



**Synway AST Series**

**CDC-1522A/PCI**

**CDC-2522A/PCI**

**CDC-3522A/PCI**

# **Hardware Manual**

**Version 1.0**

**Synway Information Engineering Co., Ltd**

**[www.synway.net](http://www.synway.net)**

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## Revision History

Version	Date	Comments
Version 1.0	2009-2	Initial publication.

**Note:** Only major revisions to this manual itself recorded herein.

## Chapter 1 Overview

The Synway CDC Series (hereinafter referred to as 'CDC') are multi-channel codec boards with PCI 2.2 bus, supporting the hardware-based transformations between voice codecs. In view of the board features and functionalities, the Synway CDC series board is a perfect substitute for the TC400B product from Digium Inc.

The Figure 1-1 shows the typical application of CDC Series boards.

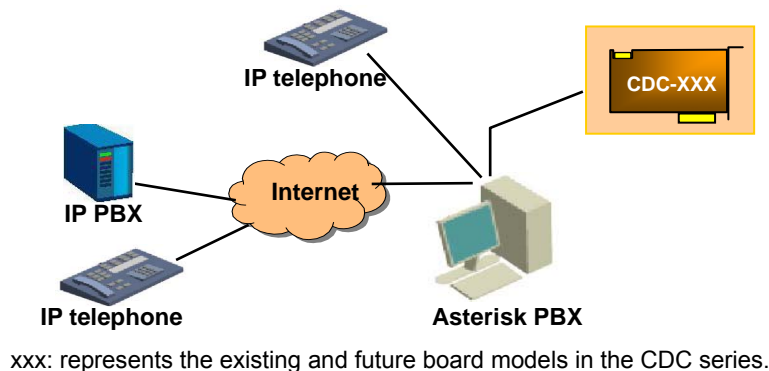


Figure 1-1 Typical Application

Now available models are CDC-1522A/PCI, CDC-2522A/PCI and CDC-3522A/PCI. The point of difference between them lies on how many voice channels are supported for encoding and decoding at the same time. To be exact, CDC-1522A/PCI supports simultaneous encoding and decoding on 50 voice channels; CDC-2522A/PCI supports that on 100 voice channels; and CDC-3522A/PCI supports that on 150 voice channels.

### 1.1 Features

- **PCI 2.2 Bus Support**

Includes PCI 2.2 bus with burst data transmission rate up to 132 MB/s; PNP (plug and play) feature eliminates the need for jumper leads; the general PCI design supports 3.3V/5V PCI slot and PCI-X slot.

- **DMA Read and Write**

The use of PCI-based DMA technique for data reading and writing helps minimize the cost of the host CPU.

- **Voice CODEC Support**

Supports the codec translations among G.711 A-Law,  $\mu$ -Law and G.729A in hardware.

- **Highly Efficient Real-time Voice Processing**

This board enables highly efficient voice processing and the multiple on-board DSPs give a nearly real-time voice effect.

- **Plentiful API Functions**

Fully compatible with the API functions of Asterisk.

## Chapter 2 Installation

### 2.1 Hardware Structure

- CDC-1522A/PCI Board

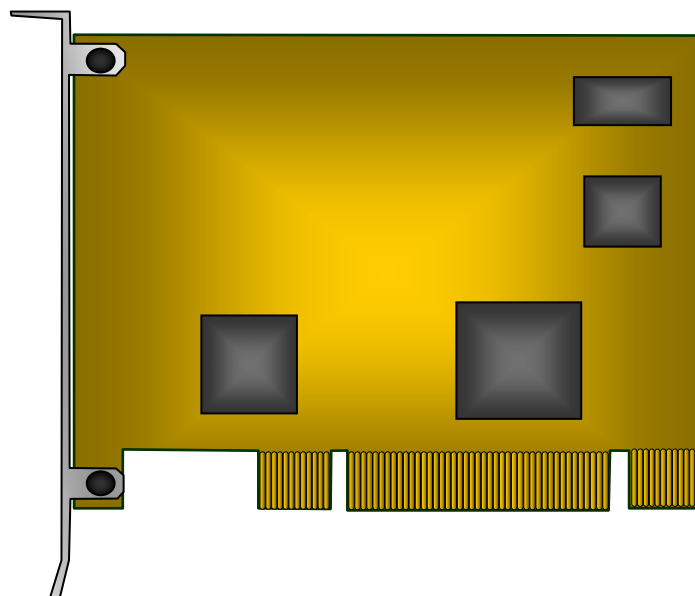


Figure 2-1 CDC-1522A/PCI (Front Views)

