

AddPac IP Video Door Phone Technical Notes



AddPac

AddPac Technology

Sales and Marketing

www.addpac.com




Contents

- WiFi supporting IP Video Door Phones
- Standard SIP Protocol interworking (example)
 - Asterisk IP-PBX
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- Full-duplex Two-Way Communication Support (Acoustic Echo Canceller)


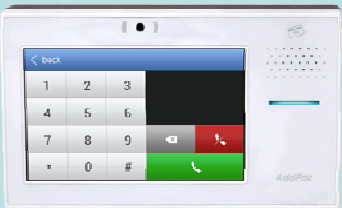


WiFi supporting IP Video Door Phones

7 Inch LCD IP Video Door Phone Comparison Table

Model	AP-VAC350	AP-VAC300	AP-VAC280
Service Features			
Duplex (Voice)	Full Duplex	Full Duplex	Full Duplex
Key Pad	Touch Screen based Key	Touch Screen based Key	Touch Screen based Key
LCD	7 Inch LCD	7 inch LCD	7 inch LCD
RF Card	Support	Support	Support
Fingerprint	Support	N/A	N/A
ZWave Sensor Hub	Option	Option	N/A
Video Camera	SD (CMOS Sensor)	SD (CMOS Sensor)	SD (CMOS Sensor)
Video Codec	H.264/MPEG4/H.263	H.264/MPEG4/H.263	H.264/MPEG4/H.263
Voice Codec	G.711	G.711	G.711
Signaling	H.323/SIP	H.323/SIP	H.323/SIP
MIC & Speaker Phone	Support	Support	Support
LAN Port	1	1	1
WiFi (Option)	USB based WiFi Module	USB based WiFi Module	USB based WiFi Module
PoE(Optional)	Support	Support	Support

5 Inch LCD IP Video Door Phone Comparison Table

Model	AP-VAC150	AP-VAC80
Service Features		
Duplex (Voice)	Full Duplex	Full Duplex
Key Pad	Touch Screen based Key	Touch Screen based Key
LCD	5 Inch LCD	5 inch LCD
RF Card	Support	Support
Fingerprint	Support	N/A
Video Camera	SD (CMOS Sensor)	SD (CMOS Sensor)
Video Codec	H.264/MPEG4	H.264/MPEG4
Voice Codec	G.711	G.711
Signaling	H.323/SIP	H.323/SIP
MIC & Speaker Phone	Support	Support
LAN Port	1	1
WiFi (Option)	USB based WiFi Module	USB based WiFi Module
PoE (Option)	Support	Support

