

# Bluetooth VoIP Gateway Solution for Non-RUIM Type CDMA Network



**AddPac**

**AddPac Technology**

2013, Sales and Marketing

[www.addpac.com](http://www.addpac.com)

# Contents

- Bluetooth VoIP Gateway Service Overview
- Bluetooth VoIP Gateway Service Diagram
- Bluetooth VoIP Gateway Series
  - AP-LMS1001(1ch)
  - AP-LMS1500(8ch)
  - AP-LMS2500(16ch)
- Smart Web Manager for Bluetooth VoIP Gateway



# Bluetooth VoIP Gateway Service Overview

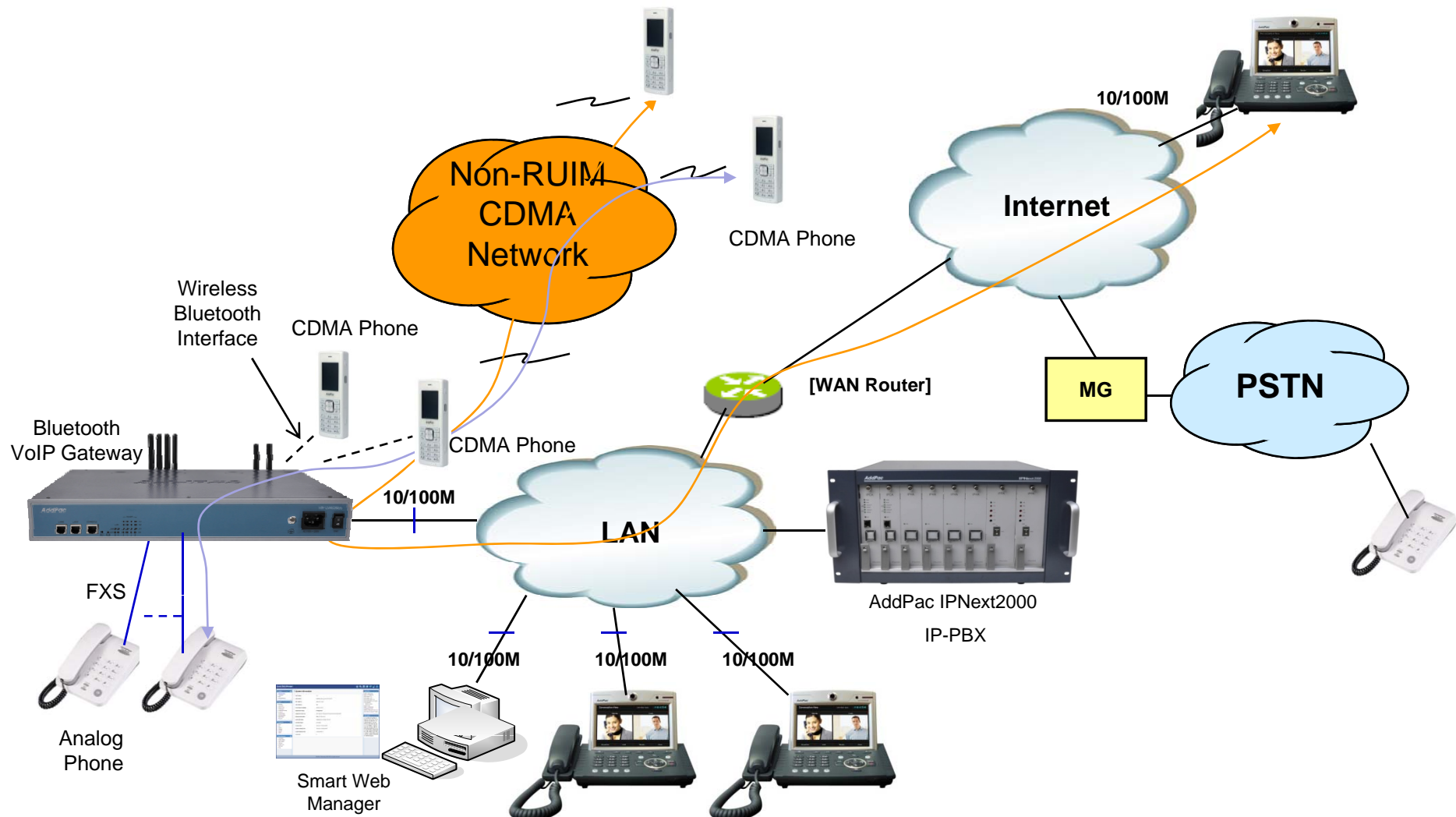
AddPac Bluetooth VoIP Gateway are a device that can support both mobile station gateway service (FXS->Bluetooth->cellular phone->2G or or 3G, Internet->Bluetooth->cellular phone->2G or 3G) and VoIP gateway service (FXS->Internet) simultaneously.

