# Smart Web Manager for SS7 VoIP Gateways

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		imart Web Manage	r		
	D + 60.196.6.38	index.html?page	viewnetwa	n C (	loogle )
Smart Web Manage					0. 🕅 🛤 🖻
			-	_	
Bystem O	WAN & Tunneling	Setup			Information
* Language	WAN Setup				Model AP1800
* LAN Setup	Hostname @ APTR				HW Vanion :2.0
* NAT					Smart Web Version : 0.4
* NTP	IP Add Notes	March (255,255,255.0	ABCD		Smart Web Build : Sep 16 2010
* System Time	O Stada IP 19 Defaul	Reuter \$0.196.6.1	ABCD		S(4)O(4) None
	DNS 1	arver	Secondary DNS S	latver 5 Server	Protocol SP Rotes Resident
Besic O					Current Calls : 0
* Protocol	User r	ere C			ColNetwork : Biblic
* Server SP	Patte	O all here and			Mac Address: 0002.add Nad
* Server H.323	PPPoE(ADSL)	GPAP (PPP ALB	artication Proton	(4)	
* SIP Registration	Autoria -	CHUP(Challeng	s Handshaka Aul	hertication	Description
+ E1/T1 Trunk					This command ants up WAN
* FXS Extension	O DHCP 0				perf. The static IP address is to be expected from the service
+ FXO Esteration	Own				provider and you can arter the
* ES/T1 Extension	UVLAN IDE				ansinged IP address. For DBCIF and EPEruE. No. 10
+ STMF/CODEC	0.				address of the device cart be
+ FXD DisPlan			0		changed MAC Address change
* Static Route	WAN Link Control	speed	U/ 100	010	receitary I is recommended
* Hot Line		Digites	0M	Chat	to use the address created by
-		O HAT O Dates			device
Advanced O		and the second second			
* Gain & CID	MAC(Hardware)				
* Savita	Address @ L.H.	0000			
+ Filtering					
* Security					
-	( Martin				
matelaretus O	And the second s				
Port & Call Stellus					
+ Call Log	Contractor				
* System Log	Betup 9				
* Test Call	Oteration	the Turneling, defect)			
* Prg	Opprove O	5-to-Point Turneling Protoc	66		
	User nam	-			
	Passed	O per Authoritopher			
	Mode Automic	the PAP(PPP Autorite	cation Protocol)		
		CHAP(Challenge H Protecti)	anduhales Author	deator	
		Qhiana (Default)			
	Prore	Histiname (Ups hor	trans as phone	reproduct)	
		Defre			
	Annual Annual Statement	-			
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#### Contents

- SS7 VoIP Gateway Service Diagram
- SS7 VoIP Gateway Main Features
- SS7 VoIP Gateway Features
- SS7 Protocol Standard & Stack
- Smart Web Manager for SS7 Signaling Part
- Smart Web Manager Overview for VoIP Gateway



#### SS7 VoIP Gateway Service Diagram



## **SS7** VoIP Gateway Main Features

 Support SS7 to SIP/H.323 signaling interconnect and TDM Voice/Data conversion to industry-standard VoIP codecs.

(No need to buy additional 3<sup>rd</sup>-party media-gateway)

- Support SS7 to PSTN interconnect.
- Support SS7 to ISDN or R2 interconnect.
- Support multiple SS7 variants(ANSI, ITU-T).
- Support multiple interface formats(E1, T1).



### **SS7 VoIP Gateway Feature**

- Support Multiple E1 / T1 Interface
- Support Incoming and Outgoing Calls
- MTP2 (Q.703) / MTP3 (Q.704) / ISUP (Q.76x)
- SS7 A/F Link Support
- Support multiple linksets with different Point Code
- Support links with multiple links for load balance and failover
- Variant : ANSI, ITU-T, Japan(\*), China(\*)

## SS7 Signaling Standard

- MTP Level 2
  - Q.702 Signaling data link, Q.703 Signaling link
  - Q.781 MTP level 2 Test Specification (ITU-T)
  - T1.111 SS7 MTP (ANSI 1988/1992)
- MTP Level 3
  - Q.704 Signaling network function and message (ITU-T)
  - Q.707 Testing and Maintenance
  - Q.782 MTP level 3 Test Specification (ITU-T 1988/1992)
  - T1.111 SS7 MTP (ANSI 1998/1992)
- ISUP (ISDN User Part)
  - Q.763 Signaling System No. 7 ISDN User Part formats and codes (ITU-T 1999)



#### SS7 Protocol Stack Support



#### **OSI Model**



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## Smart Web Manager for SS7 Signaling Part

#### Smart Web Manager



# Smart Web Manager Overview



#### Contents

- Web Connection
- Main Page Layout
- System Configuration
  - Language, WAN Setup, LAN Setup, NAT, NTP, System Time, File Browser
- Basic Configuration
  - Protocol : SIP Server , H.323 Server
  - Analog Port : FXS Extension, FXO Extension, FXO Dial Plan, Hot Line
  - Digital Port : E1/T1 Trunk, E1/T1 Extension
  - VoIP : DTMF/CODEC, VoIP Dial Plan, Static Route
- Advanced Configuration
  - Gain/CID, FAX, Service, Filtering, Security
- Miscellaneous Configuration
  - Port & Call Status, System Status
  - Call Log, System Log, Test Call, Ping



#### Web Connection

#### IP Address Configuration via RS232C Console Port



- 1. Connect to VoIP Gateway via console port to enter IP address in order to set Interface 0/0
- 2. Input IP address of interface 0/0 using below command
- 3. Connect to the IP address via web after saving

Router> enable	=> Enter the enable mode
Router# configure terminal	=> Enter the configuration mode
Router(config)# interface FastEthernet 0/0	
Router(config-if)# ip address <ip address=""> <subnet mask=""></subnet></ip>	=> Ex) ip address 172.17.109.1 255.255.0.0
Router(config-if)# exit	
Router(config)# ip route 0.0.0.0 0.0.0.0 <defaullt gateway=""></defaullt>	=> Ex) ip route 0.0.0.0 0.0.0.0 172.17.1.1
Router(config)# write	=> saving
Proceed with write? [confirm]y	



