AddPac IP/Video Phone Series

Paging, Intercom & BLF(Busy Lamp Field) function for Asterisk PBX

AddPac Technology

2011, Sales and Marketing

Contents

Paging and Intercom with Asterisk PBX

- Paging and Intercom

✓ On legacy phone systems you can find the following kinds of paging:

- Dial a code to connect to a separate overhead paging and announcement system (like in an airport)
- Dial a code and connect directly to a built-in one-way announcement speaker on one or more phones.
- Dial a code and connect directly to a built-in two-way announcement and talkback function on one or more phones

✓ Asterisk IP-PBX supports Paging and Intercom functions as follows.

- New in Asterisk 1.2: The new dial-plan command Page utilizes MeetMe to page one or more phones.
- New in Asterisk 1.8: A new RTP engine and channel driver have been added which supports Multicast RTP.

The channel driver can be used with the Page application to perform multicast RTP paging.
The dial string format is:
MulticastRTP/<type>/<destination>/<control address>

✓ All AddPac's IP-Phone series & VP-Phone series support Paging and Intercom function.

SIP Protocol for Paging and Intercom

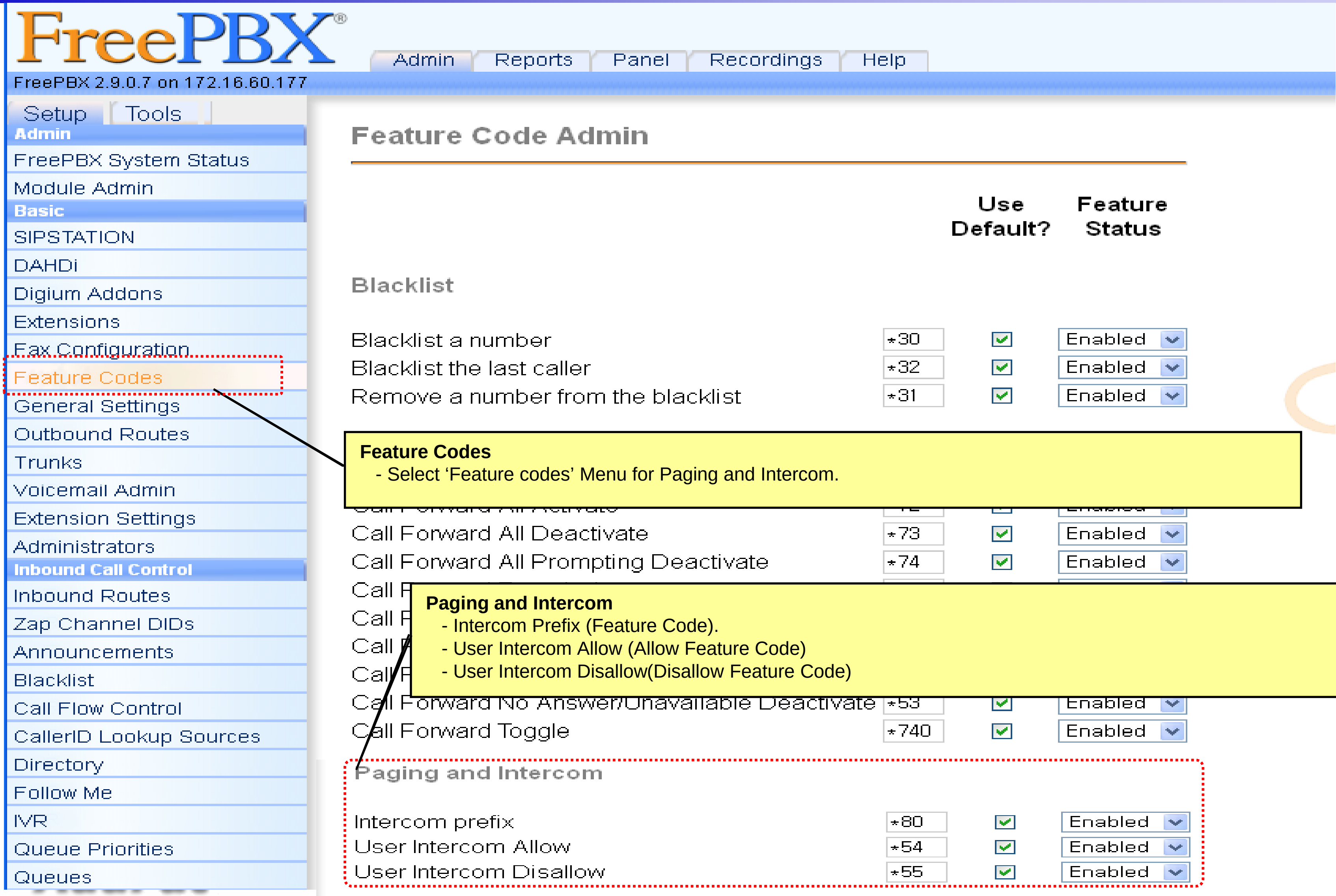
- SIP MIME Header for Paging and Intercom

  Call-Info: <uri>;answer-after=0
  Alert-Info: Ring Answer

AddPac IP-Phone will automatically answered a call with a ring when the call contains SIP header “Call-Info: answer-after=0”.

And when the call hung up by the remote party, the phone will automatically on hook without alerting user with disconnect busy tones.