This Bluetooth VoIP Gateway provides high-performance Analog or IP to Mobile Station(cellular phone) gateway solution including IP-routing services for call termination service provider, and medium size enterprise. This product uses the state-of-art technology voice compressed algorithm and unique QoS algorithm of AddPac to maintain the maximum voice quality under fast internet line and slow internet line as well.

Bluetooth VoIP gateway combining IP-PBX is now suggesting a new model for a main voice communication solution. In order to be a part of advanced VoIP communications naturally in the future, making an excellent choice of choosing Bluetooth VoIP gateway is essential.

In some mobile operator, they use unique Non-RUIM CDMA, 3G or LTE frequency band often. In this case, this bluetooth technology based VoIP gateway can be another choice instead of 3G or 4G mobile chip built-in VoIP gateway system.

# Bluetooth VoIP Gateway Service Diagram (Non-RUIM Type CDMA Network)






**AddPac**

[www.addpac.com](http://www.addpac.com)



# Bluetooth VoIP Gateway Series

# Bluetooth VoIP Gateway Comparison Table

Model	AP-LMS1001		AP-LMS1500	AP-LMS2500
				
Available Modules	Type	VoIP	AP-N1-LMS4 (4ch bluetooth module) AP-N1-3G4 AP-N1-FXS8 AP-N1-FXO8 AP-N1-FXS4O4	AP-N1-LMS4 (4ch bluetooth module) AP-N1-3G4 AP-N1-FXS8 AP-N1-FXO8 AP-N1-FXS4O4 AP-N1-E1
	A	None		
	B	1FXS		
	C	1FXO		
Bluetooth Channel	1 Channel		Up to 8 Ch.	Up to 16 Ch.
Module Slot	N/A		Two(2) Module Slots for 4ch Bluetooth module	Four(4) Module Slots for 4ch Bluetooth module
LAN Port	2		2	2
Console	N/A		1	1
Power	External Power Adaptor		Single PSU	Single PSU



# AP-LMS1001

## 1-Port Bluetooth VoIP Gateway

# Main Features

## AP-LMS1001 1-Port Bluetooth VoIP Gateway

- Analog Interface (FXS)/VoIP Interface(LAN) Both Support
- Mobile Phone Interworking Solution via Bluetooth Technology
- H.323/SIP Dual Concurrent Stack Embedded
- High Performance RISC & Programmable DSP Architecture
- 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
- Smart Web Manager for LMS Gateway
- Smart NMS for Large Scale Deployment
- Advanced Voice QoS Mechanism
- Light and Compact Design with External Power Supply