#### Web Connection

Web Connection via LAN 1 Port





- 1. It is the way to connect to VoIP Gateway via LAN 1 port
- 2. The factory default of LAN 1 port
  - IP Address : 192.168.10.1
  - Subnet mask : 255.255.255.0
- 3. After set PC with same IP address subnet, connect to VoIP Gateway
  - Connect PC to VoIP Gateway using Cross UTP-Cable. You may use Ethernet switch with normal UTP-cable
    - Enter IP address 192.168.10.1 on your web browser



#### **WEB** Connection

#### Connect to VoIP Gateway

Connect to 19	2.168.10.1	? 🛛
1		
AddPac		
User name: Password:		<b>~</b>
	Remember my pas	ssword
	ОК	Cancel

Please enter the below log-in information to access Smart Web Manager

ID : root Password : router

Smart Web Manager	6		¢, 🖸 📑 🖨
System O	System Information		internation .
Language     WINI Setup     LAN Setup	HW Version	2.0	AddPac Technology Model: AP1800 HWV Version: 2.0
• NAT	SW Version	8.41.006	S/W Version 8.41.086 Smat Web Version 9.4
System Time	MAC Address	0002.34876344	Smart Web Build : Sep 15 2010 Voice Interface
· Fee scowser	VolP Protocol	54	S(4)O(4) : None Protocol: SP
Basic O	Voice Interface Module	5(4)O(4): None	Status : Unregistered Current Calls: 0
Server S8P	Registration Status	Unregistered	Califietwork Static 0.0.0 Mac Address 0002 a48 5a4
Server H.323     SIP Registration	Supported Codec List		
H.323 Registration     ENT1 Trunk	Network Information	Static 0.0.0.0	Description
FXS Extension     FX0 Extension	WAN LINK Status	100Mbps FULL Duplex Link UP	
E3/T1 Extension     DTMFICODEC	LAN LINK Status	100Mbps FULL Duplex Link UP	
VolP Dial Plan     FX0 DialPlan	Current Time	Thu Sep 16 14:24:50:2010	
Static Route     Hot Line	System Startup Time	Thu Sep 16 14 23 19 2010	
	System Running Time	0 days 00.01:31	
+ Gain & CID	Total Calls	0	
<ul> <li>Fax</li> <li>Service</li> <li>Filtering</li> <li>Security</li> <li>SNMP</li> </ul>			
Miscollaneous O - Port & Call Status - Giptern Status - Call Log - System Log - Test Call - Ping			

#### Main Page Layout

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





#### System - Language

Smart Web Manage	er	🌼 🖸 📮 루
System       •         Language       •         WAN Setup       •         LAN Setup       •         NAT       •         NTP       •         System Time       •         File Browser       •         Basic       •         •       Protocol         •       Server SIP         •       Server H.323         •       SIP Registration         H.323 Registration	● 한국어 ● English ● Portugal ✓ Apply Configure Language English, Korea, Portual	Information AddPac Technology Model : AP1800 H/W Version : 2.0 S/W Version : 8.41.086 Smart Web Version : 0.4 Smart Web Build : Sep 15 2010 Voice Interface S(4)O(4) : None Protocol : SIP Status : Unregistered Current Calls : 0 CallNetwork : Static 0.0.0 Mac Address: 0002.a4ff.f6a4
E1/T1 Trunk     FXS Extension     FXO Extension     E1/T1 Extension     DTMF/CODEC     VoIP Dial Plan		Choose the basic language to be applied. English is set at default.

#### System – WAN Setup





#### System – LAN Setup



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## System - NAT

	Smart Web Manage	r					💩 🖸 🚍 🚍
	System 👄	NAT Static	Table				Information
NAT Static When many	Language     WAN Setup     LAN Setup     LAN Setup     NAT     NTP     System Time     File Browser      Basic      C      Table     / PCs are connected to L      C	IP Protocol tcp •	Global Port	Local Address	Local Port	Selection Add	AddPac Technology Model : AP1800 HW Version : 2.0 S/W Version : 8.41.086 Smart Web Version : 0.4 Smart Web Build : Sep 15 2010 Voice Interface S(4)O(4) : None Protocol : SIP Status : Unregistered Current Calls: 0 CallNetwork : Static 0.0.0 Mac Address: 0002.a4ff.f6a4
port to PC	ne for delivering TCF/OL						Description
	FXS Extension     FXO Extension     E1/T1 Extension     DTMF/CODEC     VoIP Dial Plan						When many PCs are connected to LAN, create a table for delivering TCP/UDP port to PC.



## System - NTP

System			Information
Language     WAN Setup     LAN Setup		Enable I Disable	AddPac Technology Model : AP1800 H/W Version : 2.0
NAT     NTP     System Time		Primary Server (Domain Name or IP Address)	S/W Version : 8.41.086 Smart Web Version : 0.4 Smart Web Build : Sep 15 201
• File Browser	NTP	Secondary Server (Domain Name or IP Address)	Voice Interface S(4)O(4) : None
Basic		Interval (1~72 hours)	Protocol : SIP Status : Unregistered
<ul> <li>Protocol</li> <li>Server SIP</li> <li>Server H.323</li> </ul>		Timezone Name Offset : (-23~23 hours): (0~60 minute)	Current Calls: 0 CallNetwork : Static 0.0.0.0 Mac Address: 0002.a4ff.f6a4
<ul> <li>SIP Registration</li> <li>H.323 Registration</li> <li>E1/T1 Truck</li> </ul>			Description
EXS Extension	Appiy		Setup NTP Server

