

# Hybrid IP-PBX Series

## FXO Service Features



IPNext180

**AddPac**

AddPac Technology

Sales and Marketing

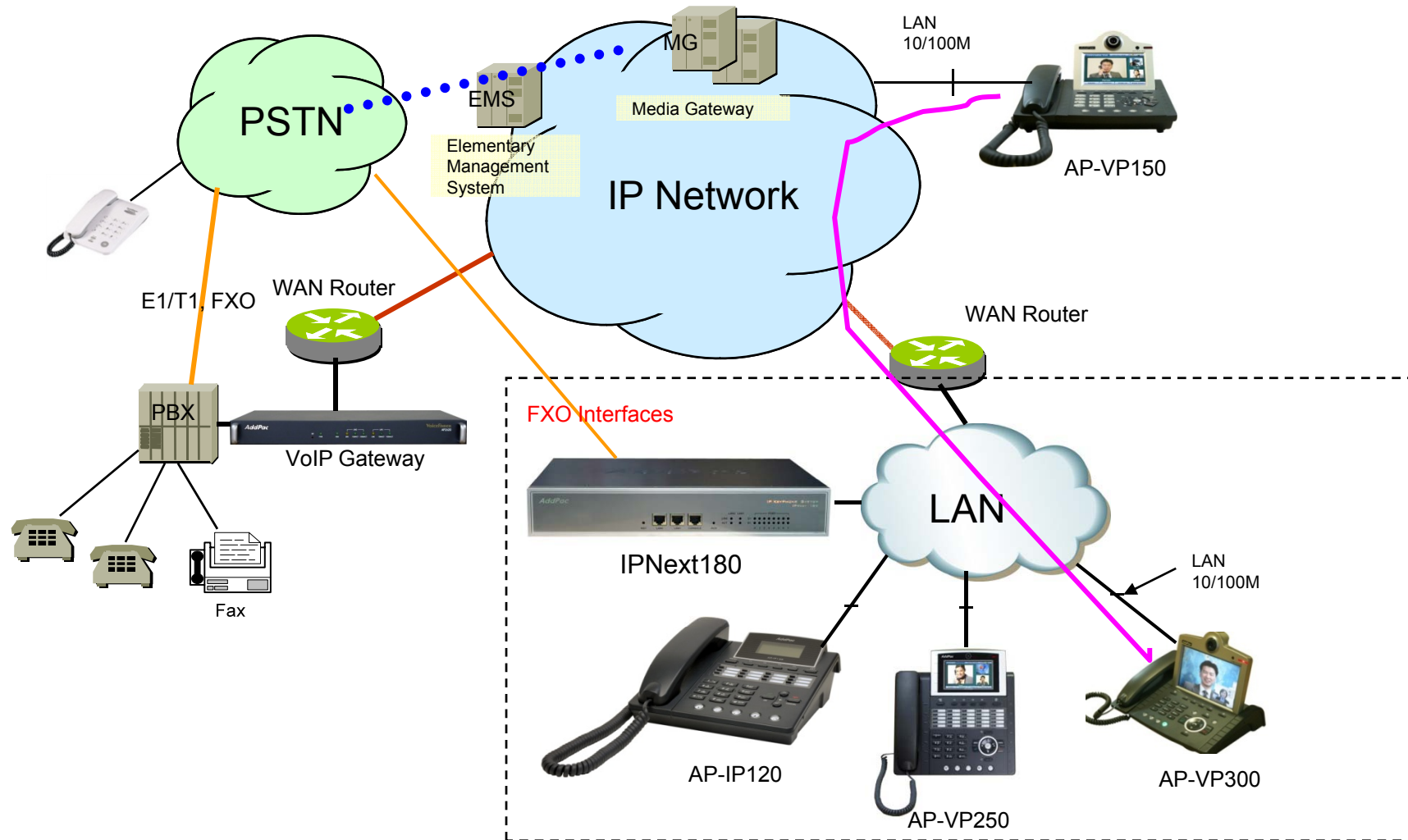
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  - Ring number and detect timing