Hardware Specification

7 Inch LCD IP Video Door Phone

RISC
CPU

High-end
DSP

Front Side

Video Camera

7" TFT LCD Display
& Touch Screen

Touch Key Menu

RF Card Sensor

Fingerprint
Recognition
Detection LED

Fingerprint
Recognition
Sensor



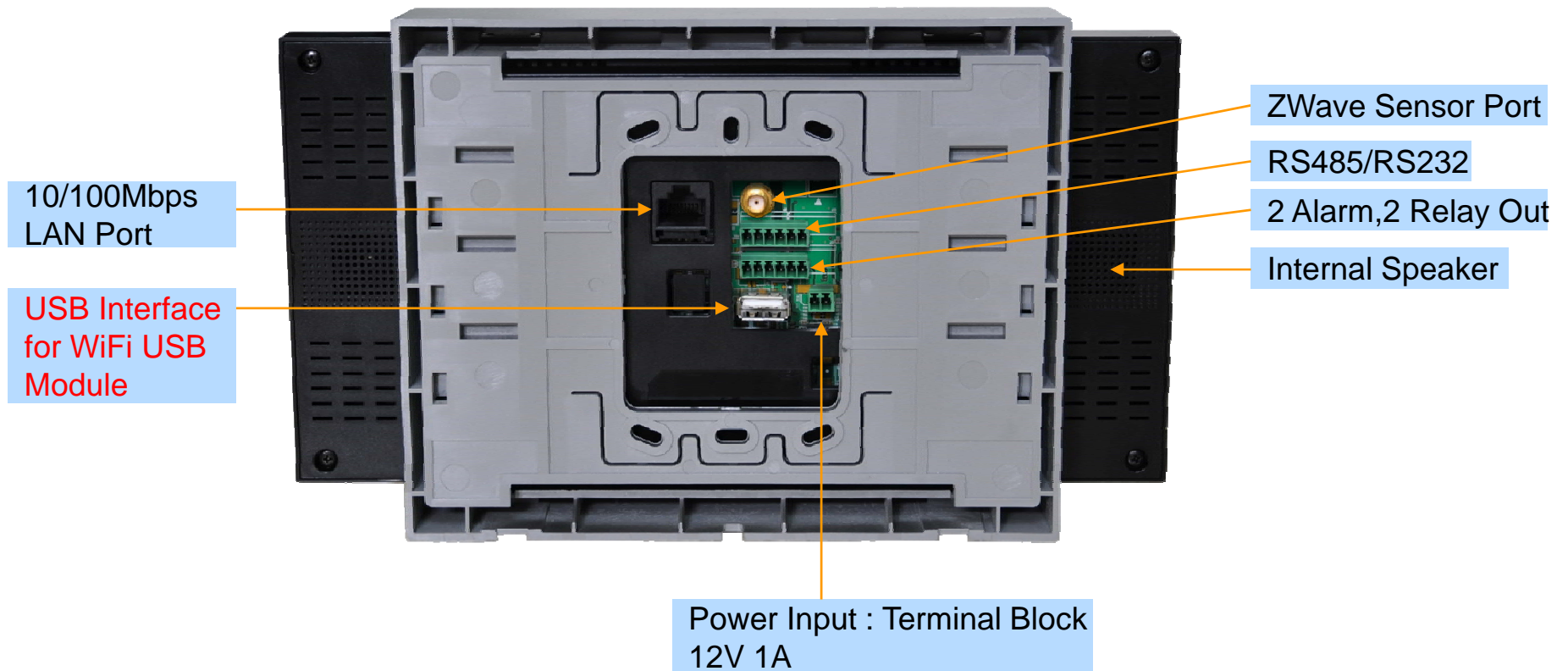
Hardware Specification

7 Inch LCD IP Video Door Phone

RISC
CPU

High-end
DSP

Back Side



Hardware Specification

5 inch LCD IP Video Door Phone

RISC
CPU

High-end
DSP

Front Side



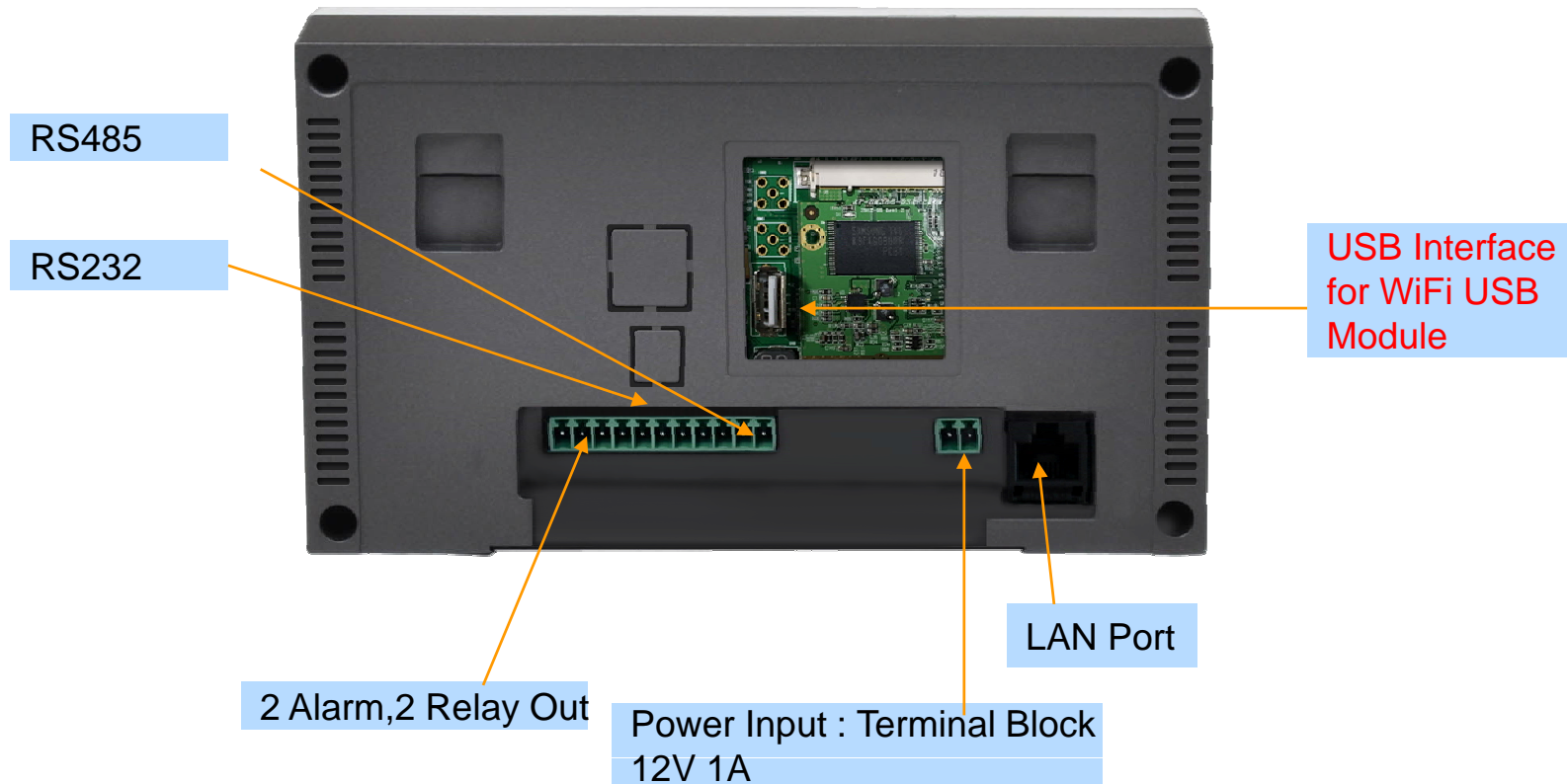
Hardware Specification

5 Inch LCD IP Video Door Phone

RISC
CPU

High-end
DSP

Back Side



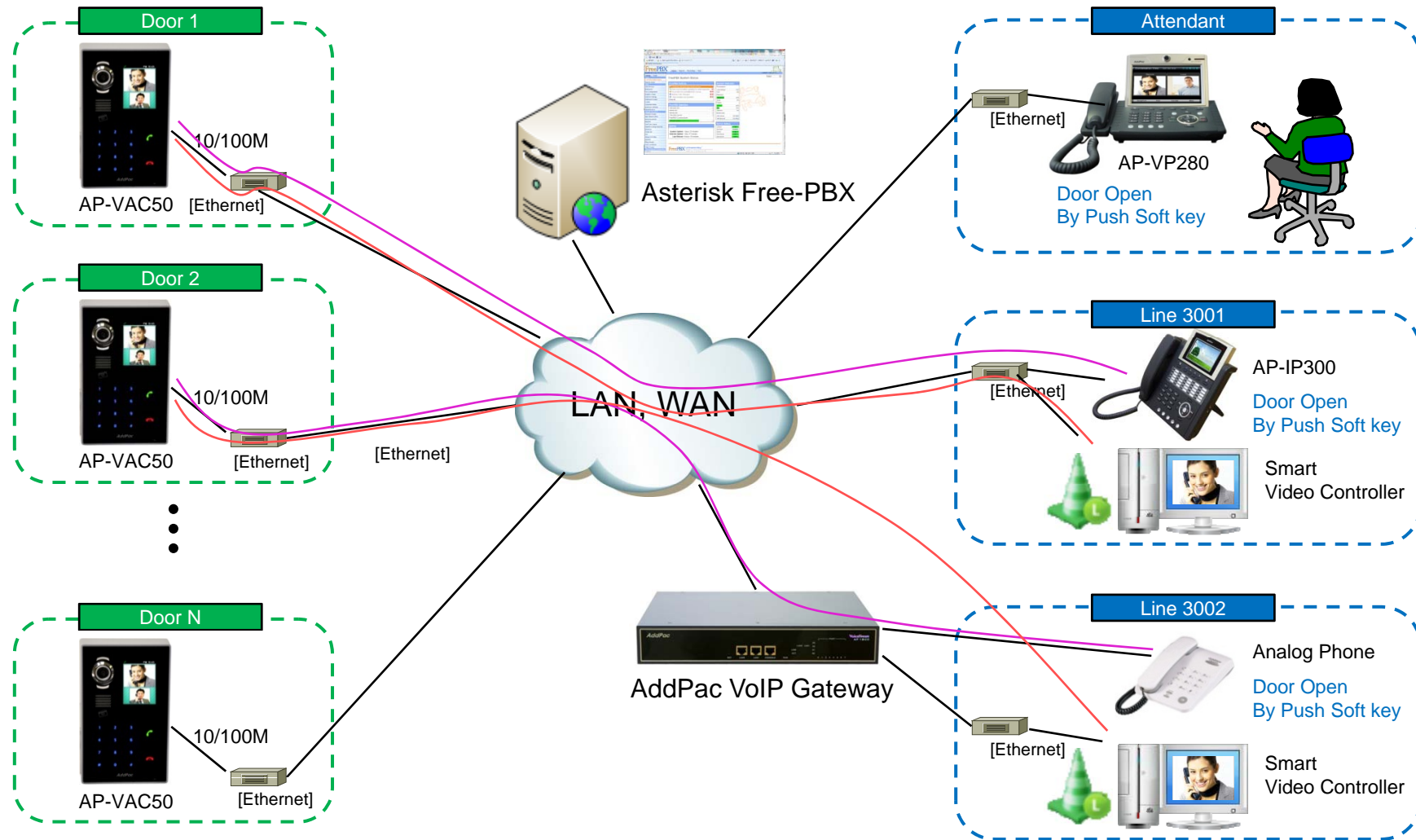


Standard SIP Protocol Interworking