## System – System Time

Smart Web Manage	r i i i i i i i i i i i i i i i i i i i	🔍 🖸 📙 🚍
System O	System Time	Information AddPac Technology
VAN Setup     LAN Setup     NAT     NTP     System Time	Current Time     Thu Sep 16 14:29:54 2010       Set System Time     Year     1 <ul> <li>Month</li> <li>1          <ul> <li>Day</li> <li>1              <ul> <li>Min</li> <li>1              <ul></ul></li></ul></li></ul></li></ul>	HW Version : 2.0 SW Version : 8.41.086 Smart Web Version : 0.4 Smart Web Build : Sep 15 2010
File Browser  Basic	Apply	Voice Interface S(4)O(4) : None Protocol : SIP Status : Unregistered Current Calle : 0
Protocol     Server SIP     Server H.323     SIP Registration     H 323 Registration	System Time Configure Local Time	CallNetwork : Static 0.0.0.0 Mac Address: 0002.a4ff.f6a4
E1/T1 Trunk FXS Extension FXO Extension E1/T1 Extension		Description

#### System – File Browser

#### Smart Web Manager 🍳 🖸 📑 🚍 • File Browser Information System Language AddPac Technology WAN Setup Model: AP1800 Index of Root/ LAN Setup H/W Version : 2.0 Name Last Modified Size Type S/W Version : 8.41.086 • NAT Smart Web Version : 0.4 NTP 2010-Sep-16 14:30:09 secondary/ Directory Smart Web Build : Sep 15 2010 System Time Voice Interface File Browser tmp/ Directory 2007-Oct-19 00:56:02 S(4)O(4): None Protocol : SIP Basic • Status : Unregistered ap1800\_g2\_v8\_41\_086.bin 3.3M BIN 2010-Sep-16 23:13:10 Current Calls : 0 Protocol CallNetwork : Static 0.0.0.0 Server SIP 3 0.3K CFG 2010-Sep-16 14:23:20 apos.cfg Mac Address: 0002.a4ff.f6a4 Server H.323 SIP Registration 5 booter.cfg 0.4K CFG 2009-Jul-14 10:26:23 H.323 Registration Description E1/T1 Trunk Back up / Restore the setting of FXS Extension 0.2K 2009-Jul-14 10:26:23 booter.cfg~ the system software and device FXO Extension E1/T1 Extension 찾아보기... Upload DTMF/CODEC VoIP Dial Plan

**File Browser** Download and Upload Gateway's firmware or configuration file.

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#### **Basic - Protocol**

#### Smart Web Manager

System 👄	Protocol	Information
<ul> <li>Language</li> <li>WAN Setup</li> <li>LAN Setup</li> <li>NAT</li> <li>NTP</li> <li>System Time</li> <li>File Browser</li> </ul> Basic • <ul> <li>Protocol</li> <li>Server SIP</li> <li>Server H.323</li> <li>SIP Registration</li> </ul>	<ul> <li>IP(Session Initiation Protocol)</li> <li>H.323(ITU H.323 Protocol)</li> <li>✓ Apply</li> <li>Configure VoIP signaling protocol SIP , H.323</li> </ul>	AddPac Technology Model : AP1800 HW Version : 2.0 SW Version : 8.41.086 Smart Web Version : 0.4 Smart Web Build : Sep 15 2010 Voice Interface S(4)O(4) : None Protocol : SIP Status : Unregistered Current Calls : 0 CallNetwork : Static 0.0.0.0 Mac Address: 0002.a4ff.f6a4
<ul> <li>H.323 Registration</li> </ul>		Description
<ul> <li>E1/I'I Trunk</li> <li>FXS Extension</li> <li>FXO Extension</li> <li>E1/I'I Extension</li> <li>DTMF/CODEC</li> </ul>		Configure the settings of the protocol to be used for VoIP communication

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#### Basic – SIP Server

#### Smart Web Manager

System 🗢	SIP (Session Initiation Protocol)	Information
<ul> <li>Language</li> <li>WAN Setup</li> <li>LAN Setup</li> <li>NAT</li> <li>NTP</li> </ul>	Use SIP Server 🖗 💿 Yes 💿 No	AddPac Technology Model : AP1800 H/W Version : 2.0
	Primary SIP Server 🕑 5060 Server address and Port (default 5060)	S/W Version : 8.41.086 Smart Web Version : 0.4 Smart Web Ruild : Sep 15 2010
System Time     File Browser	Secondary SIP Server  Server address and Port (default 5060)	Voice Interface S(4)O(4) : None
Basic O	Local Domain Name 3 (SIP userpart of authentication)	Protocol : SIP Status : Unregistered
Protocol     Server SIP     Server H.323	SIP Signaling Port 9 5060 (default 5060, between 1 to 65535)	CallNetwork : Static 0.0.0.0 Mac Address: 0002.a4ff.f6a4
<ul> <li>SIP Registration</li> <li>H.323 Registration</li> </ul>	Register Expiration 60 (in seconds, default 60, between 10 to 86400)	Description
<ul><li>E1/T1 Trunk</li><li>FXS Extension</li></ul>	Session Re-Fresh	Configure the settings for SIP.
FXO Extension     E1/T1 Extension	Session Expire Time (in seconds, default 1800, between 30 to 86400, 0 = disable)	for the settings
VolP Dial Plan     FXO DialPlan	Min-SE 1800 (in seconds, default 1800, between 30 to 86400)	
<ul> <li>FXO DialPlan</li> <li>Static Route</li> <li>Hot Line</li> </ul>	SIP Server Primary & Secondary server, Local domain name, SIP Signaling Port ( reboot necessary) Timer * register expire * session refresh * session expire	

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#### **Basic – SIP Registration**