IPNext50




# Network Diagram for FXO Call









# FXO Service Feature List

FXO Service Features	Polarity inverse detection function
	Caller-ID detection function
	PSTN backup or busy-out function with hook off in case of power down
	Clear down tone registration and detect function
	Hook flash timing setting function
	Ring detect timeout setting function
	Ring number setting function
	Voice-confirmed connect function

# IPNext SOHO IP-PBX Comparison Table



Model		IPNext100	IPNext50	IPNext20
Service Features				
Registration User Number		50	30	10
Concurrent Call User Number		20	15	5
IPv4/IPv6 Dual Stack Support		Support	Support	Support
VoIP Signaling	Internal	SIP	SIP	SIP
	External	H.323/SIP	H.323/SIP	H.323/SIP
Powerful IVR, UMS, Media Service, User Presence Service		Support	Support	Support
RTP Proxy Service (IPv6, Private IP)		Support	Support	Support
LAN Port		2	2	2
USB Interface		Support	Support	Option
FXO, FXS Interface		Option	Option	Option

# Hybrid IP-PBX Comparison Table

Model		IPNext250	IPNext230	IPNext210	IPNext190	IPNext187	IPNext180
Service Features							
Registration User Number		200	200	150	150	150	100
Concurrent Call User Number		100	60	50	50	50	30
IPv4/IPv6 Dual Stack Support		Support	Support	Support	Support	Support	Support
VoIP Signaling	Internal	SIP	SIP	SIP	SIP	SIP	SIP
	External	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP
Powerful IVR, UMS, Media Service, User Presence Service		Support	Support	Support	Support	Support	Support
RTP Proxy Service (IPv6, Private IP)		Support	Support	Support	Support	Support	Support
LAN Port		2	2	2	2	2	2
VoIP Module Slots for PSTN		10 Slots (8 Port Module)	15 Slots (4 Port Module)	4 Slots (8 Port Module)	4 Slots (8 Port Module)	3 Slots (8 Port Module)	2 Slots (8 Port Module)
VoIP Interface		FXS, FXO, E1/T1	FXS, FXO, E&M, E1/T1	FXS, FXO, E&M, E1/T1	FXS, FXO, E1/T1	FXS, FXO, E1/T1	FXS, FXO, E1/T1





# FXO VoIP Modules

DSP

Target	VoIP Modules	Module Features	Module Picture
IPNext180 IPNext187 IPNext190 IPNext250	<b>AP-N1-FXO8</b>	8-Port FXO Module	
IPNext180 IPNext187 IPNext190 IPNext250	<b>AP-N1-FXS4O4</b>	4-Port FXS&4-Port FXO Module	

# FXO VoIP Modules

DSP

Target	VoIP Modules	Module Features	Module Picture
IPNext230	<b>AP-FXO4</b>	4-Port FXO Module	
IPNext230	<b>AP-FXS202</b>	2-Port FXS&2-Port FXO Module	
IPNext210	<b>AP-FXO8</b>	8-Port FXO Module	
IPNext210	<b>AP-FXS404</b>	4-Port FXS&4-Port FXO Module	