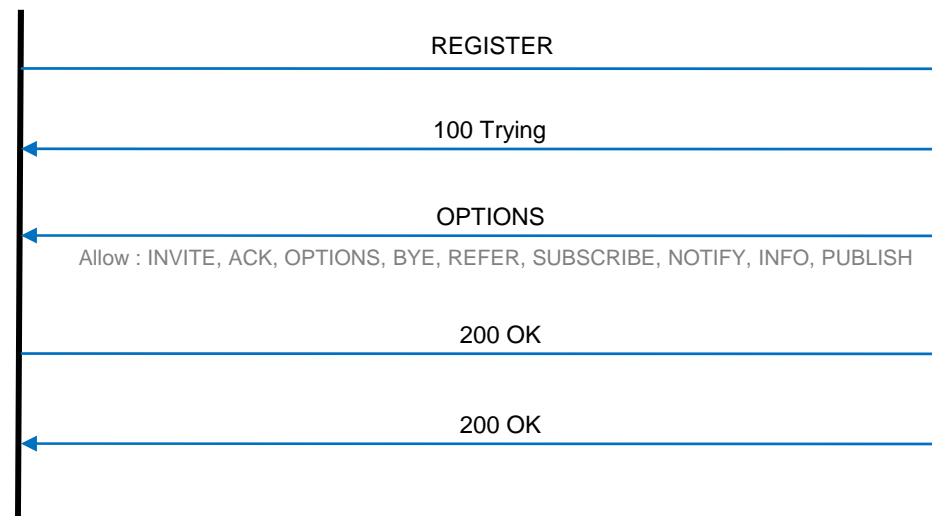
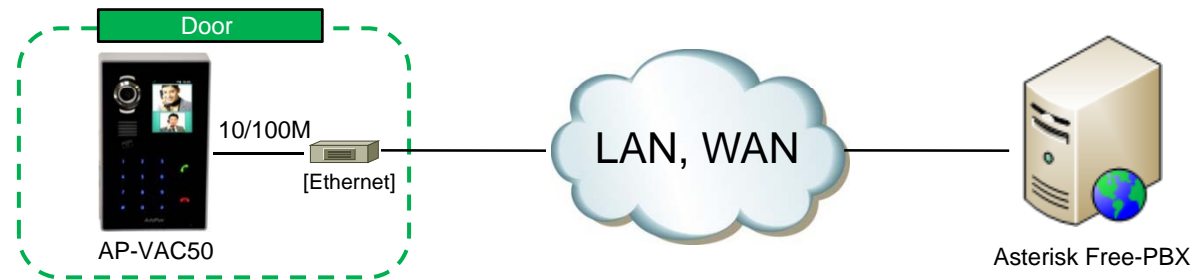
Asterisk IP-PBX Interworking

Network Diagram



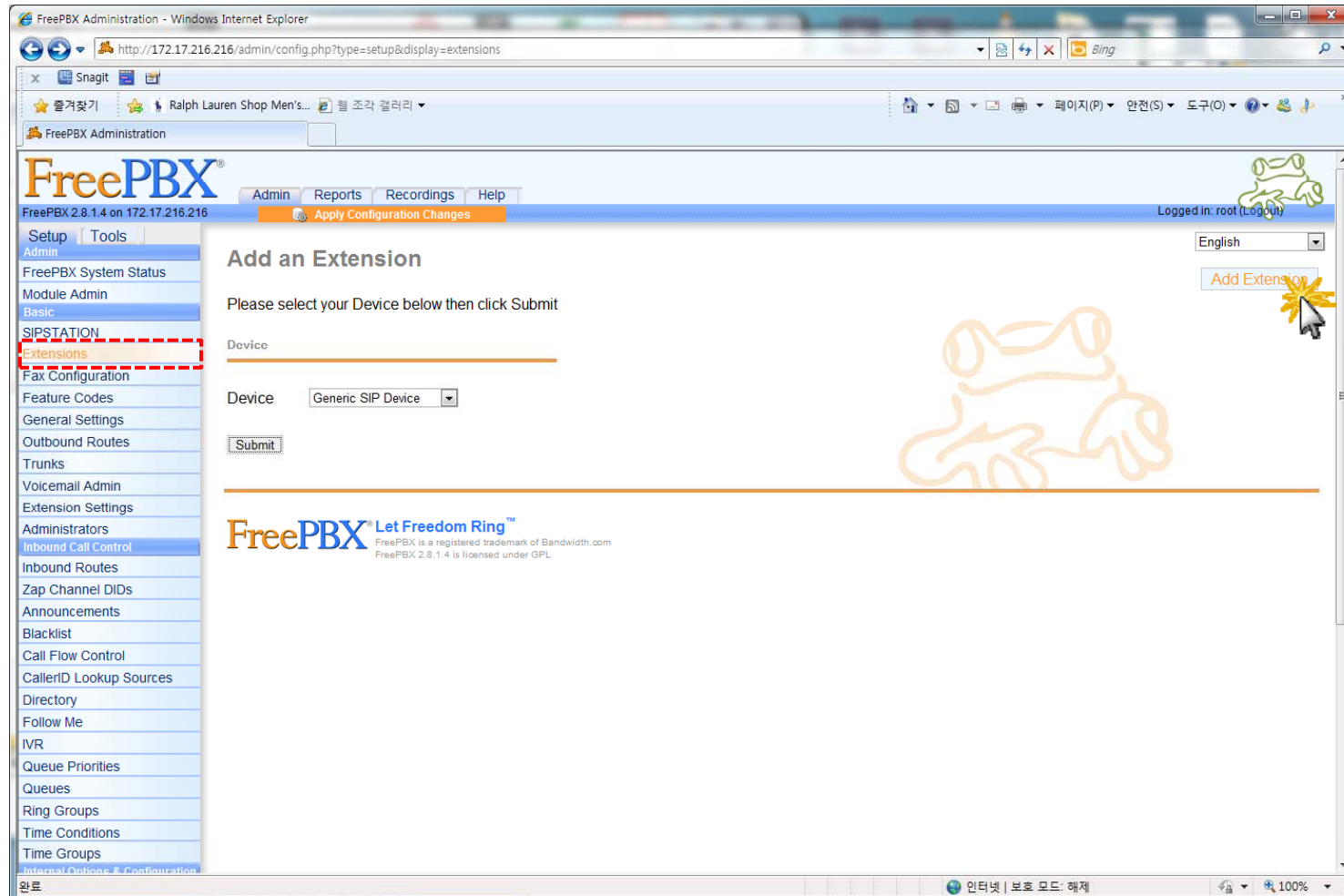
SIP Register

AP-VAC50 Register to Asterisk Free-PBX



SIP Register

AP-VAC50 Register to Asterisk Free-PBX



SIP Register

AP-VAC50 Register to Asterisk Free-PBX

The screenshot displays the FreePBX Administration web interface in a Windows Internet Explorer browser window. The address bar shows the URL `http://172.17.216.216/admin/config.php`. The page title is "FreePBX Administration" and the version is "FreePBX 2.8.1.4 on 172.17.216.216". The user is logged in as "root".

