

4-Party MCU Full HD Video Conference Codec Solution

4-Party MCU Full-HD Video Codec Solution

AP-HVC2000 HD Video Conference
AP-HCC2000 HD Video Conference Codec

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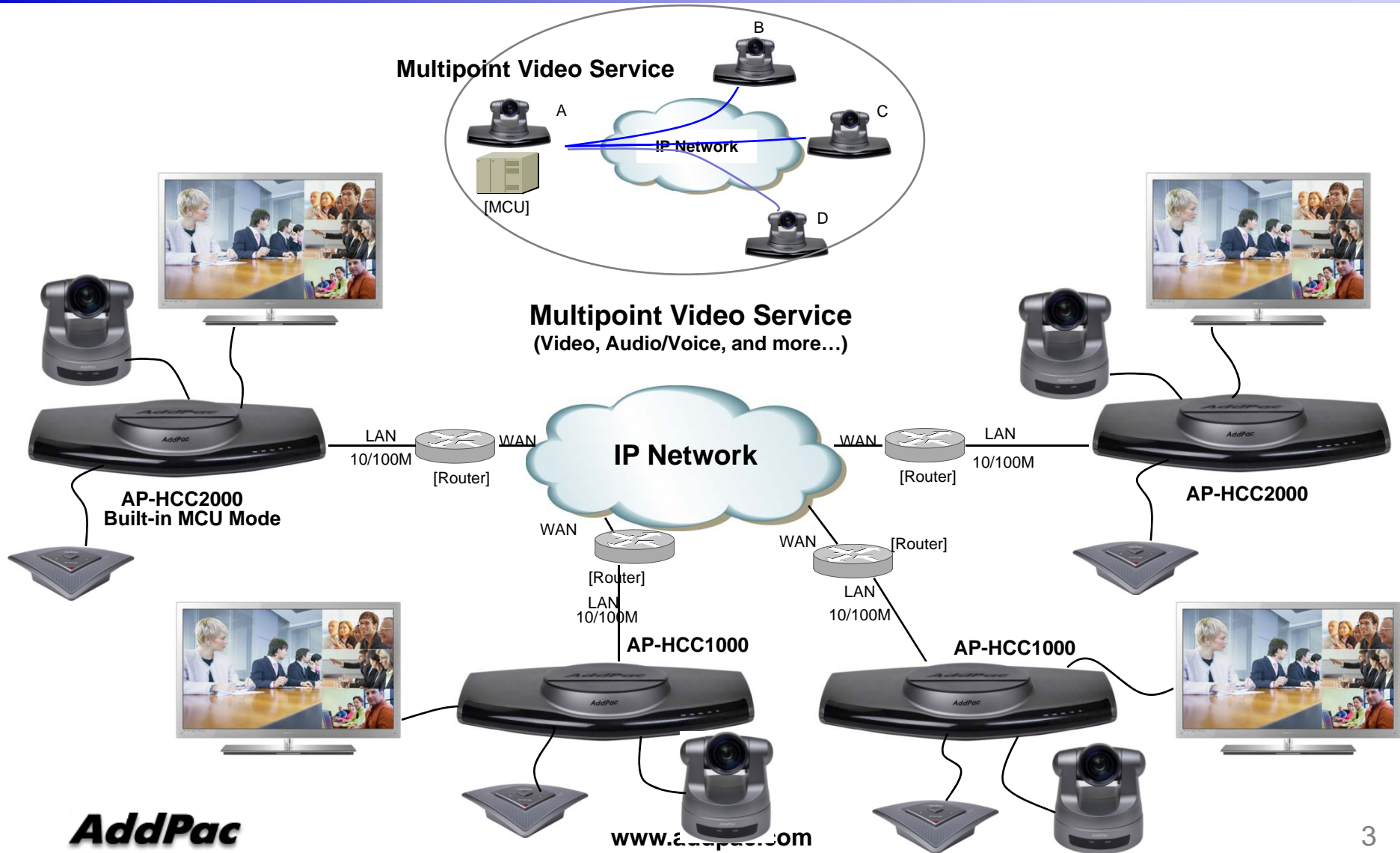
2014, Sales and Marketing

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- AEC Microphone
- Smart Conference Controller

Full HD Video Conference Codec Service Diagram (Internal MCU Mode)







4-Party MCU

Full HD Video Conference Codec

4-Party MCU Full HD Video Conference Codecs

| Product | | AP-HCC2000 | AP-HVC2000 |
|-------------------------|--------------|--|---|
| | |  |  |
| Camera Video Resolution | | 720P, 1080i(60), 1080p(30) | Built-in Camera : HD, Full HD |
| Channel One(1) | Video Input | Composite RCA, HD-SDI, HDMI | Built-In Full HD Camera |
| | Video Output | Composite RCA, Component, HDMI | Composite RCA, Component, HDMI |
| | Audio Input | Stereo RCA Type | Stereo RCA Type |
| | Audio Output | RCA Type Audio (L,R) | RCA Type Audio (L,R) |
| | PTZ Control | Support, RS232C | N/A |
| Channel Two(2) | Video Input | Composite RCA, HD-SDI, RGB, HDMI | Composite RCA, HD-SDI, RGB, HDMI |
| | Video Output | Composite RCA, Component, HDMI | Composite RCA, Component, HDMI |
| | Audio Input | Stereo RCA Type | Stereo RCA Type |
| | Audio Output | RCA Type Audio (L,R) | RCA Type Audio (L,R) |
| | PTZ Control | Support, RS232C | Support, RS232C |
| Video MCU | | 4-Party Video MCU | 4-Party Video MCU |
| LAN | | One(1) 10/100M Fast Ethernet | One(1) 10/100M Fast Ethernet |
| Power | | External Power Adaptor | External Power Adaptor |

AP-HVC2000

Two(2)-Ch Full HD Video Codec



Main Features

AP-HVC2000 MCU Built-in Two(2)-Channel Full HD Video Conference Codec

- IP based Video Conference Solution
- High-End Full HD Video Camera Features
- CMOS Sensor, 2Mega Pixel Camera
- Various Video Format Support (ex;1080i/59.94)
- PAN/TILT/Zoom Housing Features
- Optical 10 x Zoom, Digital 12 x Zoom Camera
- Built-in Wide Angle Lens for Video Conference
- Two(2) Channel Video Interface
- 4-Party Full HD MCU Built-in
- Second Video Interface for Document Sharing, Camera, etc
- External Acoustic Echo Canceller Microphone (AP-MP100)
- High-performance Video, Audio, and Voice Service
- Flexible Videoconferencing Deployment
- Firmware Upgradeable Architecture
- Video Solution with Outstanding Network Service Capability
- Audio/Video Privacy Protection