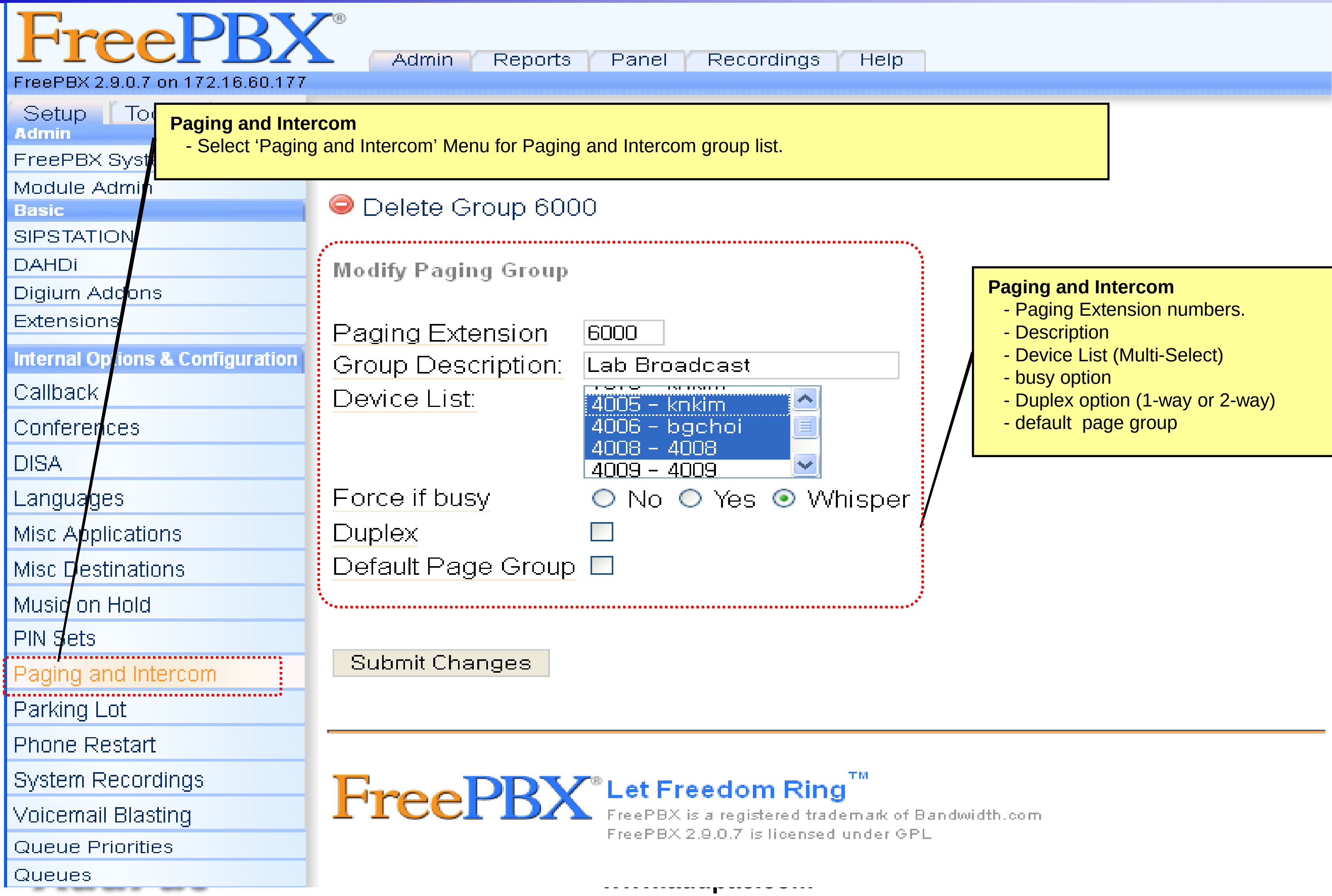
FreePBX Intercom Configuration



Feature Codes
- Select 'Feature codes' Menu for Paging and Intercom.

Paging and Intercom
- Intercom Prefix (Feature Code).
- User Intercom Allow (Allow Feature Code)
- User Intercom Disallow(Disallow Feature Code)

