100Mbps Fast Ethernet (RJ45) : Model B, Model C
  - One(1) 10/100Mbps Fast Ethernet (RJ45) : Model E
- Run LED, LAN LED, Port LEDs
- External Power Supply

Hardware Specification

AP-CD701 1-Port CDMA Gateway

RISC CPU

High-end DSP

	AP-CD701 			
Analog Interface	Model A	Model B	Model C	Model E
	None	1FXS	FXO	FXS + FXO
CDMA Channel	1	1	2	2
CDMA Antenna	1	1	2	2
RUIM Card Slot	1	1	2	2
LAN Port 10/100Mbps	2	2	2	1
Power	External Power Adaptor	External Power Adaptor	External Power Adaptor	External Power Adaptor

Hardware Specification

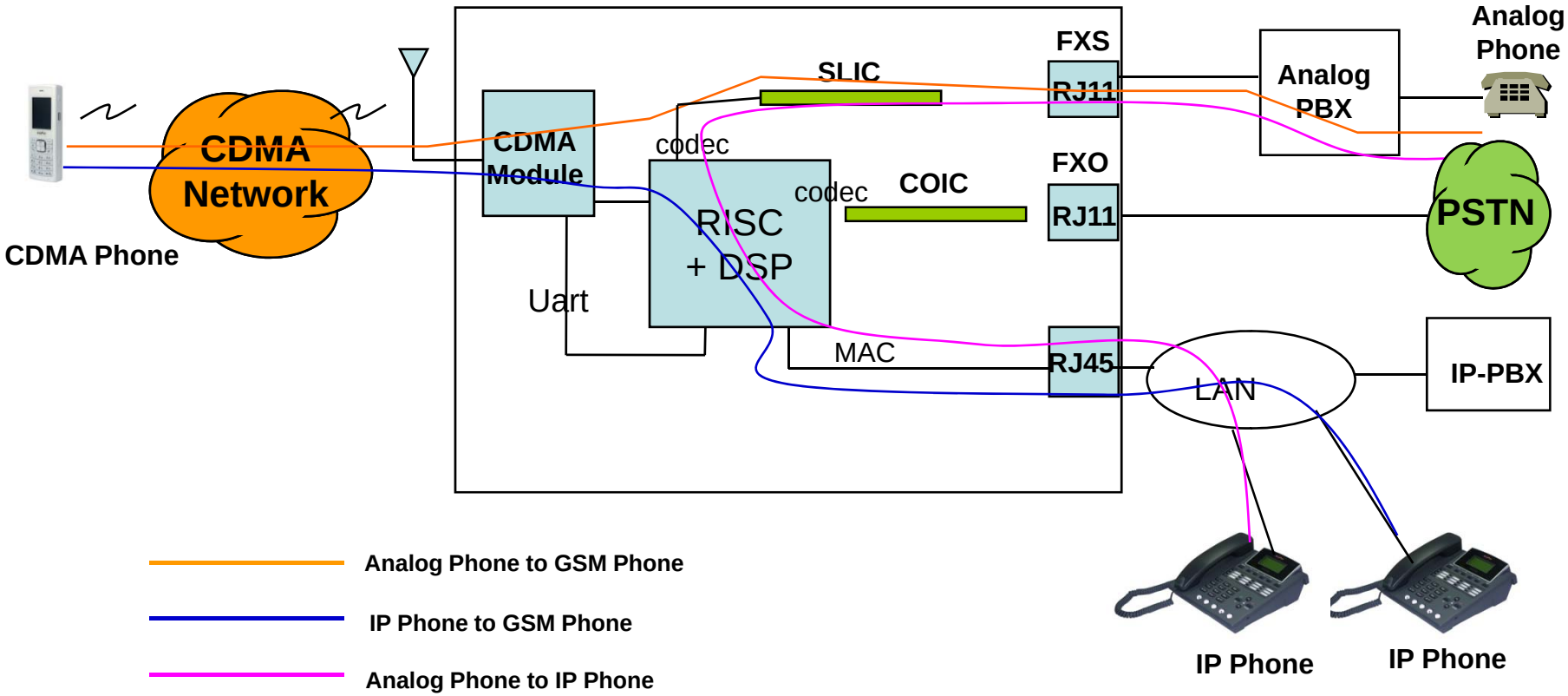
AP-CD701 1-Port CDMA Gateway

RISC CPU

High-end DSP

CDMA Gateway Service Diagram

AP-CD701E CDMA Gateway Internal H/W Block Diagram



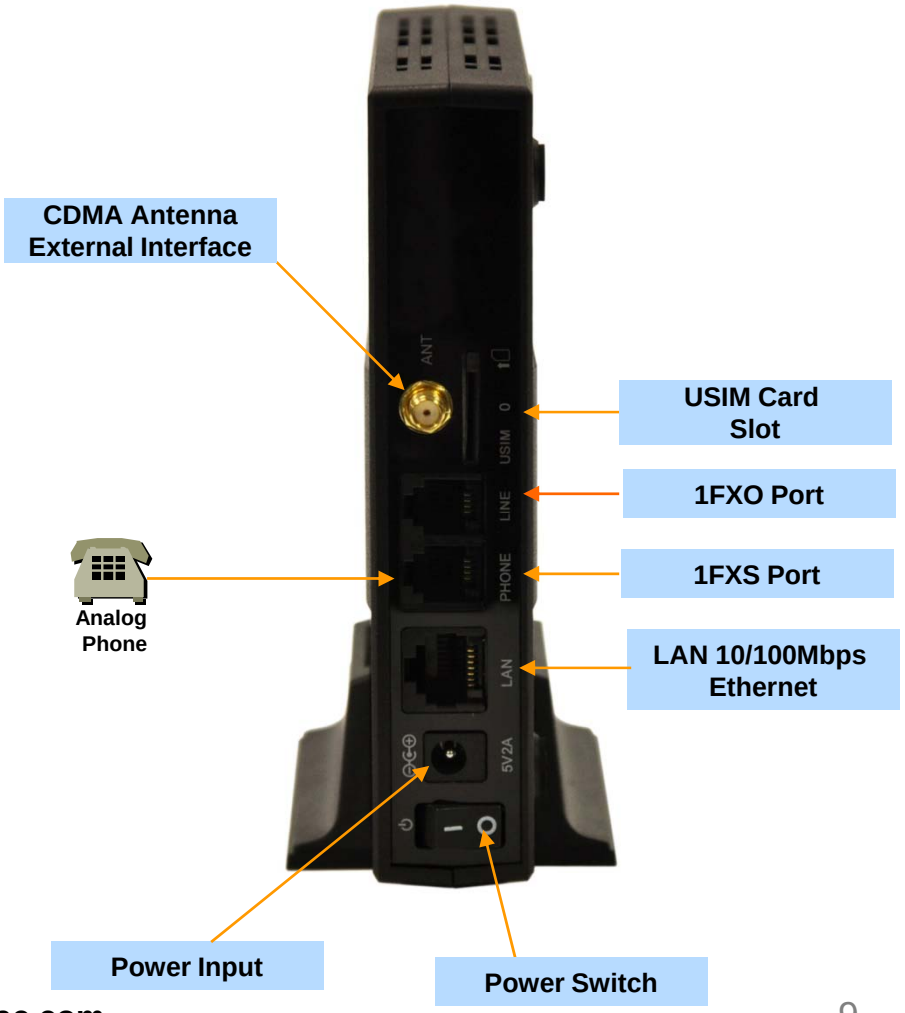
Hardware Specification

AP-CD701 1-Port CDMA Gateway

Hardware Specifications

AP-CD701 CDMA Gateway	Basic Specifications
