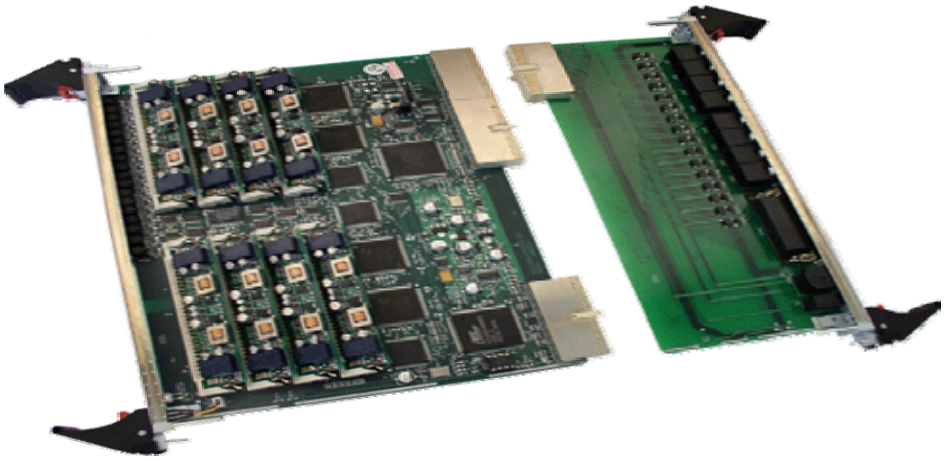
Synway CTI Series

SHT-16B-CT/cPCI 2.0
SHT-16B-CT/cPCI/FAX 2.0
SHT-16B-CT/cPCI/MP3 2.0

Analog Voice Board

Product Introduction



Synway Information Engineering Co., Ltd

www.synway.net

Functions

- Supports ring-alert for external calls
- Station phones on-hook/off-hook detection
- Direct connection between trunk and station keeps call uninterrupted during power outage
- Multiple fax channels
- Calling party info (Caller ID) detection, DTMF and FSK support
- Activity/silence detection
- Automatic Gain Control (AGC) support in recording operation
- DTMF transmission and detection
- Automatic line voltage detection
- Automatically checks the number and the type of the modules on the board

Characteristic Features

- **CompactPCI 2.1 Bus Support**

  Includes CompactPCI 2.1 bus with burst data transmission rate up to 133 MB/s; PNP (plug and play) feature eliminates the need for jumper leads; supports hot swap while running the application software (most advanced hot-swap operation for CompactPCI system).

- **Connects via Rear Connection Panel**

  The use of the rear connection panel eliminates the need for reconnection upon changing the board, which facilitates system development and debugging, and enhances runtime stability.

- **Module Configurable**

  8 on-board dual channel modules can be freely arranged in pairs or groups for various complex, multi-functional applications, such as call center and recording functions available on a single board.

- **On-board SIMM Slots**

  Fit modules to board. Contacts on both sides of the SIMM slots greatly improve

connection and ease installation.

- **Teleconferencing**

  The flexible distributed conferencing system sets no limit on the number of simultaneous conferences and participants in each conference, allows monitoring and recording of the whole conference and each individual speaker.

- **RJ11 and DB44 Connectors Available**

  A rear connection panel has eight 4-pin RJ11 jacks and a 16-way DB44 connector which can be directly connected to phone lines via a proper arrangement of lines and cables, making connection easy and malfunctions rare.

- **Optional Internal/External Ringing Current & Battery Feed Power Supply**

  The external ringing current & battery feed power supply provides station modules with battery feed, and enables the phones which are linked to station channels to ring.

  The ringing current module which may be optionally built on the rear connection panel supplies the internal ringing current and battery feed provided that it is working with the 48V IPC power supply.

- **Programmable Tone Detector**

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

- **Specialized Driver Algorithm**

  Uses SPECDial – a specialized driver algorithm - to perform a complete automatic dial process through analog lines. Accurately identifies called-party statuses and precisely distinguishes an answering machine from a fax machine that is responding at the remote end.

- **Echo Cancellation**

  The self-adaptive echo cancellation feature effectively eliminates echoes under various conditions, which cancels out the effect of voice playback on DTMF and busy tones detection, avoids self-excited oscillation and howling, and minimizes the possibility of registering wrong DTMF and busy tones in a conference call.

- **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.

- **Supports WAV File**

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

- **Audio Output Interface**

The analog tone amplifier circuit equipped on the first channel and the audio output jack on the rear connection panel allow the board to connect directly with the headset or sound box, and enable the voice to be played to a specified channel by simple function calls.

- **TDM Capability**

  The use of the on-board H.110 bus in a CompactPCI chassis facilitates smooth connectivity to third-party boards with H.110 bus for the transfer of acquired voice signals to other devices.

- **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.