#### 🔅 🖸 📮 🚍 Smart Web Manager **SIP Registration** Information System • Language AddPac Technology · WAN Setup Model: AP1800 SIP Registration Configuration LAN Setup H/W Version : 2.0 S/W Version : 8.41.086 • NAT Pots Num Port E.164 Number User Name 😣 Password DisplayName HuntStop Reg Smart Web Version : 0.4 • NTP Smart Web Build : Sep 15 2010 System Time S0P0 1000 Voice Interface File Browser S(4)O(4): None 1001 S0P1 Protocol : SIP Basic Θ Status : Unregistered 1002 S0P2 Current Calls: 0 Protocol CallNetwork : Static 0.0.0.0 Server SIP 1003 S0P3 Mac Address: 0002.a4ff.f6a4 Server H.323 SIP Registration A .... ..... H.323 Registration Description \* SIP Registration - Assigned Pots Tag Number : 1000 - 1024 • E1/T1 Trunk Set up for using FXS port to FXS Extension registration SIP Server Apply FXO Extension E1/T1 Extension DTMF/CODEC **SIP Registration** - Valo Dial Dia-- E.164 Number - User Name - Password - Display Name - Hunt Stop - Registration checking

#### Basic – H.323 Server

System e	H.323 (ITU H.323 Protocol)	Information
Language WAN Setup LAN Setup	Use H.323 Server 🖗 💿 Yes 💿 No	AddPac Technology Model : AP1800 H/W Version : 2.0 S/W Version : 8.41.086
NTP System Time	Primary Gatekeeper  Primary Gatekeeper	Smart Web Version : 0.4 Smart Web Build : Sep 15 201
• File Browser	Secondary Gatekeeper  Server address and Port (default 1719)	Voice Interface S(4)O(4) : None
Basic e	H.323 ID (H.323 Identifier string)	Protocol : H.323 Status : Unregistered
Protocol Server SIP Server H.323	H.323 Signaling Port (default 1720, between 1 to 65535)	CallNetwork : Static 0.0.0.0 Mac Address: 0002.a4ff.f6a4
SIP Registration H.323 Registration	H.323 Call start mode 🐵 🔹 💿 Fast 🔘 Slow	Description
E1/T1 Trunk FXS Extension	H.323 Tunnel mode 🎱 💿 Enable 🔘 Disable	Configure the settings for
FXO Extension E1/T1 Extension		provider for the settings
DTMF/CODEC VoIP Dial Plan	Apply	
FXO DialPlan	H.323 Server Primary & Secondary server, H.323 ID SIP Signaling Port (reboot necessary) H.323 Call start mode H.323 Tunnel mode	

#### Basic – H.323 Registration

Smart Web Manager 🔅 🖸 📮 🚍 H.323 Registration Θ Information System Language AddPac Technology WAN Setup Model: AP1800 H.323 Registration H/W Version : 2.0 LAN Setup S/W Version : 8.41.086 NAT Pots Num Port Number REG HuntStop Smart Web Version : 0.4 NTP Smart Web Build : Sep 15 2010 System Time S0P0 1000 Voice Interface File Browser S(4)O(4): None 1001 S0P1 Protocol : H.323 ٥ Basic Status : Unregistered 1002 S0P2 Current Calls: 0 Protocol CallNetwork : Static 0.0.0.0 Server SIP 1003 S0P3 Mac Address: 0002.a4ff.f6a4 Server H.323 SIP Registration H.323 Registration Description \* H323 Registration - Assigned Pots Tag Number : 1000 - 1024 E1/T1 Trunk Set up for using FXS port to FXS Extension registration H.323 Server 🖌 Apply FXO Extension E1/T1 Extension DTMF/CODEC **H.323 Registration** - Number - Hunt Stop - Registration checking

#### Basic – Analog : FXS Extension



#### Basic – Analog : FXO Extension



### Basic – Analog : FX0 Dial Plan

Smart Web Manager		ې 💭 🚭 🤹
System 👄	FXO Dial Plan / Prefix	Information
Language     WAN Setup	Port Information	AddPac Technology Model : AP1800
Port Information voice port type & physical port	Port P0 P1 P2 P3 P4 P5 P6 P7	H/W Version : 2.0 S/W Version : 8.41.086 Smart Web Version : 0.4 Smart Web Puild : Sep 15 2010
- File Blowsei	SLOT 0         FXS         FXS         FXS         FXO         FXO         FXO           SLOT 1	Voice Interface S(4)O(4) : None
Basic O	Plan Table 🕲	Status : Unregistered Current Calls: 0
<ul> <li>Server SIP</li> <li>Server H.323</li> <li>SIP Registration</li> </ul>	Rule Num  Digits to Insert Control Control Control Control	Mac Address: 0002.a4ff.f6a4
H.323 Registration     E1/T1 Trunk     FXS Extension	Add	Description
FXO Extension     E1/T1 Extension     DTMF/CODEC	FXO Table 9	
VolP Dial Plan     FXO DialPlan	Pots Num I FXS I FXO I Number PlanIndex Preference Control	
Plan Table Configure translation rule for FXC	Delete	
<ul> <li>first, 'Number of Digits to Delet applied.</li> <li>second, 'Digits to Insert' option</li> </ul>		
(ex) Origin called Number = 12	Assigned Translation-Rule Tag Number Number : 100 - 199 Assigned Pots Tag Number : 3560 - 4071 (3456	
Number of Digits to Delete Digits to Insert = "88"	= 2 FXO Table Configure FXO Port with translation rule.	
result = 883456		