# Hardware Specification

AP-LMS1001 1-Port Bluetooth VoIP Gateway

RISC  
CPU

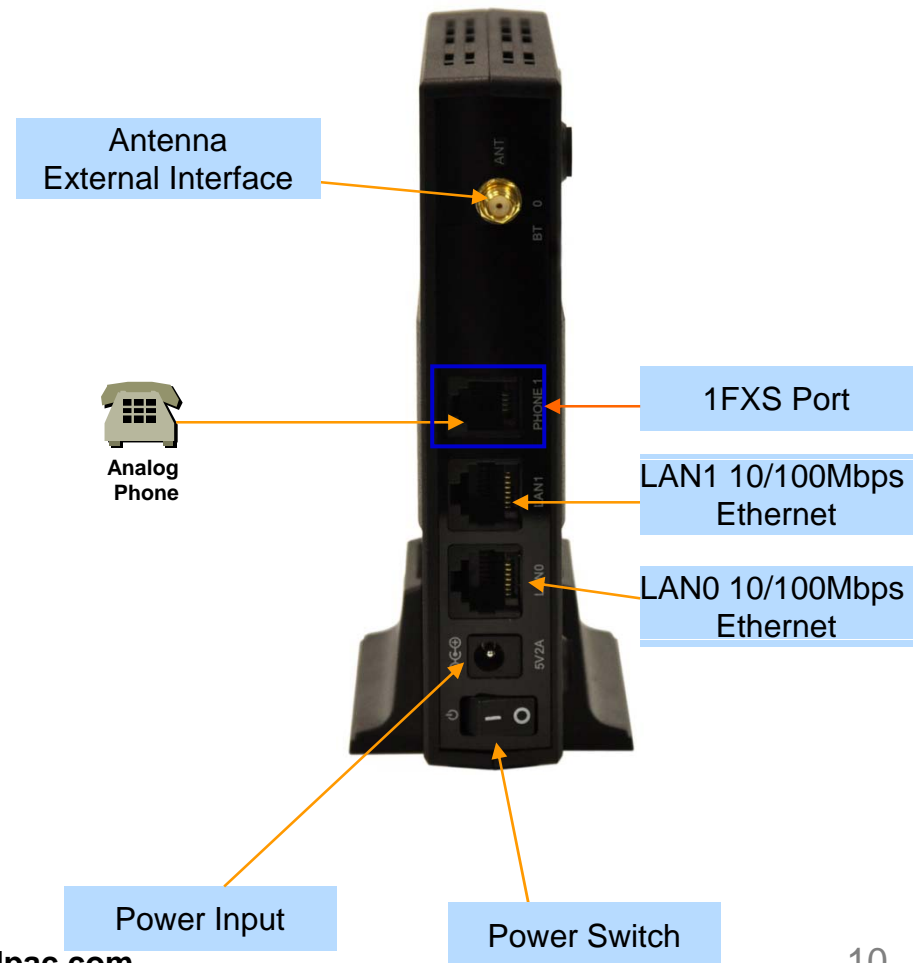
High-end  
DSP

- RISC Microprocessor Computing Power
- 1-Port Bluetooth VoIP Gateway
- 1-Port Antenna Interface
- VoIP Gateway Interface
  - AP-LMS1001 Model A: Basic Configuration
  - AP-LMS1001 Model B: One(1) FXS Port
  - AP-LMS1001 Model C: One(1) FXO Port
- Network Interface for VoIP Direct Interface
  - Two(2) 10/100Mbps Fast Ethernet (RJ45)
- Run LED, LAN LED, Port LEDs
- External Power Supply

# Hardware Specification

## AP-LMS1001 1-Port Bluetooth VoIP Gateway

### Network interface Configurations





# AP-LMS1500 Multi-Port(8ch) Bluetooth VoIP Gateway

# Main Features

## AP-LMS1500 Multi-Port Bluetooth VoIP Gateway

- Two(2) Module Slots for 4-Port Bluetooth Module, 3G WCDMA, 8FXS/8FXO Analog Interface (Up to 16-Port Bluetooth Channel)
- Analog Interface (FXS)/VoIP Interface(LAN) Both Support
- Mobile Phone Interworking Solution via Bluetooth Technology
- H.323/SIP Dual Concurrent Stack Embedded
- High Performance RISC & Programmable DSP Architecture
- 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
- Smart Web Manager for LMS VoIP Gateway
- Smart NMS for Large Scale Deployment
- Advanced Voice QoS Mechanism
- Light and Compact Design with Internal Power Supply

