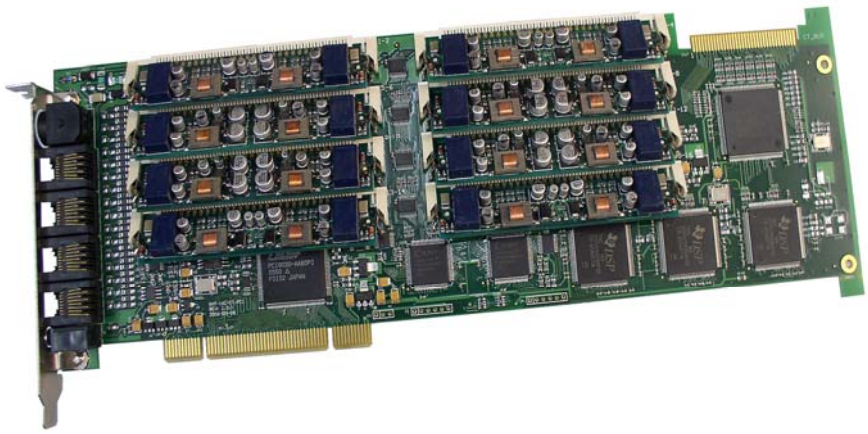
Synway CTI Series

SHT-16C-CT/PCI/EC

SHT-16C-CT/PCI/FAX

Analog Voice Board

Product Introduction



Synway Information Engineering Co., Ltd

www.synway.net

Functions

- A single board can be installed with at most 8 dual-channel modules, supports 16 voice channels
- 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
- Calling party info (Caller ID) detection/transmission, DTMF and FSK support
- Activity/silence detection
- Automatic Gain Control (AGC) support in recording operation
- DTMF transmission and detection
- 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
- Includes H.100 bus, compatible with MVIP bus, SC bus and ST bus, facilitating smooth connectivity to third-party boards with H.100 bus for the transfer of acquired voice signals to other devices
- Includes audio output interface. The first channel on the board equipped with an analog audio amplifier circuit can directly connect to the headset or sound box, and play voices to a particular channel via a simple function call
- Automatic line voltage detection
- Automatically checks the board to determine the number and type of modules on the board
- 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
- The on-board authorization code identification circuit is designed for software safety. Users can apply to our company for the authorization code
- The on-board lightning-proof circuit reaches the telecom standard and eliminates the damage caused by the lightning
- The fax channel on the SHT-16C-CT/PCI/FAX board can be shared by all the voice

channels, supports the transmit/receive rate of 14400bps

- Each channel on the SHT-16C-CT/PCI/EC board supports 64ms echo cancellation

Characteristic Features

- **PCI 2.2 Bus Support**

  Includes PCI 2.2 bus with 32/64-bit PCI slot and 3.3V/5V slot voltage; Operable on device platforms which support PCI-X.

- **On-board SIMM Slots**

  Fit modules to board. Contacts on both sides greatly improve connection and ease installation.

- **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.

- **RJ45 Jack**

  A single board has four 8-pin RJ45 jacks, each of which can be converted into four 2-pin RJ11 jacks via a proper 4-way hub to serve as the analog telephone line interfaces, making connection easy and malfunctions rare.

- **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.

- **Programmable Tone Detector**

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

- **Professional Driver Algorithm**

  Uses SPECDial - a professional 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. Compared with the B Series voice boards, the C Series EC boards have the enhanced capability in echo cancellation, i.e. each channel supports 64ms echo cancellation, designed especially for the VoIP and teleconferencing applications.

- **Various CODECs Support**

  Offers a large selection of voice CODECs, including hardware-based A-law, μ-law, IMA-ADPCM, software-based 16-bit linear PCM, MP3 and VOX.