## Basic – Digital : E1/T1 Trunk

	Smart Web Ma	nager						ة، 🖸 🧔 🔅
	System	•	E1/T1 Trunk					Information
E1/T1 Port Configure E1 chan	nel & group	] -	E1 Port (Slot 0/0)	Slot 0/0         Slot 0/1           Slot/Port         group Num (0~9)           0/0	Time slot Rang	e(1-31,16-31,1,2,3)	Control Add	AddPac Technology Model: AP1800 HW Version: 2.0 SW Version: 8.41.086 Smart Web Version: 0.4 Smart Web Build: Sep 15 2010
<b>E1/T1 value</b> Clock-Source Framing Line Code Signaling type	• File Browser		Clock-Source Framing Line Code Signaling-type	Master CRC4 HDB3 ISDN-PRI				Voice Interface E1(2): None Protocol: H.323 Status: Unregistered Current Calls: 0 CallNetwork: Static 0.0.0.0 Mac Address: 0002.a4ff.f6a4
	<ul> <li>FXS Extension</li> <li>FXO Extension</li> <li>E1/T1 Extension</li> <li>DTMF/CODEC</li> </ul>			Protocol-emulate	Network Enable	O User O Disable		Configure the settings for VoIP Dial Plan and Prefix table
E1/T1Sub function	า	$ _{\chi}$		Immediate-disc 😟 Dial-Tone-Generate 🕹	<ul> <li>Enable</li> <li>Enable</li> </ul>	<ul><li>Disable</li><li>Disable</li></ul>		
- virtual-Connect	÷		ISDN-PRI	Compand-Type 🥹	a-law	© u-law		
- immediate-disconnect - dial-tone generate					N303	2 (1~10sec)		
- Q931 Timer				Q931 Timer	T303 T310	4 (1~400	lsec)	
- Get calling numb	ber	•	R2-MFC	Get-Calling-number	C Enable	Oisable		
- monitoring E1/T	1 port status		Busyout <sup>(</sup>	Action	© PortDown	None		
	• Test Call • Ping	1	Apply					



## Basic – Digital : E1/T1 Extension

Smart Web Ma	nager											🌼 🖸 릙 草
System      Language     WAN Setup     LAN Setup     NAT		E1/T1 E	ctension								 	Information AddPac Technology Model : AP1800 H/W Version : 2.0 S/W Version : 8.41.086
NTP     System Time     File Browser  Basic	<b>-</b>	Port         P0         P1         P2           SLOT 0         E1         E1           SLOT 1         E1/T1 Extension Configuration         E1/T1 Extension Configuration		P3 P4 P5 P6 P7			Smart Web Version : 0.4 Smart Web Build : Sep 15 2010 Voice Interface E1(2) : None Protocol : H.323 Status : Unregistered Current Calls : 0					
SIP Registration     H.323 Registration     E1/T1 Trunk     FXS Extension		Pots Num	Port P0:0 V	Group	Nun	nbers	HuntStop	F	forward Digits(0~	-99)	Control Delete Apply	CallNetwork : Static 0.0.0.0 Mac Address: 0002.a4ff.f6a4
<ul> <li>FXO Extension</li> <li>E1/T1 Extension</li> <li>DTMF/CODEC</li> <li>VoIP Dial Plan</li> <li>FXO DialPlan</li> <li>Static Route</li> </ul>	• • E	E1/T1 Extension - E1/T1 Ext Configure - Forwa	Assigned Pots ension e phone-nu rd-Digits (f	Tag Numbe	r: 2536 - r using st)	2737 PABX			]			

## Basic – DTMF/CODEC

Smart Web Manager		🔍 🖸 📮 🚍
System CODEC Configure voice codec preference (g711a, g711u, g729, g7231, g726) • NTP • System Time • File Browser	DTMF/CODEC         Preference 1         None         Preference 2         None         Preference 3         None         Preference 4         None         Preference 5         None	Information AddPac Technology Model : AP1800 H/W Version : 2.0 S/W Version : 8.41.086 Smart Web Version : 0.4 Smart Web Build : Sep 15 2010 Voice Interface T1(2) : None
Basic ● Protocol ● Server SIP ● Server H.323 ● SIP Registration ■ H.323 Registration ■ H.323 Registration ■ E1/T1 Trunk ■ FXS Extension ■ FXO Extension	Preference 6 None      DTMF relay by In-band voice     DTMF relay by RTP payload defined by RFC 2833     DTMF relay by Out-of-band signal     DTMF relay by Cisco out-of-band signal     DTMF relay by Cisco out-of-band signal	Protocol : H.323 Status : Unregistered Current Calls : 0 CallNetwork : Static 0.0.0.0 Mac Address: 0002.a4ff.f6a4 Description Configure the settings for GSM Dial Plan and Prefix table
E1/T1 Extension     DTMF/CODEC     VolP Dial Plan	(in-band, RFC2833, out-of-band, CISCO type out-of-band)	

#### Basic – VoIP Dial Plan

	Smart Web Manager	r .					🍳 🖸 븕 草
	System 🗢	VoIP Dial Pla	n / Prefix				Information
	<ul> <li>Language</li> <li>WAN Setup</li> <li>LAN Setup</li> <li>NAT</li> </ul>	Plan Table 🕑					AddPac Technology Model : AP1800 H/W Version : 2.0 S/W Version : 8.41.086
		Rule Num 🥹	Digits to Insert 🥹	Digits to delete	Digit Pattern	Control	Smart Web Version : 0.4
Configure translation rule f	or VOIP Peer. Delete' option is	<b>\</b>				Delete	Voice Interface T1(2): None
applied.					Add	Protocol : H.323 Status : Unregistered	
(ex) Origin called Number	Prefix Table 🗐					Current Calls : 0 CallNetwork : Static 0.0.0.0 Mac Address: 0002.a4ff.f6a4	
Digits to Insert = "88	" "	Voip Num 🖲	Prefix	Called Num Plan 😟	Calling Num Plan	Control	Description
result = 883456						Delete	Configure the settings for the outbound call of main/remote
	EXC Extension     E1/T1 Extension			N.A. 🔻	N.A. 🔻	Арріу	and incoming E1/T1 and routing
	VolP Dial Plan     FXO DialPlan     Static Route     Hot Line	* VolP Dial Plan - Assigned * VolP Dial Plan - Assigned	Translation-Rule Tag Number VoIP Tag Number: 10000 - 10	: 0 - 99 099	/		
	-		onfigure VoIP Pee Serviced by SIP S	r with translation ru ERVER)	le.		