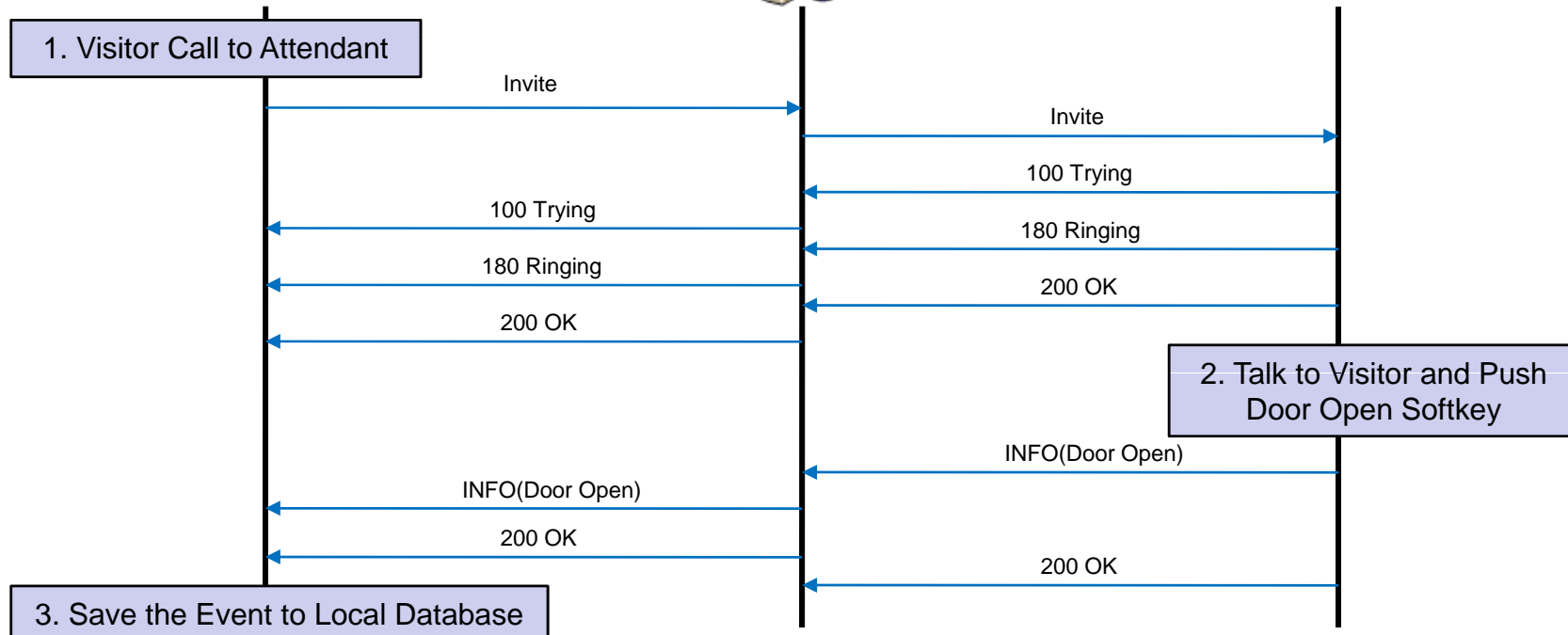
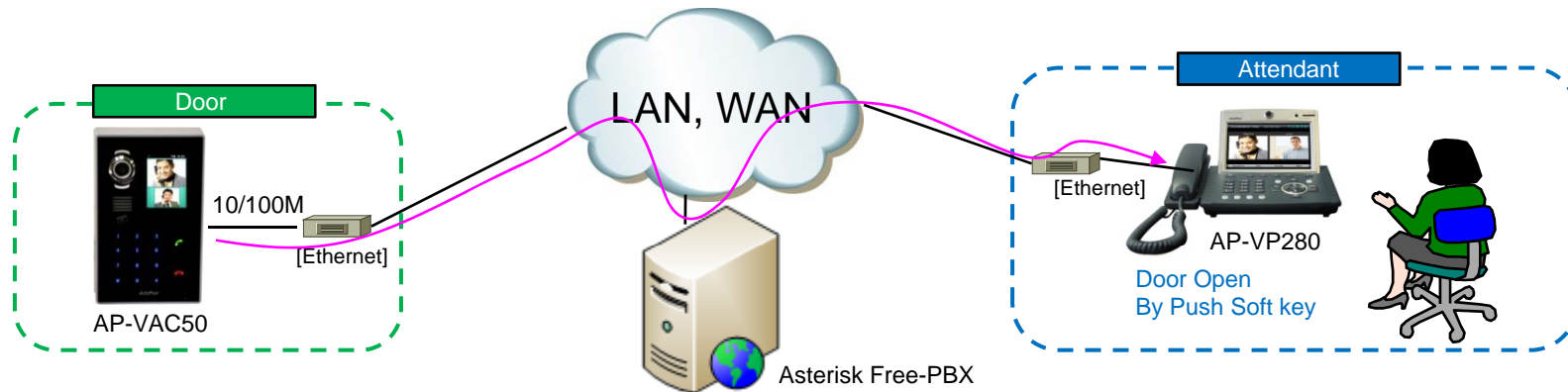
The main content area is titled "Add SIP Extension" and contains the following fields and options:

- Add Extension:**
 - User Extension:
 - Display Name:
 - CID Num Alias:
 - SIP Alias:
- Extension Options:**
 - Outbound CID:
 - Ring Time:
 - Call Forward Ring Time:
 - Outbound Concurrency Limit:
 - Call Waiting:
 - Internal Auto Answer:
 - Call Screening:
 - Pinless Dialing:
 - Emergency CID:
 - Queue State Detection:
- Assigned DID/CID:**
 - DID Description:

On the right side of the page, there is a language dropdown menu set to "English" and two buttons: "Add Extension" and "1000 <1000>". A large, faint watermark of a hand is visible in the background of the page.