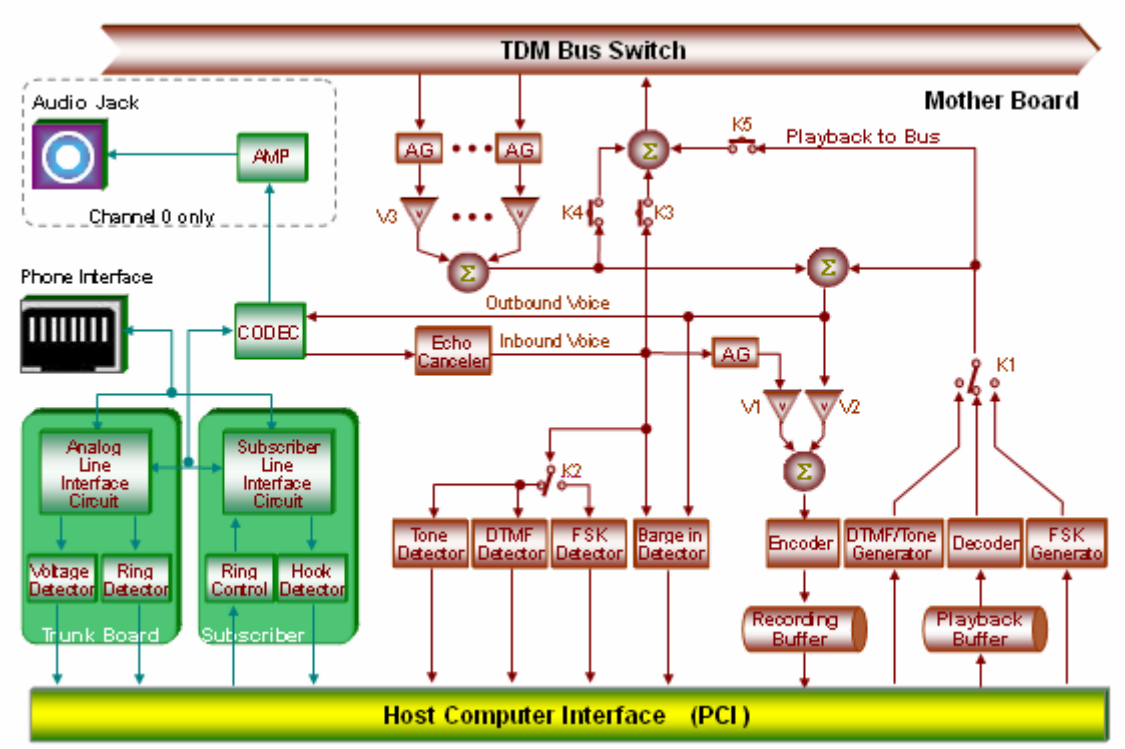
- **Supports WAV File**

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

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

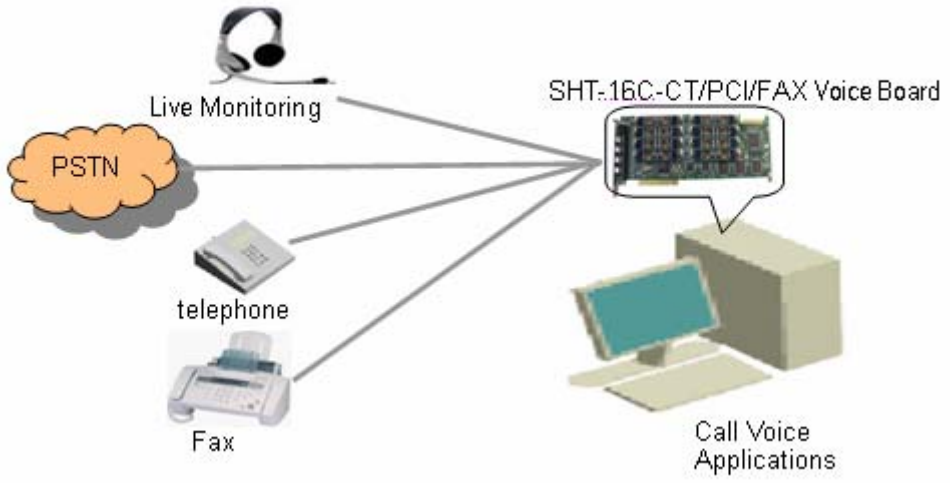
  Synway owns the intellectual property rights for the unified high-intelligence SynCTI driver development platform. Each system supports up to 2048 channels. Functions such as the detection and analysis of rings, tones and Caller IDs, are available via simple function calls on the driver platform, without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

Operation Principle

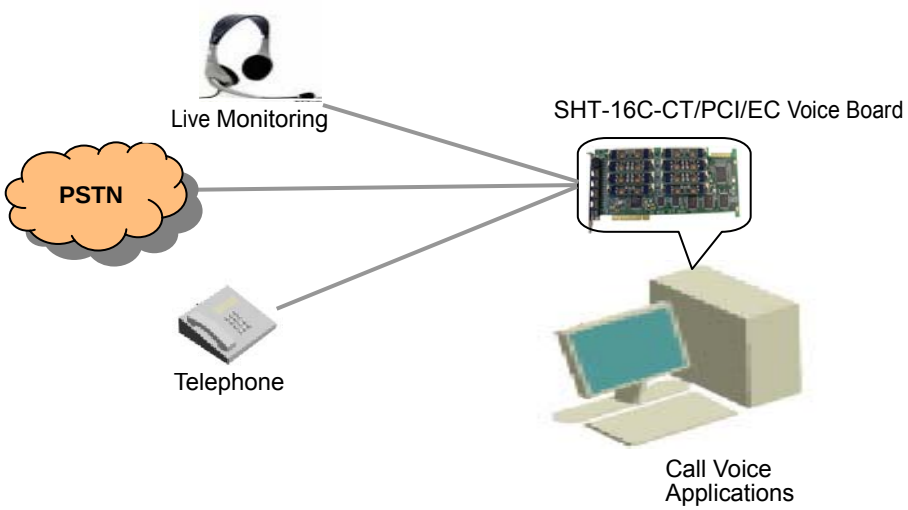


Typical Application

- **SHT-16C-CT/PCI/FAX**



◆ SHT-16C-CT/PCI/EC



Technical Specifications

Dimensions

310×115mm^2 (excluding L-bracket)

Weight

≈ 400g

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: Four 8-pin RJ45 jacks

Audio Specifications

CODEC: CCITT A/μ-Law 64kbps,

IMA ADPCM 32kbps

Output power: ≥50mW

Distortion: ≤3%

Frequency response: 300-3400Hz (±3dB)

Signal-to-noise ratio: ≥38dB

Echo suppression: ≥40dB

Maximum System Capacity

Up to 10 analog voice 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 (PC power 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*

Sampling Rate

8kHz

Safety

Lightning resistance: Level 4

Purchasing Guide

The Synway CTI Series SHT-16C-CT/PCI/EC, SHT-16C-CT/PCI/FAX voice boards provide a complete range of features to meet all requirements

➢ Model Description

Model	PC Bus	Voice Channels	Conferencing	Enhanced Echo Cancellation	Faxing	Board TDM	Between-board TDM
SHT-16C-CT/PCI/EC	PCI	16	√	√	—	√	√
SHT-16C-CT/PCI/FAX	PCI	16	√	—	√	√	√

Technical/sales Support

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TIPS

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- **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.**