#### Basic – Static Route

Smart Web Manag	ler	🏟 🖸 븕 🚍
System	Static Route	Information
Language     WAN Setup     LAN Setup	Set Remote Site Call(5-digit number is set to begin *2->*2)	AddPac Technology Model : AP1800 H/W Version : 2.0
NAT     NTP     System Time     File Browser	Pots Num Remote Site IP I Signaling Port I Prefix Digits to Insert Digits to Delete Name of Remote Site Answer Addr Control	S/W Version : 8.41.027 Smart Web Version : 0.4 Smart Web Build : Sep 16 2010 Voice Interface
Basic	* Apply	E1(2) : None Protocol : SIP Status : Unregistered
Protocol     Server SIP     Server H.323	* Static Route - Assigned Voip Tag Number : 10100 - 10199 * Static Route - Assigned Translation-Rule Tag Number : 10100 - 10199	Current Calls : 0 CallNetwork : Static 0.0.0.0 Mac Address: 0002.a4ff.f6a4
SIP Registration     H.323 Registration     E1/T1 Trunk     FXS Extension	Static Route Configure Static VoIP Peer for using Inter-Office . ( Already, I know IP & phone-number)	Description
<ul> <li>E1/T1 Extension</li> </ul>		

#### **Basic** – Hot Line

#### Smart Web Manager 🏟 🖸 📮 🚍 Hot Line • Information System Language AddPac Technology · WAN Setup Model: AP1800 **Hot Line Configuration** . LAN Setup H/W Version : 2.0 S/W Version : 8.41.027 • NAT Port Hot Line Number Digit Input Timeout <0~10 sec> Smart Web Version : 0.4 • NTP Smart Web Build : Sep 16 2010 System Time S0P0(S) 0 🔻 Voice Interface File Browser S(4)O(4): None S0P1(S) 0 🔻 Protocol : SIP Basic Θ Status : Unregistered 0 -S0P2(S) Current Calls : 0 Protocol CallNetwork : Static 0.0.0.0 Server SIP 0 🗸 S0P3(S) Mac Address: 0002.a4ff.f6a4 Server H.323 SIP Registration 0 -S0P4(O) H.323 Registration Description E1/T1 Trunk 0 -S0P5(O) FXS Extension 0 - FXO Extension S0P6(O) E1/T1 Extension 0 - DTMF/CODEC S0P7(0) VolP Dial Plan FXO DialPlan Static Route Hot Line 🛷 Apply Hot Line

- Used as incoming direct call of FXO port(Connection PLAR)
- Timer (FXS port only : No Digit event is occurred for configured timer value, Auto-Dialing will be started )



#### Advanced – Gain & CID

#### Smart Web Manager

System 🗢	Gain & CID	9				Information
<ul> <li>Language</li> <li>WAN Setup</li> <li>LAN Setup</li> <li>NAT</li> </ul>	Gain					AddPac Technology Model : AP1800 HWV Version : 2.0 S/W Version : 8.41.086
• NTP	Port	Port Type	InputGain	OutputGain	Caller ID	Smart Web Version : 0.4
<ul><li>System Time</li><li>File Browser</li></ul>	P0:0	FXS	0 🗸	0 🔻		Voice Interface
	P0:1	FXS	0 🔻	0 🔻		Protocol : H.323
• Protocol	P0:2	FXS	0 🔻	0 🔻		Status : Unregistered Current Calls : 0
<ul> <li>Server SIP</li> <li>Server H 323</li> </ul>	P0:3	FXS	0 -	0 🔻		CallNetwork : Static 0.0.0.0 Mac Address: 0002.a4ff.f6a4
SIP Registration	P0:4	FXO	0 🗸	0 -		
E1/T1 Trunk	P0:5	FXO	0 🔻	0 🔻		Description
<ul> <li>FXS Extension</li> <li>FXO Extension</li> </ul>	P0:6	FXO	0 🔻	0 🔻		Adjust the input voice volume from FXS/FXO/E1/E&M to DSP
<ul> <li>E1/T1 Extension</li> <li>DTMF/CODEC</li> </ul>	P0:7	FXO	0 -	0 🔻	/	DSP to the phone or PSTN line;
<ul> <li>VoIP Dial Plan</li> <li>FXO DialPlan</li> <li>Static Route</li> <li>Hot Line</li> </ul>	····	Gain & CID		/	ļ	

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#### Advanced - Fax

Smart Web Manager		ې 🎝 🖸 🧔
System 🕒	Fax	Information
<ul> <li>Language</li> <li>WAN Setup</li> <li>LAN Setup</li> <li>NAT</li> <li>NTP</li> <li>System Time</li> <li>File Browser</li> </ul>	Fax Mode @         @ T.38 @ Inband T.38 @ Bypass           Fax Rate @         © Disable @ 2400 @ 4800 @ 7200 @ 9600 @ 12000 @ 14400	AddPac Technology Model : AP1800 H/W Version : 2.0 S/W Version : 8.41.027 Smart Web Version : 0.4 Smart Web Build : Sep 16 2010 Voice Interface S(4)0(4) : None
Basic ← • Protocol • Server SIP • Server H.323 • SIP Registration	Apply FAX Configure fax mode & rate (VoIP Lines)	Protocol : SIP Status : Unregistered Current Calls : 0 CallNetwork : Static 0.0.0.0 Mac Address: 0002.a4ff.f6a4
<ul> <li>H.323 Registration</li> <li>E1/T1 Trunk</li> <li>FXS Extension</li> <li>FXO Extension</li> <li>E1/T1 Extension</li> <li>DTMF/CODEC</li> </ul>		Description Enable or disable T.38/Inband T.38, which is fax internet protocol and specify Baudrate