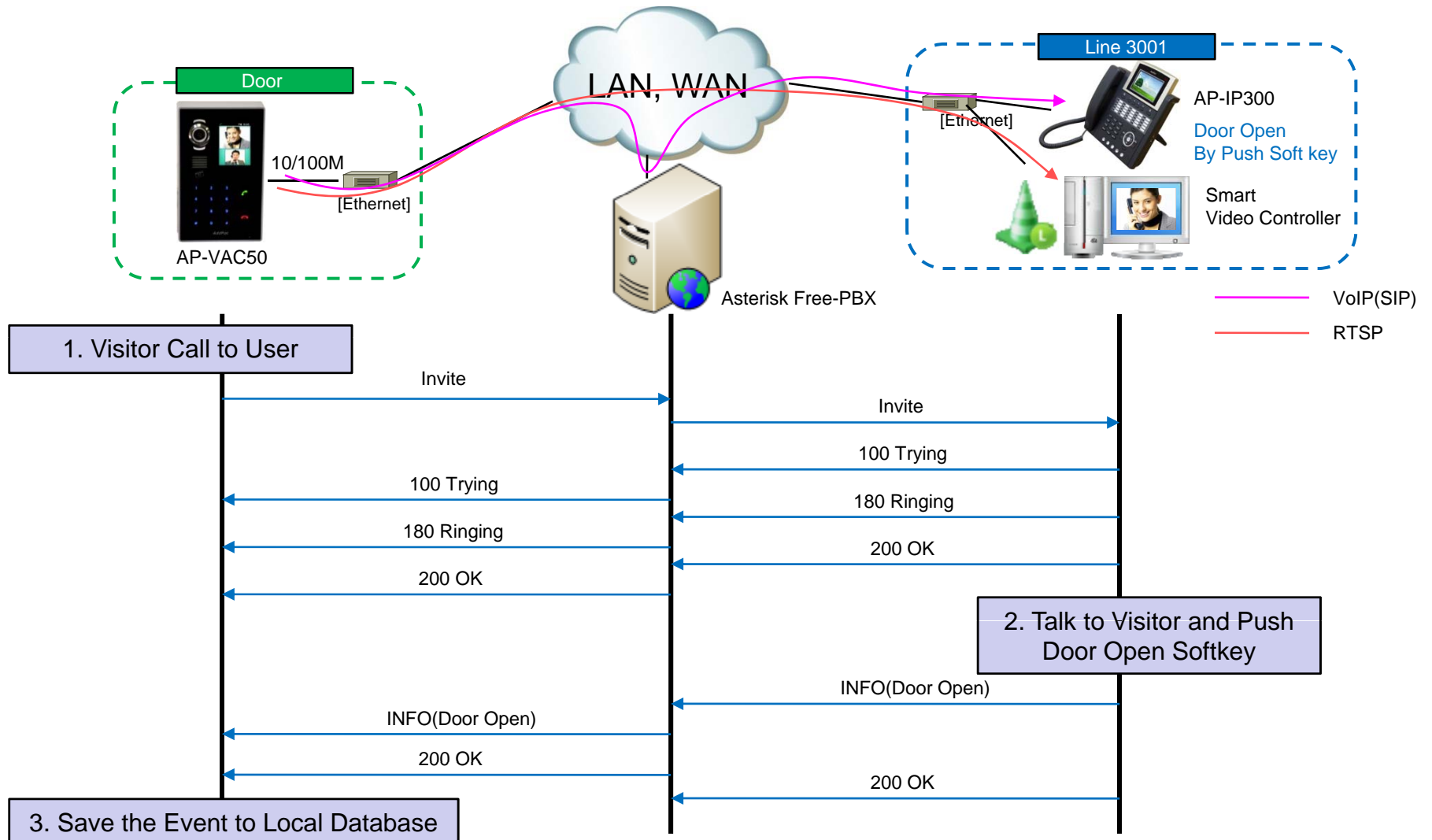
SIP Message Flow

Door Open by Other Terminal - Attendant



SIP Message Flow

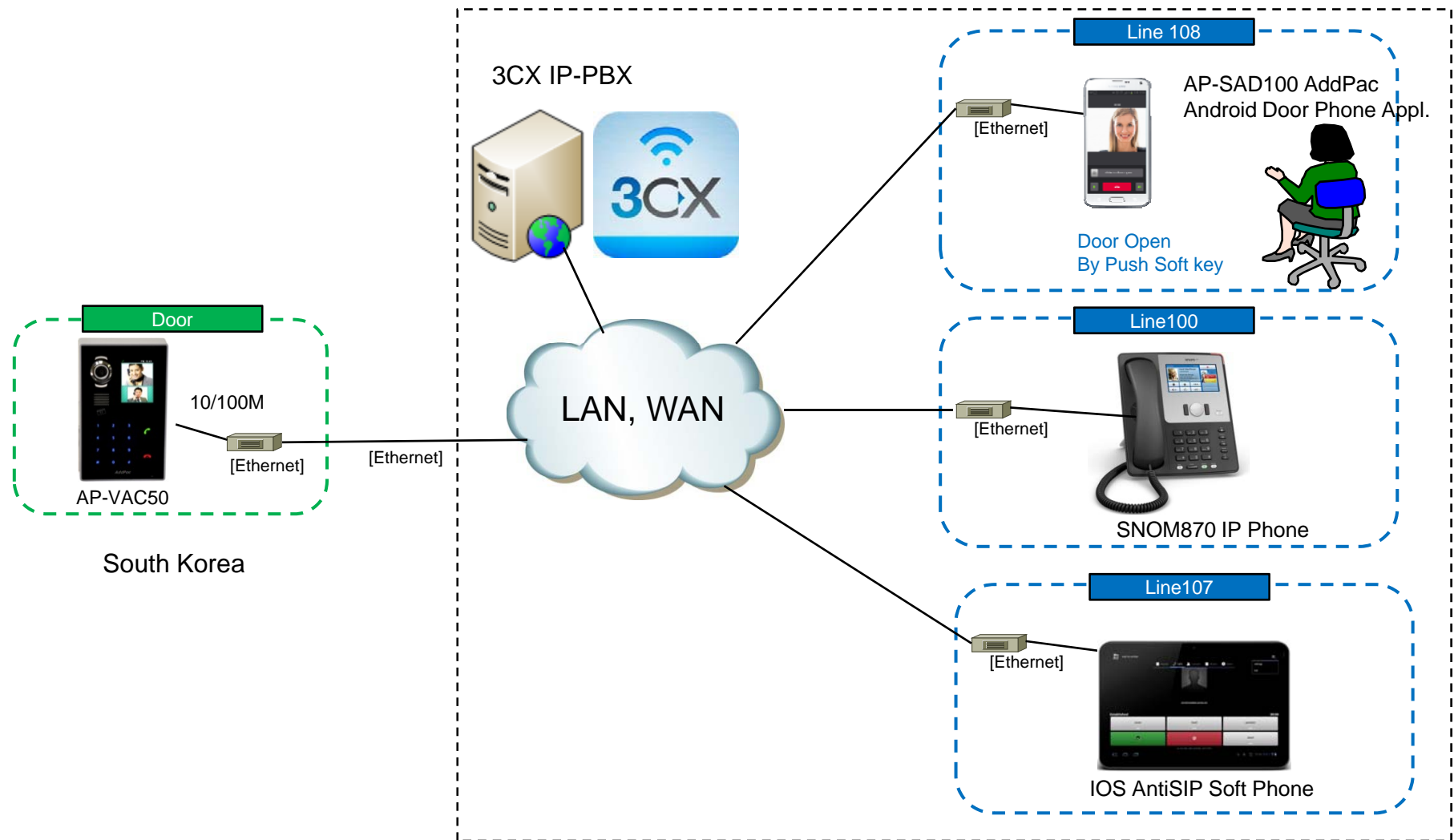
Door Open by Other Terminal - User





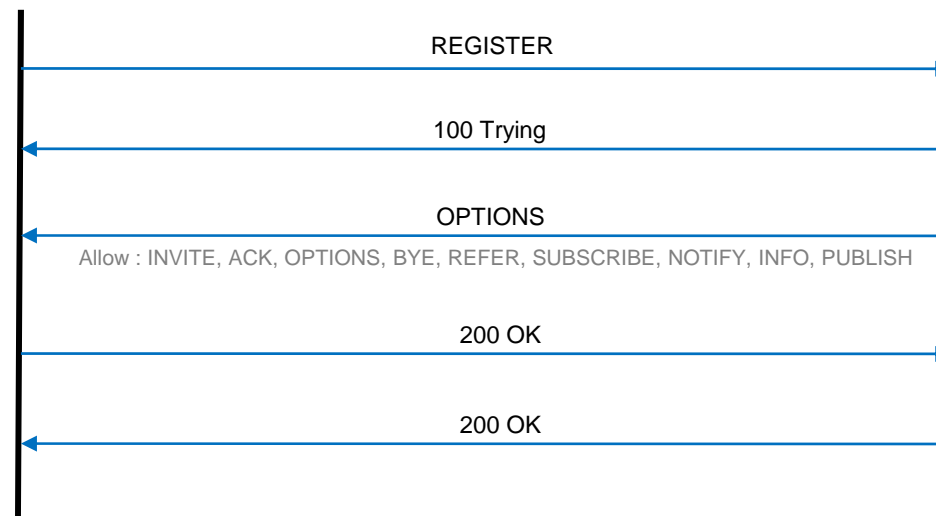
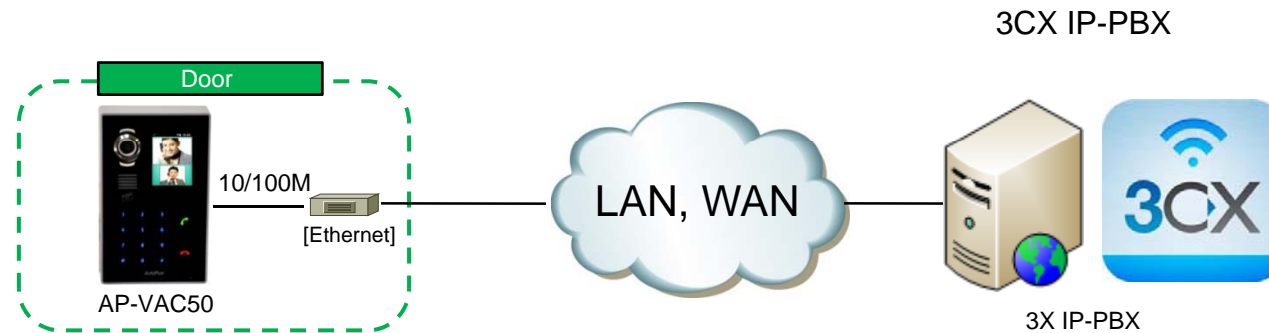
3CX IP-PBX Interworking