Voice Interface (Model E)	One(1)-Port FXS Analog Interface
	One(1)-Port FXO Analog Interface
Antenna Interface	External CDMA Antenna
SIM Card Slot Interface	CDMA USIM Card Slot
Ethernet Interface (Model E)	1-Port 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, 5V, 2A
Operating Temperature	0ºC ~ 45ºC (32 ºF ~ 122ºF)
Storage Temperature	-40ºC ~ 85ºC (-40ºC ~ 185ºF)
Relative Humidity	5% ~ 95% (Non-condensing)
Dimension	142mm x 142mm x 28mm (W x D x H)

Network interface Configurations



CDMA Module Specification

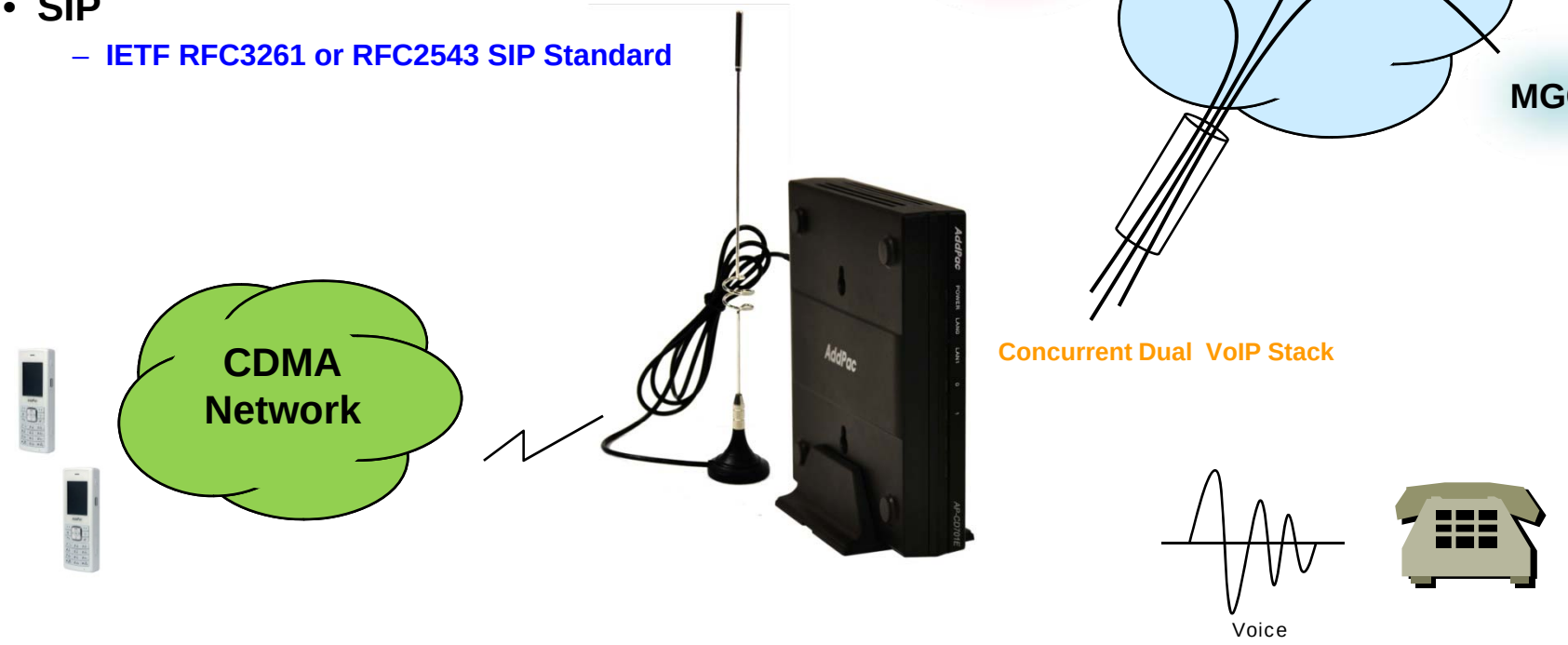
AP-CD701 1-Port CDMA Gateway

- CDMA2000 1xRTT (IS-2000)-(Dual Band)
- Band class0 (TX : 824~849 MHz / RX : 869~894MHz)
- Band class1 (TX : 1850~1910 MHz / RX : 1930~1990MHz)
- GPS L1 Support
- Output Power : 0.25W CDMA
- CDMA2000 Release A
- IS-637 : Short Message Service (Mobile Originated and Mobile Terminated)
- RUIM(for Asia Pacific Countries)

