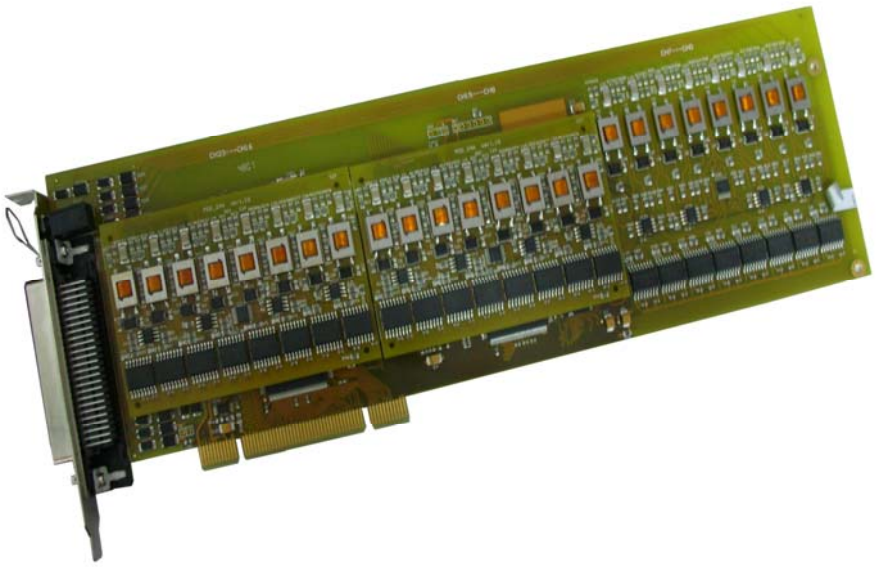
Synway ATP Series

ATP-24A/PCI
ATP-24A/PCI+
ATP-24A/PCIe
ATP-24A/PCIe+
ATP-24A/PCI(2.0)
ATP-24A/PCI+(2.0)
ATP-24A/PCIe(2.0)
ATP-24A/PCIe+(2.0)

Analog Tap Passive Board

Product Introduction



Synway Information Engineering Co., Ltd

www.synway.net

Functions

- High-impedance passive monitoring through parallel connection
- A variety of ways to start/stop recording
- Support of simultaneous recording on 24 channels
- Caller ID detection, FSK/DTMF support
- DTMF digits detection
- Simultaneous detection of DTMF and FSK
- Programmable tone analyzer detects all kinds of tones
- Activity/silence detection
- Automatic Gain Control (AGC) support in recording/playback operation
- Call progress monitoring
- Automatic detection of line voltage
- Automatically checks board to see if recording modules are correctly inserted
- ATP-24A/PCI+, ATP-24A/PCIe+, ATP-24A/PCI+(2.0) and ATP-24A/PCIe+(2.0) boards support hardware-based MS-GSM, G.729A and MP3 formats for encoding

Characteristic Features

- **PCI 2.2 Bus Support**

  (ATP-24A/PCI, ATP-24A/PCI+, ATP-24A/PCI(2.0), ATP-24A/PCI+(2.0))

  These four boards include PCI 2.2 bus with burst data transmission rate up to 133 MB/s; the PNP (plug and play) feature they have eliminates the need for jumper leads; also they support 3.3V/5V slot voltage and PCI-X.

- **PCIe Bus Support**

  (ATP-24A/PCIe, ATP-24A/PCIe+, ATP-24A/PCIe(2.0), ATP-24A/PCIe+(2.0))

  Developed with the design of PCIe X1, these four boards support PCIe X1, X2, X4, X8 and X16 slots.

- **DMA Transfer Support**

  The DMA transfer of recording data does not cost any of the host CPU resources, which helps extend the capacity of recording lines on a single board to an extreme.

- **Modularized Design**

  This board is designed with modularized structure and can be configured in flexible ways. Each board is equipped with 8 recording units and can be fitted with up to 2 recording modules. Each module supports the recording of 8 analog phone lines. Now it is widely used in various systems.

- **Available RJ21 Connector**

  This board has a 50-pin RJ21 connector which is often used for PBXs, making connection easy and malfunctions rare. With the help of a 24-port RJ21-to-RJ11 adapter that is supplied with the board, users can use the RJ11 jack for direct connection.

