



Synway Voice Board Accessories

SHD-240A-JB/BNC Interface Converter

Hardware Manual

Version 1.0

Synway Information Engineering Co., Ltd

www.synway.net

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Revision History

Version	Date	Comments
Version 1.0	2007-9	Initial publication

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Chapter 1 Overview

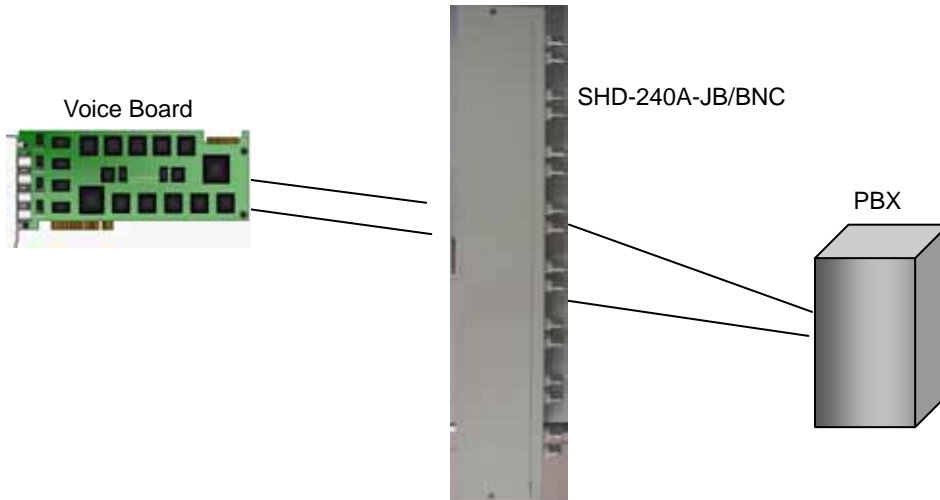
Synway digital voice boards are mainly equipped with RJ48C, RJ48C/M or RJ48T connectors, while user interfaces are always RJ48C or BNC connectors. Therefore, interface converters are sometimes required in real practices. The SHD-240A-JB/BNC interface converter designed for all digital voice boards can help implement the conversion from RJ48C, RJ48C/M or RJ48T connectors to RJ48C or BNC connectors and provide multi ways for installation, satisfying most users' requirements.

1.1 Features

- A single product supports the conversion of 8 E1 interfaces
- Supports the conversion of both common and special RJ48C connectors (the former is for digital trunk boards with 120 or less than 120 channels while the latter is for 240D boards and named as RJ48C/M)
- Support of the conversion from RJ48C to BNC
- Support of the conversion from RJ48C/M to RJ48C or BNC
- Support of the conversion from RJ48T to RJ48C or BNC
- Usable on a 19" 1U standard cabinet
- More than one way available for installation