Hardware Specification

High-end
DSP

AP-HVC2000 MCU Built-in Two(2)-Channel Full HD Video Conference Codec

- High Performance RISC Computing Power
- High-end Programmable DSP Hardware Architecture
- CH#1 I/O Interface

| | |
|--------------|-------------------------------------|
| Video Input | Built-in Full HD Camera |
| Video Output | Composite RCA, Component , HDMI |
| Audio Input | Stereo RCA Type Audio Input |
| Audio Output | RCA Type Audio Output (Left, Right) |

- CH#2 I/O Interface

| | |
|--------------|---|
| Video Input | Composite RCA, HD-SDI, RGB, HDMI |
| Video Output | Composite RCA, Component , HDMI |
| Audio Input | Stereo RCA Type Audio Input |
| Audio Output | RCA Type Audio Output (Left, Right) |
| PTZ Control | RS-232C Pan/Tilt/Zoom Control Interface |

Hardware Specification

High-end
DSP

AP-HVC2000 MCU Built-in Two(2)-Channel Full HD Video Conference Codec

- High-end Programmable DSP Hardware Architecture
- Network Interface
 - One(1) 10/100Mbps Fast Ethernet(RJ45)
 - One(1) RS-232C Interface (RJ45) for Console
- USB Interface
 - USB 2.0 Interface for Mouse, etc
- Voice Interface
 - FXS Interface for Analog Phone, Analog Conference Phone, etc
- External Power Input Connector
- Power On/Off Switch

Hardware Specification

High-end
DSP

AP-HVC2000 MCU Built-in Two(2)-Channel Full HD Video Conference Codec



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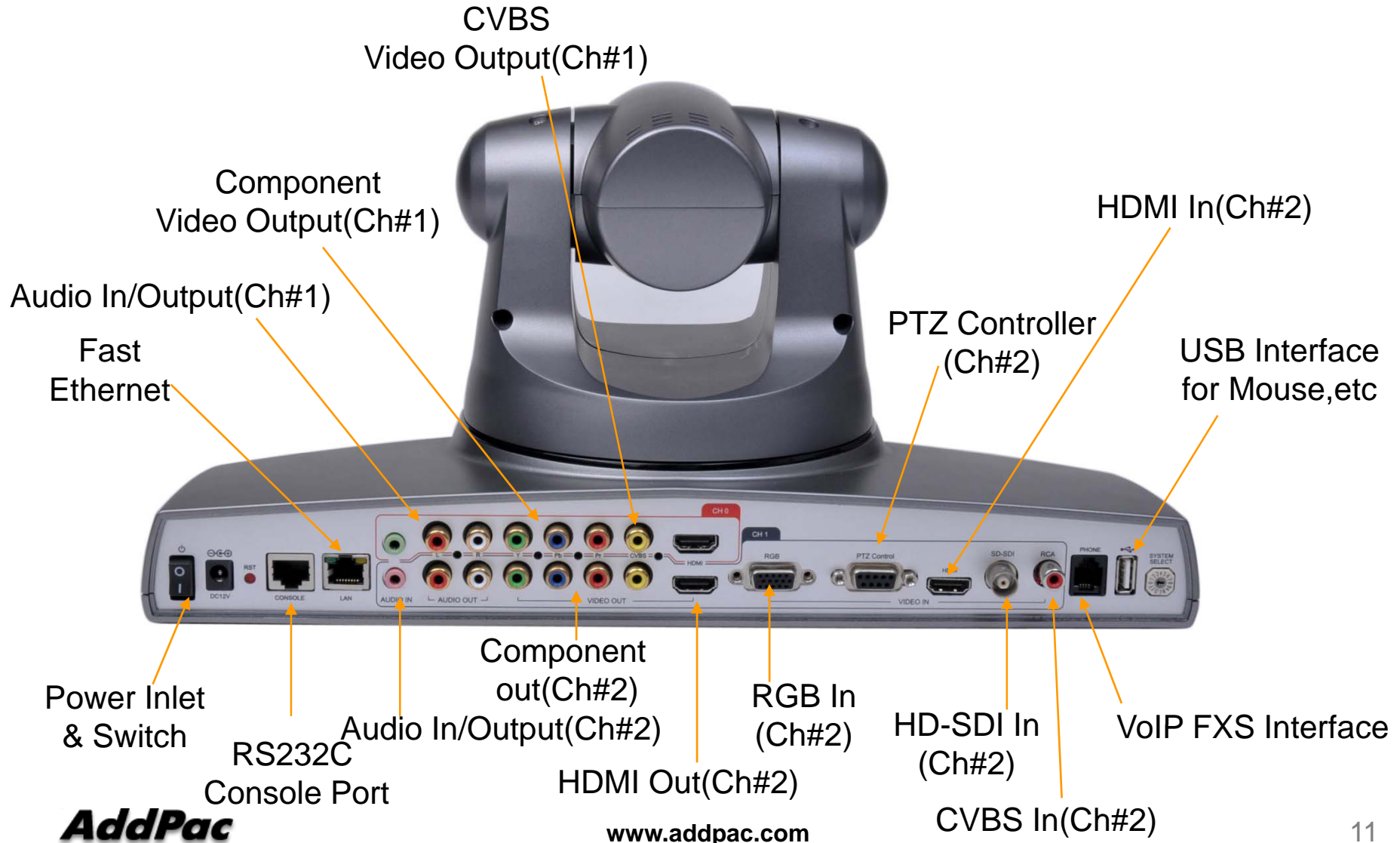
IR Sensor & Status Indication Area

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Hardware Specification

High-end
DSP

AP-HVC2000 MCU Built-in Two(2)-Channel Full HD Video Conference Codec



AP-HCC2000

Two(2)-Ch Full HD Video Codec



Main Features

AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec

- IP based Video Conference Solution
- High-End Full HD Video Conference Codec Features
- Two(2)-Channel Full HD Video Conference Codec
- 4-Party MCU Built-in
- External Full HD Video Conference Camera (ex: AP-HDC100)
 - CMOS Sensor, 2Mega Pixel Camera
 - Various Video Format Support (ex;1080i/59.94)
 - PAN/TILT/Zoom Housing Features
 - Optical 10 x Zoom, Digital 12 x Zoom Camera
 - Built-in Wide Angle Lens for Video Conference
- External Acoustic Echo Canceller Microphone (AP-MP100)
- High-performance Video, Audio, and Voice Service
- Flexible Videoconferencing Deployment
- Firmware Upgradeable Architecture
- Video Solution with Outstanding Network Service Capability
- Audio/Video Privacy Protection