- **Fits Modules via Inter-plane Connectors**

  The use of high-precision inter-plane connectors highlights the characteristic compact and highly-reliable advantages of Synway's all-in-one boards.

- **8 to 24 Port Hi-Z Monitoring of Analog Lines**

  Flexible positioning of the tapping point is allowed on the communication line between Central Office Terminal (COT) and PBX, COT and telephones, PBX and telephones, as well as any kind of analog audio signals, e.g. radio signals. This function is widely used in small-to-large capacity call recording systems, call centers and so on.

- **Programmable Tone Detector**

  Detects single or dual tones at any frequency, offering facility for use with a variety of PBXs and key telephone systems.

- **High-impedance Recording**

  The recording impedance is up to 10kΩ AC/2MΩ DC, ruling out the interruption on transmission of monitored signals.

- **Various CODECs Support**

  Offers a large selection of voice CODECs, including hardware-based A-Law (G.711), μ-law, IMA-ADPCM, software-based 16-bit linear PCM, MP3 and VOX. The ATP-24A/PCI+, ATP-24A/PCIe+, ATP-24A/PCI+(2.0) and ATP-24A/PCIe+(2.0) boards also support the hardware-based MS-GSM, G.729A and MP3 formats for encoding.

- **Supports WAV File**

  The recorded voice files can be edited and played by audio tools such as Cooledit.

- **Audio Output Interface**

  Equipped with an analog tone amplifier circuit and an output interface, the first channel on the board can directly connect to the headset or sound box, allowing monitoring of a specified channel in real time and voice playback only via a simple function call.

- **Unique Hardware Serial Number**

  Each board has a unique hardware serial number written in the firmware to distinguish itself from other boards and prevent piracy. The number is available via an easy function call with applications.

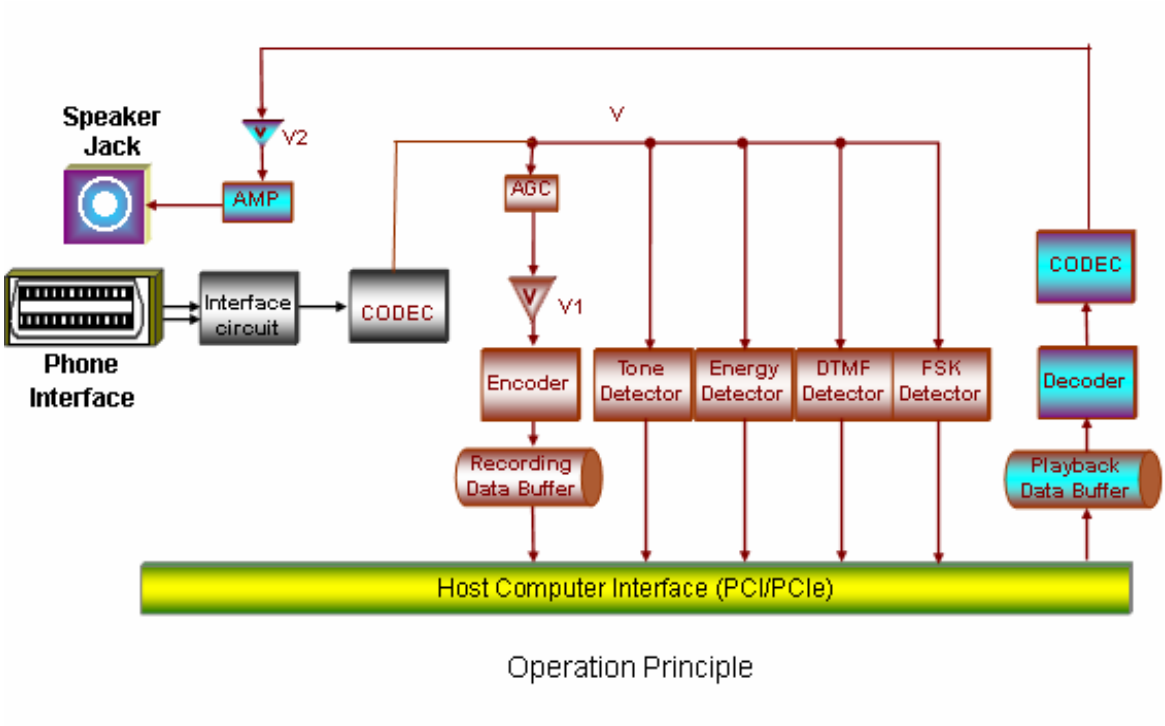
- **Authorization Code Identification Circuit**

  The on-board authorization code identification circuit is designed for software safety. Users can apply to our company for an exclusive one.