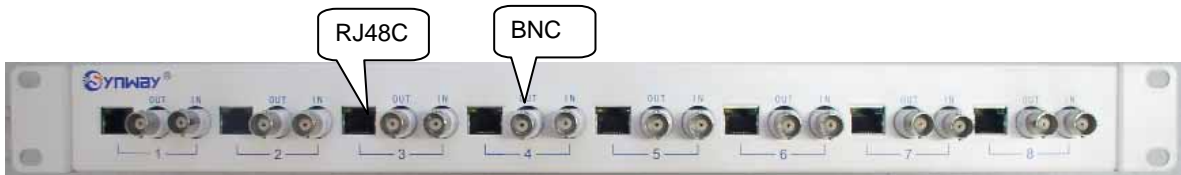
Chapter 2 Installation

2.1 Connection Model

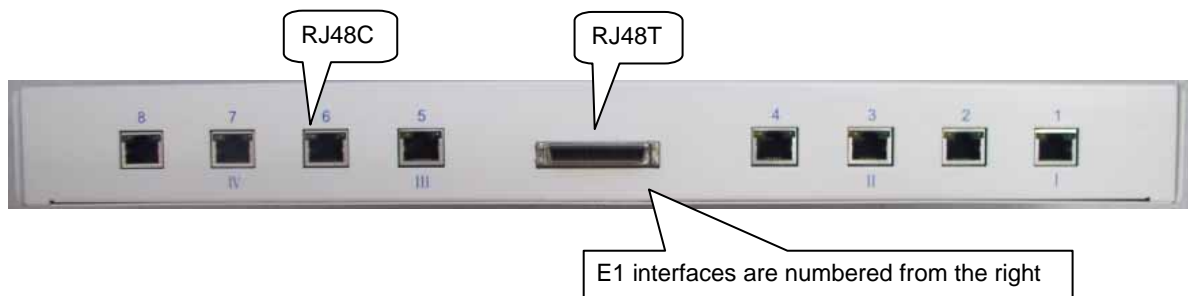


2.2 Hardware Structure

- Front View



- Rear View



- Interface Definition

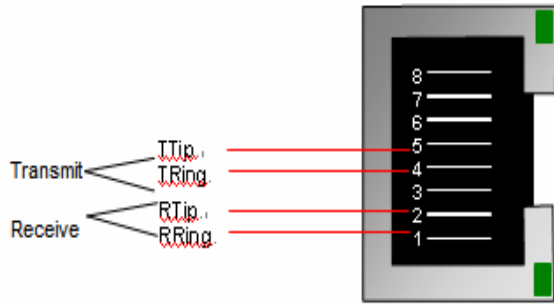


Figure 2-1 RJ48C

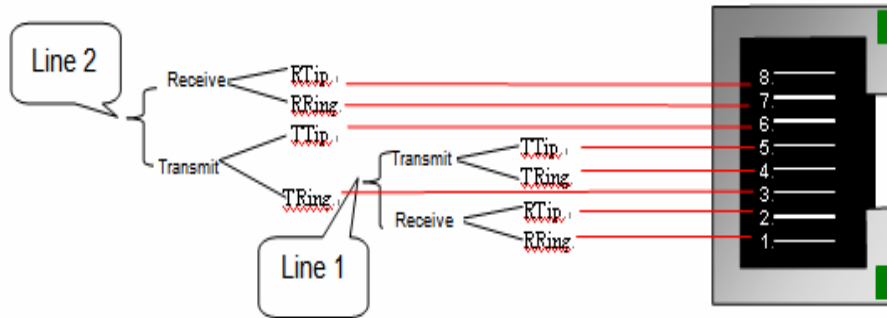
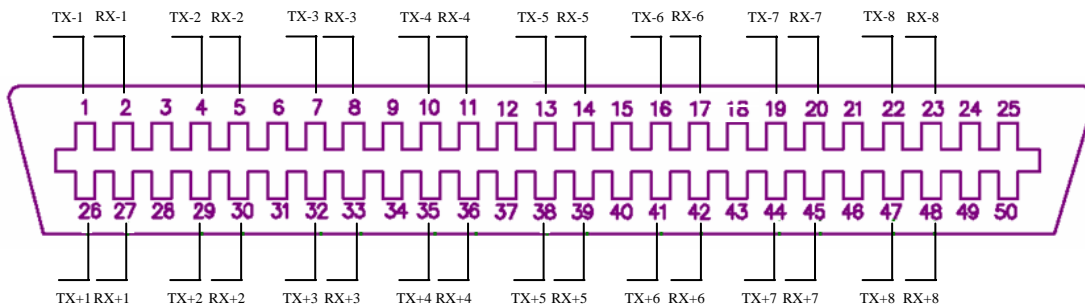


Figure 2-2 RJ48C/M



Note: RX- = RRing

RX+ = RTip

TX- = TRing

TX+ = TTip

Figure 2-3 RJ48T

Notes:

1. Up till now, except the SHD-240D-CT/PCI and SHD-240D-CT/PCI/EC boards which use RJ48C/M connectors, all digital trunk boards with PCI bus from Synway use common RJ48C connectors.
2. At present, only the SHD-240A-B/cPCI and SHD-480A-B/cPCI rear connection panels which are applied with the 240/480-channel digital trunk boards including cPCI bus use RJ48T connectors.

