

GPS NTP Server based Time Synchronization for IP Emergency Call Center



AddPac

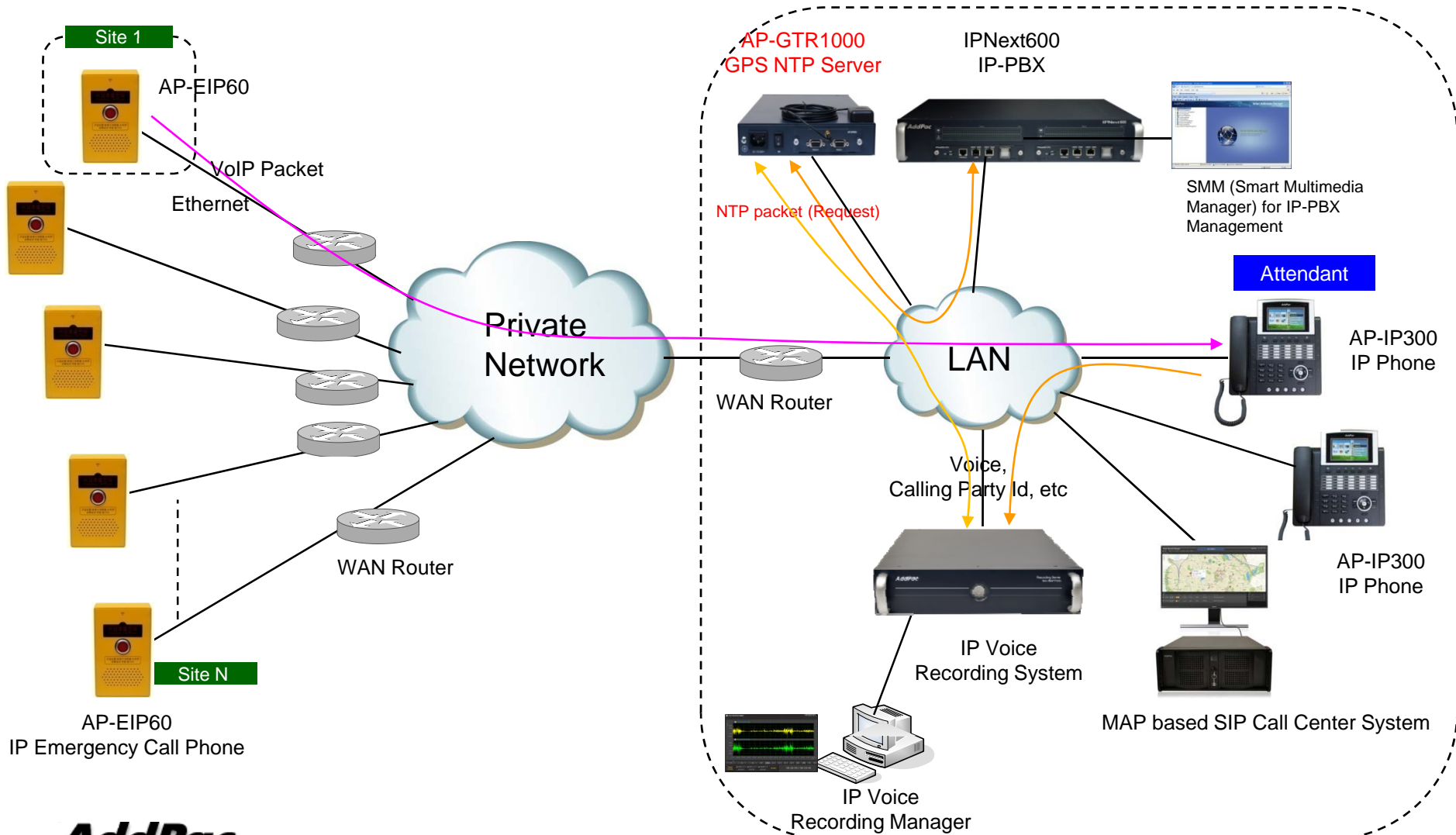
AddPac Technology

Sales and Marketing

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- GPS NTP Server based Time Synchronization

Network Diagram



IP Emergency Call Solution Product Table






MAP based Management System	SIP Call Manager	SIP Emergency Phone	SIP Phone for Call Center	IP Voice Recording Server	GPS based NTP Server
	 <p>IPNext600</p>	 <p>AP-EIP100</p>	 <p>AP-IP300</p>	 <p>AP-NR1500</p>	 <p>AP-GTR1000</p>
		 <p>AP-EIP70</p>	 <p>AP-IP230</p>		
		 <p>AP-EIP60</p>			