- **Synway's Unified SynCTI Driver Development Platform**

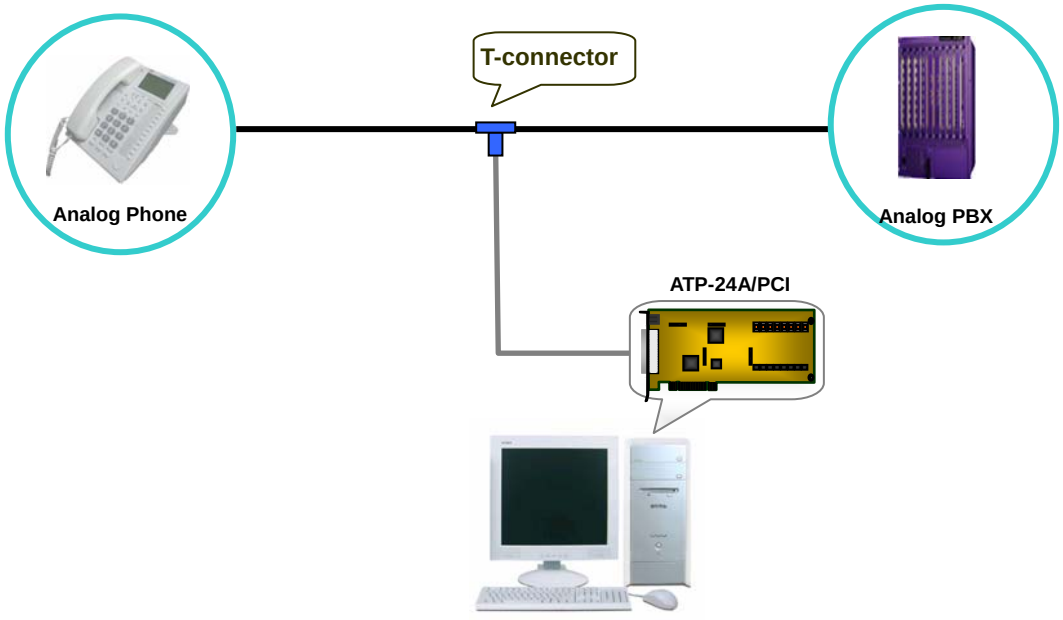
  Synway owns the intellectual property rights for the unified high-intelligence SynCTI driver development platform. Each system supports up to 2048 channels. Functions such as the detection and analysis of rings, tones and Caller IDs, are available via simple function calls on the driver platform, without having to understand complex call procedures.

Operation Principle



Operation Principle

Typical Application



Note: This typical application is also applicable to other ATP series boards.

Technical Specifications

Dimensions

ATP-24A/PCI, ATP-24A/PCI+, ATP-24A/PCIe, ATP-24A/PCIe+:

310×115 mm^2 (excluding L-bracket)

ATP-24A/PCI(2.0), ATP-24A/PCI+(2.0), ATP-24A/PCIe(2.0), ATP-24A/PCIe+(2.0):

160×111mm^2 (excluding L-bracket)

Weight

ATP-24A/PCI, ATP-24A/PCI+:

≈250g (including 2 8-channel modules)

ATP-24A/PCIe, ATP-24A/PCIe+:

≈200g (including 2 8-channel modules)

ATP-24A/PCI(2.0), ATP-24A/PCI+(2.0), ATP-24A/PCIe(2.0), ATP-24A/PCIe+(2.0):

≈215g (including 2 8-channel modules)