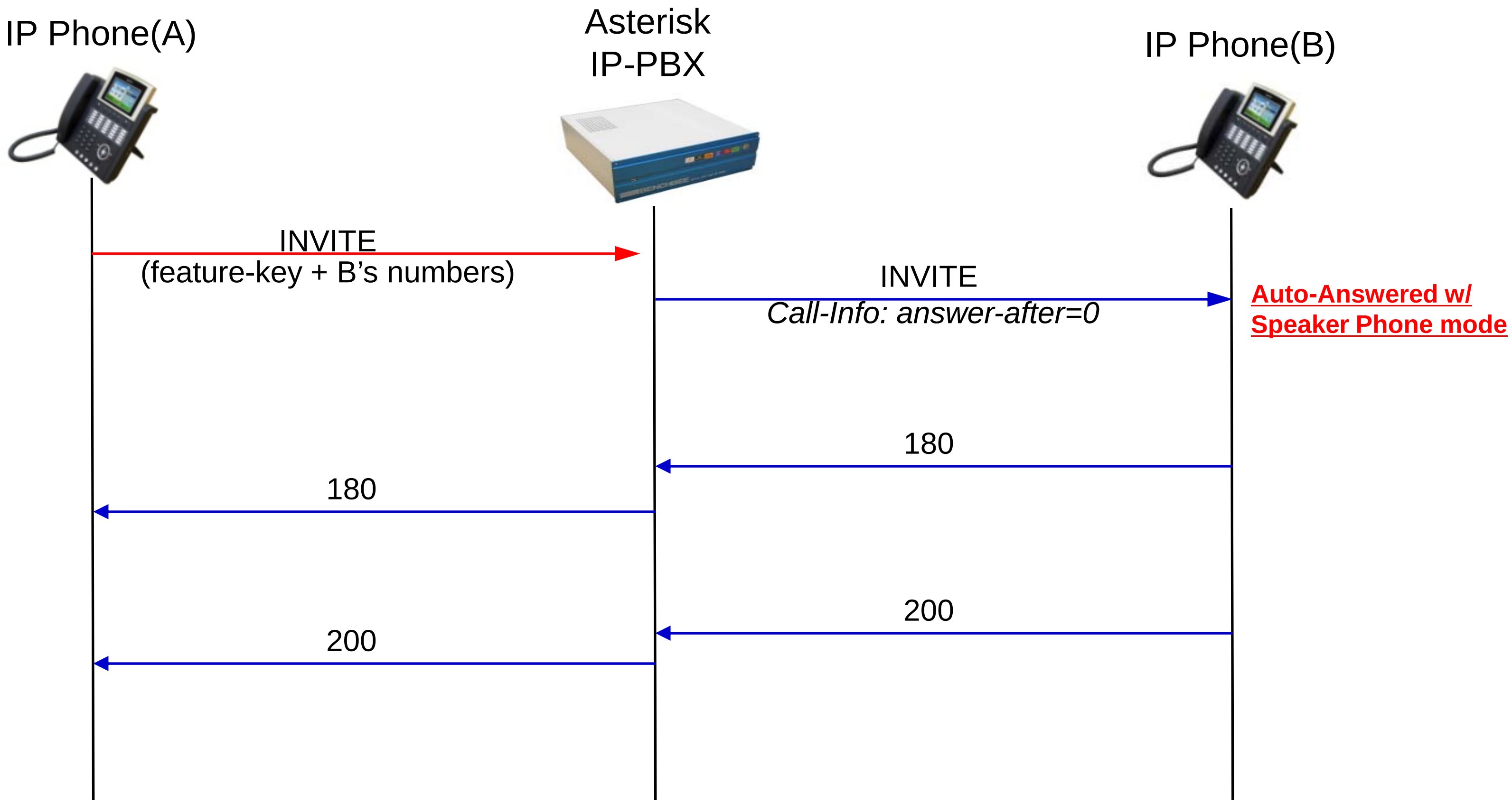
FreePBX Paging Configuration



Paging and Intercom
- Select 'Paging and Intercom' Menu for Paging and Intercom group list.

Paging and Intercom
- Paging Extension numbers.
- Description
- Device List (Multi-Select)
- busy option
- Duplex option (1-way or 2-way)
- default page group

Paging and Intercom Message Flow Example



BLF Service Diagram

BLF IP-Phone Example (1/2)

AP-IP300
IP Phone

BLF IP-Phone Example (2/2)

- BLF (Busy Lamp Field)

The Busy Lamp Field (BLF) feature allows you to program a key that monitors whether or not another user is on a call.

The BLF Key also acts as a Speed Dial key to the monitored user's number, and as a Call Pickup key on behalf of the monitored user.

The appearance of the LED indicator for the BLF key is as follows:

Line Status	BLF Indicator	Description
Idle (On hook)	Off	The user being monitored is not on a call, nor dialing a call. The BLF key can be used as a speed dial key to the monitored user.
Off hook/Outgoing call	Solid Red	The monitored user is in the process of placing a call. The BLF key can be used as a speed dial key to the monitored user.
Incoming call	Flashing Red	A call is incoming for the monitored user. Press the BLF key to pick up the call on behalf of the monitored user.
Connected call	Solid Red	The incoming call has been answered by the monitored user. The BLF key can be used as a speed dial key to the monitored user.

BLF Protocols

- RFC 4235 – Dialog Event Package

  RFC 4235 defines the mechanism for an endpoint to subscribe to the state of any dialog involving another endpoint. RFC 4235 is an instantiation of the SIP Specific Event Notification Framework (RFC 3265) and defines the dialog event package. It also defines the behavior of the device (subscriber) and the Application Server in the context of subscriptions to the dialog event package.