# Hardware Specification

## AP-LMS1500 Multi-Port Bluetooth VoIP Gateway

RISC  
CPU

High-end  
DSP

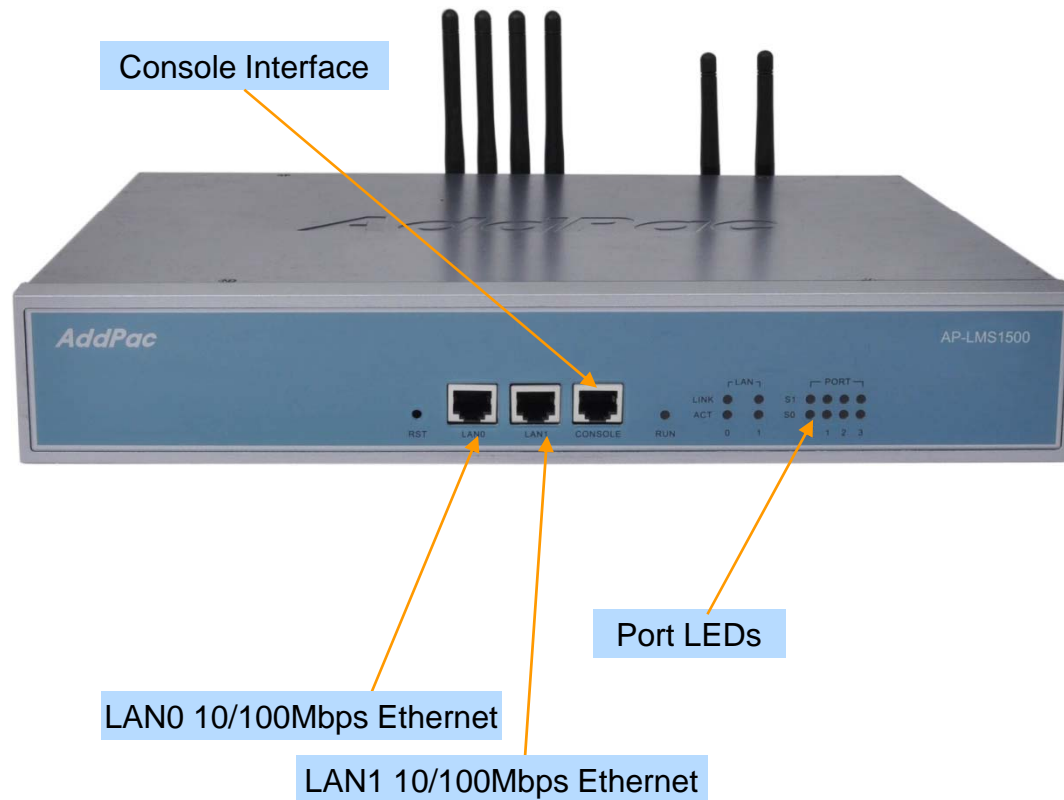
- RISC Microprocessor Computing Power
- Two(2) Module Slot for Bluetooth, 3G, Analog Interface
- 4-Port Bluetooth Module(AP-N1-LMS4)
  - Four(4) Bluetooth Antenna Interface
  - Hot-Swap
- VoIP Interface Module
  - 8-Port FXS Module (AP-N1-FXS8)
  - 8-Port FXO Module (AP-N1-FXO8)
  - Hot-Swap
- Network Interface
  - Two(2) 10/100Mbps Fast Ethernet (RJ45)
- RS232C Console Interface for CLI
- Run LED, LAN LED, Port LEDs
- Internal Power Supply