Environment

Operating temperature: 0℃—55℃

Storage temperature: -20℃—85℃

Humidity: 8%— 90% non-condensing

Storage humidity: 8%— 90% non-condensing

Input/output Interface

Headset jack: One φ3.5 stereo jack

Telephone line jack: A 50-pin RJ21 connector

Audio Specifications

Codec: CCITT A/μ-Law 64kbps

IMA ADPCM 32kbps

Output power: ≥50mW

Distortion: ≤2%

Frequency response: 300-3400Hz(±3dB)

Signal-to-noise ratio: ≥38dB

Echo suppression: ≥40dB

Maximum System Capacity

Up to 10 boards concurrently per system; up to 24 channels per board

Power Requirements

ATP-24A/PCI, ATP-24A/PCI+, ATP-24A/PCIe, ATP-24A/PCIe+:

+3.3V DC：700mA

+5V DC：200mA (PCI board only)

-12V DC：120mA (PCI board only)

+12V DC：100mA

Maximum power consumption: ≤12W (PC power supply only)

ATP-24A/PCI(2.0), ATP-24A/PCI+(2.0):

+3.3V DC: 900mA

+5V DC: 200mA

+12V DC: 100mA

Maximum power consumption: ≤8W (PC power supply only)

ATP-24A/PCIe(2.0), ATP-24A/PCIe+(2.0):

+3.3VDC: 900mA

+12V DC: 300mA

Maximum power consumption: ≤9W (PC power supply only)

Impedance

Input impedance: ≥1MΩ/500V DC;

≥10kΩ/1000V AC

Insulation resistance for PC isolation from telephone line: ≥2MΩ/500V DC

Telephone line impedance: Compliant with the national standard impedance for three-component network

Audio Encoding & Decoding

16Bit PCM	*128kbps*
8Bit PCM	*64kbps*
A-Law	*64kbps*
μ-Law	*64kbps*
VOX	*32kbps*
ADPCM	*32kbps*
GSM	*13.6kbps*
MP3	*8kbps*
G.729A	*8kbps*

Sampling Rate

8kHz

Safety

Lightning resistance: Level 4

Purchasing Guide

The Synway ATP Series ATP-24A/PCI, ATP-24A/PCI+, ATP-24A/PCIe, ATP-24A/PCIe+, ATP-24A/PCI(2.0), ATP-24A/PCI+(2.0), ATP-24A/PCIe(2.0), ATP-24A/PCIe+(2.0) voice boards provide a complete range of features to meet all requirements.

Model Description

Model	PC Bus	Voice Channels	Voltage Detection	Audio Jack	Tone Analyzer	ANI	G.729A MS-GSM	MP3	DTMF Detector	Board TDM	Between-board TDM
ATP-24A/PCI	PCI	24	√	√	√	√	—	—	√	√	—
ATP-24A/PCI+	PCI	24	√	√	√	√	√	√	√	√	—
ATP-24A/PCIe	PCIe	24	√	√	√	√	—	—	√	√	—
ATP-24A/PCIe+	PCIe	24	√	√	√	√	√	√	√	√	—
ATP-24A/PCI(2.0)	PCI	24	√	√	√	√	—	—	√	√	—
ATP-24A/PCI+(2.0)	PCI	24	√	√	√	√	√	√	√	√	—
ATP-24A/PCIe(2.0)	PCIe	24	√	√	√	√	—	—	√	√	—
ATP-24A/PCIe+(2.0)	PCIe	24	√	√	√	√	√	√	√	√	—

Technical/sales Support

Headquarters

Synway Information Engineering Co., Ltd

http://www.synway.net/

9F, Synway D&R Center, No.3756, Nanhuan Road, Binjiang District, Hangzhou, P.R.China, 310053

Tel: +86-571-88860561

Fax: +86-571-88850923

Technical Support

Tel: +86-571-88864579

Mobile: +86-13735549651

Email: techsupport@sanhuid.com

Email: techsupport@synway.net

MSN: scycindy_sh@hotmail.com

Sales Department

Tel: +86-571-88860561

Tel: +86-571-88864579

Fax: +86-571-88850923

Email: sales@synway.net

TIPS

- **All the content and data herein have been scrupulously checked. However, we do not guarantee the absence of errors.**
- **Product specifications and relevant data are subject to conditions on the purchase contract.**
- **Our company reserves the right to modify this document without prior notice and the right for final explanation.**