VoIP (Voice over IP) Service

AP-CD701 1-Port CDMA Gateway

- **H.323, SIP Dual 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

AP-CD701 1-Port CDMA 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

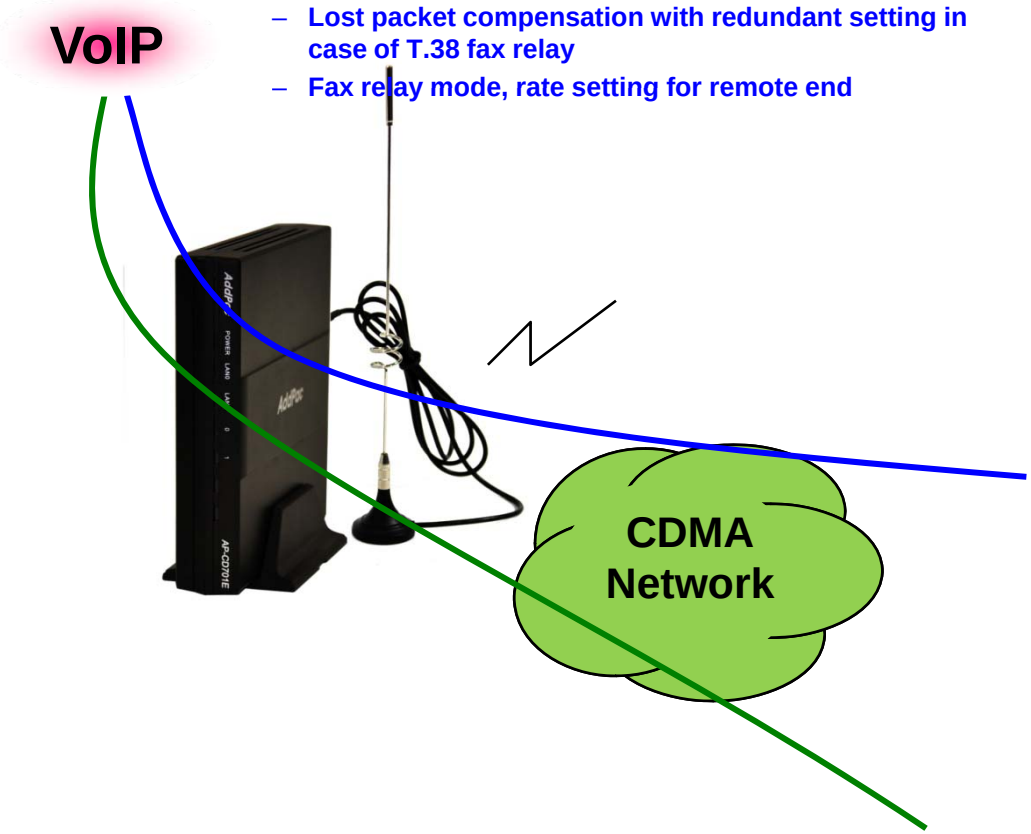
- **SIP**
  - Gateway-based / Endpoint-based registration support
  - Secondary proxy-server assignment function
  - SIP signaling port change function
  - SIP proxy server assignment according to the domain name
  - T.38 real-time fax relay support
  - DTMF relay support with RFC2833 / OPTION message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

