Synway NTP Series

NTP-480A/PCIe(2.0)

VoIP Call Recording

Hardware Manual

Version 1.0

Synway Information Engineering Co., Ltd

www.synway.net

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Copyright Declaration

Revision History

Version	Date	Comments
Version 1.0	2017.07	Initial publication.

Note: Please visit our website http://www.synway.net to obtain the latest version of this document.

Chapter 1 Overview

The NTP Series NTP-480A/PCIe(2.0) boards are VoIP call recording boards supporting up to 480 channels. These boards perform VoIP call recording via port mirroring, applicable to 100M/1000M network environment.

1.1 Functions

- A single board provides up to 480 channels for VoIP call processing.
- Data acquisition via port mirroring allows recording for two PBXes simultaneously.
- Adopts port mirroring to obtain voice data from the network and transfers them to the PC, eliminating any disturbance to either side of the original call, and making the recording unperceived at all.
- Each board has a unique hardware serial number written in the firmware to distinguish itself from other boards and prevent piracy.
- The on-board authorization code identification circuit is designed for software safety. Users can apply to our company for the authorization code.

1.2 Features

- **PCIe Bus Support**

  Includes PCIe x1 interface which meets the PCIe1.0a standard and is applicable to various PCIe slots; supports the PNP (plug and play) feature.

- **Integrated LAN**

  The board is integrated with 100M/1000M network card.

- **Two Gigabit RJ45 Interfaces**

  Either or both of the two RJ45 interfaces can be used for data acquisition.

- **Update Available**

  Users can update the board to acquire more channels simply by applying for new channel license files. The authorization information will be saved in the firmware after update.

- **Various Encoding Formats Support**

  Offers a large selection of encoding formats, including A-Law, μ-Law, IMA-ADPCM, G.729a and GSM.

- **Supports WAV File**

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

- **RTP Data Reception**

  Supports RTP decoding formats including A-Law, μ-Law and G.729.

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

  Synway owns the intellectual property rights for the unified high-intelligence SynCTI driver development platform. By simple API function calls on this platform, recording for different occasions can be implemented. Our API interfaces are highly encapsulated and exported in ANSI C style, which eliminates the need for users to consider the bottom layer IP communication details.