Hardware Specification

AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec

High Performance
CPU

High-end
DSP

- High Performance RISC Computing Power
- High-end Programmable DSP Hardware Architecture
- CH#1 I/O Interface

| | |
|--------------|---|
| Video Input | Composite RCA, HD-SDI, HDMI |
| Video Output | Composite RCA, Component , HDMI |
| Audio Input | Stereo RCA Type Audio Input |
| Audio Output | RCA Type Audio Output (Left, Right) |
| PTZ Control | RS-232C Pan/Tilt/Zoom Control Interface |

- CH#2 I/O Interface

| | |
|--------------|---|
| Video Input | Composite RCA, HD-SDI, RGB, HDMI |
| Video Output | Composite RCA, Component , HDMI |
| Audio Input | Stereo RCA Type Audio Input |
| Audio Output | RCA Type Audio Output (Left, Right) |
| PTZ Control | RS-232C Pan/Tilt/Zoom Control Interface |

Hardware Specification

AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec

- Network Interface
 - One(1) 10/100/1000Mbps Gigabit Ethernet(RJ45)
 - One(1) RS-232C Interface (RJ45) for Console
- USB Interface
 - USB 2.0 Interface for Mouse, etc
- Voice Interface
 - FXS Interface for Analog Phone, Analog Conference Phone, etc
- External Power Input Connector
- External IrDA Connector
- Power On/Off Switch