VoIP (Voice over IP) Service

AP-CD701 1-Port CDMA 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

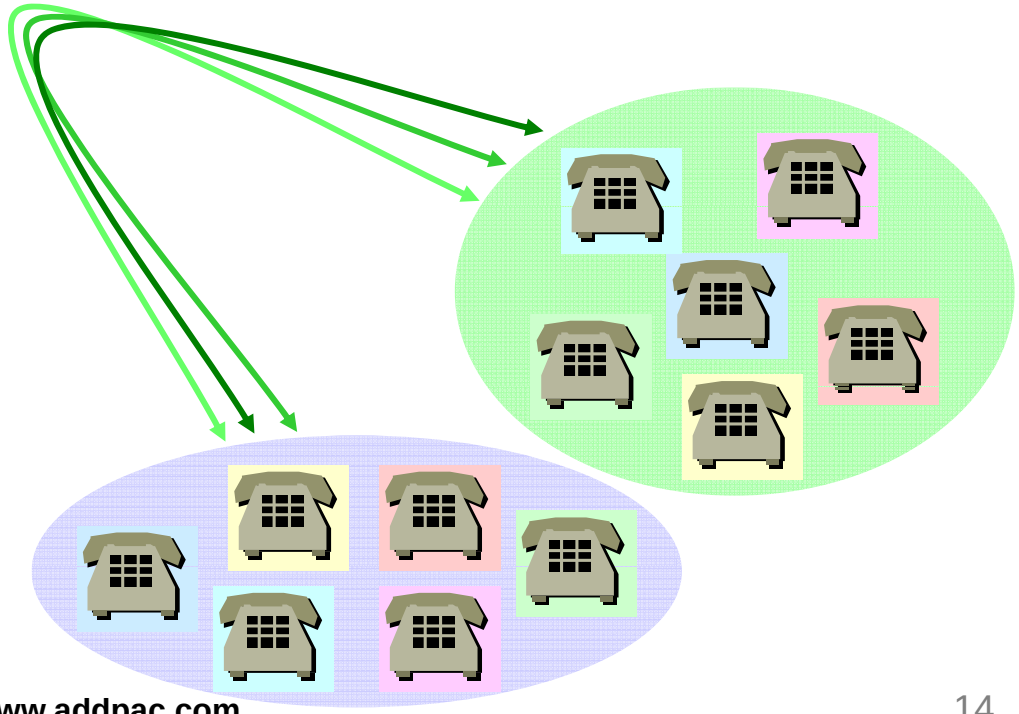


VoIP (Voice over IP) Service

AP-CD701 1-Port CDMA 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

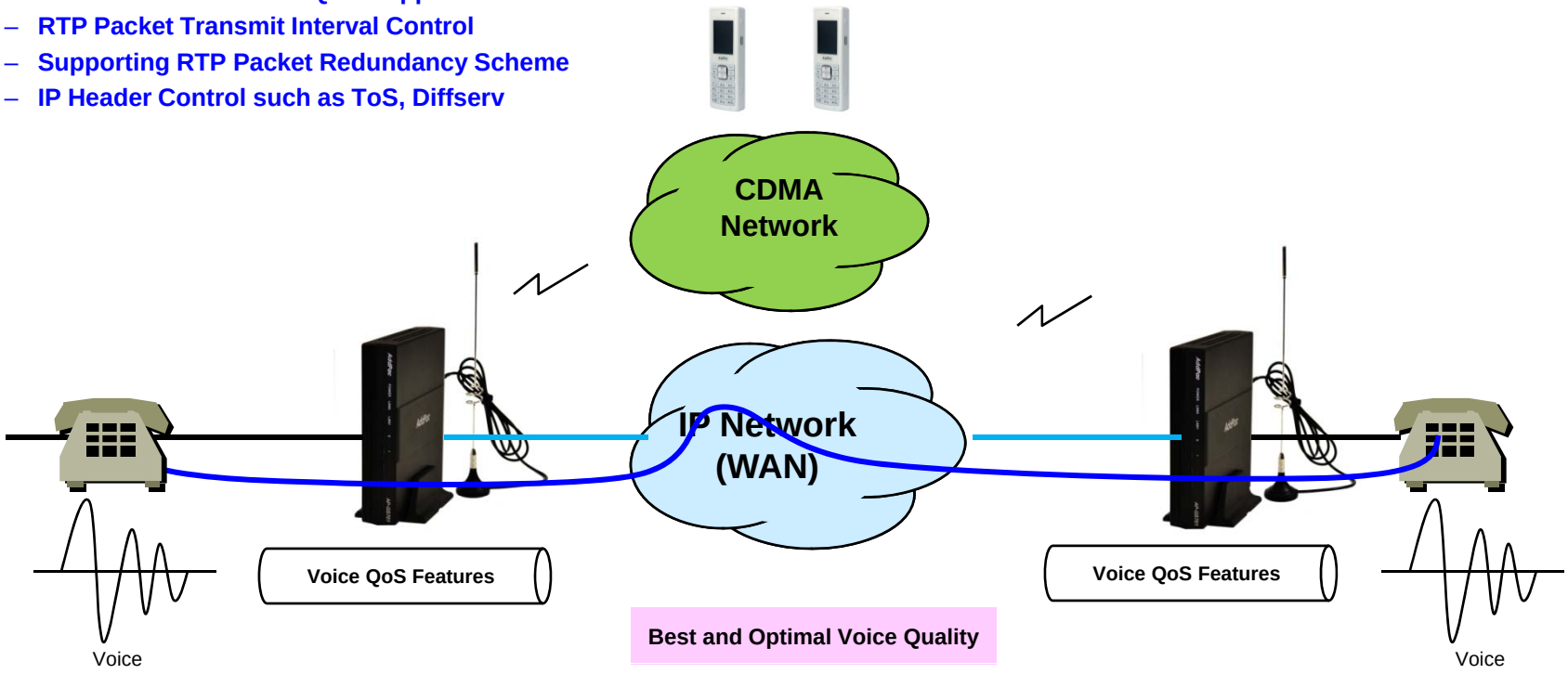


Advanced QoS Features

AP-CD701 1-Port CDMA 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

AP-CD701 1-Port CDMA Gateway

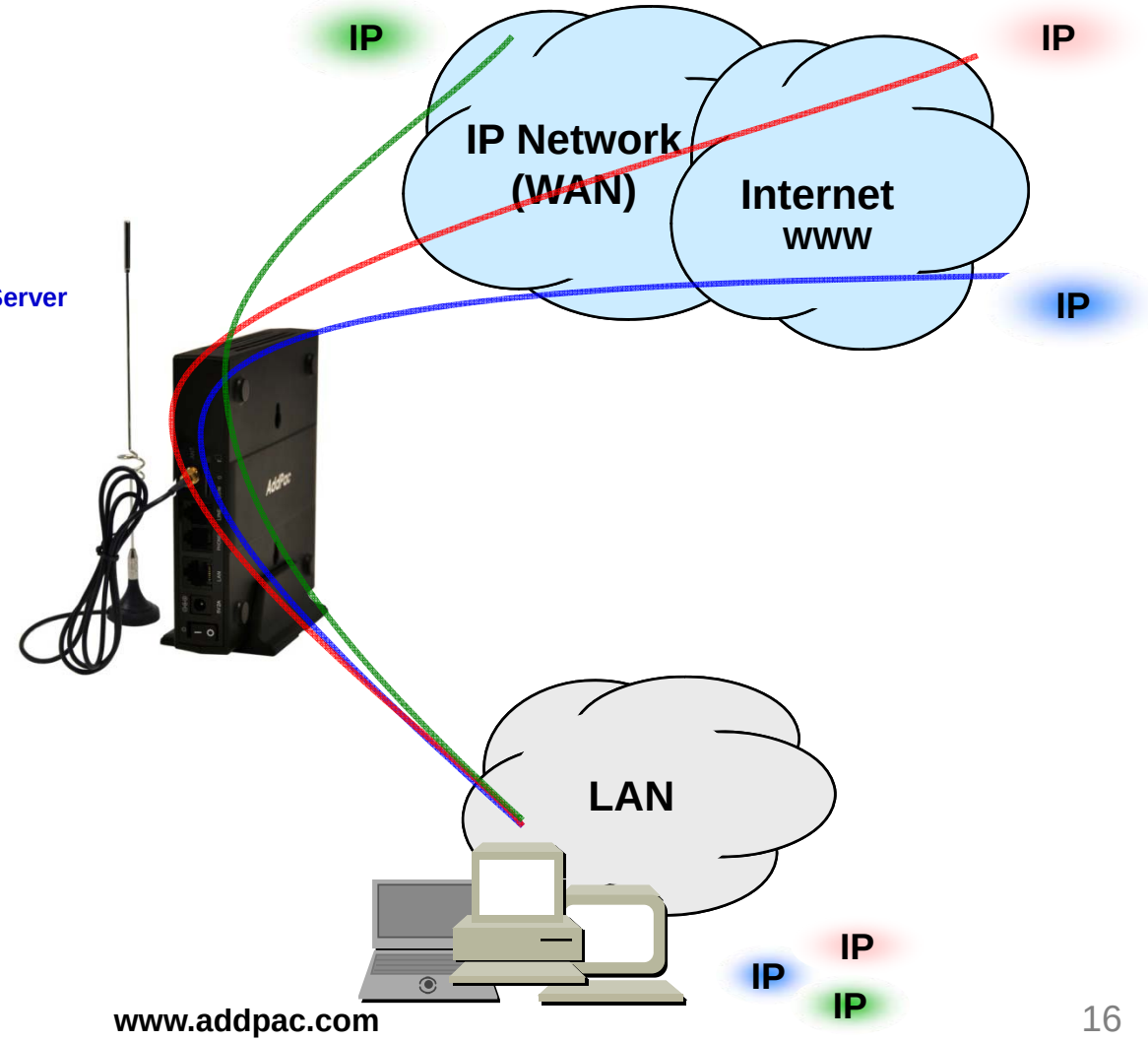
Basic Network Protocols
- ARP, IPv4, TCP, UDP, ICMP, SCTP, IGMP, MLD