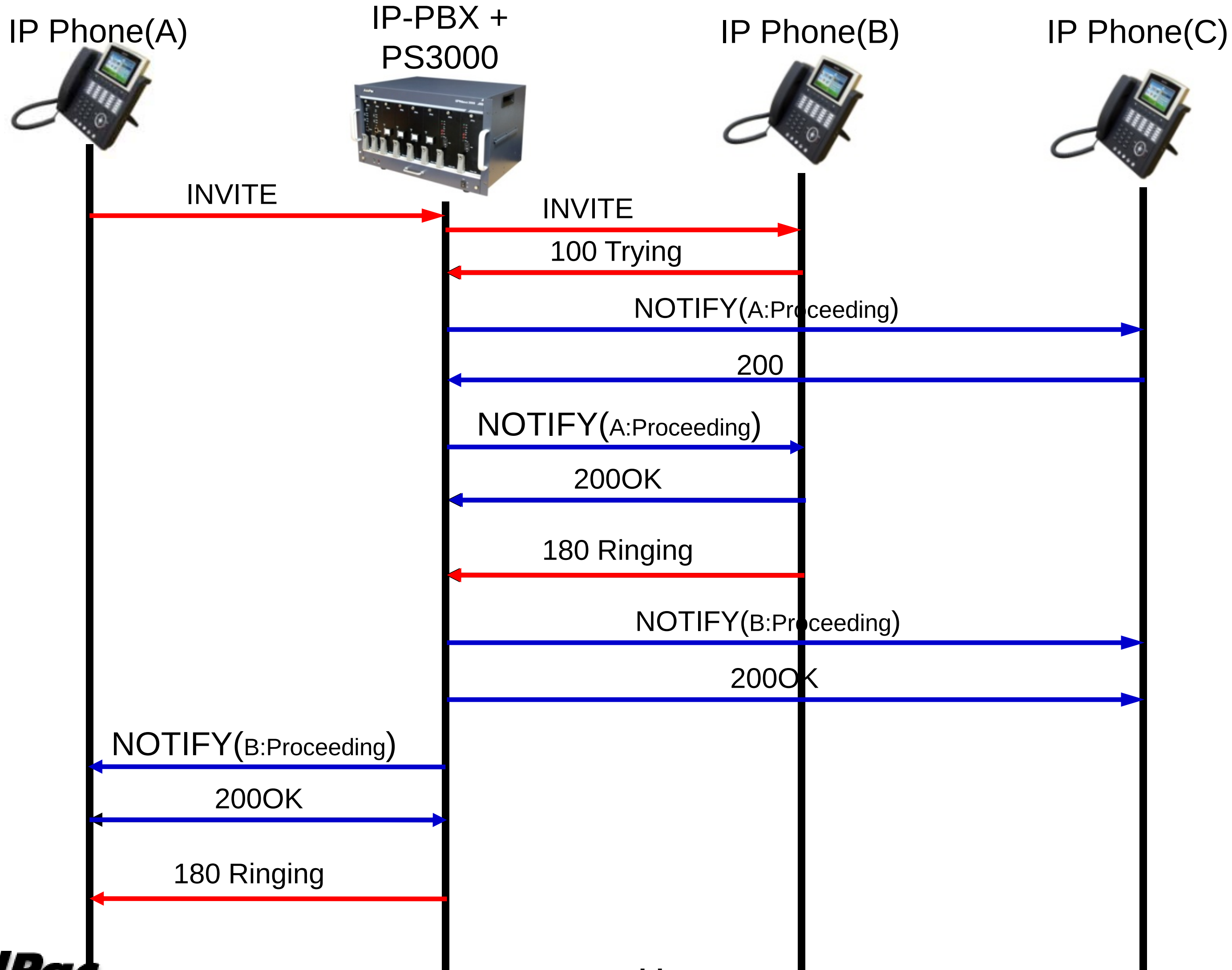
- RFC 4662– Resource Lists

  RFC 4662 defines an aggregating mechanism that allows for subscribing and notifying for a list of resources. This is useful in the context of the Attendant Console application whether the device needs to subscribe to a large number of resources.

- Compatibility

  - AddPac IP-PBX
  - Asterisk IP-PBX
  - BroadWorks IP-PBX

BLF Message Flow Example



IP Phone Comparison Table

	AP-IP300	AP-IP230	AP-IP160	AP-IP120	AP-IP90
					
LCD Size	4.3 Inch Color LCD	5 Inch Color LCD	4 Text Line Graphic LCD	4 Text Line Graphic LCD	4 Text Line Graphic LCD
Touch Screen	N/A	Support	N/A	N/A	N/A
Speed-Dial Keys	25 Key with Presence LED	Touch Screen based 25 Keys	16 Key with Presence LED	12 Key with Presence LED	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	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP
3-Party Conversation	Support	Support	Support	Support	Support
LAN Port	2	2	2	2	2
PoE(Option)	Support	Support	Support	Support	Possible
FXO(Option)	Support	Support	Support	Support	Support

IP Video Phone Comparison Table

	AP-VP500	AP-VP300N	AP-VP280	AP-VP250	AP-VP230	AP-VP120
						
LCD Size	12.1 Inch Touch Screen	7Inch Touch Screen	7Inch Touch Screen	4.3Inch Touch Screen	5Inch Touch Screen	4.3Inch
Camera	CCD	CCD	CMOS	CMOS	CMOS	CMOS
Video Codec	H.263 MPEG4 H.264	H.263 MPEG4 H.264	H.263 MPEG4 H.264	H.263 MPEG4 H.264	H.263 MPEG4 H.264	H.263 MPEG4 H.264
Signaling	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP	H.323/SIP
Video MCU	N/A	N/A	N/A	N/A	N/A	N/A
Voice MCU	3-Party	3-Party	3-Party	3-Party	3-Party	3-Party
LAN Port	2	2	2	2	2	2
PoE	N/A	Support	N/A	Support	Support	Support