- CDC-2522A/PCI Board

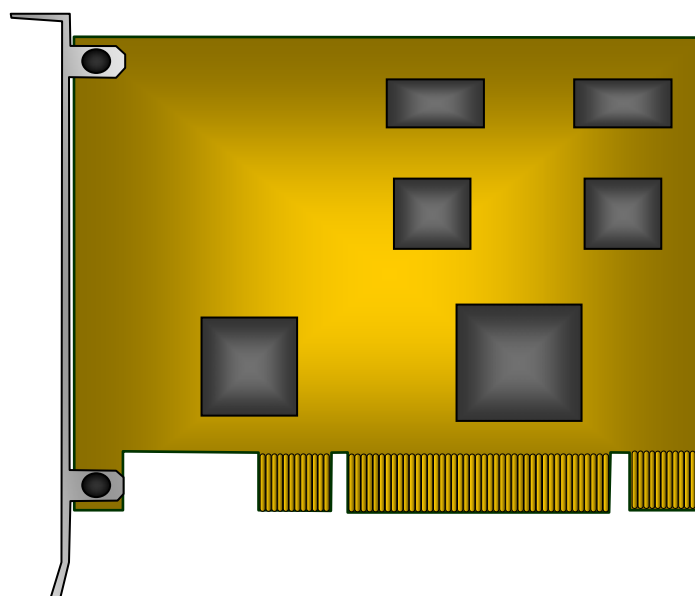


Figure 2-2 CDC-2522A/PCI (Front Views)

- CDC-3522A/PCI Board

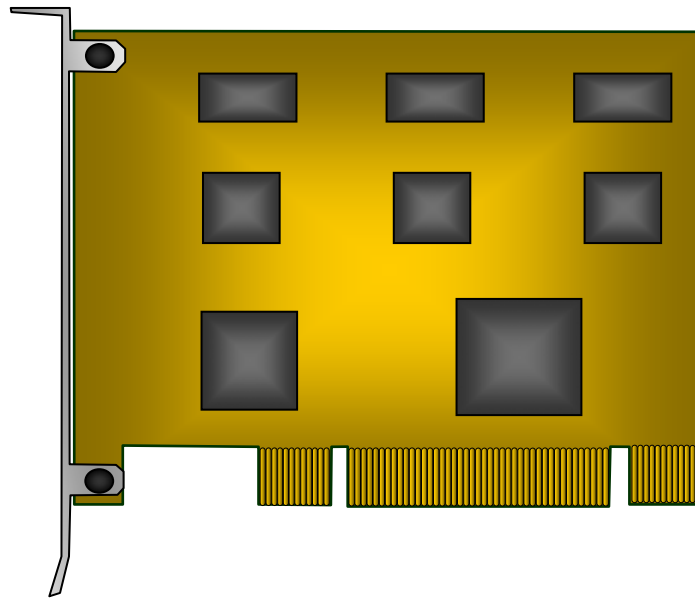


Figure 2-3 CDC-3522A/PCI (Front View)

## 2.2 System Requirements

### Host System Requirements

CPU: 400MHz Intel® Pentium®III or above

Memory: 512M or more

HD: Depends on individual requirements

### Supported Operating Systems

Linux RH7.2/RH9.0/AS4/FC4/SUSE10

## 2.3 Installation Procedure

- Step 1: Turn off the power and open the chassis.
- Step 2: Fit the board into a slot on the PC.
- Step 3: Close and seal the chassis.

## Appendix A Technical Specifications

### Dimensions

*120×95mm<sup>2</sup> (excluding L-bracket)*

### Weight

*≈100g*

### Environment

*Operating temperature: 0℃—55℃*

*Storage temperature: -20℃—85℃*

*Humidity: 8%—90% non-condensing*

*Storage humidity: 8%—90%  
non-condensing*

### Audio Decoding

*From G.729A to A-Law,  $\mu$ -Law*

### Audio Encoding

*From A-Law,  $\mu$ -Law to G.729A*

### Power Requirements

*Maximum power consumption: ≤8W*

### Audio CODEC

*A-Law: 64kbps*

*$\mu$ -Law: 64kbps*

*G.729A: 8kbps*

## **Appendix B Technical/Sales Support**

Thank you for choosing Synway. Please contact us should you have any inquiry regarding our products. We shall do our best to help you. However, our technicians and salesmen are mainly responsible for maintaining our boards and providing relative technical support. If there are problems about Asterisk, please keep touch with Digium Inc. for help.

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