Emergency Call IP Phone Solution

(SIP VoIP Standard Signaling Protocol)

Emergency Call IP Phone Comparison Table

Model	AP-EIP100	AP-EIP90	AP-EIP80	AP-EIP70	AP-EIP50
Service Features					
Duplex	Full Duplex (Acoustic Echo Canceller)	Full Duplex (Acoustic Echo Canceller)	Full Duplex (Acoustic Echo Canceller)	Full Duplex (Acoustic Echo Canceller)	Full Duplex (Acoustic Echo Canceller)
Key Pad	3x4 Key Support	N/A	N/A	N/A	N/A
Handset	Support	N/A	N/A	N/A	N/A
Voice Codec	G.711/G.726/ G.729/G.723	G.711/G.726/ G.729/G.723	G.711/G.726/ G.729/G.723	G.711/G.726/ G.729/G.723	G.711/G.726/ G.729/G.723
Signaling	SIP	SIP	SIP	SIP	SIP
Speaker Phone	Support	Support	Support	Support	Support
LAN Port	1	1	1	1	1
PoE(Optional)	Support	Support	Support	Support	Support
Application	Indoor	Outdoor(water resistance)	Outdoor(water resistance)	Outdoor(water resistance)	Indoor

Emergency Call IP Phone Comparison Table

Model	AP-EIP60	AP-EIP60L
Service Features		
Duplex	Full Duplex (Acoustic Echo Canceller)	Full Duplex(Acoustic Echo Canceller)
Key Pad	N/A	N/A
Handset	N/A	N/A
Voice Codec	G.711/G.726/G.729/G.723	G.711/G.726/G.729/G.723
Signaling	SIP	SIP
Speaker Phone	Support (Internal SPK.Watt is comparative large for Outdoor Env.)	Support
LAN Port	1	1
PoE(Optional)	Support	Support
Chassis	Die-Casting Steel Frame Chassis(Optional) Front, Back (Steel)	Front Panel (Steel)
Application	Outdoor(water resistance)	Indoor

GPS based Embedded NTP Server for Time Sync. AP-GTR1000



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- Product Overview
- Hardware Specification
- Simple NTP (Network Time Protocol)
- Network Diagram



Product Overview

AP-GTR1000 IP based GPS Time Receiver Terminal

- High Performance GPS Time Receiver Terminal Solution
- IP based GPS Time Receiver (Location Free, etc)
- NTP (Network Time Protocol) Sever Solution
- Dual RS232 Port for GPS Time Information Transmission
- LCD Display for GPS Time Information
- External Antenna Interface Support
- Various Antenna Support for GPS Signal
- Blue LAMP for Device Status
- Smart Web Manager for System Configuration & Management
- Window, Linux Simple Socket API Program Support
- Firmware Upgradeable Architecture
- Broadcasting Solution with Outstanding Network Service Capability

Hardware Specification

AP-GTR1000 IP based GPS Time Receiver Terminal

RISC
CPU

High-end
GPS

- RISC Microprocessor Computing Power
- High-end GPS Module Hardware Architecture
- One(1) Module Slot for GPS Module
- LCD Display at Front Side
- Blue LAMP
- One(1) 10/100Mbps Fast Ethernet Interface
- Dual(2) DB-9 RS232C Interface
- Internal Power Supply
- Rack Mount Bracket (Option)
- GPS Antenna (Option)
- Option Module : AP-GPS-RS232
 - Two(2) DB-9 RS232C Interface Port
 - GPS Antenna Interface Port