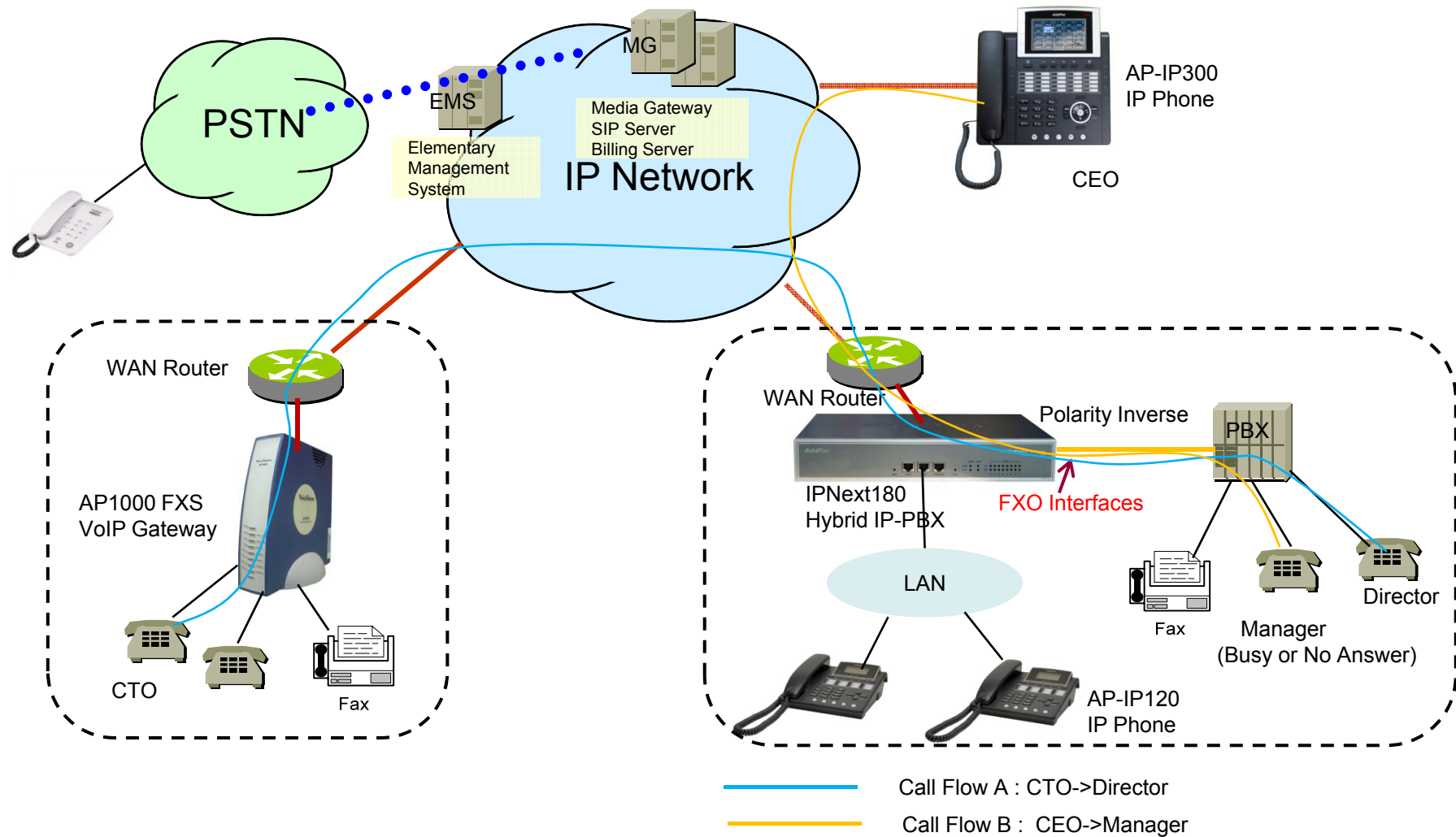
# Polarity Inverse Detection Function

- Polarity inverse detection function
  - The FXO port detects the polarity inverse signal coming from Legacy PBX
  - When there is an incoming VoIP call via the FXO port to Legacy PBX, the gateway sends call connect message to Softswitch after detecting the polarity inverse signal on the FXO port.
  - Using Polarity Inverse Signal, a accurate billing service is available.