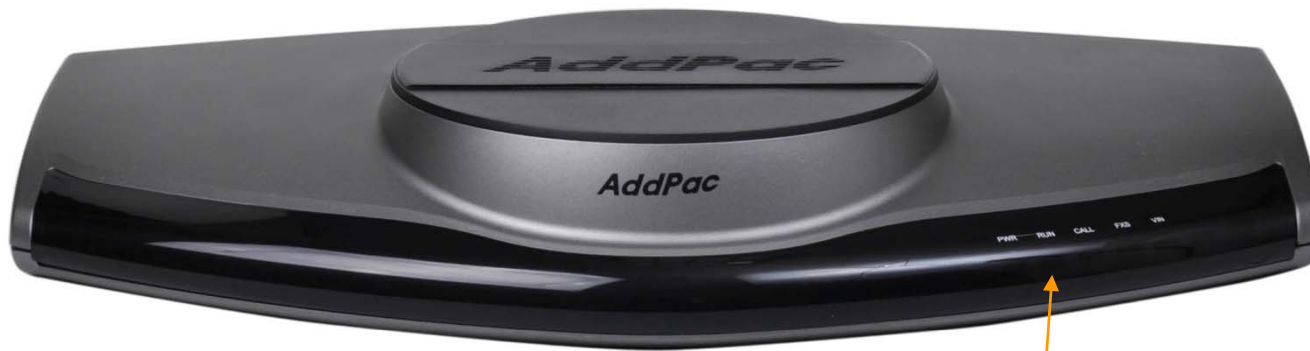
Hardware Specification

AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec

High
Performance
CPU

High-end
DSP

Front Side



IR Sensor & Status Indication Area

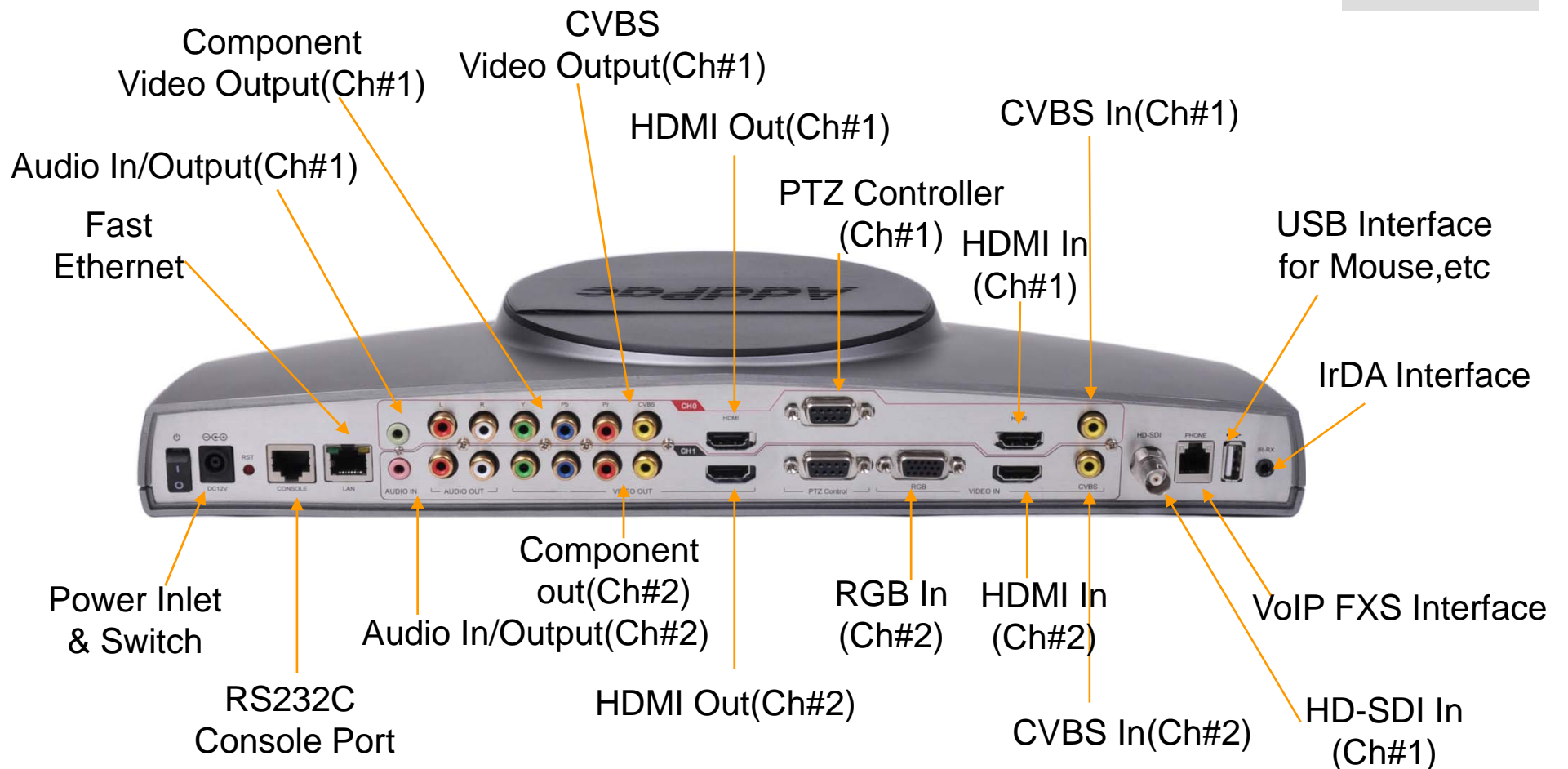
Hardware Specification

AP-HCC2000 Two(2)-Channel Full HD Video Conference Codec

High Performance
CPU

High-end
DSP

Back Side









Full HD/HD Video Conference Camera

HD Video Conference Cameras

- Full HD Camera Specification
 - High-end CMOS Camera Sensor
 - 2Mega Pixel
 - HD : 1080i/59.94, 1080i/50, 720p/59.94, 720p/50, etc
 - Auto Focus 10 x Optical Zoom, 12 x Digital Zoom
 - Wide Angle Lens for Video Conference Application
 - PELCO-D Control Protocol
 - Position Preset

HD Video Conference Cameras

| Product | AP-HDC50 | AP-HDC100 | AP-HDC200 | AP-HDC300 | AP-HDC350 |
|-----------------------|---|--|---|---|---|
| |  |  |  |  |  |
| Sensor | CCD | CMOS | CCD | CMOS | CMOS |
| Optical Zoom | x18 | x10 | x18 | x10 | x20 |
| Video Resolution | HD 720P(1280x720) | Full HD 720P, 1080i | HD 720P(1280x720) | Full HD 720P, 1080i | Full HD 720P, 1080i, 1080p |
| Video Output | HDMI, HD-SDI, Component, RCA | HDMI, HD-SDI, Component, RCA | HDMI, HD-SDI, Component, RCA | HDMI, HD-SDI, Component, RCA | HDMI, HD-SDI, Component, RCA |