AP-IP300
IP Phone

IP Phone

AP-IP300 Premium IP Phone

Main Features

- 4.3 Inch Color LCD Display
- 25 Speed-Dial Keys with User Presence LED
- 4 Soft Key for Call Control
- Various Function Keys
- H.323/SIP Concurrent VoIP Signaling Stack Embedded
- High-performance Voice Codec Support
  - G.711/G.726/G.729/G.723, etc
- Two(2) 10/100Mbps Fast Ethernet (IP Share ,etc)
- High Quality Speaker Phone Features (Acoustic Echo Canceller)
- 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

IP Phone

AP-IP300 Premium IP Phone

RISC CPU

High-end DSP

Hardware Specification

- RISC Microprocessor Computing Power
- 4.3 Color LCD
- 25 Speed Dial Keys with User Presence LED
- High-end Programmable DSP Hardware Architecture
- High quality Audio and Voice Interface
  - Stereo Audio Input & Output Connector
- Network Interface
  - Two(2) 10/100Mbps Fast Ethernet
  - One(1) USB 1.0 Interface
- PSTN Interface
  - One(1) FXO(RJ11) interface
- Power Supply
  - *External DC adaptor (5V)*
  - *Power Switch*
  - *PoE (Power over Ethernet)*

IP Phone

AP-IP300 Premium IP Phone

RISC
CPU

High-end
DSP

Hardware Specification

User Presence Information Display

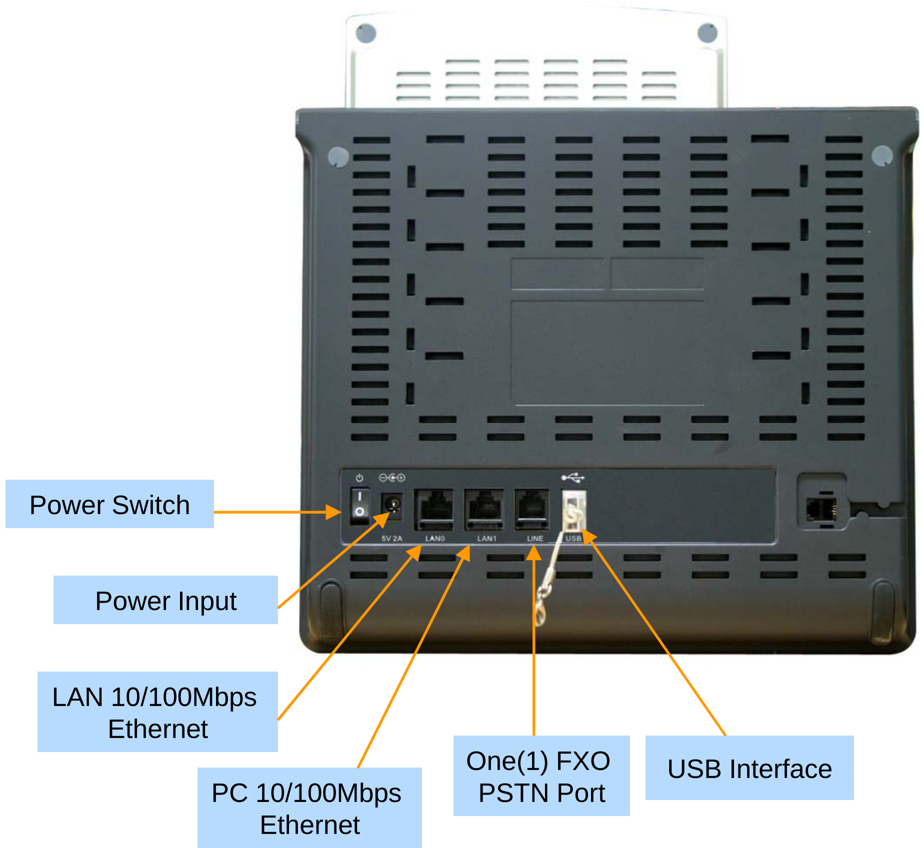
25 Speed-Dial Keys with User Presence LED

IP Phone

AP-IP300 Premium IP Phone

RISC CPU
High-end DSP

Hardware Specification



AP-IP230
IP Phone

IP Phone

AP-IP230 Premium IP Phone

Main Features

- 5 Inch Color LCD Display, Touch Screen
- Touch Screen based 25 Speed-Dial Keys
- 4 Soft Key for Call Control
- Various Function Keys
- H.323/SIP Concurrent VoIP Signaling Stack Embedded
- High-performance Voice Codec Support
  - G.711/G.726/G.729/G.723, etc
- Two(2) 10/100Mbps Fast Ethernet (IP Share ,etc)
- High Quality Speaker Phone Features (Acoustic Echo Canceller)
- 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

IP Phone

AP-IP230 Premium IP Phone

RISC CPU

High-end DSP

Hardware Specification

- RISC Microprocessor Computing Power
- 5 Inch Color LCD with Touch Screen
- High-end Programmable DSP Hardware Architecture
- High quality Audio and Voice Interface
  - Stereo Audio Input & Output Connector
- Network Interface
  - Two(2) 10/100Mbps Fast Ethernet
  - One(1) USB 1.0 Interface
- PSTN Interface
  - One(1) FXO(RJ11) interface
- Power Supply
  - *External DC adaptor (5V)*
  - *Power Switch*
  - *PoE (Power over Ethernet)*