Chapter 2 Installation

2.1 Hardware Structure

- **NTP-480A/PCIe(2.0) VoIP Call Recording Board (Half-length board)**

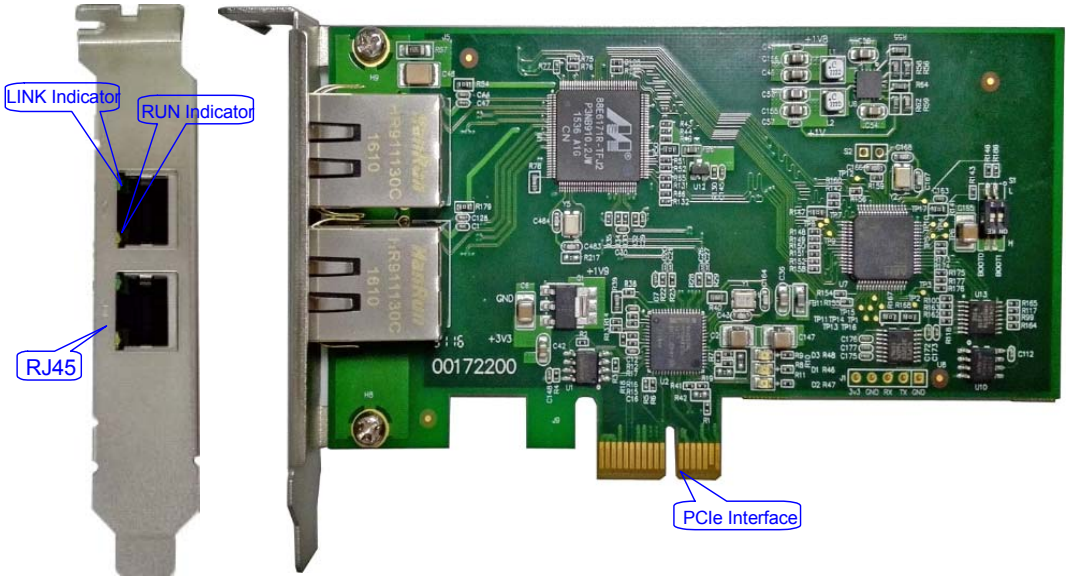

Figure 2-1 Left and Front Views

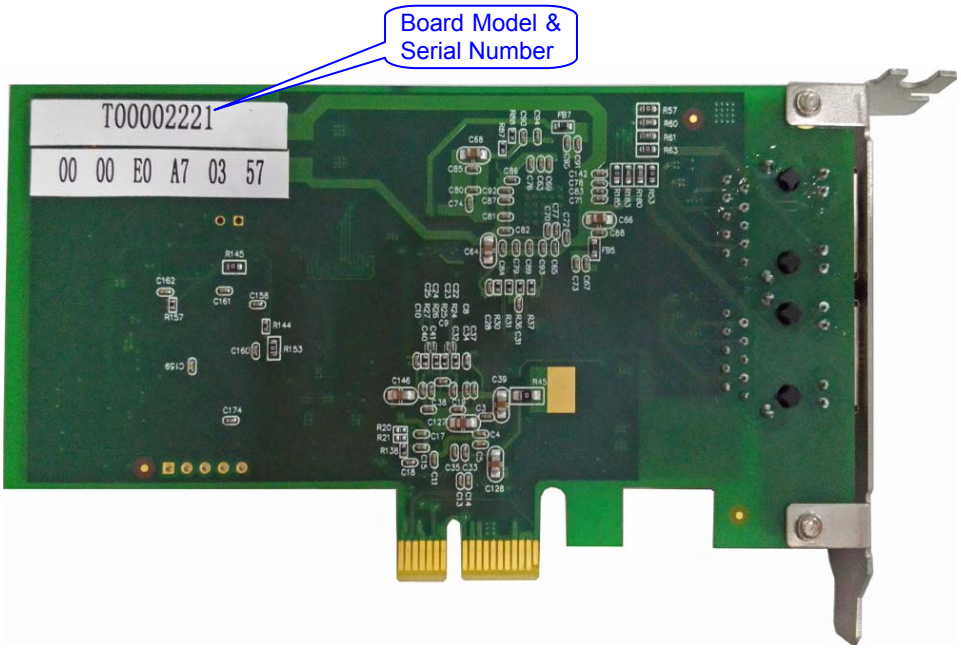

Figure 2-2 Rear View

- **NTP-480A/PCIe(2.0) VoIP Call Recording Board (Full-length board)**

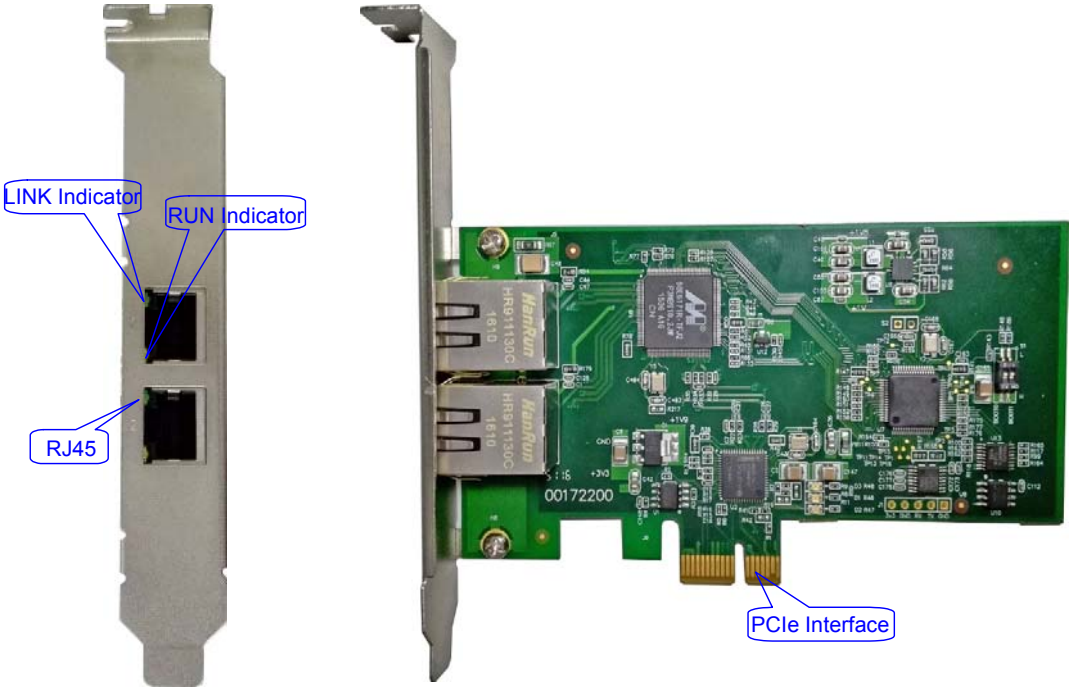

Figure 2-3 Left and Front Views

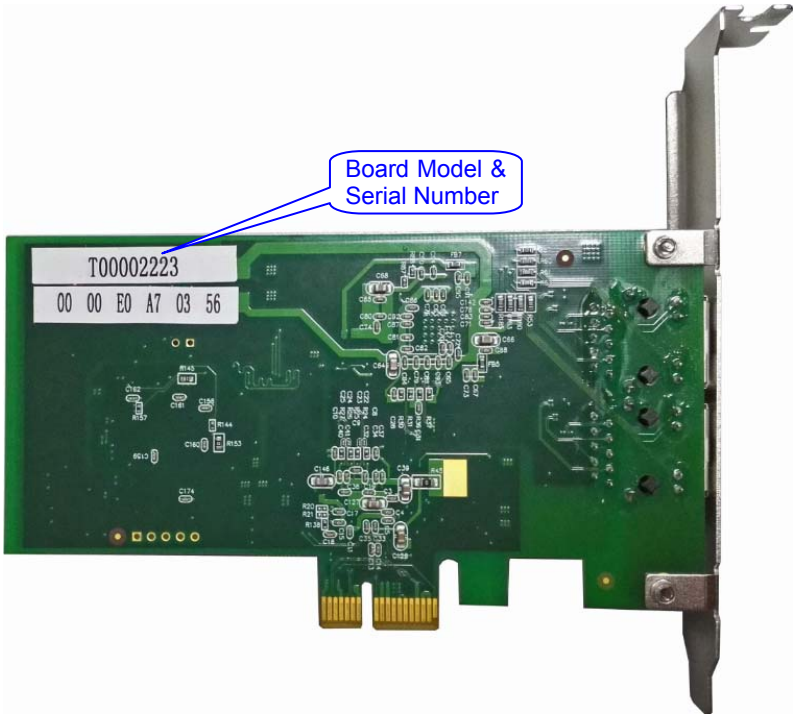

Figure 2-4 Rear View

2.2 System Requirements

Host System Requirements

CPU: Intel® Pentium®Ⅳ or above

Memory: 1G or more

HD: Depends on individual requirements

Supported Operating Systems

Refer to *SynCTI Programmer's Manual.pdf.*

2.3 Installation Procedure

Note: Always turn off the power before installation!

Step 1: Properly fit the required NTP board into the PCIe slot (compatible with X1-16) on the PC chassis.

Notes:

① For the installation of other voice boards from Synway which are used with the NTP board, refer to corresponding hardware manuals.

② Other necessary hardware devices (such as network cable) used to set up a whole VoIP application environment should be installed by users themselves.

Step 2: Boot your computer and install the driver.

Regarding driver installation, refer to *SynCTI_InstManual.pdf*.

Note:

After installation, you should just set the IP of the network card but not the gateway; otherwise the local network connection may fail.