| PTZ Control | Support | Support | Support | Support | Support |
| PTZ Control Interface | RS232/RS485 | RS232/RS485 | RS232/RS485 | RS232/RS485 | RS232/RS485 |
| Power | External Power Adaptor | External Power Adaptor | External Power Adaptor | External Power Adaptor | External Power Adaptor |

AEC Microphone (AP-MP100)



Main Features

AP-MP100 AEC Microphone

- Acoustic Echo Canceller Micro Phone Solution for Video Conference
- Wide band(16bits, 16kHz sampling) operation
- Support CNG(comport noise generation) to generate white noise
- Support double talk
- Noise reduction algorithm
- Support HDMI speaker mode & analog speaker mode
- S/W upgrade by y-modem protocol via RS232C
- Support CLI(Command Line Interface) to configure AEC parameters
- Voice Activity Detection
- Mute button
- Status LED (Mute, Active)
- Compact Design & Die Casting
- Power On/Off Switch

Hardware Specification

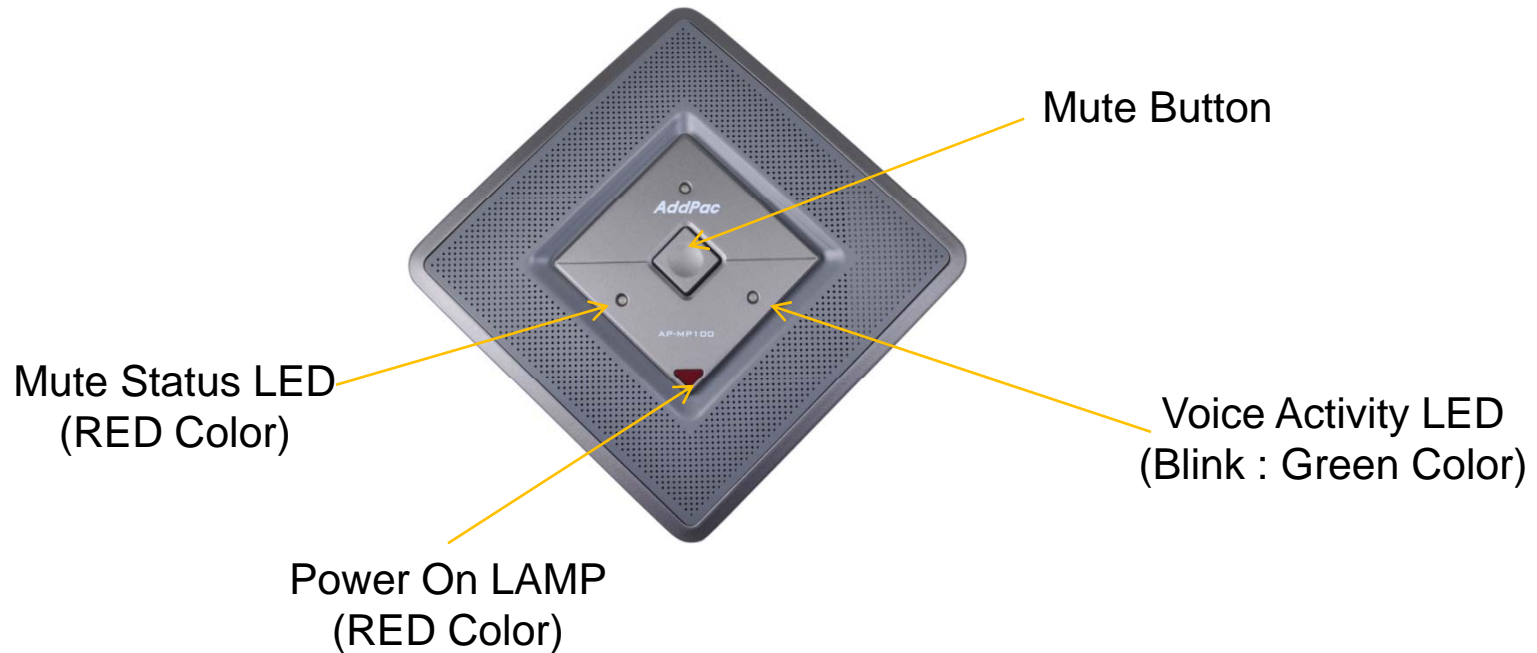
AP-MP100 AEC Microphone

- DSP based Acoustic Echo Canceller Hardware Architecture
- Status LED (Mute, Active)
- Audio Mute Key Support
- RS232C based Firmware Upgrade Architecture
- Compact Design & Die Casting
- Power On/Off Switch
- MIC Interface
 - Power Input
 - Audio Output