IP Phone

AP-IP230 Premium IP Phone

RISC
CPU

High-end
DSP

Hardware Specification

5 Inch
LCD with Touch
Screen

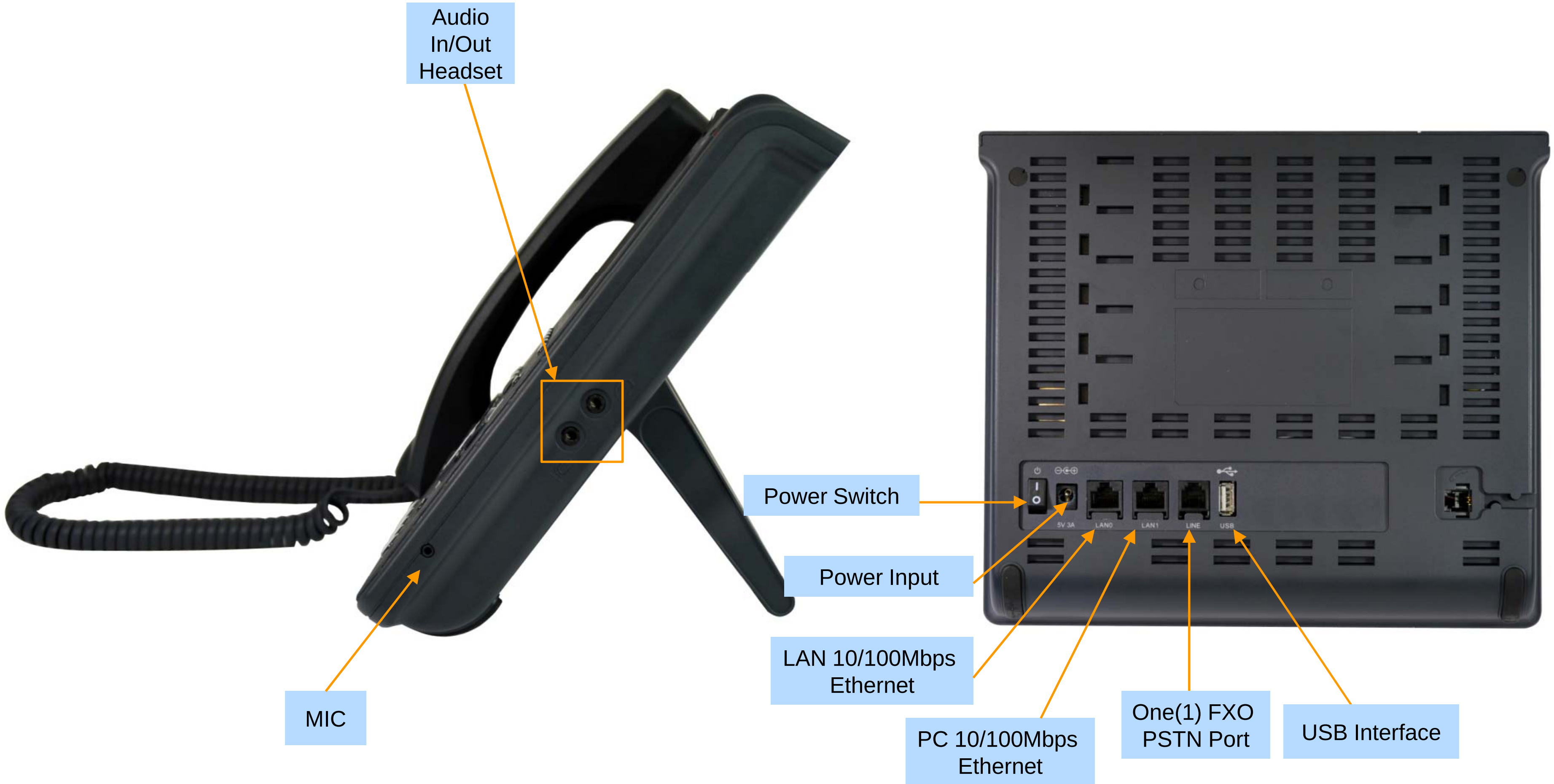
IP Phone

AP-IP230 Premium IP Phone

RISC CPU

High-end DSP

Hardware Specification



AP-IP160
IP Phone

IP Phone

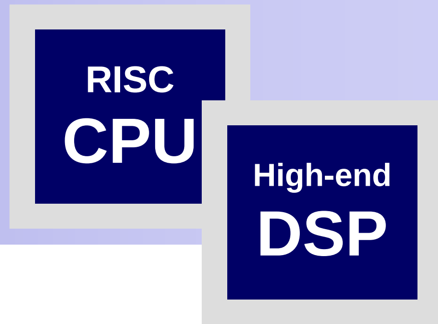
AP-IP160 IP Phone

Main Features

- 4 Text Line Graphic LCD Display
- 16 Speed-Dial Keys with User Presence LED
- 4 Soft Key for Call Control
- Various Function Keys
- H.323/SIP Concurrent VoIP Signaling Stack Embedded
- High-performance Voice Codec Support
  - G.711/G.726/G.729/G.723, etc
- Two(2) 10/100Mbps Fast Ethernet (IP Share ,etc)
- High Quality Speaker Phone Features (Acoustic Echo Canceller)
- 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