Step 3: Connect network cable.

Connect the network cable from the mirror port to an RJ45 interface of the board. Set the mirror port of the target network depending on your requirements.

Key Tips:

- As the system is expected to run for long hours unmannedly, 'energy-saving' mode should be turned off for both the CPU and the HD in CMOS or WINDOWS operating system. This is to ensure full-speed operation of the computer, or it may lead to a drop in performance or unexpected errors after running for some time.
- A chassis installed with voice boards must be grounded for safety reasons, according to standard industry requirements. A simple way is earthing with the third pin on the plug. No or improper grounding may cause instability in operation as well as decrease in lightning resistance.

Appendix A Technical Specifications

Dimensions

120×68mm^2 (excluding L-bracket)

Weight

Half-length board≈50g, Full-length board≈55g

Environment

Operating temperature: 0℃—55℃

Storage temperature: -20℃—85℃

Humidity: 8%—90% non-condensing

Storage humidity: 8%—90% non-condensing

On-board LAN

Speed: 100M/1000M Compatible

Interface: RJ45

Maximum System Capacity

Only 1 NTP board per system

Recording Format

A-Law, μ-Law, ADPCM, G.729a, GSM

Power Requirements

Maximum power consumption: ≤5W

Audio Encoding & Decoding

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

Headquarters

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