Hardware Specification

AP-MP100 AEC Microphone



Hardware Specification

AP-MP100 AEC Microphone



AEC Microphone Adaptor (AP-MA100)



Main Features

AP-MA100 AEC Microphone Adaptor

- Acoustic Echo Canceller Micro Phone Adaptor Solution for Video Conference
- Wide band(16bits, 16kHz sampling) operation
- Support CNG(comport noise generation) to generate white noise
- Support double talk
- Noise reduction algorithm
- Support HDMI speaker mode & analog speaker mode
- S/W upgrade by y-modem protocol via RS232C
- Support CLI(Command Line Interface) to configure AEC parameters
- Mute button
- Compact Design & Still Chassis
- Phantom +48V Supply On/Off Control
- Various MIC Input Interface Support
- Power On/Off Switch

Hardware Specification

AP-MA100 AEC Microphone Adaptor

- DSP based Acoustic Echo Canceller Hardware Architecture
- Audio Mute Button Support
- Status LED (Mute)
- RS232C based Firmware Upgrade Architecture
- Compact Design & Still Chassis
- Power On/Off Switch
- Phantom +48V On/Off Switch
- Three(3) Type MIC Input Interface



Hardware Specification

AP-MA100 AEC Microphone Adaptor

Back Side



Audio Out & Power In Connector

Power On/Off Switch

Front Side



Audio Mute Button & LAMP

RS232C Port for Firmware Upgrade

MIC Interface

Phantom +48V Interface

Smart Conference Controller (AP-SCC)



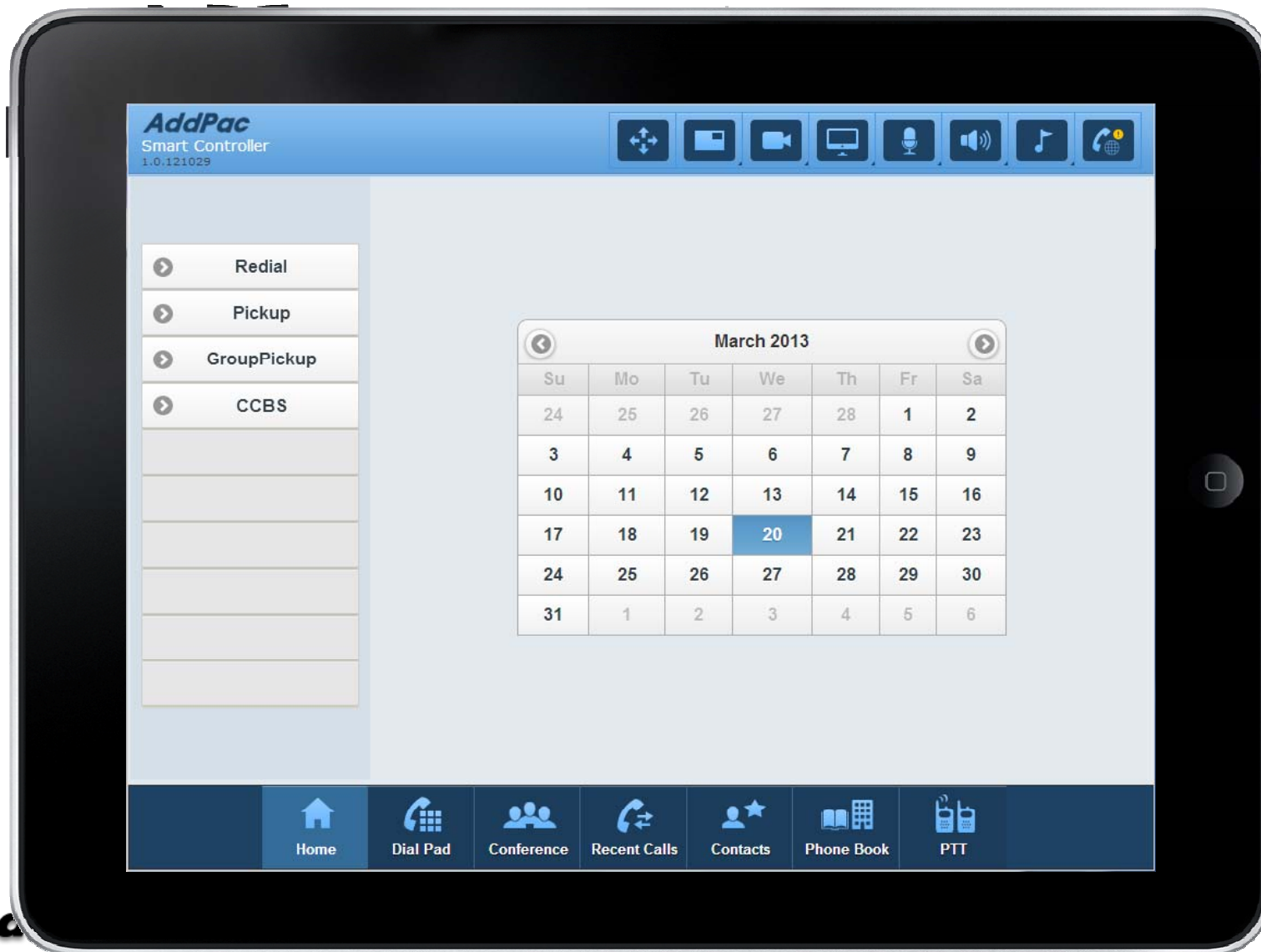
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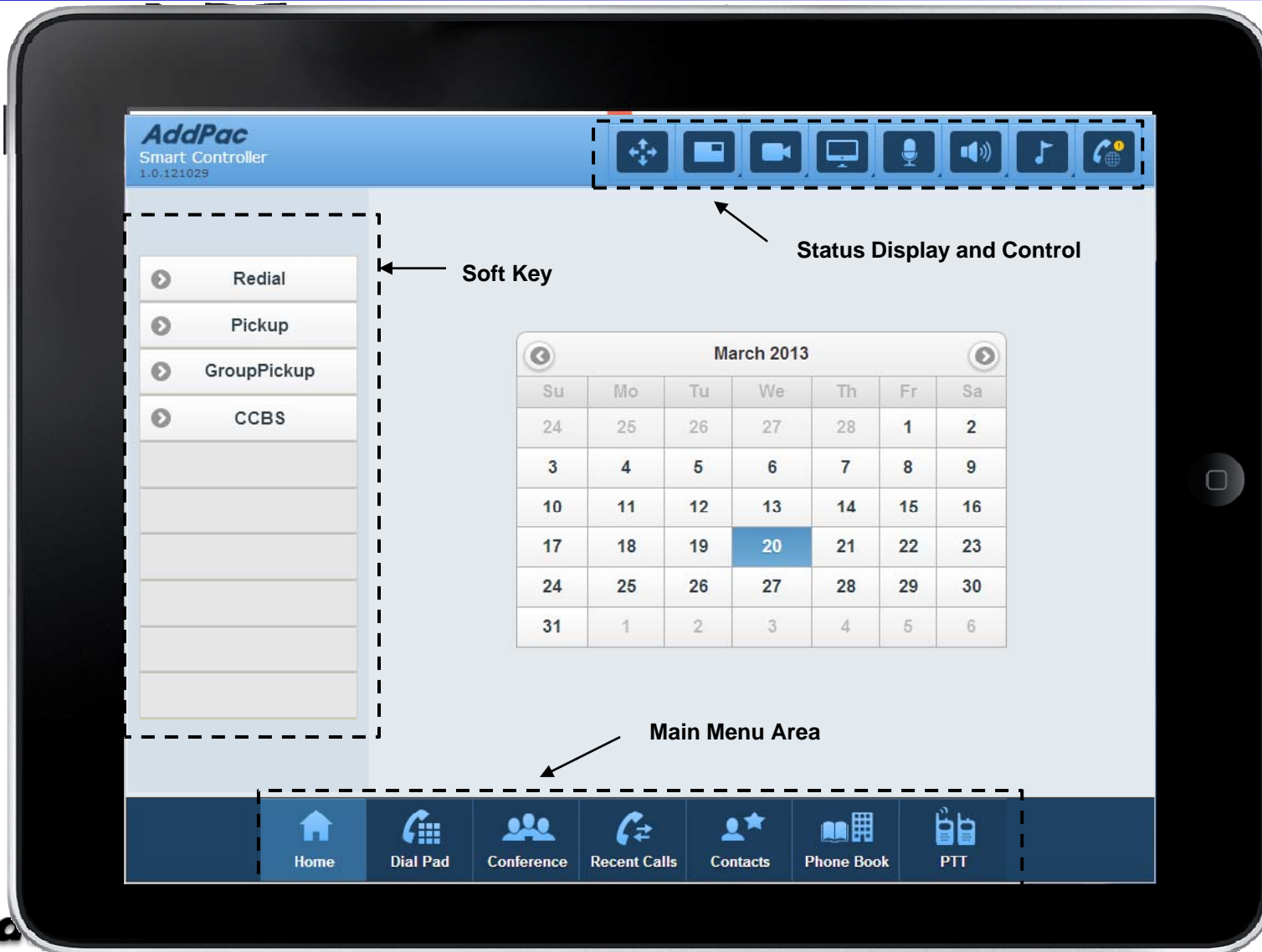
Smart Conference Controller Overview