# Hardware Specification

AP-LMS1500 Multi-Port Bluetooth VoIP Gateway

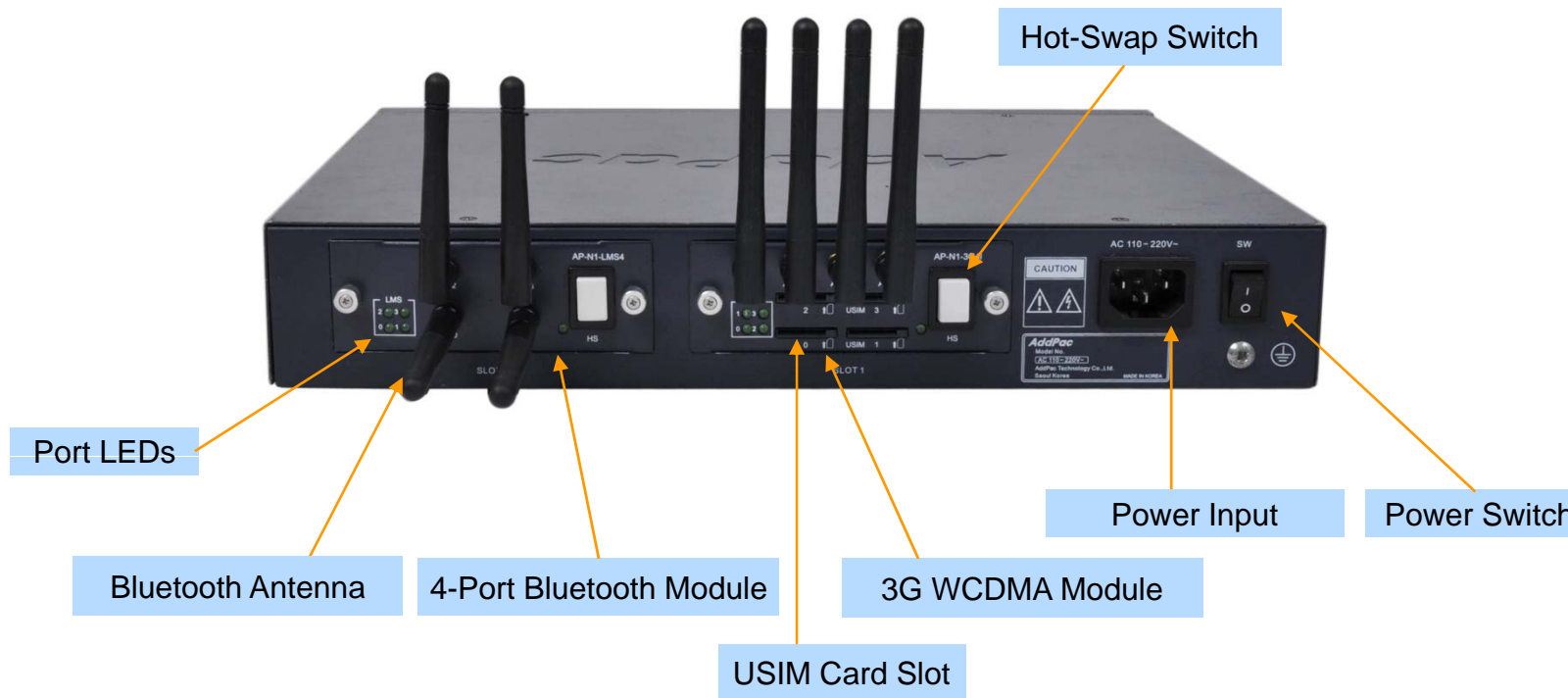
## Front Side View



# Hardware Specification

AP-LMS1500 Multi-Port Bluetooth VoIP Gateway

## Back Side View (8-Port Bluetooth + 8-Port 3G WCDMA)



# Hardware Specification

AP-LMS1500 Multi-Port Bluetooth VoIP Gateway

## 4-Port Bluetooth Module (AP-N1-LMS4)



Bluetooth  
Port LEDs

Bluetooth Antenna

Hot-Swap Button





# AP-LMS2500 Multi-Port(16ch) Bluetooth VoIP Gateway

# Main Features

## AP-LMS2500 Multi-Port Bluetooth VoIP Gateway

- Four(4) Module Slots for 4-Port Bluetooth Module, 3G WCDMA, 8FXS/8FXO Analog Interface (Up to 16-Port Bluetooth Channel)
- Analog Interface (FXS)/VoIP Interface(LAN) Both Support
- Mobile Phone Interworking Solution via Bluetooth Technology
- H.323/SIP Dual Concurrent Stack Embedded
- High Performance RISC & Programmable DSP Architecture
- 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
- Smart Web Manager for LMS VoIP Gateway
- Smart NMS for Large Scale Deployment
- Advanced Voice QoS Mechanism