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

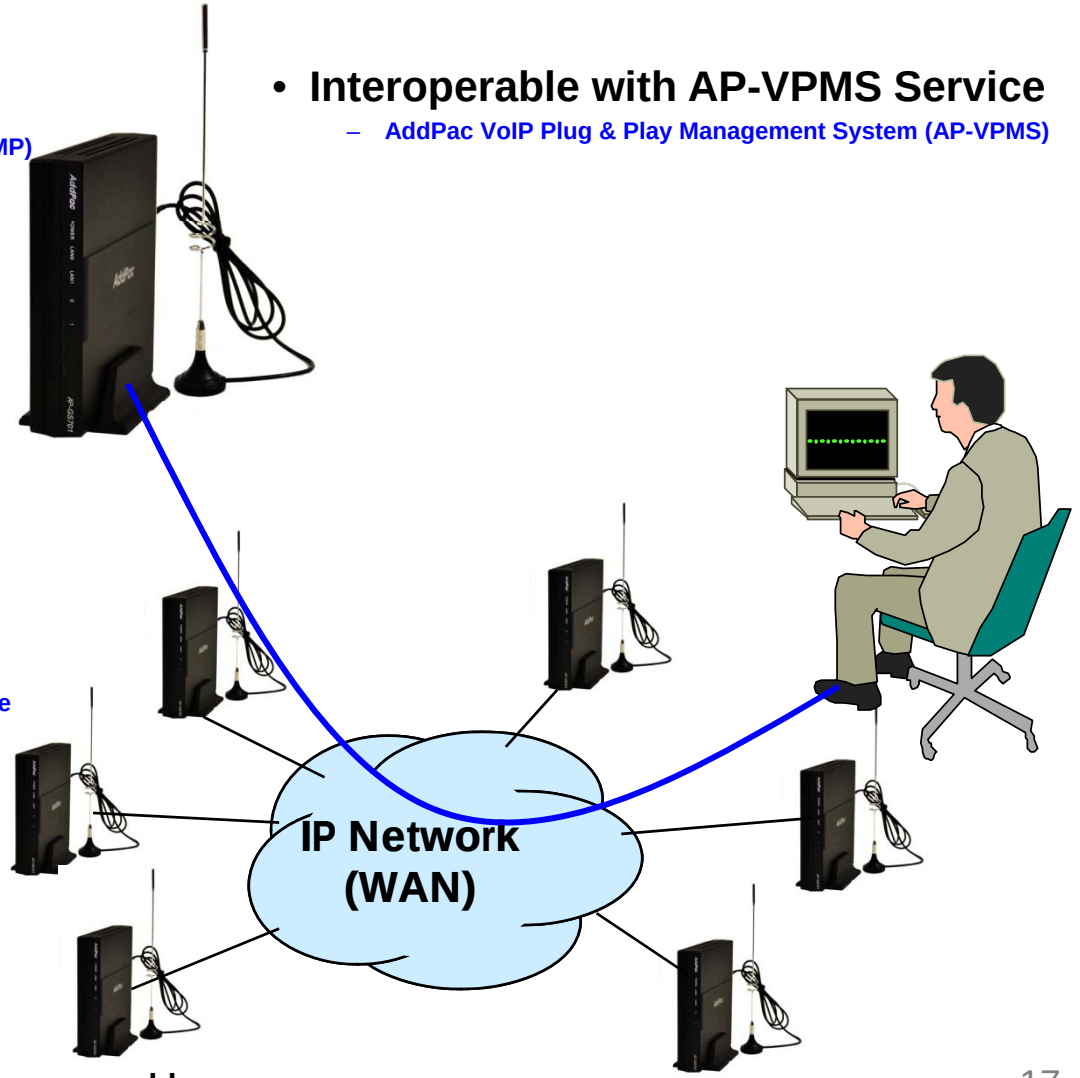


Network Management

AP-CD701 1-Port CDMA 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)

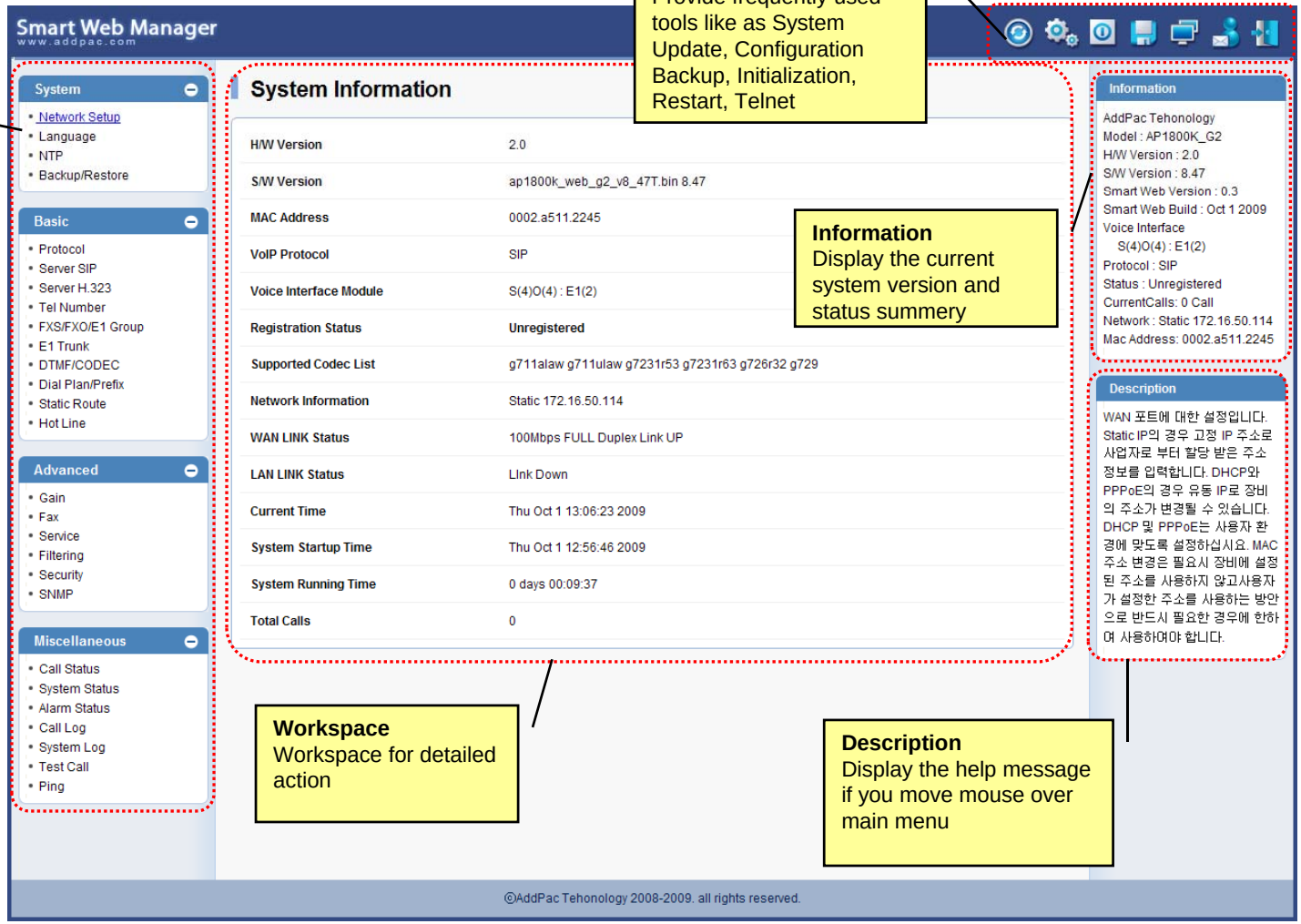


Smart Web Manager : Main Page Layout

AP-CD701 1-Port CDMA Gateway

Main Menu
For easy system setup, provide the various menu and category

Tool Bar
Provide frequently used tools like as System Update, Configuration Backup, Initialization, Restart, Telnet