#### Advanced - Service

System 😑	Service				Information
Language     WAN Setup     LAN Setup		<table-cell> Enable Telnet</table-cell>	Server Port 23 (default	23, 1-65535)	AddPac Technology Model : AP1800 H/W Version : 2.0
• NAT		Enable HTTP	Server Port 80 (default	80, 1-65535)	Smart Web Ruild : Sep 16 201
System Time     File Browser	Applicaton Services	Enable FTP	Control Port 21 (default Data Port 20 (default	21, 1-65535) 20, 1-65535)	Voice Interface S(4)O(4) : None Protocol : SIP
Protocol     Server SIP     Server H.323     SIP Registration     H.323 Registration		Enable Syslog	Primary Server Secondary Server Log Level 0-emergency Log Command disable 👻	Port (default 514) Port (default 514)	Status : Unregistered Current Calls : 0 CallNetwork : Static 0.0.0 Mac Address: 0002.a4ff.f6a4
<ul> <li>E1/T1 Trunk</li> <li>FXS Extension</li> </ul>	Timer	Inter Digit Time	3 sec (default 3, 1-600)		Enable or disable Telnet,
<ul> <li>FXO Extension</li> <li>E1/T1 Extension</li> <li>DTMF/CODEC</li> </ul>	Call Service 😡	Transfer	💿 Hook-Flash 🖲 Not-assigned	1	ATTP, FTP and specify the acess port and Call Hold/ Transfer and Timer.
VolP Dial Plan     FXO DialPlan		Hold	🔘 Hook-Flash 🖲 Not-assigned	1	
<ul> <li>Static Route</li> <li>Hot Line</li> </ul>	SIP Transfer 😣	Mode	blind  Attended		
	Skype Server	Use	🔘 Enable 🖲 Disable		
Gain & CID	Hunt	Algorism	(0) longest - preference - random	<b>•</b>	
<ul> <li>Fax</li> <li>Service</li> <li>Filtering</li> <li>Security</li> </ul>	Change Password	ID : root	New Password •••••• Confirm Password ••••••	Service - Configure application servi - Configure IDT(Inter Digit Ti	ce(Telnet, HTTP, ftp, syslog)
Miscellaneous  Port & Call Status System Status Coll Los	Apply			<ul> <li>Configure Call-Transfer-Mo</li> <li>Configure SIP Call-Transfe</li> <li>Configure Skype SIP Serve</li> <li>Hunt Algorism</li> <li>Changing Password</li> </ul>	ăe & Hook-Flash-Usage-Tyr r-Mode. r Use

## Advanced - Filtering

mart Web Ma	nager				🔍 🖸 📙 🗖
System	Θ	Filter@			Information
<ul> <li>Language</li> <li>WAN Setup</li> <li>LAN Setup</li> <li>NAT</li> </ul>		FTP Filter			AddPac Technology Model : AP1800 H/W Version : 2.0 S/W Version : 8.41.027
• NTP		Network Addr	Network Mask	Control	Smart Web Version : 0.4
<ul> <li>System Time</li> <li>File Browser</li> </ul>				Add	Voice Interface S(4)O(4) : None
Basic	•	HTTP Filter			Protocol : SIP Status : Unregistered
Protocol		Notwork Addr	Notwork Mook	Control	Current Calls: 0
Server SIP		Network Addi	NEWOKMASK	Control	Mac Address: 0002.a4ff.f6a4
Server H.323				Add	
SIP Registration					
F1/T1 Trunk		Telnet Filter			Description
EXS Extension					For FTP, HTTP, Telnet, set up
FXO Extension		Network Addr	Network Mask	Control	one IP or IP band for allowing
E1/T1 Extension		THE WORK AND	Neworkindsk	Control	access
DTMF/CODEC				Add	
VolP Dial Plan					/
FXO DialPlan					
Static Route				\	
Hot Line		Filter			

### Advanced - Security

Smart Web Manager		🌼 🖸 📮 🚍
System • Language • WAN Setup • LAN Setup • NAT • NTP • System Time • File Browser	Security         IP Filtering          IP Filtering          Enable          Disable         Allowed IP Address List	Information AddPac Technology Model : AP1800 HW Version : 2.0 SWV Version : 8.41.027 Smart Web Version : 0.4 Smart Web Build : Sep 16 2010 Voice Interface S(4)(2)(4): Nano
Basic	WarDialing Filtering <ul> <li>Enable </li> <li>Disable</li> </ul> Allow Digit Length(IP to PSTN)        Min       Max         H323 Shutdown <ul> <li>Enable </li> <li>Disable</li> </ul> SIP Shutdown <ul> <li>Enable </li> <li>Disable</li> </ul>	Protocol : SIP Status : Unregistered Current Calls: 0 CallNetwork : Static 0.0.0.0 Mac Address: 0002.a4ff.f6a4
FXO Extension     E1/T1 Extension     DTMF/CODEC     VoIP Dial Plan     EVO DialPlan	Security         - IP Filtering       : Allowing only the inbound call which is registered to Call-Routing of the server by static IP.         -Allowed IP address list : Allowing only inbound call which is added ip address.         - WarDialing       : Allowing only the inbound call with the number registered to Inter-Office and phone-number.         - Digit Length       : Allowing only the inbound call with the number registered to Inter-Office and phone-number         - H.323       : H.323 signaling packets are filtered.         - SIP       : SIP signaling packets are filtered.	