IP Phone

AP-IP160 IP Phone



Hardware Specification

- RISC Microprocessor Computing Power
- 4 Text Line Graphic LCD
- Navigation Key for Menu Search
- High-end Programmable DSP Hardware Architecture
- High quality Audio and Voice Interface
  - Stereo Audio Input & Output Connector
- Network Interface
  - Two(2) 10/100Mbps Fast Ethernet
- PSTN Interface
  - One(1) FXO(RJ11) interface
- Power Supply
  - *External DC adaptor (5V)*
  - *Power Switch*
  - *PoE (Power over Ethernet)*

IP Phone

AP-IP160 IP Phone

RISC CPU

High-end DSP

Hardware Specification

4 Text Line Graphic LCD

16 Speed-Dial Keys with User Presence LED

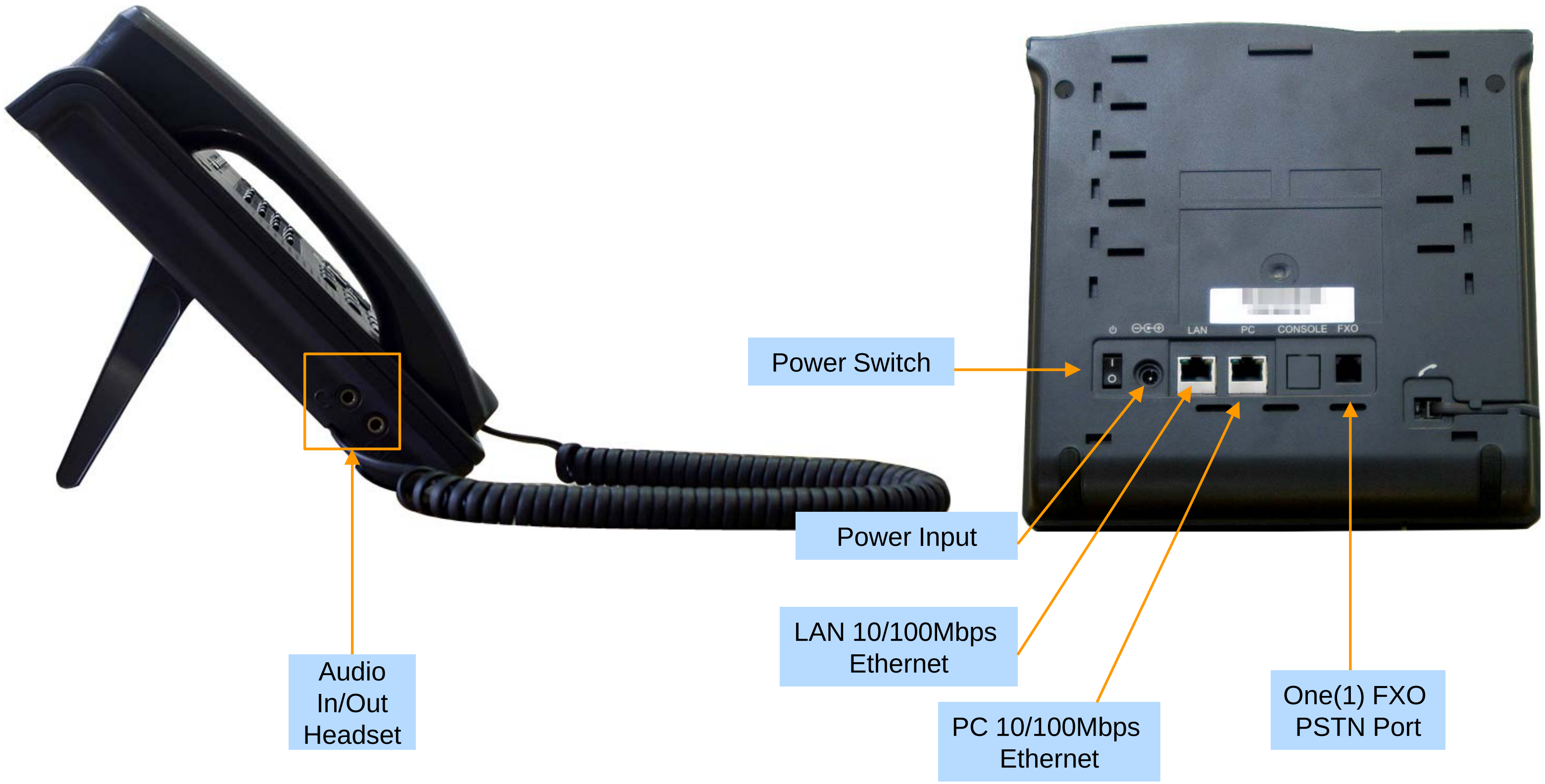
IP Phone

AP-IP160 IP Phone

RISC CPU

High-end DSP

Hardware Specification



AP-IP120
IP Phone

IP Phone

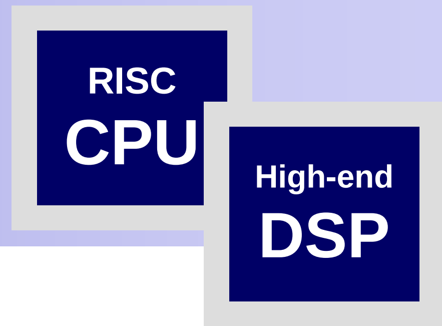
AP-IP120 IP Phone

Main Features

- 4 Text Line Graphic LCD Display
- 12 Speed-Dial Keys with User Presence LED
- 4 Soft Key for Call Control
- Various Function Keys
- H.323/SIP Concurrent VoIP Signaling Stack Embedded
- High-performance Voice Codec Support
  - G.711/G.726/G.729/G.723, etc
- Two(2) 10/100Mbps Fast Ethernet (IP Share ,etc)
- High Quality Speaker Phone Features (Acoustic Echo Canceller)
- 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