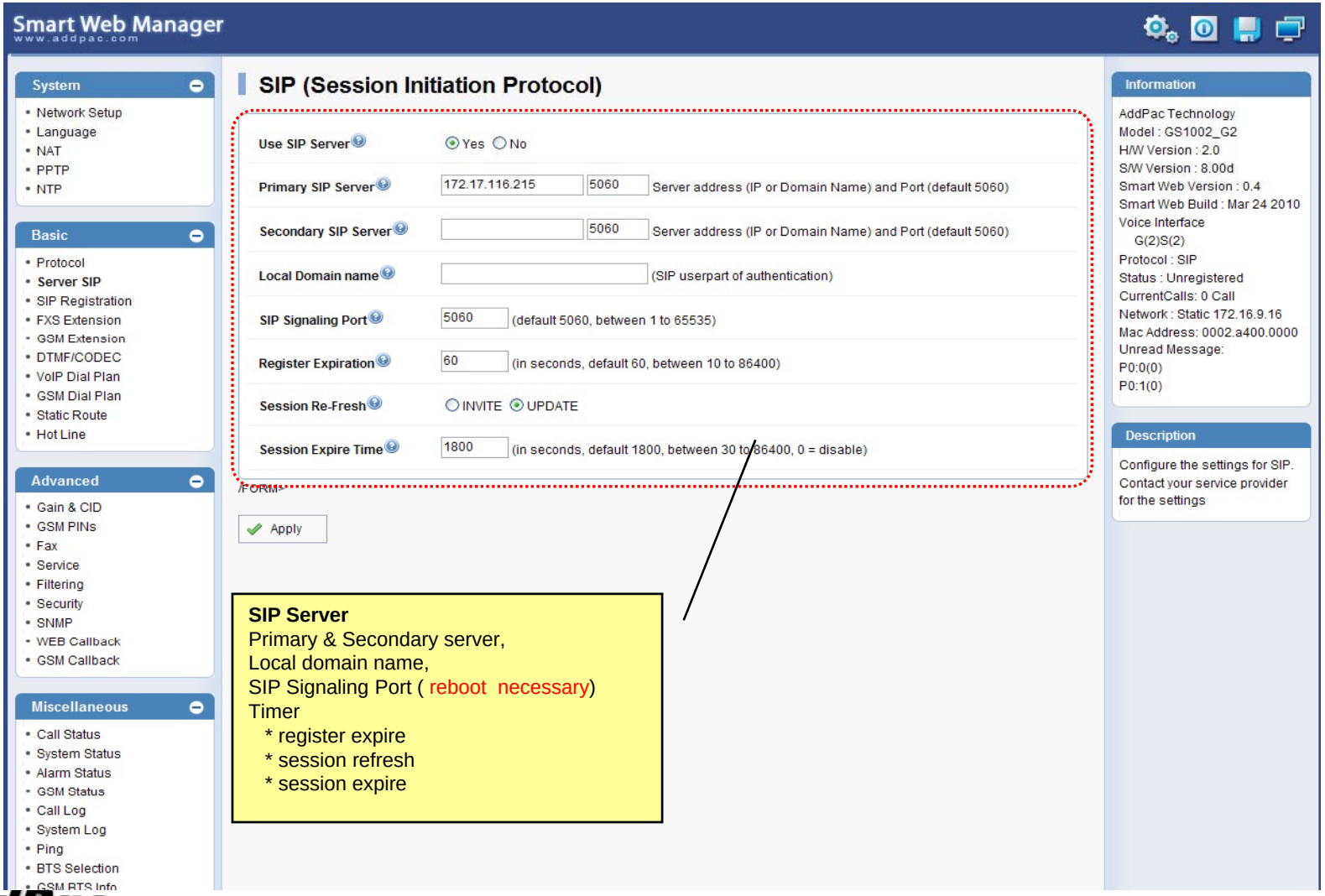
Information
Display the current system version and status summery

Workspace
Workspace for detailed action

Description
Display the help message if you move mouse over main menu

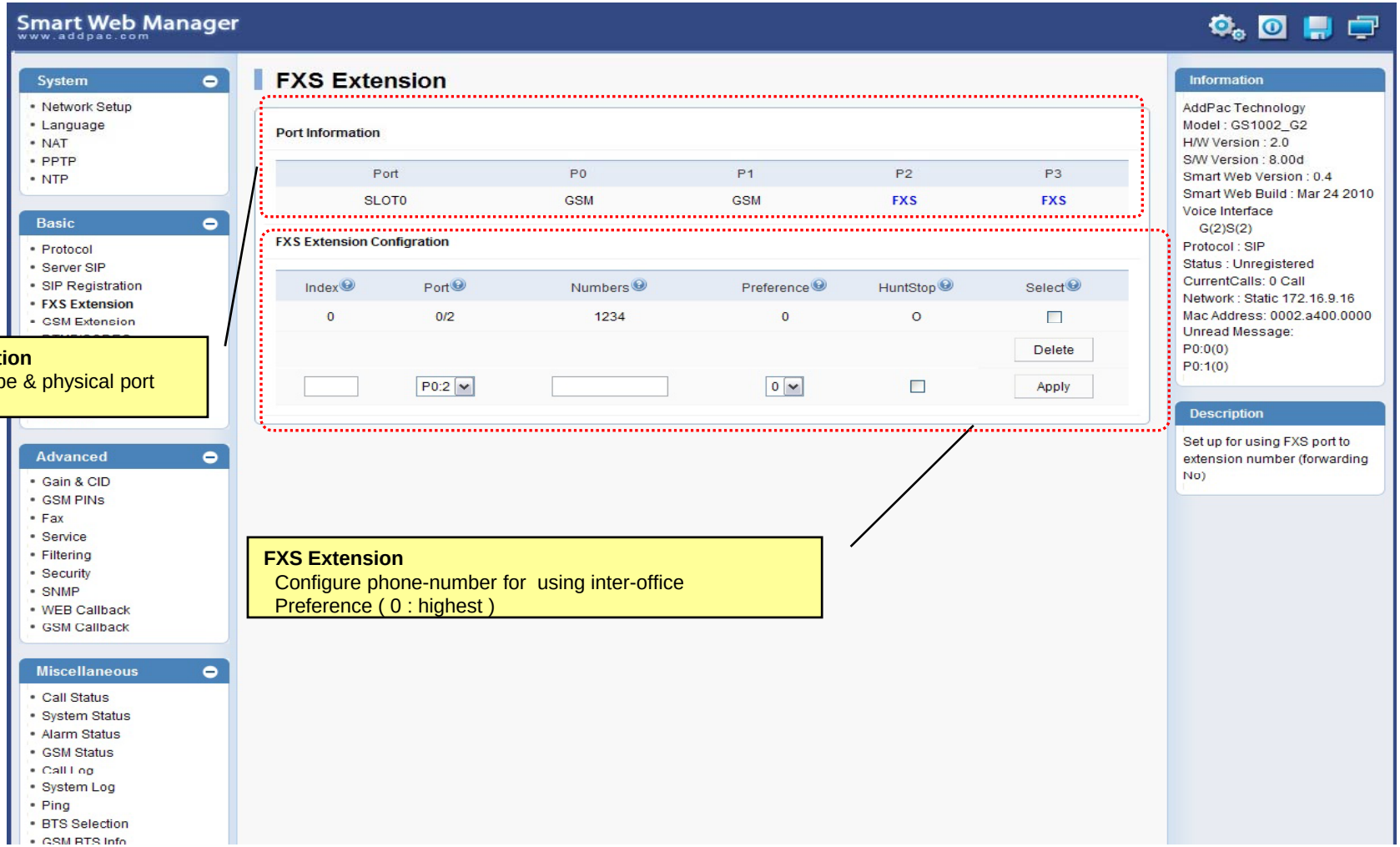
Smart Web Manager : SIP Server (Example)