Hardware Specification

AP-GTR1000 IP based GPS Time Receiver Terminal

RISC
CPU

High-end
GPS

Front Side



One(1) 10/100Mbps
LAN

RS232C Console

Status LCD

On-Air Blue LAMP
& Switch

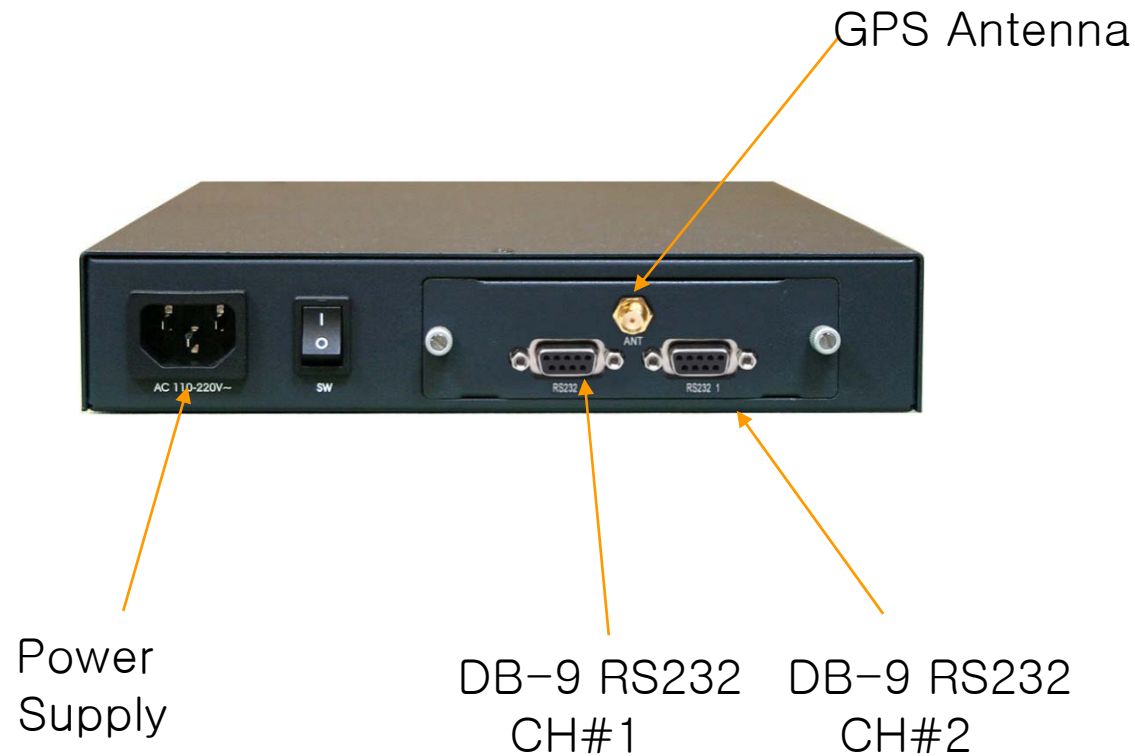
Hardware Specification

AP-GTR1000 IP based GPS Time Receiver Terminal