Network Diagram (Interworking Environment)



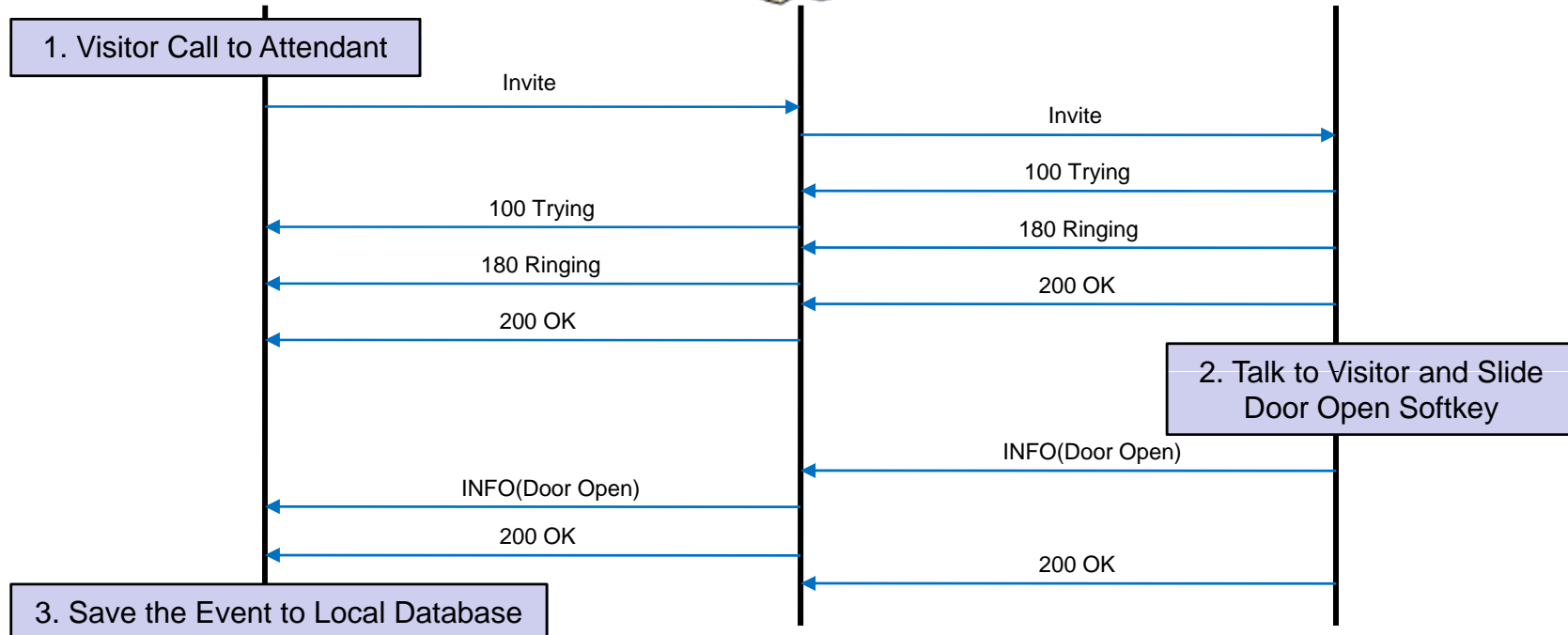
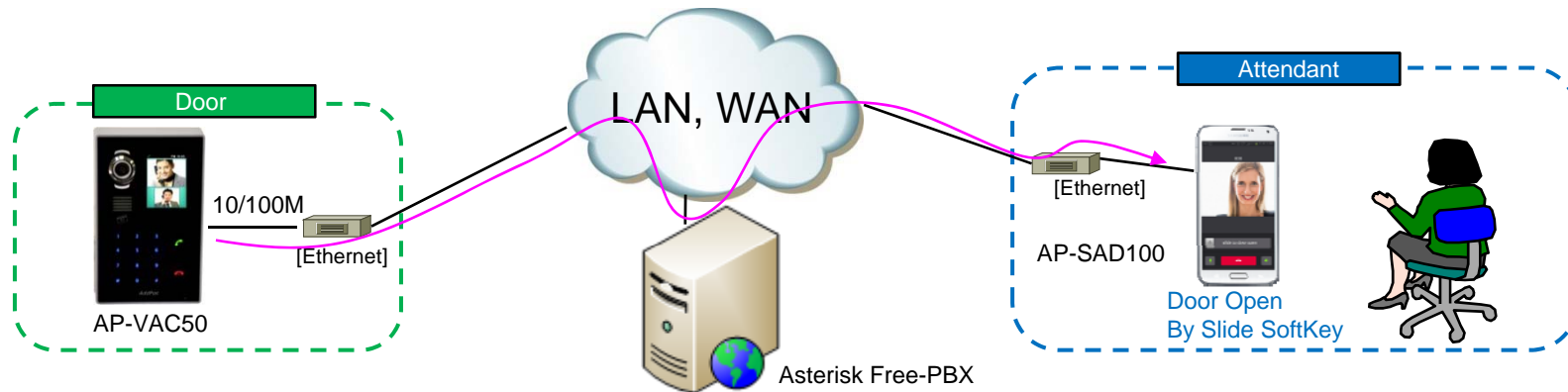
SIP Register