AP-CD701 1-Port CDMA Gateway



Smart Web Manager : FXS Extension (Example)

AP-CD701 1-Port CDMA Gateway

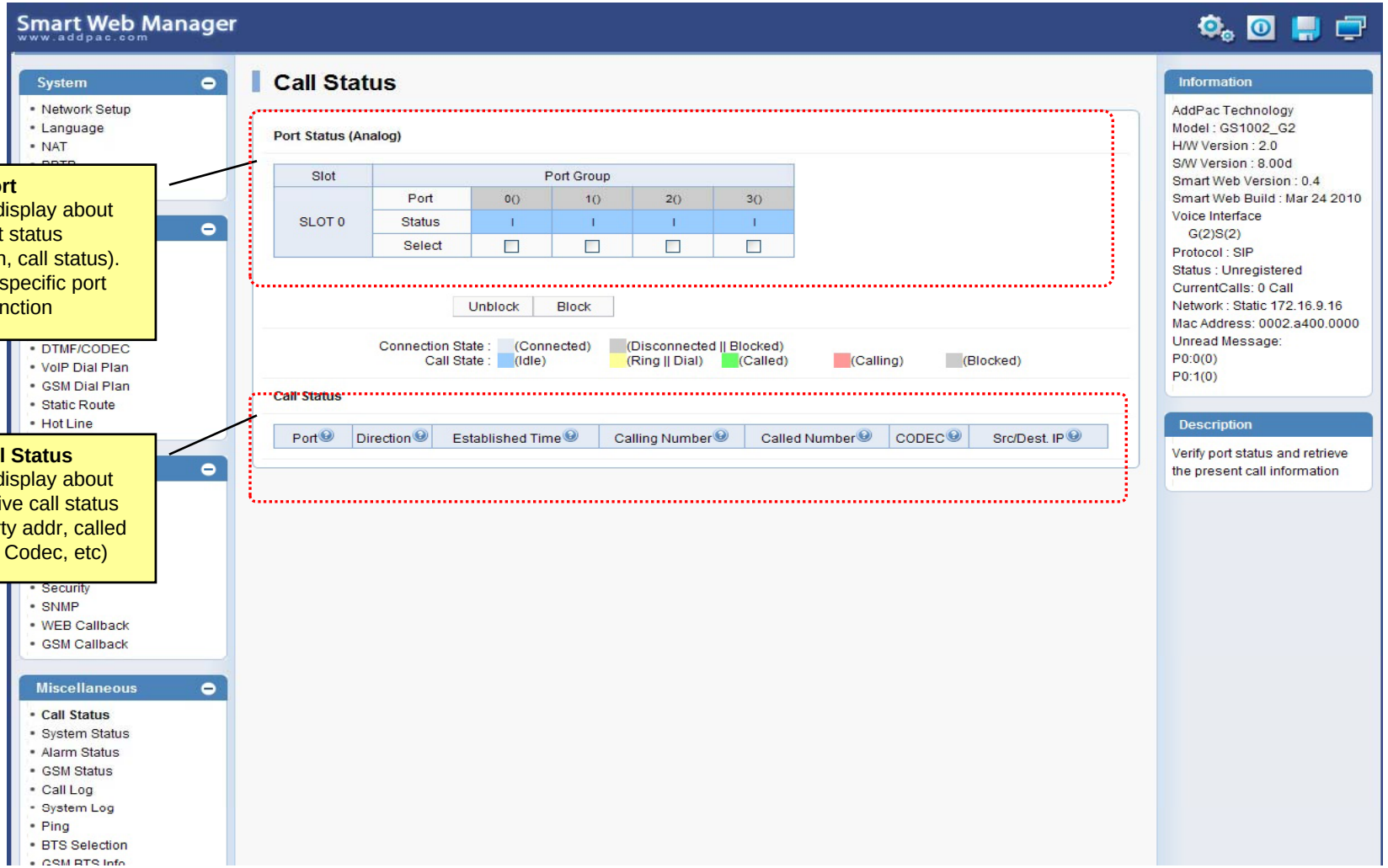


Smart Web Manager : Call Status (Example)

AP-CD701 1-Port CDMA Gateway

Analog Port
Real-time display about analog port status (occupation, call status). Provide a specific port blocking function