RISC
CPU

High-end
GPS

Back Side



Hardware Specification

AP-GTR1000 IP based GPS Time Receiver Terminal

RISC
CPU

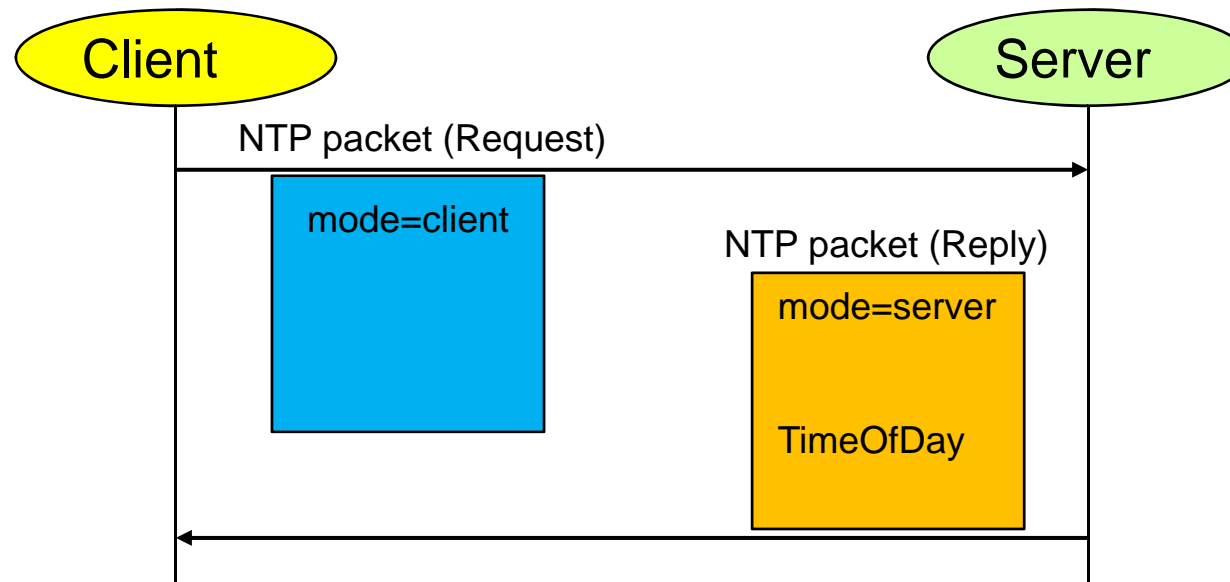
High-end
GPS

GPS Antenna

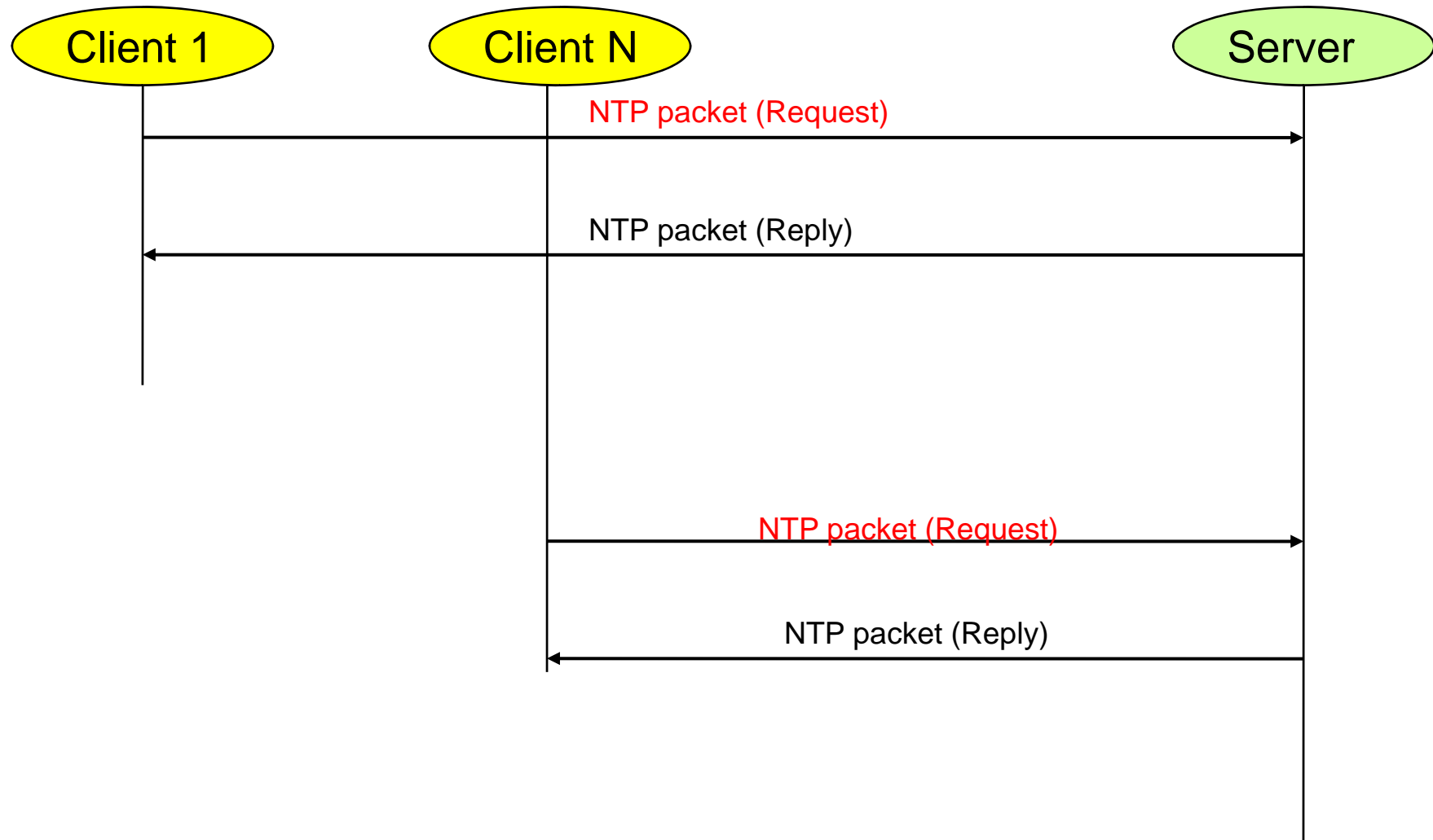


SNTP (Simple Network Time Protocol)