- Pure Web based Smart Controller for AddPac HD Video Conference System Control
- Support Various Web Brower
 - PC(or Notebook) based Internet Explorer, Chrome, etc
 - Android based Web Browser like as Galaxy Tab, etc
 - Safari Web Browser like as Apple IPAD, etc
- Landscape Orientation View Mode Optimized (Tab, IPAD)
- IP based Remote HD Video Conference Control using PC(or Notebook), Tab, PAD, etc Instead of legacy IrDA Remote Controller by OSD

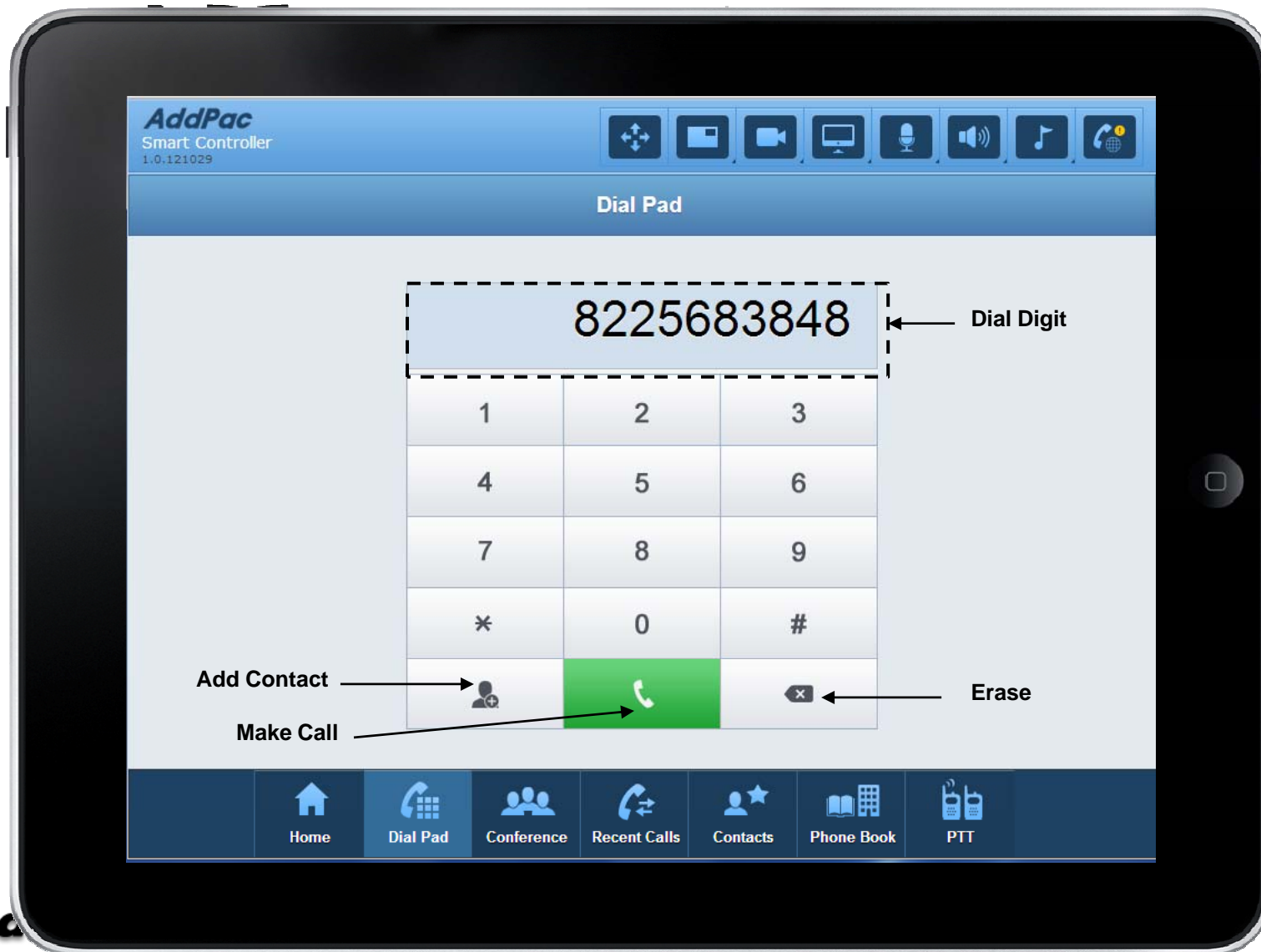
Login Home



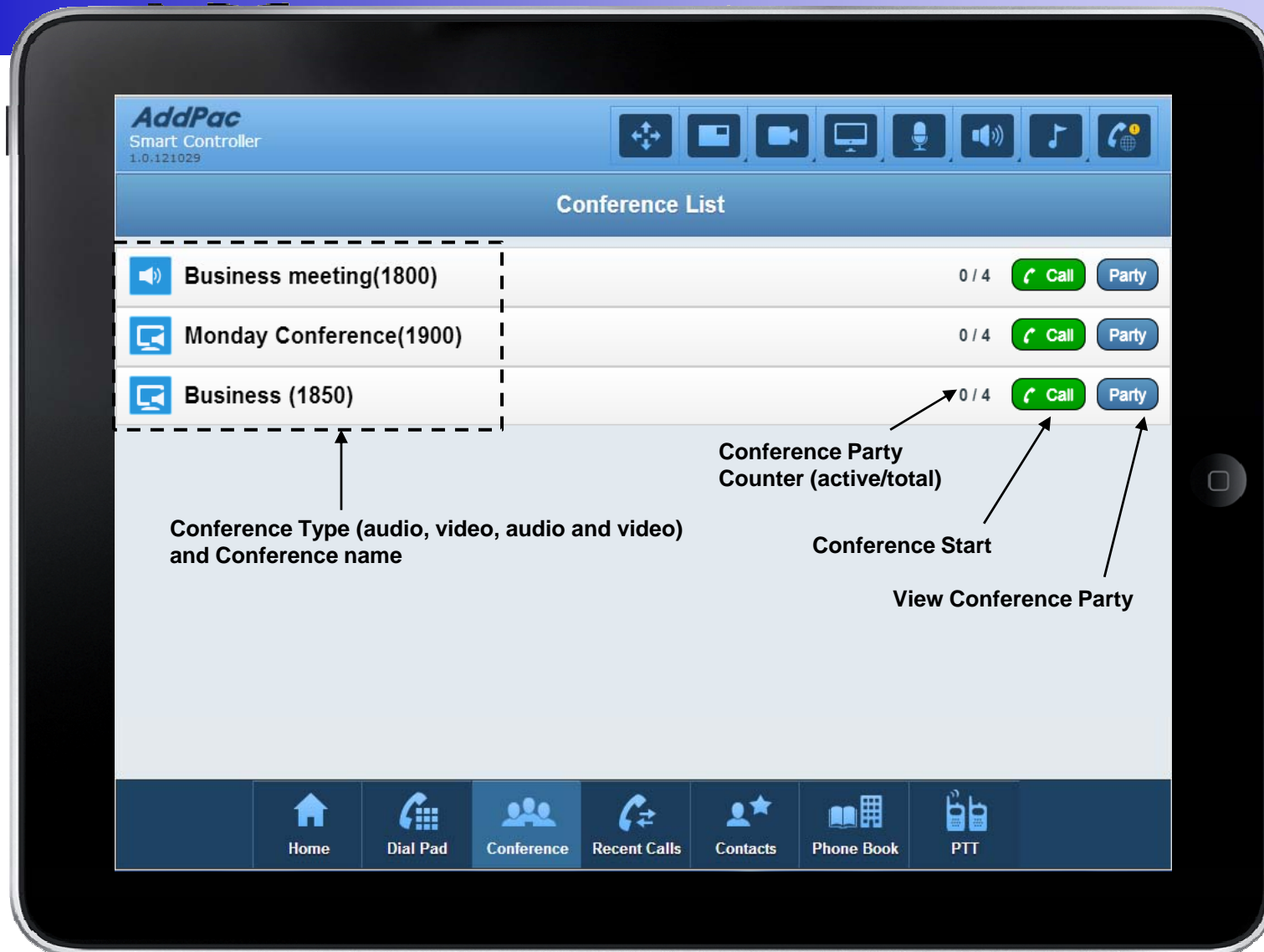
Login Home



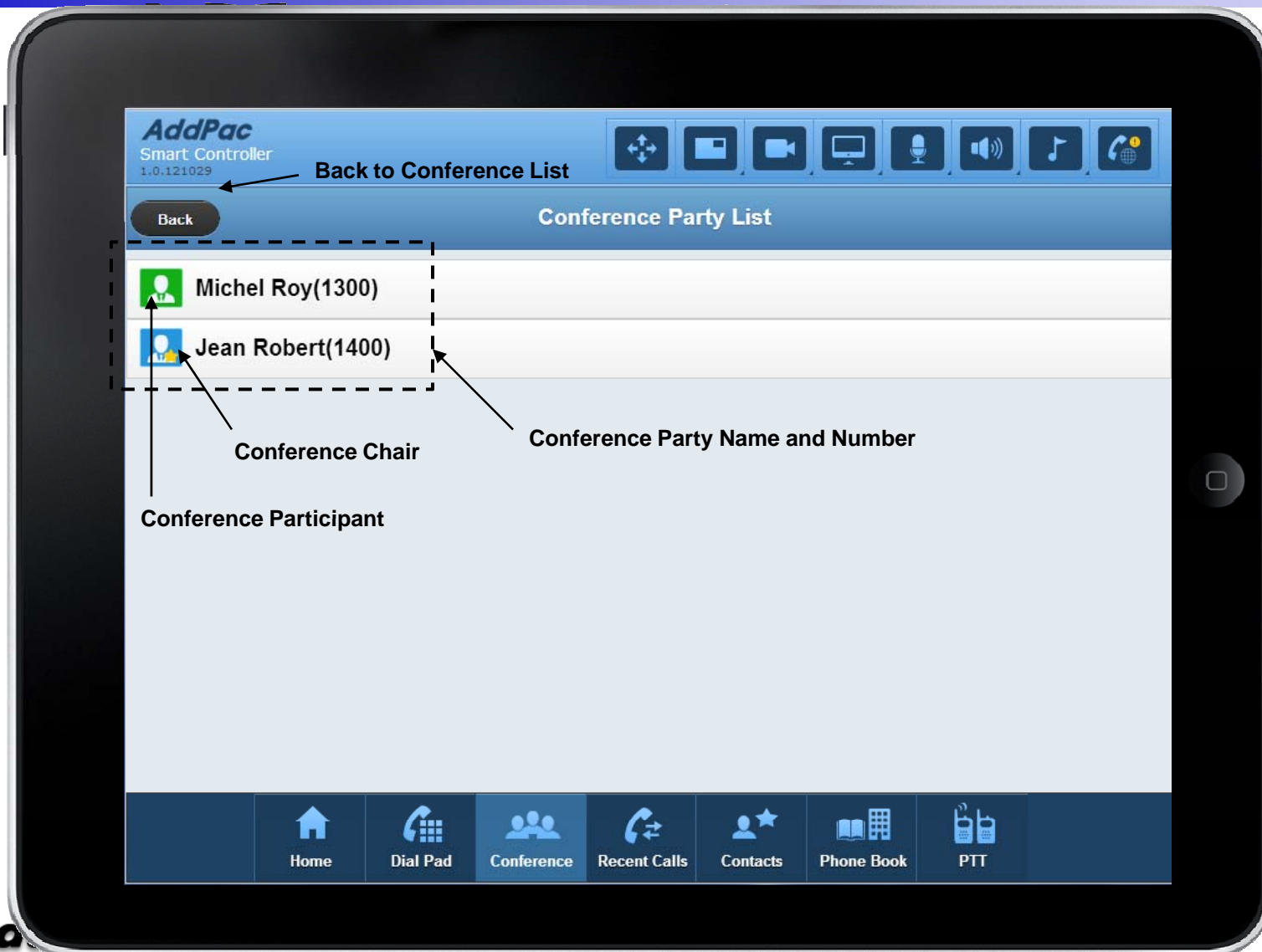
Dial Pad



Conference



Conference Party



Recent Calls



Contacts



Contacts (Add)



Phone Book (Directory)



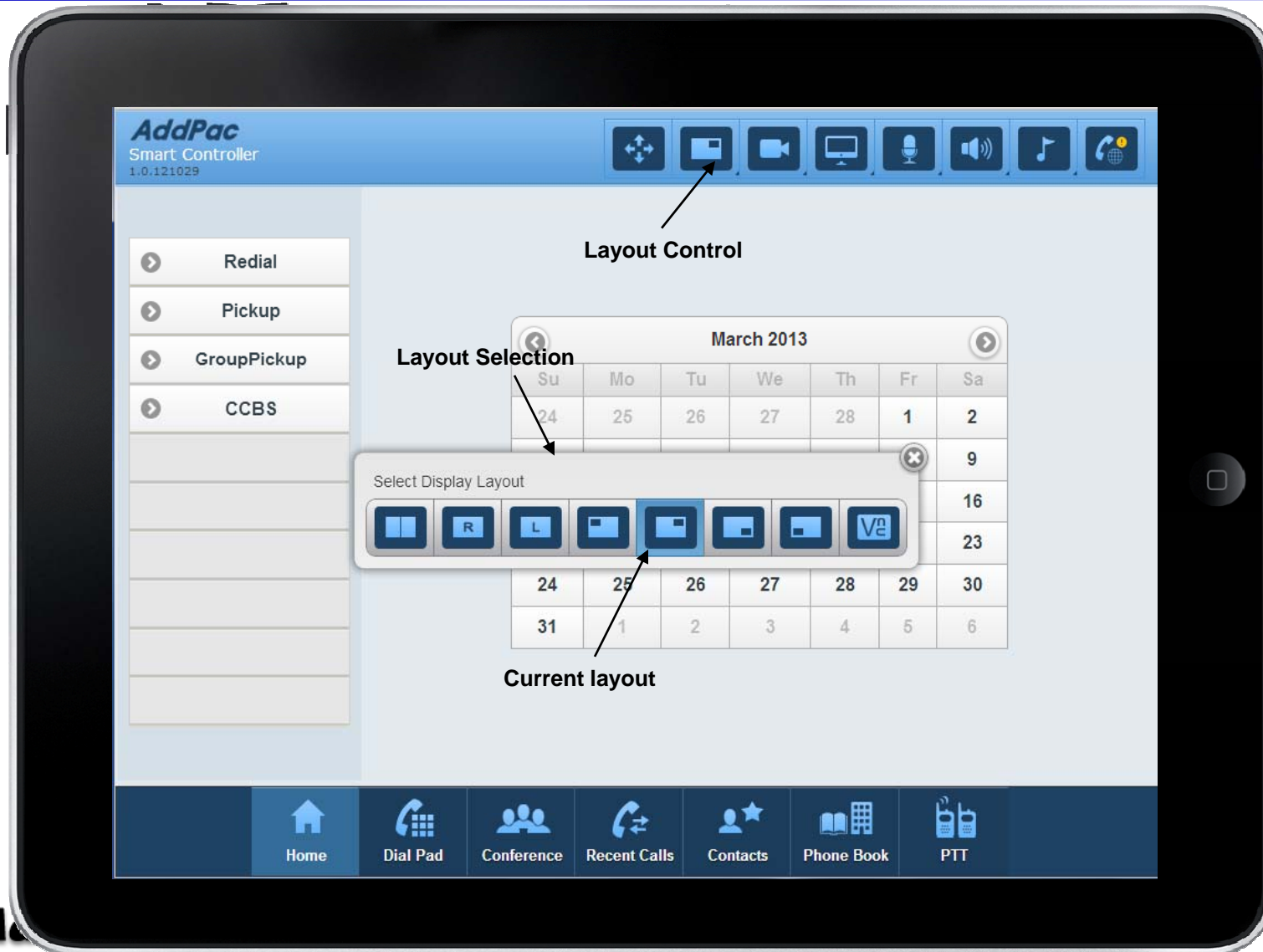
Call Connected



Camera Control



Layout Control



Speaker Control



PTT (Push-To-Talk)





Thank you!

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