



**Synway AST Series**

**CDC-1522A/PCI**

**CDC-2522A/PCI**

**CDC-3522A/PCI**

# **Hardware Manual**

**Version 1.0**

**Synway Information Engineering Co., Ltd**

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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.

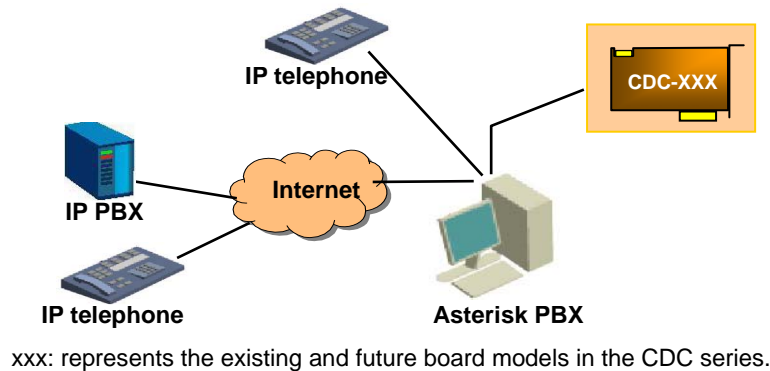


Figure 1-1 Typical Application

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

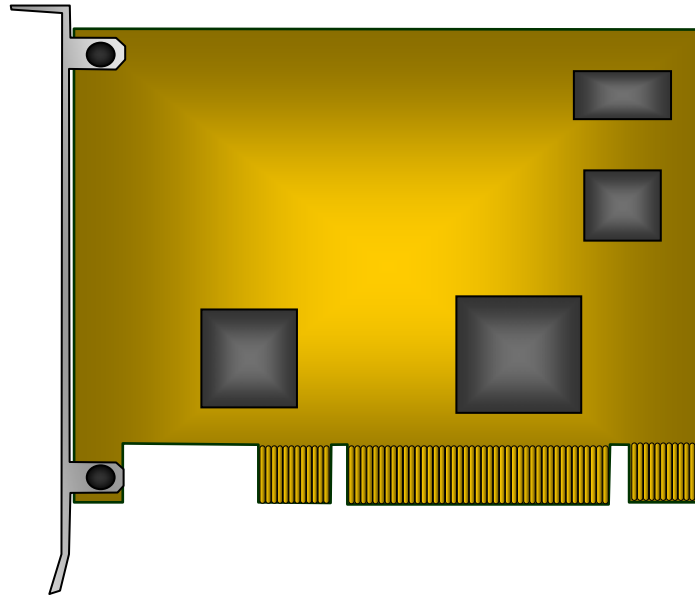


Figure 2-1 CDC-1522A/PCI (Front Views)

- CDC-2522A/PCI Board

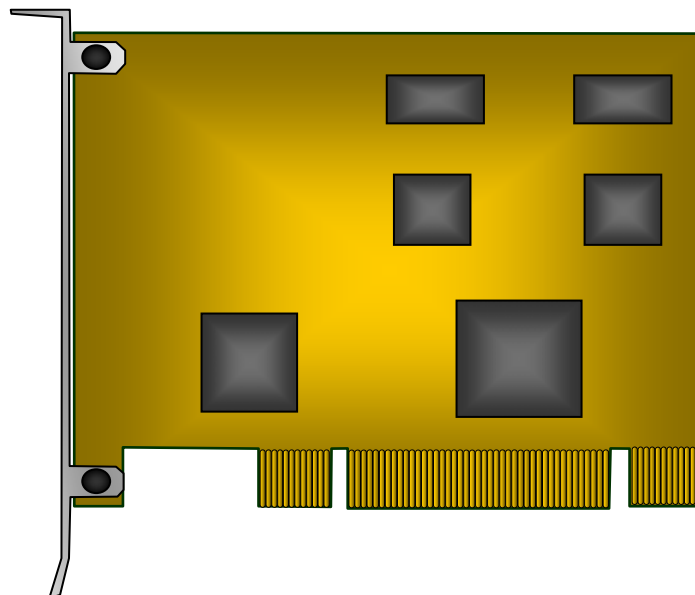


Figure 2-2 CDC-2522A/PCI (Front Views)

- CDC-3522A/PCI Board

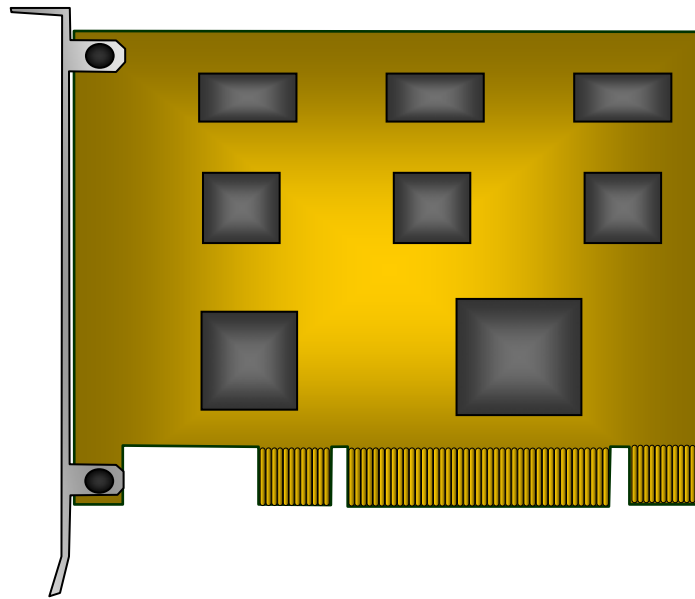


Figure 2-3 CDC-3522A/PCI (Front View)

## 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

*120x95mm<sup>2</sup> (excluding L-bracket)*

### Weight

*≈100g*

### Environment

*Operating temperature: 0 °C—55 °C*

*Storage temperature: -20 °C—85 °C*

*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:  $\leq 8W$*

### Audio CODEC

*A-Law: 64kbps*

*$\mu$ -Law: 64kbps*

*G.729A: 8kbps*