#### Miscellaneous – Port & Call Status



#### Miscellaneous – System Status

			🔍 🖸 📑 🚍
	System 🗢	System Status	Information
	<ul> <li>Language</li> </ul>		AddPac Technology
	WAN Setup     LAN Setup     NAT	Voice Port	Model : AP1800 H/W Version : 2.0 S/W Version : 8.41.027
System Status	/	Port LineType Status InGain OutGain TieType TieDigits CallNum Tcalled Tcalling	Smart Web Version : 0.4
<ul> <li>voice port status &amp; infor</li> <li>SIP-UA status &amp; inforr</li> <li>gateway status &amp; inforr</li> <li>system utilization infor</li> </ul>	ormation nation mation	O/ 0         FXS         Idle         0         0         none         -1         -1         -1           0/ 1         FXS         Idle         0         0         none         -1         -1         -1           0/ 2         FXS         Idle         0         0         none         -1         -1         -1           0/ 3         FXS         Idle         0         0         none         -1         -1         -1           0/ 4         FXO         Idle         0         0         none         -1         -1         -1	Smart Web Build : Sep 16 2010 Voice Interface S(4)O(4) : None Protocol : SIP
	Protocol     Server SIP     Server H.323	0/4     FX0     Idle     0     0     none     -1     -1     -1       0/5     FX0     Idle     0     0     none     -1     -1     -1       0/6     FX0     Idle     0     0     none     -1     -1     -1       0/7     FX0     Idle     0     0     none     -1     -1     -1	Status : Unregistered Current Calls : 0 CallNetwork : Static 0.0.0.0 Mac Address: 0002.a4ff.f6a4
	<ul> <li>SIP Registration</li> <li>H.323 Registration</li> <li>E1/F1 Truck</li> </ul>	SIP-UA	Description
	FXS Extension     FXO Extension     E1/T1 Extension     DTMF/CODEC	Proxyserver Registration Information proxyserver registration option = e164 Proxyserver list : No Proxyserver Information.	Verify the present port information, Server Register status, CPU and Memory usage
	<ul> <li>VoIP Dial Plan</li> <li>FXO DialPlan</li> <li>Static Route</li> </ul>	SIF UA limer counters retry counter = 10 SIF UA Timer values tretry (sip retry timer) = 500 msec. tipterval (sip retry max interval timer) = 4 sec	
	Hot Line  Advanced	<pre>treg (sip register timer) = 60 sec. tregtry (sip register retry timer) = 20 sec. texpires (sip invite expire timer) = 180 sec. tsipping (sip pind timer) = 45 sec.</pre>	
	Gain & CID     Fax	tsrv (sip srv retry timer) = 60 sec. thppolling (sip higher priority polling timer) = 30 sec.	
	Service	SIP UA Session Timer value Min-SE = 1800 sec.	
	Filtering     Security	Session-Expires = 1800 sec. SIP DNS SRV Query : Disable	
	- Security	STD Called_Darty_Number + from HDI	

AddPac

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#### Miscellaneous – Call Log

Smart Web Manage	er	🌼 🖸 📮 🚍
System O	Call Log	
<ul> <li>Language</li> <li>WAN Setup</li> <li>LAN Setup</li> <li>NAT</li> <li>NTP</li> <li>System Time</li> <li>File Browser</li> </ul>	CallNum EventTime Descript CallingPartyNum CalledPartyNum RemoteInfo Se	tupTime Dur Reason
Basic • • Protocol • Server SIP • Server H.323		
SIP Registration     H.323 Registration     E1/T1 Trunk     FXS Extension     FXO Extension     FXO Extension	Call Log Show call history information * call number * event time	
E1/1 1 Extension     DTMF/CODEC     VolP Dial Plan     FXO DialPlan     Static Route     Hot Line	* description * calling number * called number * remote IP information * call setup time	
Advanced • • Gain & CID • Fax • Service	* call duration * call clear reason	
Filtering     Security     Miscellaneous		
<ul> <li>Port &amp; Call Status</li> <li>System Status</li> <li>Call Log</li> <li>System Log</li> <li>Test Call</li> <li>Ping</li> </ul>		



#### Miscellaneous – System Log

Smart Web Manager		🌼 🖸 📮 🚍
System   • Language • WAN Setup • LAN Setup • NAT • NTP • System Time • UN	System Log	Information AddPac Technology Model : AP1800 HW Version : 2.0 SWV Version : 8.41.027 Smart Web Version : 0.4 Smart Web Eulid : Sep 16 2010 Voice Interface
<ul> <li>File Browser</li> <li>Basic</li> <li>Protocol</li> <li>Server SIP</li> <li>Server H.323</li> <li>SIP Registration</li> <li>H.323 Registration</li> <li>E1/T1 Trunk</li> <li>FXS Extension</li> <li>FXO Extension</li> <li>E1/T1 Extension</li> <li>DTMF/CODEC</li> <li>VoIP Dial Plan</li> <li>FXO DialPlan</li> <li>Static Route</li> <li>Hot Line</li> </ul>	System Log - command log - system alarm log ( ex : interface down)	S(4)O(4): None Protocol: SIP Status: Unregistered Current Calls: 0 CallNetwork: Static 0.0.0.0 Mac Address: 0002.a4ff.f6a4 Description Retrieve the system log
Advanced ● Gain & CID • Fax • Service • Filtering • Security Miscellaneous • Port & Call Status • System Status • Call Log • System Log • Test Call • Ping		



#### Miscellaneous – Test Call

#### Smart Web Manager

Smart Web Manager	r	🍳 🖸 📮 🚍
System 🗢	Test Call	Information
Language     WAN Setup     LAN Setup     NAT     NTP     System Time     File Browser	Port B-Ch (1-24) Test Phone Number Digits Command	AddPac Technology Model : AP1800 H/W Version : 2.0 S/W Version : 8.41.027 Smart Web Version : 0.4 Smart Web Build : Sep 16 2010 Voice Interface S(4)O(4) : None Protocol : SIP Status : Unregistered Current Calls: 0 CallNetwork : Static 0.0.0.0 Mac Address: 0002.a4ff.f6a4
	S0P0 - Start Voice Digit End	
	S0P1 - Start Voice Digit End	
	S0P2 - Start Voice Digit End	
Basic Protocol Server SIP Server SIP Server H.323 SIP Registration H.323 Registration E1/T1 Trunk FXS Extension FXO Extension E1/T1 Extension DTME(CODEC	S0P3 - Start Voice Digit End	
	remote diagnose the proper operation of VoIP call - Test Phone Number - Digits - Start / Voice / Digit / End Button	Description Make a test call remotely through web

#### Miscellaneous - Ping



#### **VoIP Gateway Series**

# Thank you!

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