2.3 Installation Procedure

Step 1: Install the interface converter

You may choose one of the following ways to install SHD-240A-JB/BNC:

- Put it on a flat surface;
- Hang it horizontally or vertically on the wall by using the screw mouth at the bottom of its shell;
- First use the attached screws to fix the suspension loop onto it (See Figure 2-4 for two available methods) and then install it on a 19" 1U standard cabinet.



Figure 2-4 Two Methods to Fix Suspension Loop

Step 2: Connect the interface converter with the voice board

Refer to Table 2-1 and Table 2-2 below for the corresponding relationship between input RJ48C and output BNC, and that between input RJ48C/M and output RJ48C.

The digital trunk boards with 120 or less than 120 channels from Synway provide common RJ48C connectors which are allowed to connect directly with all RJ48C jacks on both sides of SHD-240A-JB/BNC. Pin layout for RJ48C is shown in Figure 2-1.

The 240D voice boards from Synway are equipped with RJ48C/M connectors which can be accommodated only by the odd-numbered (1st, 3rd, 5th, 7th) jacks on the back side of SHD-240A-JB/BNC. Pin layout for RJ48C/M is shown in Figure 2-2.

- Connection of input RJ48C and output BNC on SHD-240A-JB/BNC

Number on Back Side	Interface Type	Corresponding BNC Jack on Front Side
---------------------	----------------	--------------------------------------

1	RJ48C/M	corresponds to the 1 st pair of jacks if working as a common RJ48C; otherwise, corresponds to the 1 st and 2 nd pairs.
2	RJ48C	corresponds to the 2 nd pair of jacks
3	RJ48C/M	corresponds to the 3 rd pair of jacks if working as a common RJ48C; otherwise, corresponds to the 3 rd and 4 th pairs.
4	RJ48C	corresponds to the 4 th pair of jacks
5	RJ48C/M	corresponds to the 5 th pair of jacks if working as a common RJ48C; otherwise, corresponds to the 5 th and 6 th pairs.
6	RJ48C	corresponds to the 6 th pair of jacks
7	RJ48C/M	corresponds to the 7 th pair of jacks if working as a common RJ48C; otherwise, corresponds to the 7 th and 8 th pairs.
8	RJ48C	corresponds to the 8 th pair of jacks

Table 2-1

- Connection of input RJ48C/M and output RJ48C on SHD-240A-JB/BNC

Number on Back Side	Interface Type	Corresponding RJ48C Jack on Front Side
	RJ48C/M	corresponds to the 1 st and 2 nd jacks
	RJ48C/M	corresponds to the 3 rd and 4 th jacks
	RJ48C/M	corresponds to the 5 th and 6 th jacks
	RJ48C/M	corresponds to the 7 th and 8 th jacks

Table 2-2

- Connection of input RJ48T and output RJ48C on SHD-240A-JB/BNC

See Figure 2-1, Figure 2-2 and Figure 2-3 above for correct connection. Pay attention to the position of the first E1.

As to the connection of a cPCI board and the SHD-240A-JB/BNC interface converter, the RJ48T direct connection line as shown in Figure 2-5 below is required.



Figure2-5 RJ48T Direct Connection Line

2.4 Auxiliaries

Each SHD-240A-JB/BNC is provided with 8 RJ48C direct connection lines to facilitate interface conversion of those voice boards equipped with RJ48C or RJ48C/M connectors. See Figure 2-6 below for the RJ48C direct connection line



Figure 2-6 RJ48C Direct Connection Line

2.5 Precautions

- This interface converter can only be used indoors;
- Do not mix up the corresponding lines and pins in connection.

Appendix A Technical Specifications

Dimensions

482mm x 110mm x 44mm

Weight

≈1150g

Physical Characteristics

On Resistance: <5Ω

Insulation Resistance: >10MΩ

Environment

Operating temperature: 0 —50

Storage temperature: 0 —80

Humidity: 60% non-condensing

Interface

16 BNC, 16 RJ48C and 1 RJ48T jacks

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.

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