IP Phone

AP-IP120 IP Phone



Hardware Specification

- RISC Microprocessor Computing Power
- 4 Text Line Graphic LCD
- Navigation Key for Menu Search
- High-end Programmable DSP Hardware Architecture
- High quality Audio and Voice Interface
  - Stereo Audio Input & Output Connector
- Network Interface
  - Two(2) 10/100Mbps Fast Ethernet
- PSTN Interface
  - One(1) FXO(RJ11) interface
- Power Supply
  - *External DC adaptor (5V)*
  - *PoE (Power over Ethernet)*

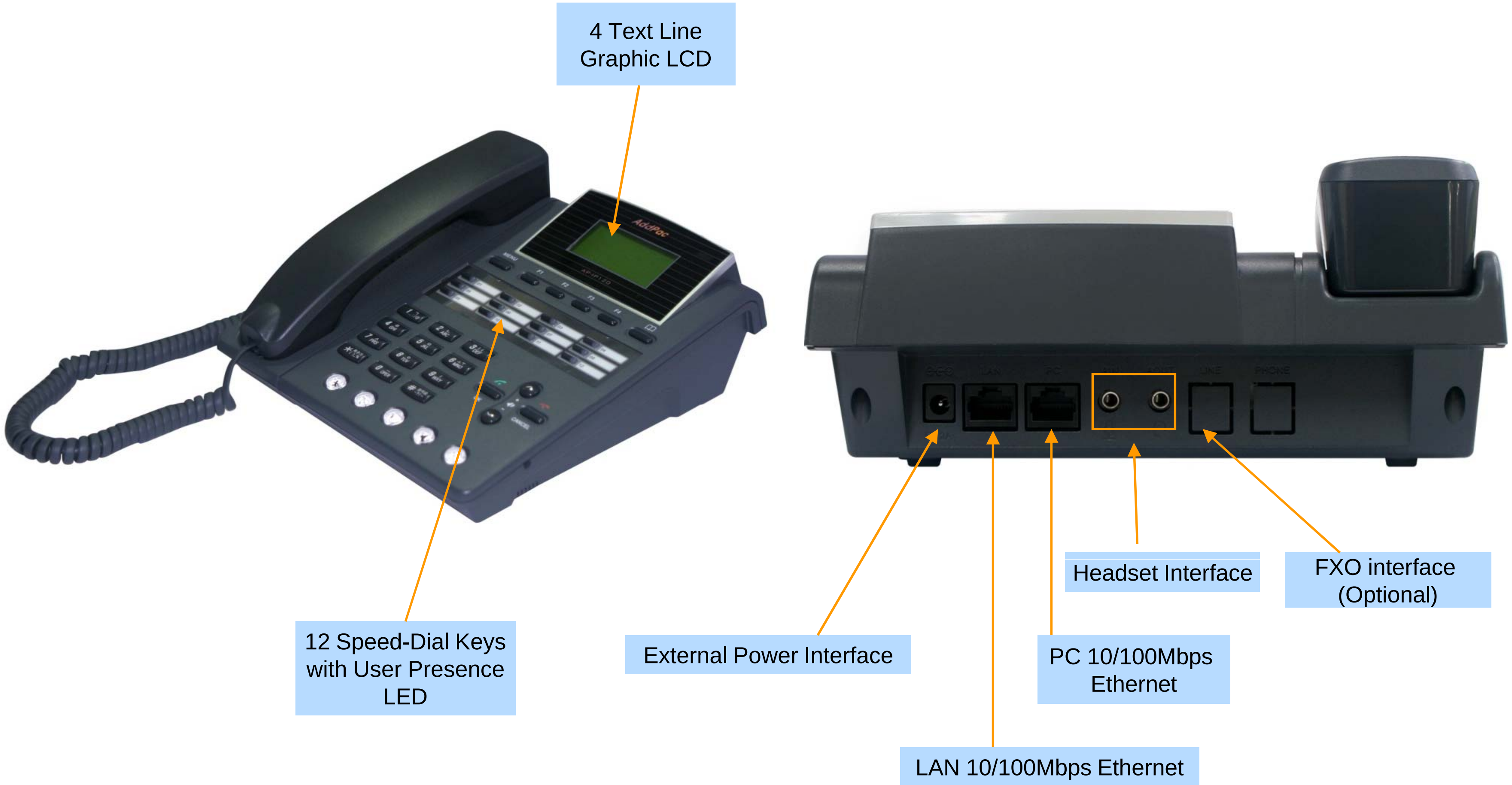
IP Phone

AP-IP120 IP Phone

RISC CPU

High-end DSP

Hardware Specification



Thank you!

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