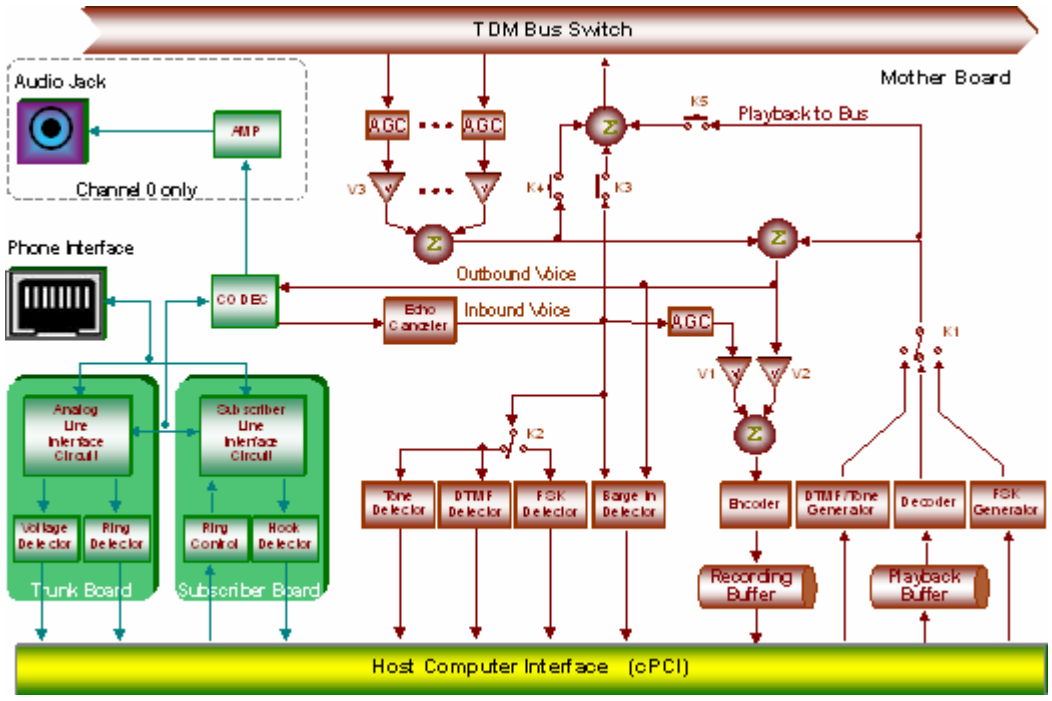
- **Authorized Code Identification Circuit**

  The on-board authorized code identification circuit is designed for software safety. Users can apply to our company for the authorized code.

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

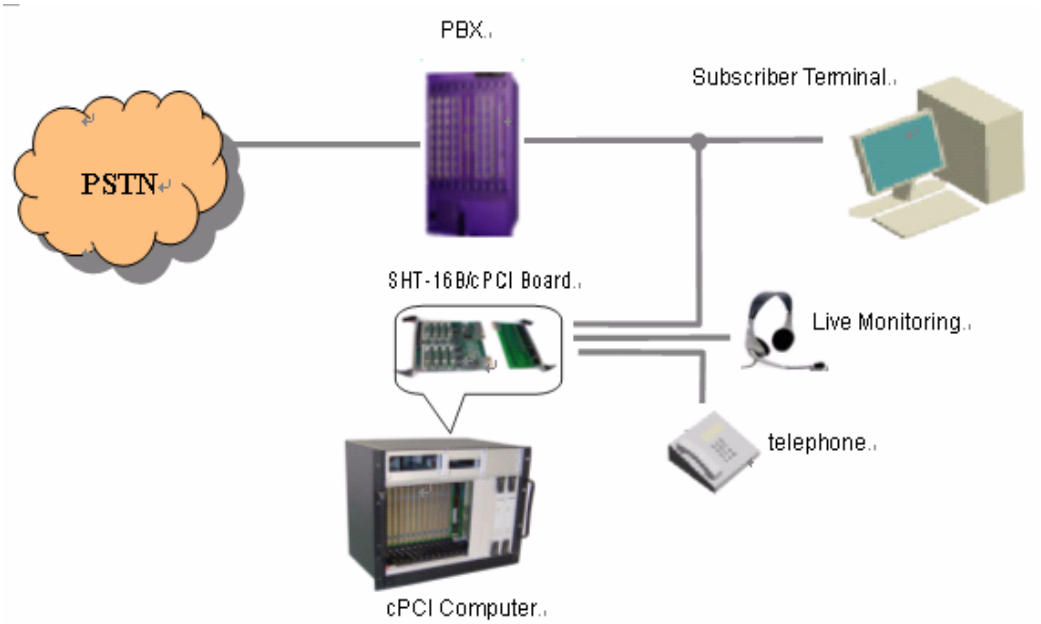
  Synway owns the intellectual property rights for the unified high-intelligence SynCTI driver development platform. Each system supports up to 2048 channels. Functions such as the detection and analysis of rings, tones and Caller IDs, are available via simple function calls on the driver platform, without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

Operation Principle



Notes: Channel 0 mentioned in this figure corresponds to Channel 1 marked on the board.

Typical Application



Technical Specifications

Dimensions

Board: 230×163mm^2 (excluding handles)

Rear connection panel: 230×82mm^2 (excluding handles)

Weight

Board: ≈ 500g (including 8 dual channel modules)

Environment

Operating temperature: 0℃—55℃

Storage temperature: -20℃—85℃

Humidity: 8%— 90% non-condensing

Input/output Interface

Headset jack: One φ3.5 stereo jack

Telephone line jack: Eight 4-pin RJ11 jacks; DB44

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 16 channels per board

Power Requirements

+5V DC: 600mA

-12V DC: 80mA

+12V DC: 300mA

Maximum power consumption: ≤12W

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*

Sampling Rate

8kHz

Safety

Lightning Resistance: Level 4

Certification: FCC; CE; CCC

Purchasing Guide

The Synway CTI Series SHT-16B-CT/cPCI 2.0, SHT-16B-CT/cPCI/FAX 2.0 and SHT-16B-CT/cPCI/MP3 2.0 boards provide a complete range of features to meet all requirements.

Model Description

Model	PC Bus	Voice Channels	Voltage Detection	Audio Jack	Conferencing	ANI	CT Bus	On-board Switching	Faxing	MP3
SHT-16B-CT/cPCI 2.0	cPCI	16	√	√	√	√	H.110	√	—	—
SHT-16B-CT/cPCI/FAX 2.0	cPCI	16	√	√	√	√	H.110	√	√	—
SHT-16B-CT/cPCI/MP3 2.0	cPCI	16	√	√	√	√	H.110	√	√	√

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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.**