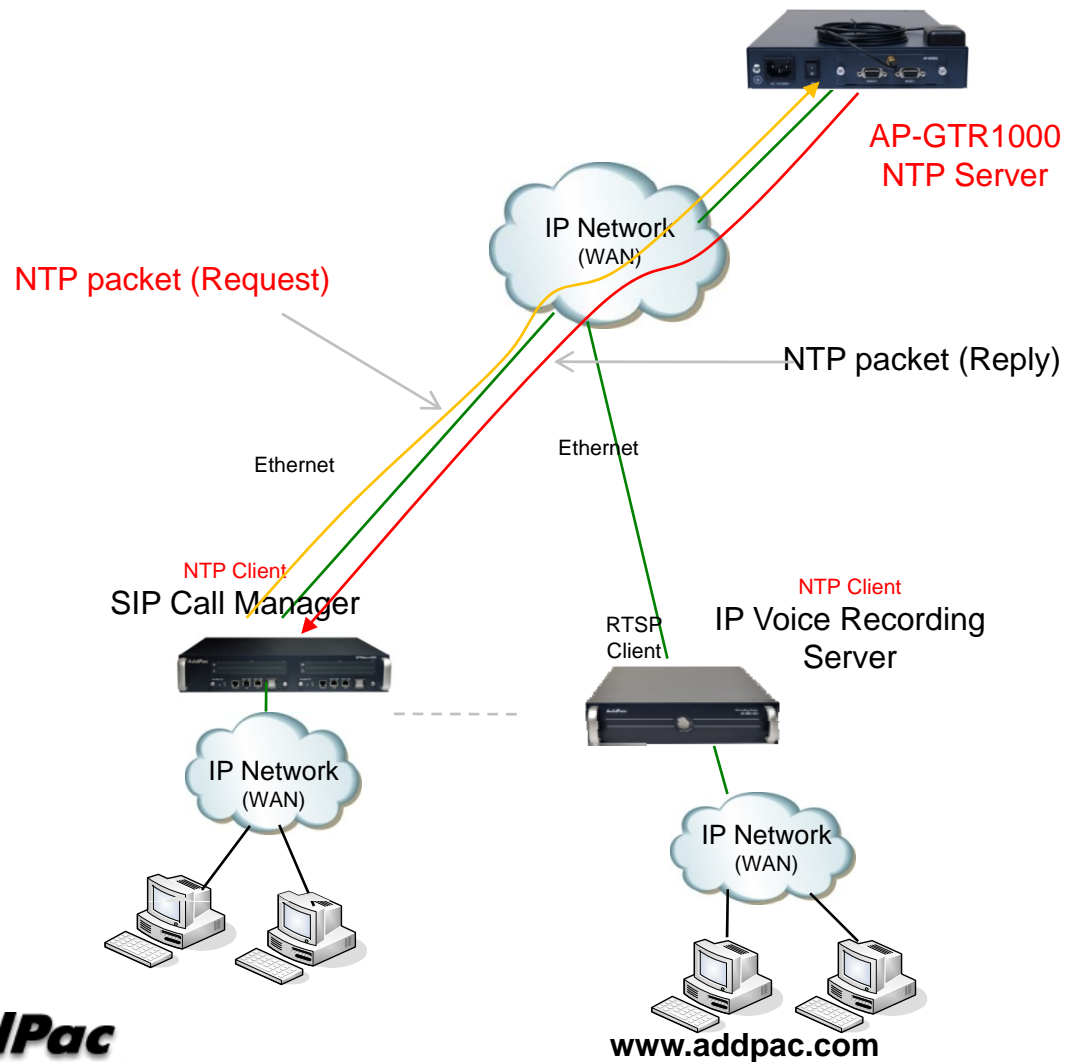
- Transport : UDP (port number 123)
- Protocol Version : 4
- Client/Server Mode