AP-VAC50 Register to 3CX IP-PBX



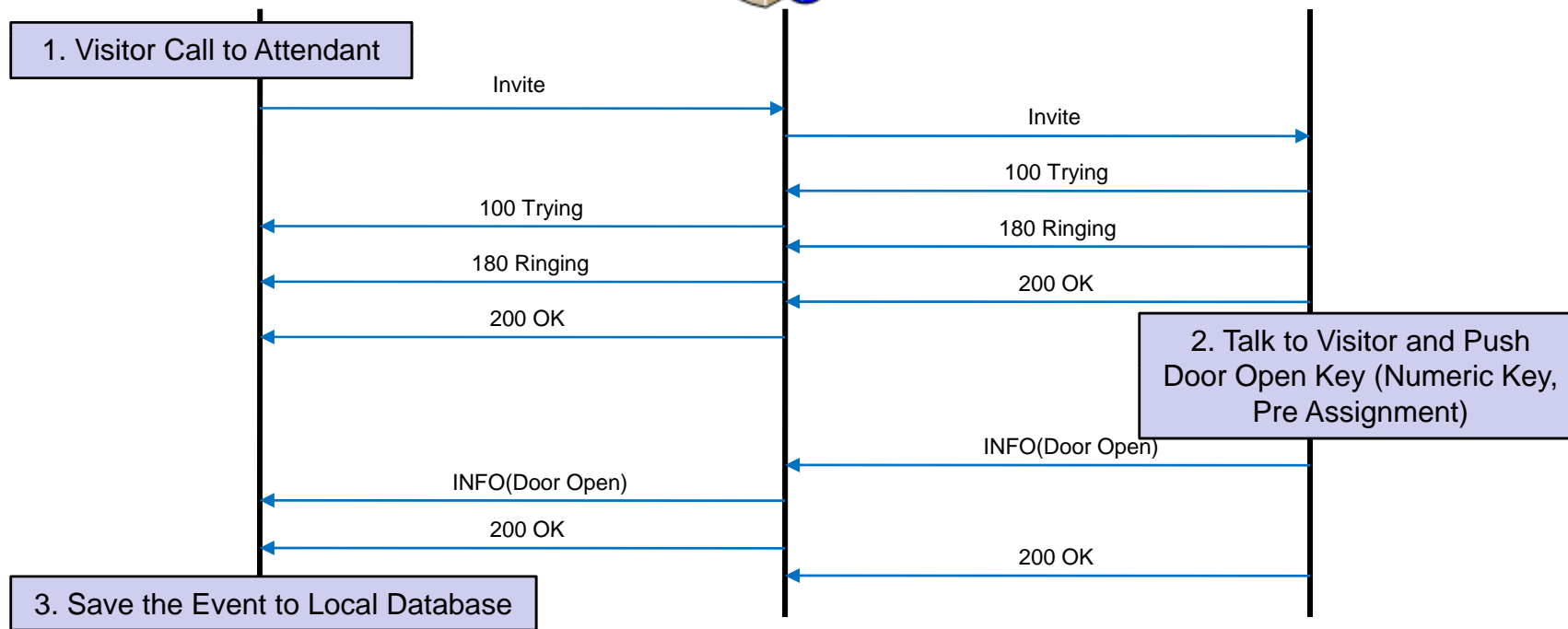
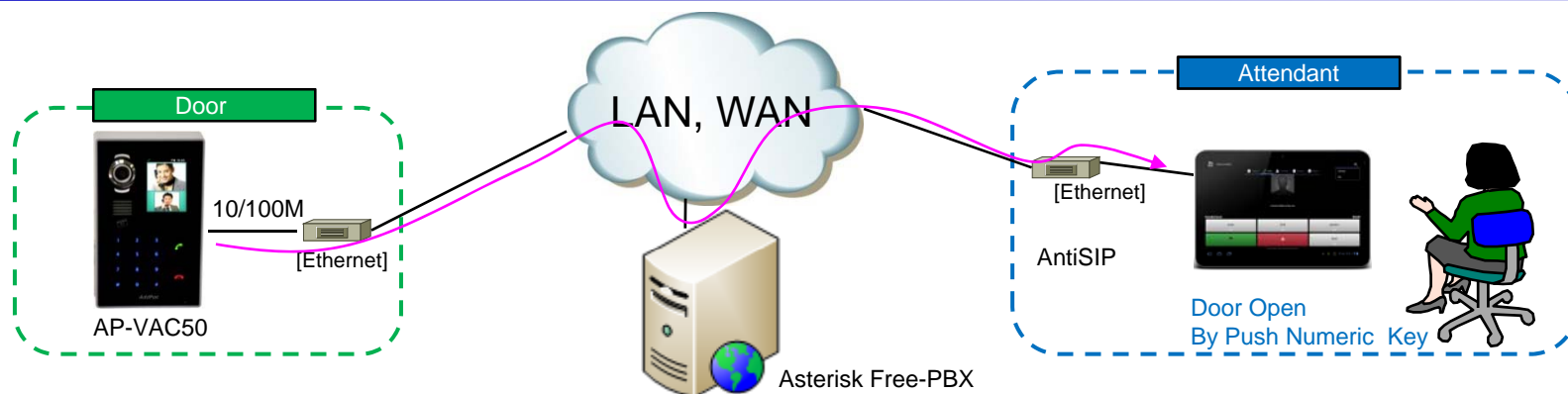
SIP Message Flow (Video)

Door Open by Terminal – AP-SAD100 (AddPac Android Door Phone Appl.)



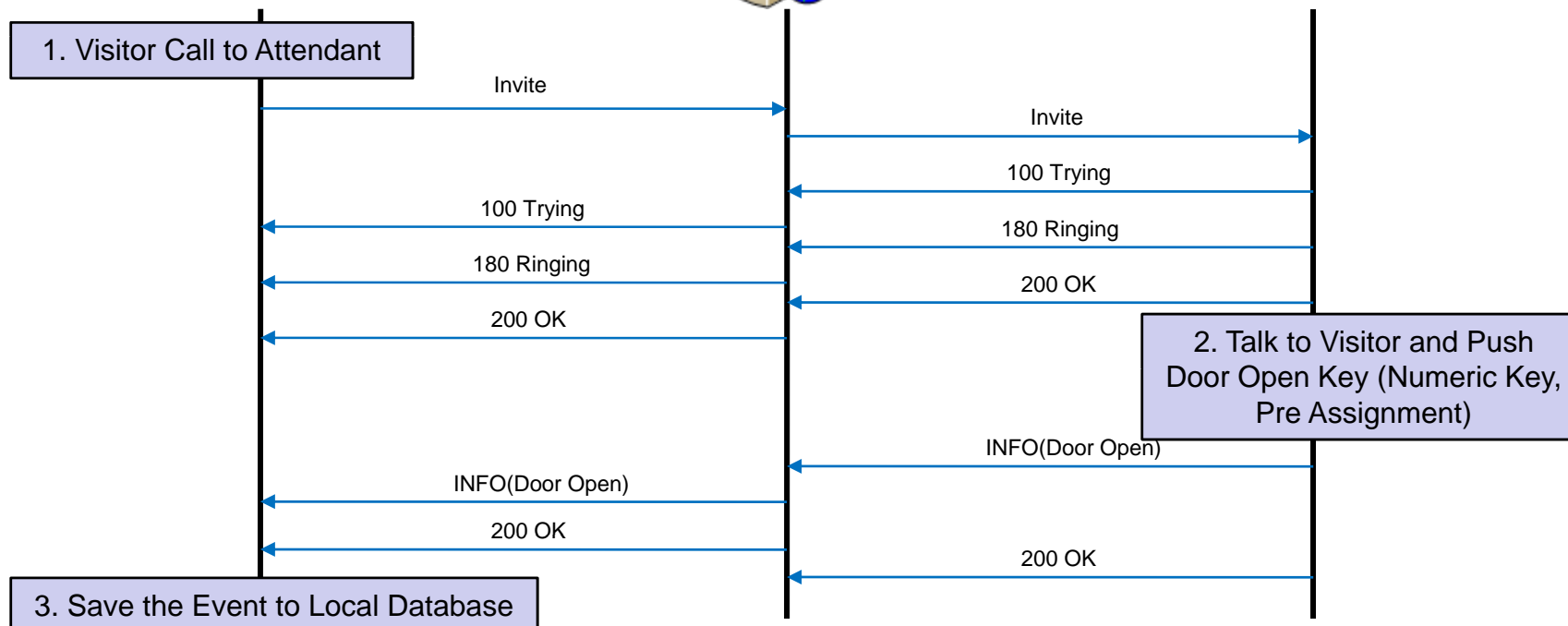
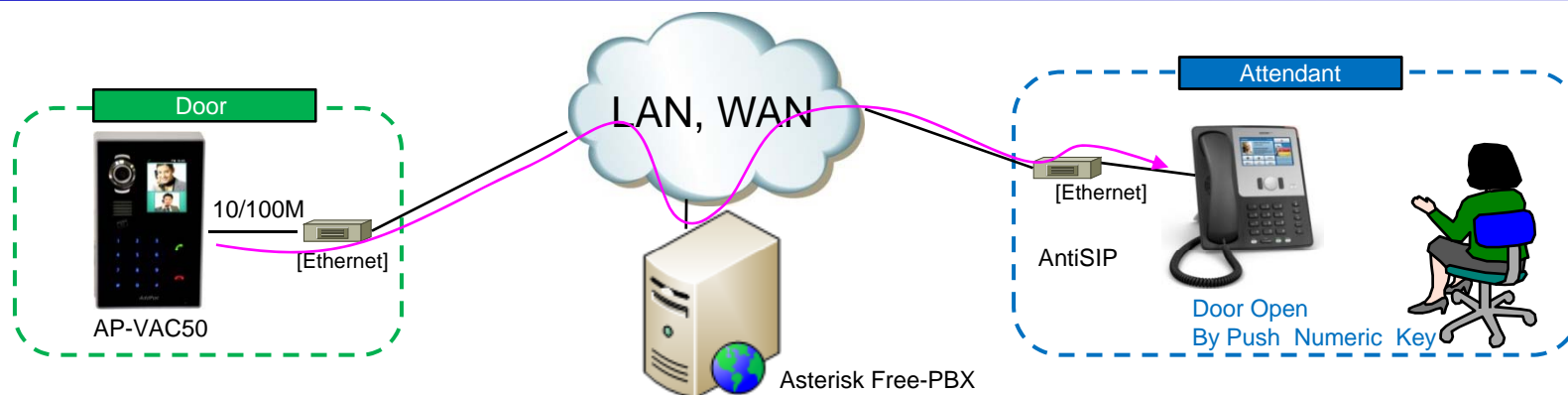
SIP Message Flow (Video)