## When polarity inverse function is enabled

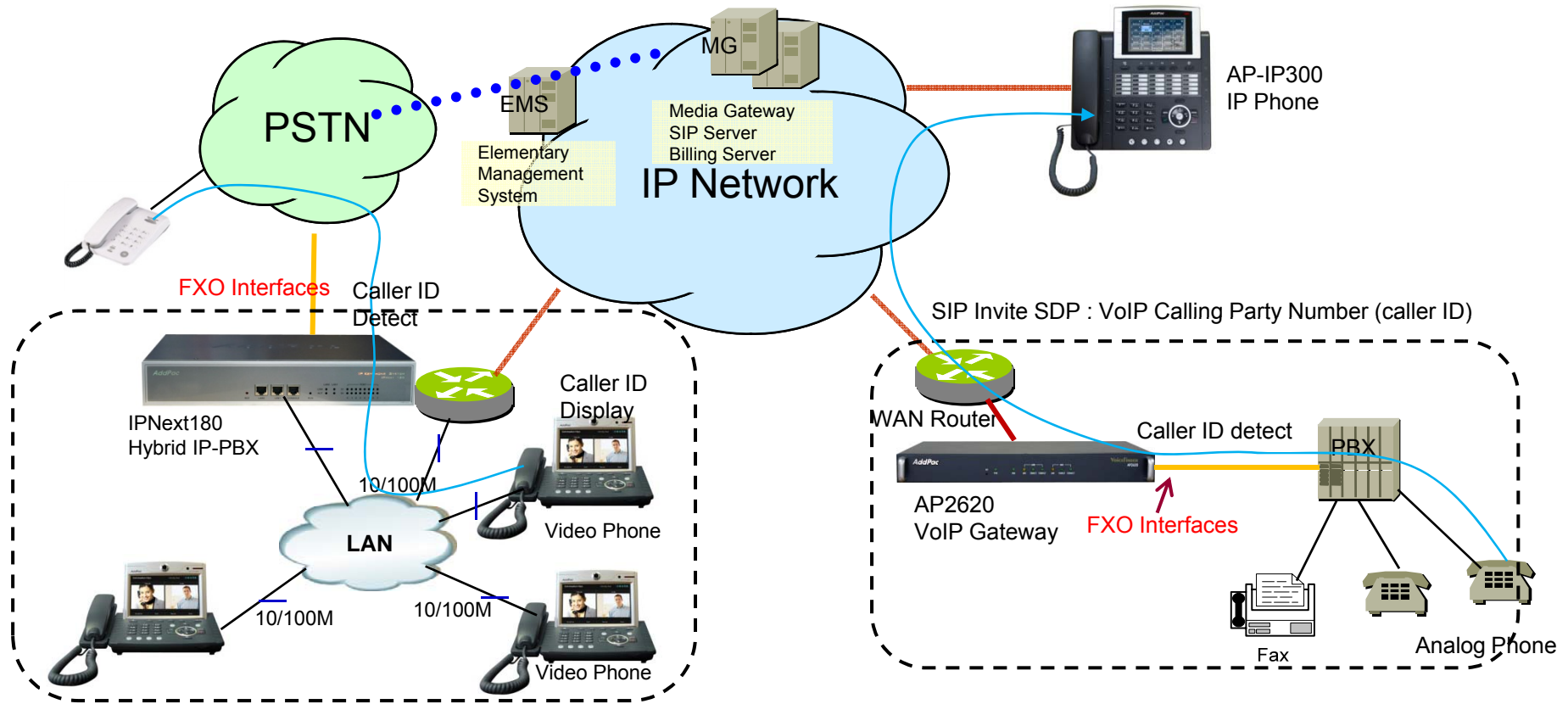
- In case of A flow, Billing is start when the director hooks off.
- In case of B flow, Billing is not start because manager port is busy or no answer