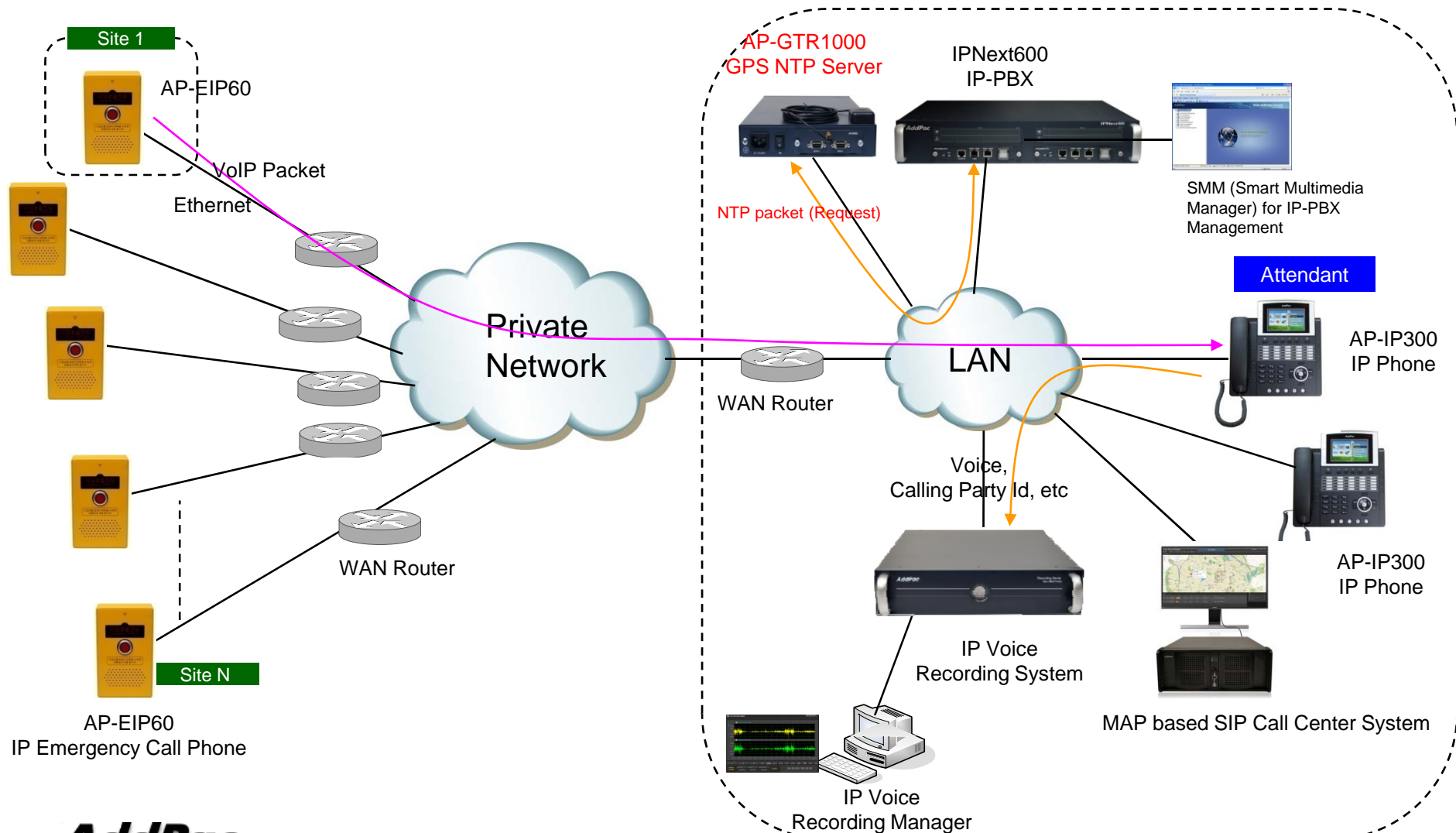
SNTP (Simple Network Time Protocol)




SNTP (Simple Network Time Protocol)