# Hardware Specification

## AP-LMS2500 Multi-Port Bluetooth VoIP Gateway

RISC  
CPU

High-end  
DSP

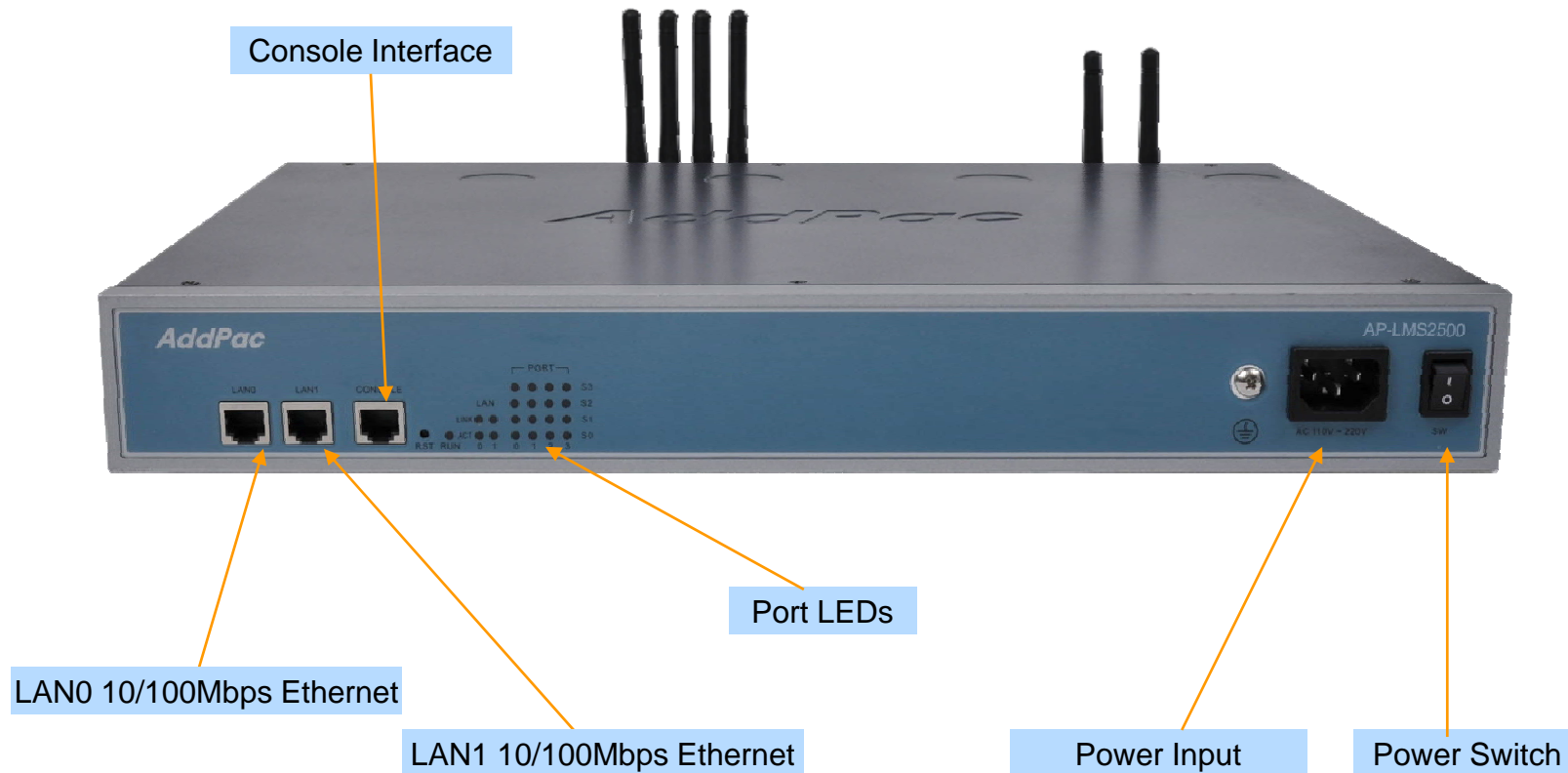
- RISC Microprocessor Computing Power
- Four(4) Module Slot for Bluetooth, 3G, Analog Interface
- 4-Port Bluetooth Module(AP-N1-LMS4)
  - Four(4) Bluetooth Antenna Interface
  - Hot-Swap
- VoIP Interface Module
  - 8-Port FXS Module (AP-N1-FXS8)
  - 8-Port FXO Module (AP-N1-FXO8)
  - Digital E1/T1 Module (AP-N1-E1)
  - Hot-Swap
- Network Interface
  - Two(2) 10/100Mbps Fast Ethernet (RJ45)
- RS232C Console Interface for CLI
- Run LED, LAN LED, Port LEDs
- Internal Power Supply