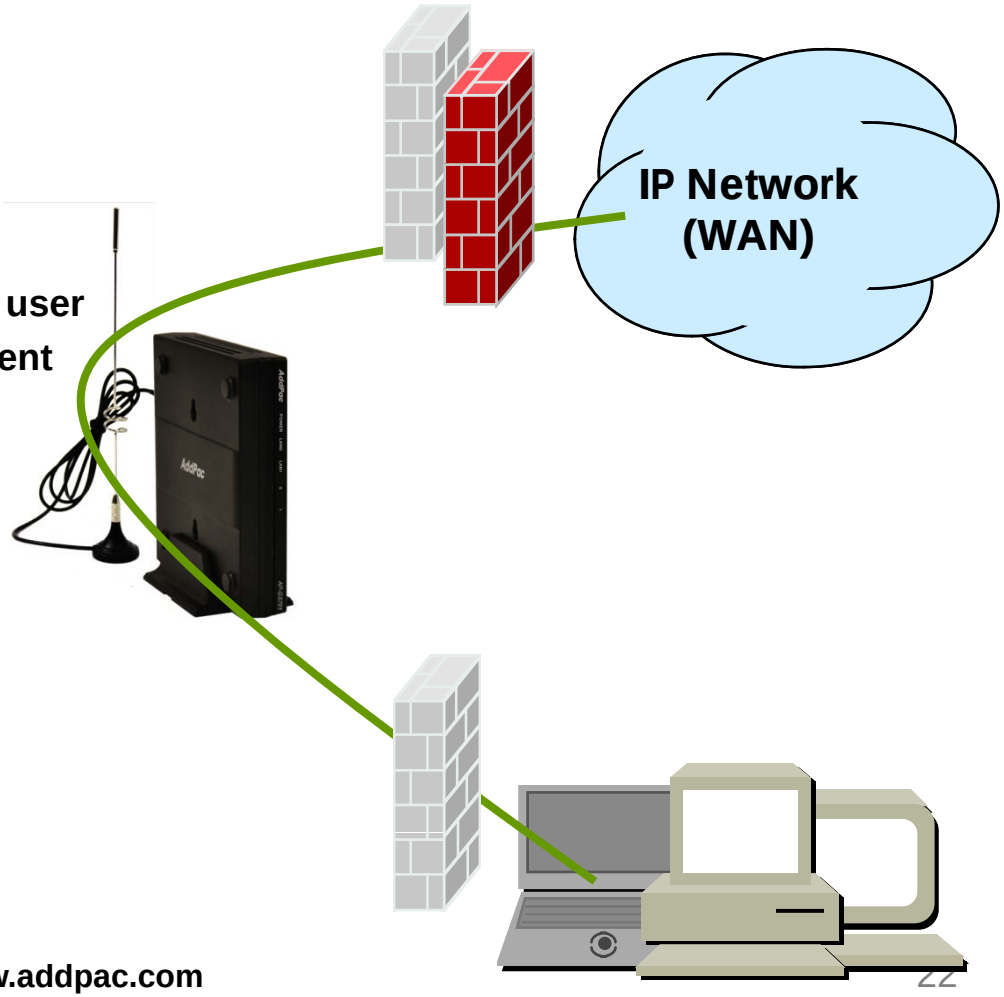
Active Call Status
Real-time display about current active call status (calling party addr, called party addr. Codec, etc)



Security Management

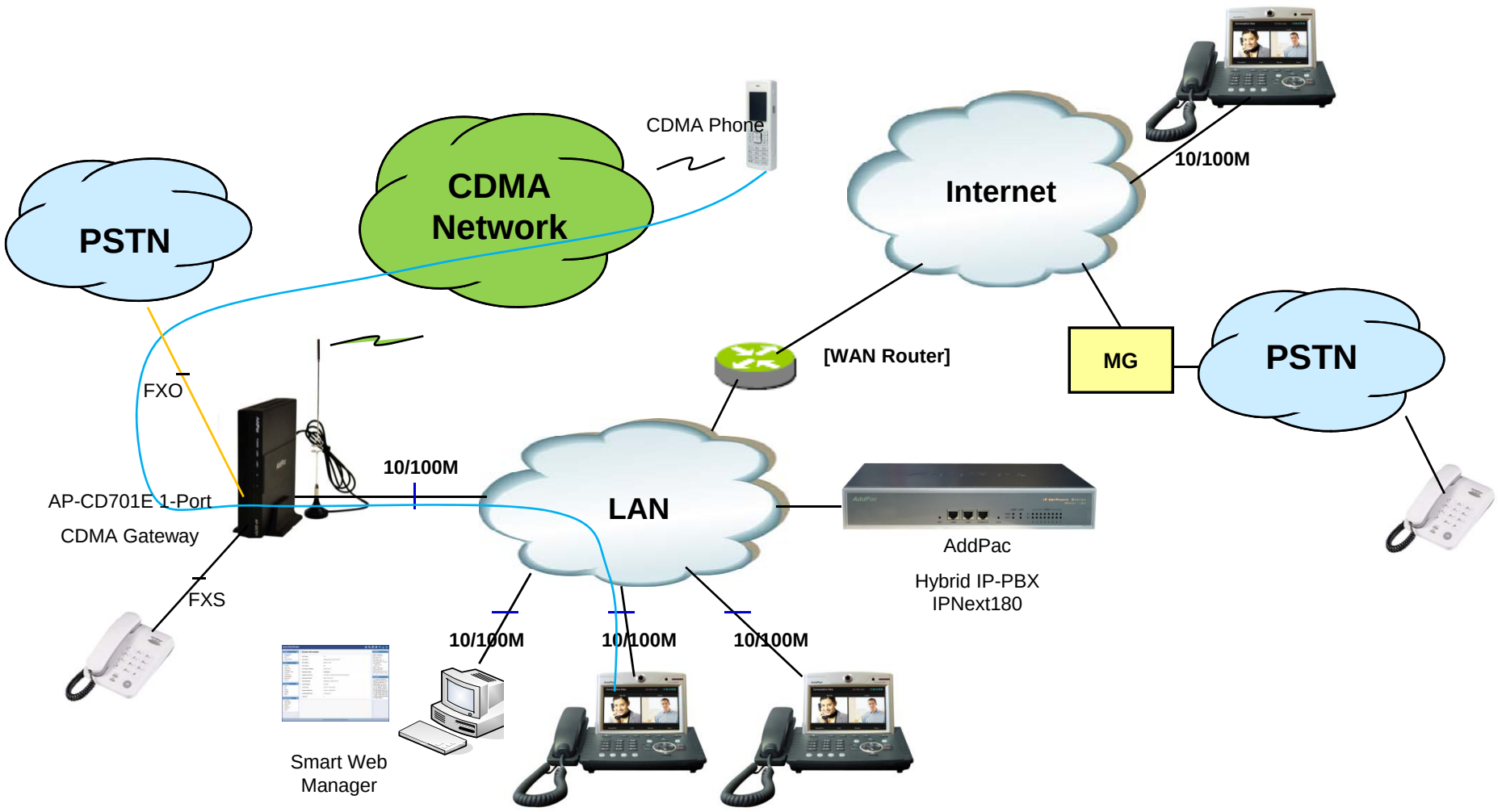
AP-CD701 1-Port CDMA Gateway

- **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

AP-CD701 1-Port CDMA Gateway



Ordering Information

- AP-CD701 1-Port CDMA Gateway Hardware
  - AP-CD701 CDMA Gateway Main Body
  - RISC Microprocessor with High-end Programmable DSP Architecture
  - One(1) CDMA Antenna & SIM Card Slot Interface
  - Model B : 1-Port FXS(RJ11), 2-Port 10/100Mbps Fast Ethernet(RJ45)
  - Model C : 1-Port FXO(RJ11), 2-Port 10/100Mbps Fast Ethernet(RJ45)
  - Model E : 1-Port FXS(Rj11), 1-Port FXO(RJ11), 1-Port 10/100Mbps Fast Ethernet(RJ45)
  - Including Network Cable, Antenna & Ext. Power Supply, etc.
- Built-in APOS Internetworking Software for AP-CD701
- 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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Sales and Marketing

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