# Polarity Inverse Detection Function



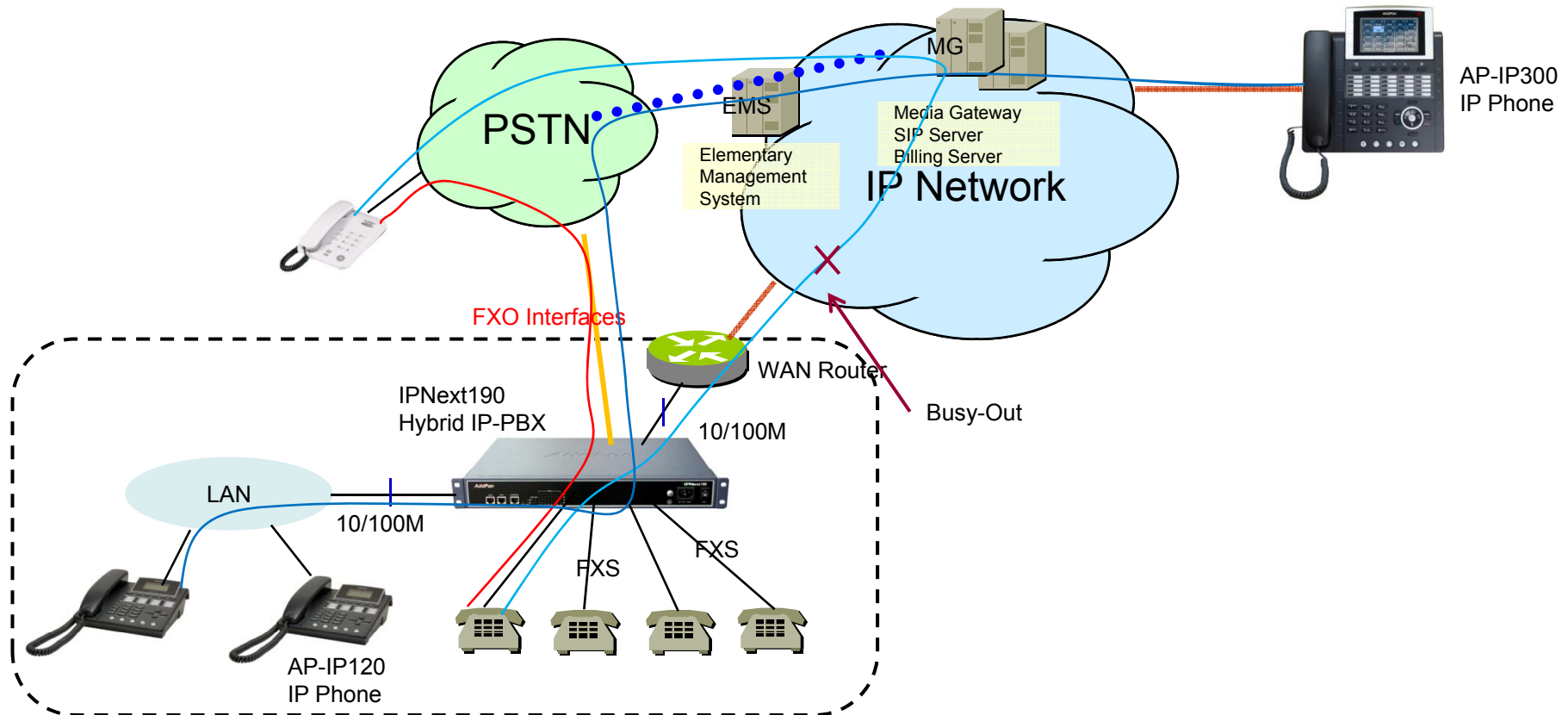
# Caller ID Detect Function

- Caller-ID detection function
  - The FXO port is connected to PSTN or PBX, and is able to detect Caller-ID.
  - When a VoIP call is originated from the FXO port, the FXO port detects the caller-ID and uses the number as the VoIP calling party number.



# PSTN backup or busy-out function

- PSTN backup or busy-out function
  - VoIP call can not be made when the gateway is in busy out state. User can be communicated continually using PSTN backup function.
  - Busy Out State : LAN interface is down, Softswitch is down, etc



# FXO Service Description

Features	Description
Voice-confirmed connect function	When FXO port is connected to PBX extension and the subscriber does take the call, connect message is not sent to sender side and billing is not included.
Ring number setting function	Use this command to set the maximum number of rings to be detected before answering a call over an FXO voice port. In that case, the FXO interface would answer if the equipment online did not answer the incoming call in the configured number of rings.
Clear down tone registration and detect function	Clear-down-tone detects call termination of FXO port connected to and generated from PSTN or PBX. The value of clear-down-tone (busy tone, fast busy tone) is different for each PSTN and PBX. So use voice class clear-down-tone for registration process in global configuration mode.
Hook flash timing setting function	Different from call-transfer, you need to press hook-flash button twice for conference call. Basically, it takes 500 ms (0.5 sec) to recognize hook-flash button from the AddPac gateway. If you think 500ms (0.5 sec) is too short, you can change hook-flash detect timeout value when hook-flash duration time of PBX is more than 500ms.



# 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)