# Hardware Specification

AP-LMS2500 Multi-Port Bluetooth VoIP Gateway

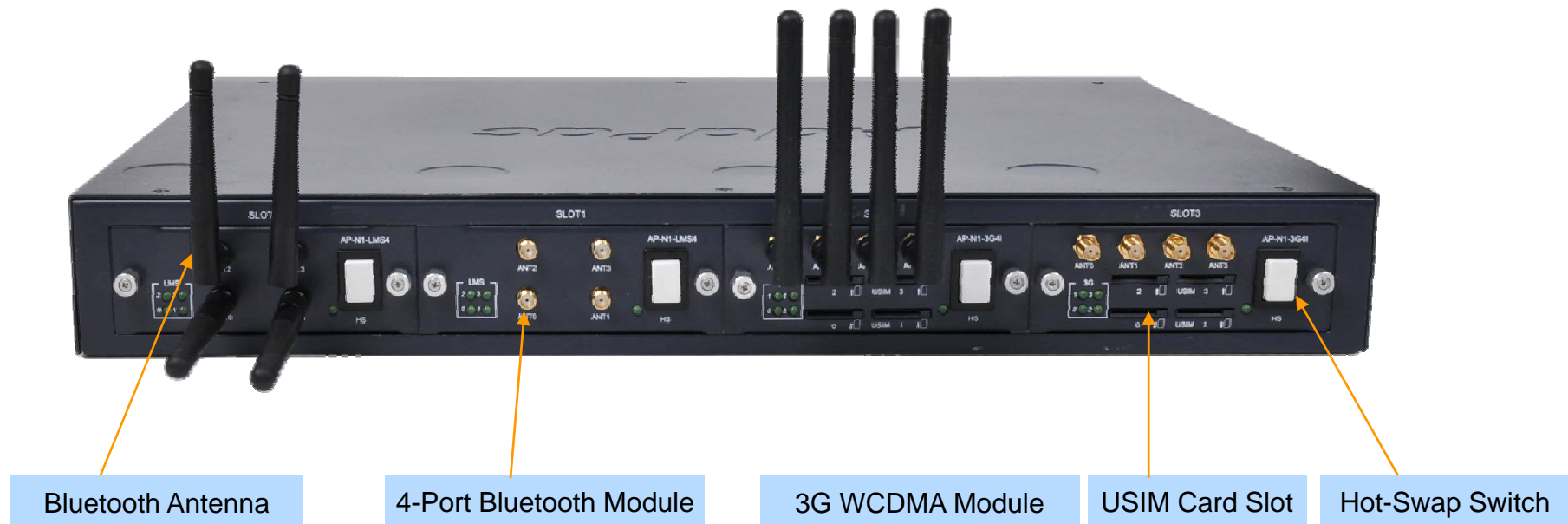
## Front Side View



# Hardware Specification

AP-LMS2500 Multi-Port Bluetooth VoIP Gateway

## Back Side View (8-Port Bluetooth + 8-Port 3G WCDMA)



# Hardware Specification

AP-LMS1500 Multi-Port Bluetooth VoIP Gateway

## 4-Port Bluetooth Module (AP-N1-LMS4)



Bluetooth  
Port LEDs

Bluetooth Antenna

Hot-Swap Button



# Smart Web Manager for Bluetooth VoIP Gateway Series

# Smart Web Manager : Main Page Layout

**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 summary

**Workspace**  
Workspace for detailed action

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

The screenshot shows the Smart Web Manager interface. On the left is a 'Main Menu' with categories: System (Network Setup, Language, NTP, Backup/Restore), Basic (Protocol, Server SIP, Server H.323, Tel Number, FXS/FXO/E1 Group, E1 Trunk, DTMF/CODEC, Dial Plan/Prefix, Static Route, Hot Line), Advanced (Gain, Fax, Service, Filtering, Security, SNMP), and Miscellaneous (Call Status, System Status, Alarm Status, Call Log, System Log, Test Call, Ping). At the top right is a 'Tool Bar' with icons for system update, configuration, backup, initialization, restart, and telnet. The central 'Workspace' displays 'System Information' as a table:

HW Version	2.0
SW Version	ap1800k_web_g2_v8_47T.bin 8.47
MAC Address	0002.a511.2245
VoIP Protocol	SIP
Voice Interface Module	S(4)O(4) : E1(2)
Registration Status	Unregistered
Supported Codec List	g711alaw g711ulaw g7231r53 g7231r63 g726r32 g729
Network Information	Static 172.16.50.114
WAN LINK Status	100Mbps FULL Duplex Link UP
LAN LINK Status	Link Down
Current Time	Thu Oct 1 13:06:23 2009
System Startup Time	Thu Oct 1 12:56:46 2009
System Running Time	0 days 00:09:37
Total Calls	0

On the right, the 'Information' panel shows system details: AddPac Tehonology, Model: AP1800K\_G2, HW Version: 2.0, SW Version: 8.47, Smart Web Version: 0.3, Smart Web Build: Oct 1 2009, Voice Interface S(4)O(4) : E1(2), Protocol: SIP, Status: Unregistered, CurrentCalls: 0 Call, Network: Static 172.16.50.114, Mac Address: 0002.a511.2245. Below it, the 'Description' panel provides help text for WAN port settings.

©AddPac Tehonology 2008-2009. all rights reserved.