Door Open by Terminal – AntiSIP IOS SoftPhone



SIP Message Flow (Voice)

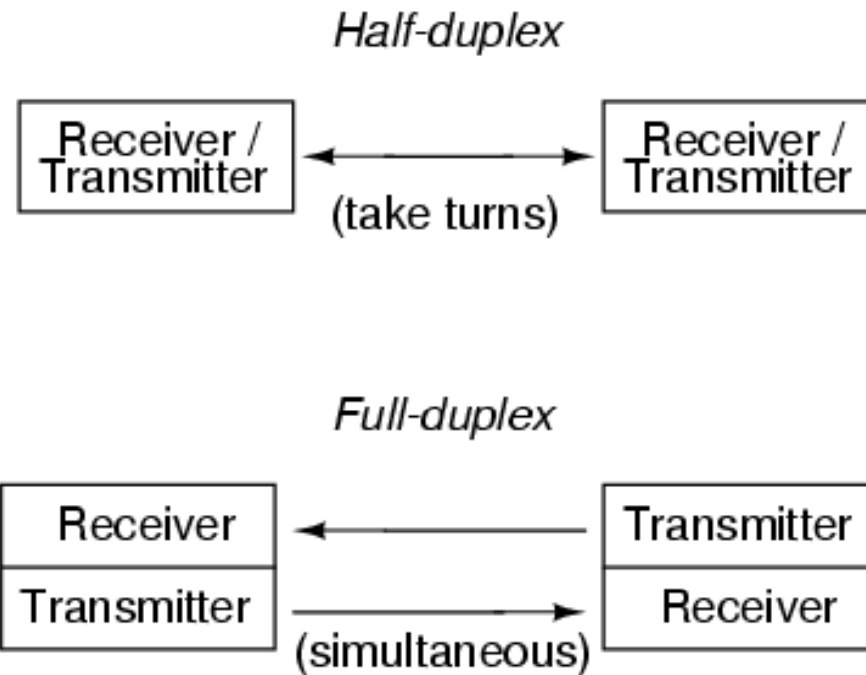
Door Open by Terminal – SNOM IP Phone





Full Duplex Two-Way Communication
by using AEC (acoustic echo canceller)

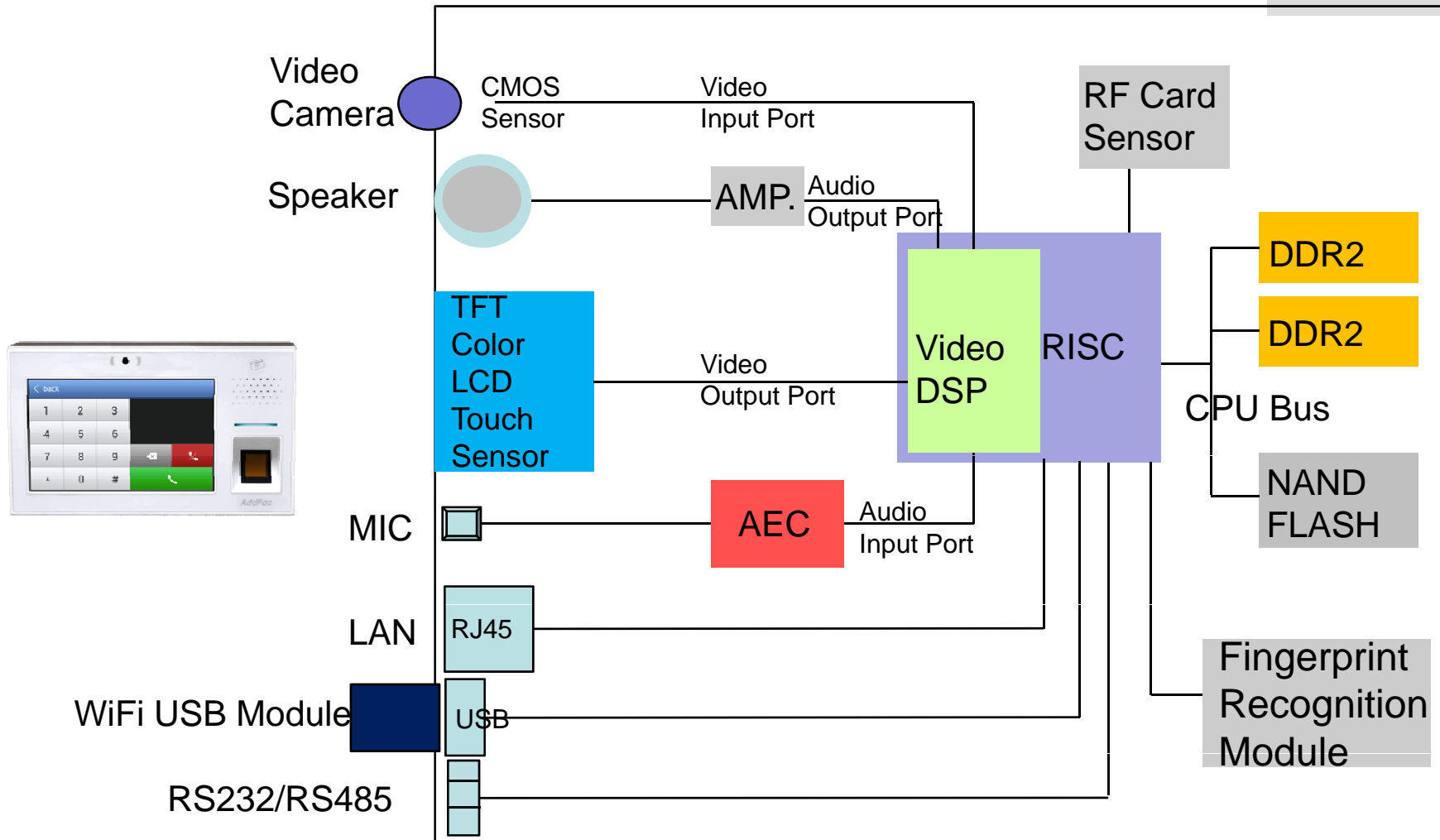
Difference between Half Duplex and Full Duplex



Hardware Block Diagram

RISC
CPU

High-end
DSP



Hardware Specification

RISC
CPU

High-end
DSP

- **Acoustic Echo Canceller**
 - Full-duplex operation during double-talk situations
 - One channel AEC, one channel LEC up to 256ms shared
 - Cancels echoes with up to 10dB echo return
 - Advanced noise reduction(up to 20dB)



Thank you!

AddPac Technology Co., Ltd.
Tech. Solution

Phone +82.2.568.3848 (KOREA)

FAX +82.2.568.3847 (KOREA)

E-mail ts@addpac.com