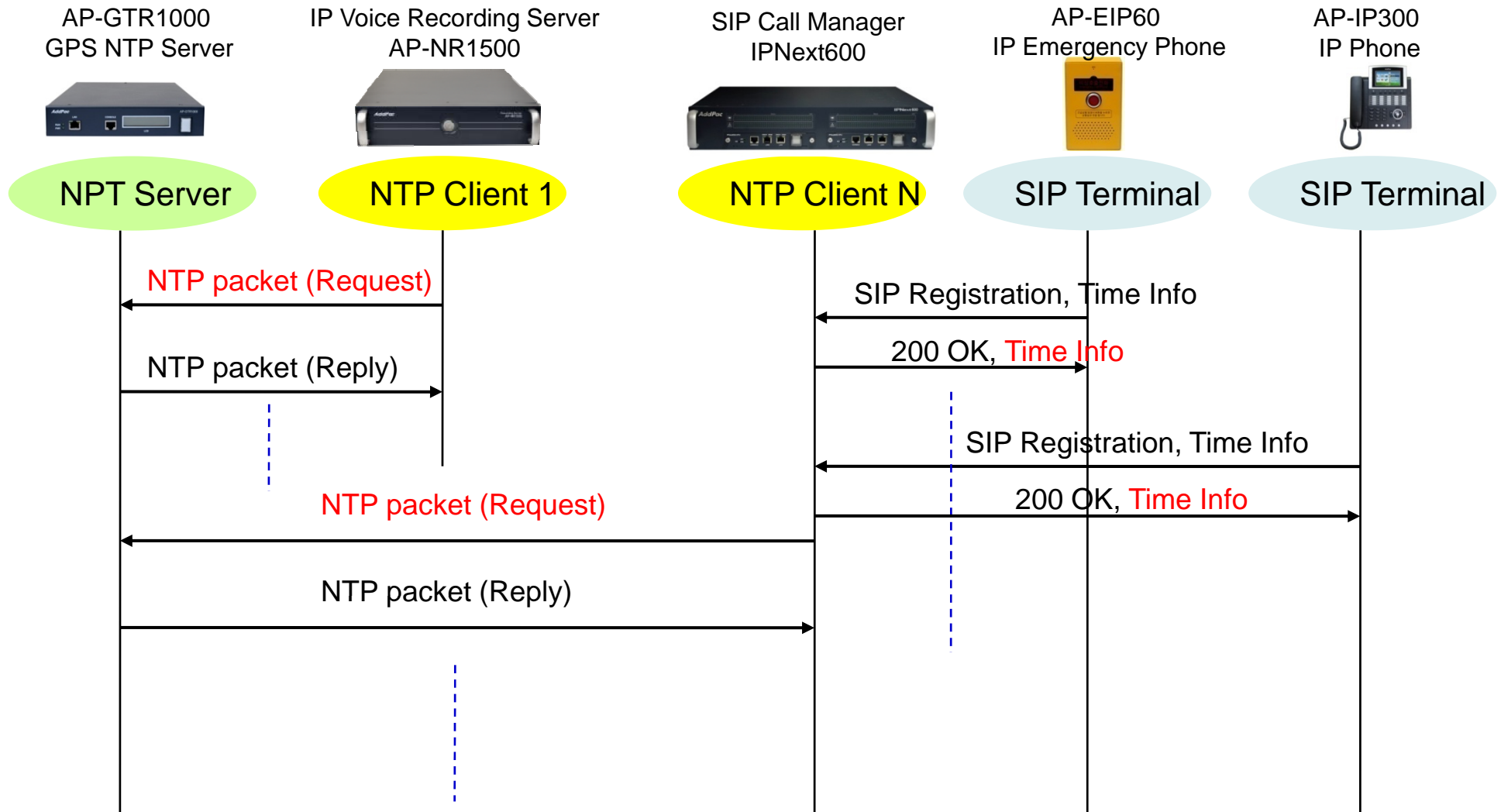
Network Diagram



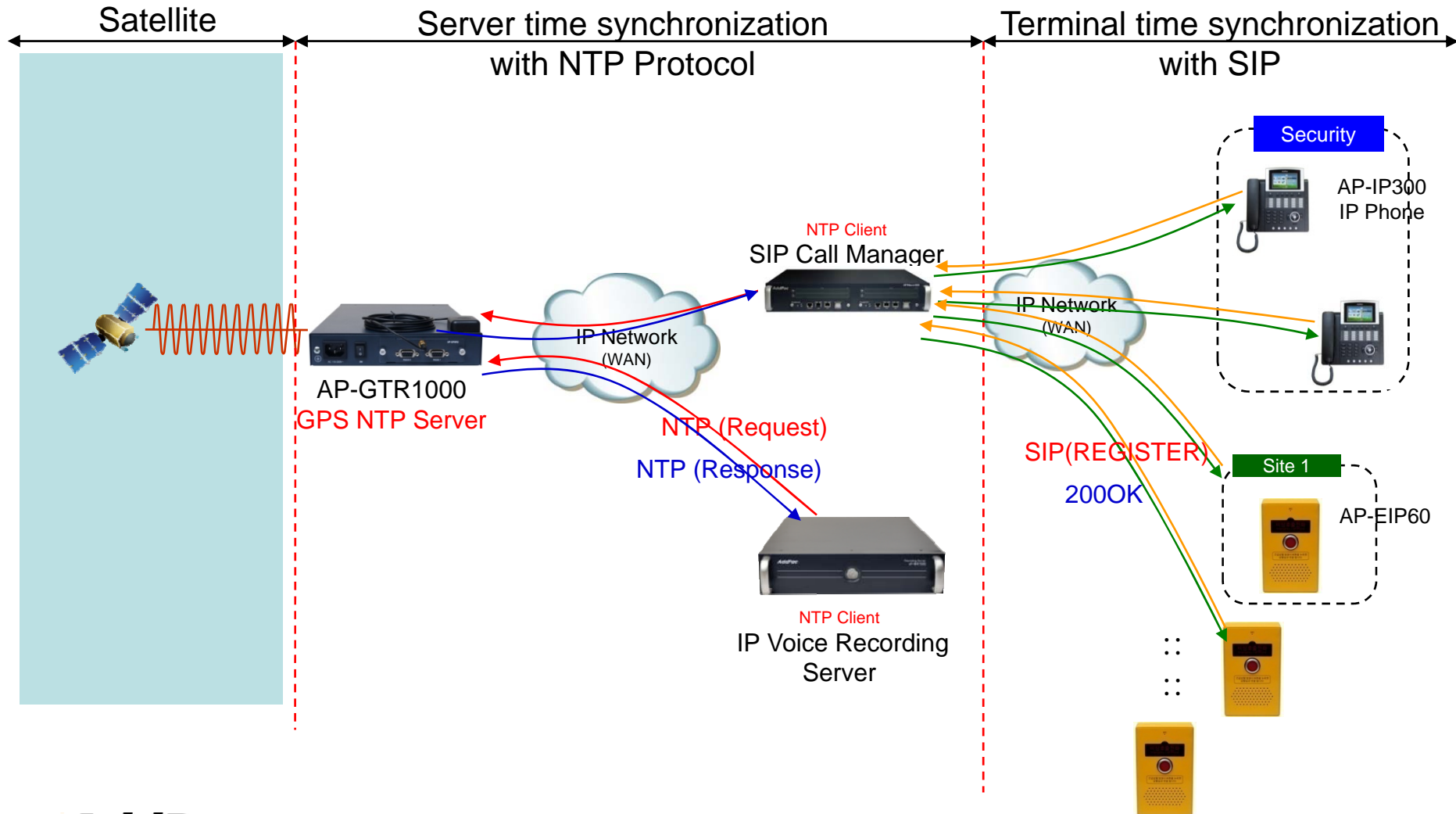


GPS NTP Server based Time Synchronization

GPS Time Synchronization (NTP -> SIP Message)



GPS Time Synchronization (Network Service Diagram)



SIP Message (REGISTER, 200 OK)

Sending SIP PDU to (172.17.50.207:5060) from 5060
REGISTER <sip:172.17.50.207> SIP/2.0
Via: SIP/2.0/UDP 172.17.63.228:5060;branch=z9hG4bK2f5af100a412199;rport
From: <sip:1004@172.17.50.207>;tag=2f5af100a4
To: sip:1004@172.17.50.207
Call-ID: 2fb20d5a-e91e-f167-8000-0002a404bc88@172.17.63.228
CSeq: 12199 REGISTER
Date: Thu, 23 Nov 2017 10:10:58 GMT
User-Agent: AddPac SIP Gateway
Contact: <sip:1004@172.17.63.228>;expires=60
Expires: 60
Content-Length: 0
Max-Forwards: 70

SIP/2.0 200 OK
Via: SIP/2.0/UDP
172.17.63.228:5060;branch=z9hG4bK2f5af100a412200;rport=5060
From: <sip:1004@172.17.50.207>;tag=2f5af100a4
To: sip:1004@172.17.50.207
Call-ID: 2fb20d5a-e91e-f167-8000-0002a404bc88@172.17.63.228
CSeq: 12200 REGISTER
Date: Thu, 23 Nov 2017 10:10:58 GMT
User-Agent: AddPac SIP Gateway
Contact: <sip:1004@172.17.63.228>;expires=60
Expires: 60
Content-Length: 0



Thank you!

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