# Smart Web Manager : SIP Server (Example)

**Smart Web Manager**  
www.addpac.com

**SIP (Session Initiation Protocol)**

Use SIP Server  Yes  No

Primary SIP Server   Server address (IP or Domain Name) and Port (default 5060)

Secondary SIP Server   Server address (IP or Domain Name) and Port (default 5060)

Local Domain name  (SIP userpart of authentication)

SIP Signaling Port  (default 5060, between 1 to 65535)

Register Expiration  (in seconds, default 60, between 10 to 86400)

Session Re-Fresh  INVITE  UPDATE

Session Expire Time  (in seconds, default 1800, between 30 to 86400, 0 = disable)

Apply

**SIP Server**  
Primary & Secondary server,  
Local domain name,  
SIP Signaling Port ( **reboot necessary** )  
Timer  
\* register expire  
\* session refresh  
\* session expire

**Information**  
AddPac Technology  
Model : GS1002\_G2  
H/W Version : 2.0  
S/W Version : 8.00d  
Smart Web Version : 0.4  
Smart Web Build : Mar 24 2010  
Voice Interface  
G(2)S(2)  
Protocol : SIP  
Status : Unregistered  
CurrentCalls : 0 Call  
Network : Static 172.16.9.16  
Mac Address : 0002.a400.0000  
Unread Message:  
P0:0(0)  
P0:1(0)

**Description**  
Configure the settings for SIP.  
Contact your service provider  
for the settings

# Smart Web Manager : FXS Extension (Example)

**Port Information**  
voice port type & physical port

**FXS Extension**  
Configure phone-number for using inter-office Preference ( 0 : highest )

**Smart Web Manager**  
www.addpac.com

**System**

- Network Setup
- Language
- NAT
- PPTP
- NTP

**Basic**

- Protocol
- Server SIP
- SIP Registration
- FXS Extension
- GSM Extension

**Advanced**

- Gain & CID
- GSM PINs
- Fax
- Service
- Filtering
- Security
- SNMP
- WEB Callback
- GSM Callback

**Miscellaneous**

- Call Status
- System Status
- Alarm Status
- GSM Status
- Call Log
- System Log
- Ping
- BTS Selection
- GSM BTS Info

**FXS Extension**

**Port Information**

Port	P0	P1	P2	P3
SLOT0	GSM	GSM	FXS	FXS

**FXS Extension Configuration**

Index	Port	Numbers	Preference	HuntStop	Select
0	0/2	1234	0	0	<input type="checkbox"/>

**Information**

AddPac Technology  
Model : GS1002\_G2  
H/W Version : 2.0  
S/W Version : 8.00d  
Smart Web Version : 0.4  
Smart Web Build : Mar 24 2010  
Voice Interface  
G(2)S(2)  
Protocol : SIP  
Status : Unregistered  
CurrentCalls: 0 Call  
Network : Static 172.16.9.16  
Mac Address: 0002.a400.0000  
Unread Message:  
P0:0(0)  
P0:1(0)

**Description**

Set up for using FXS port to extension number (forwarding No)

# Smart Web Manager : Call Status (Example)

**Smart Web Manager**  
www.addpac.com

**System**

- Network Setup
- Language
- NAT
- DTMF

**Call Status**

**Port Status (Analog)**

Slot	Port	Port Group			
		0()	1()	2()	3()
SLOT 0	Status	I	I	I	I
	Select	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="button" value="Unblock"/> <input type="button" value="Block"/>				

Connection State :  (Connected)  (Disconnected || Blocked)

Call State :  (Idle)  (Ring || Dial)  (Called)  (Calling)  (Blocked)

**Call Status**

Port	Direction	Established Time	Calling Number	Called Number	CODEC	Src/Dest. IP

**Information**

AddPac Technology  
 Model : GS1002\_G2  
 H/W Version : 2.0  
 S/W Version : 8.00d  
 Smart Web Version : 0.4  
 Smart Web Build : Mar 24 2010  
 Voice Interface  
 G(2)S(2)  
 Protocol : SIP  
 Status : Unregistered  
 CurrentCalls : 0 Call  
 Network : Static 172.16.9.16  
 Mac Address : 0002.a400.0000  
 Unread Message:  
 P0:0(0)  
 P0:1(0)

**Description**

Verify port status and retrieve the present call information

**Miscellaneous**

- Security
- SNMP
- WEB Callback
- GSM Callback
- Call Status**
- System Status
- Alarm Status
- GSM Status
- Call Log
- System Log
- Ping
- BTS Selection
- GSM BTS Info

**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)



# Thank you!

**AddPac Technology Co., Ltd.**  
Sales and Marketing

Phone +82.2.568.3848 (KOREA)

FAX +82.2.568.3847 (KOREA)

E-mail [sales@addpac.com](mailto:sales@addpac.com)