

Installation EVOflex



Installation manual for system providers

11/13/2019

Product line neo, version 6.x

The described functions can be used with the following ASC products:

EVOflex (country-specific)

Please note that you can always find the most up-to-date technical documentation and product updates in the partner area on our website at <http://www.asctechnologies.com>.

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1 General information

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2 Introduction

2 Introduction

This document describes the mounting, installation, and functionalities of the EVOflex.

3 Hardware and software requirements



For basic information about the necessary hardware and software components refer to the installation manual *Installation requirements*.

3.1 Reference hardware systems

The following reference systems show the minimum requirements for the configuration of a compatible off-the-shelf server. In order to meet the requirements, CPU, RAM, **RAID** controller, and the hard disk have to comply with the components listed below or be even more powerful.



When using other hardware than our recommended reference systems, the maximum number of parallel recording channels can differ substantially.

The maximum number of channels are limited by the number of PCI slots or PCIe slots; however, they may not exceed the specifications of the product line *neo*.

- The minimum performance class (a maximum of 2 PCI or PCIe slots) corresponds to EVOLUTION*neo* eco.
- The medium performance class (a maximum of 4 PCI or PCIe slots) corresponds to EVOLUTION*neo*.
- The high performance class (a maximum of 8 PCI or PCIe slots) corresponds to EVOLUTION*neo* XXL.

The specifications of the product line *neo* apply to hybrid systems, too.

Reference system of minimum performance class

	Minimum requirements
System	Dell PowerEdge T110 II 1 * PCIe entire length 312 mm (length) x 107 mm (height)
CPU	E3-1220
RAM	≥ 8 GB
RAID controller	PERC H310
Hard disk	SAS

Tab. 1: Reference system of minimum performance class

Reference system of middle performance class

	Minimum requirements
System	Dell PowerEdge T320 3 * PCIe entire length 312 mm (length) x 107 mm (height)
CPU	E3-2420
RAM	≥ 16 GB
RAID controller	PERC H710
Hard disk	SAS ≥ 10k rpm

Tab. 2: Reference system of middle performance class

Reference system of high performance class

	Minimum requirements
System	Dell PowerEdge T630 6 * PCIe entire length 312 mm (length) x 107 mm (height)
CPU	2 * E5-2640 Only TDM: 2 * E5-2620
RAM	≥ 32 GB Only TDM: ≥ 16 GB
RAID controller	PERC H710P
Hard disk	SAS ≥ 10k rpm

Tab. 3: Reference system of high performance class

3.2 Supported recording cards

Name	Type	Channels	Interface	ASC no.
PRI interface for 1 trunk, passive	SmartWORKS DP3209-EH 910-0703-001 AudioCodes USA, Inc.	24/30 (E1/T1)	PCIe	76512032
PRI interface for 2 trunks, passive	SmartWORKS DP6409-EH 910-0703-002 AudioCodes USA, Inc.	48/60 (E1/T1)	PCIe	76512033
PRI interface for 1 trunk, passive	SmartWORKS DP3209 910-0308-002 AudioCodes USA, Inc.	24/30 (E1/T1)	PCI	76512030
PRI interface for 2 trunks, passive	SmartWORKS DP6409 910-0324-001 AudioCodes USA, Inc.	48/60 (E1/T1)	PCI	76512031
MVTC basic board *	SmartWORKS NGX800-EH 910-0700-001 AudioCodes USA, Inc.	8	PCIe	76961036
MVTC channel board	SmartWORKS MX80A 910-1315-001 AudioCodes USA, Inc.	8	PCIe	76961039
MVTC basic board *	SmartWORKS NGX800 910-0314-001 AudioCodes USA, Inc.	8	PCI	76961037
MVTC channel board	SmartWORKS MX80 910-0315-001 AudioCodes USA, Inc.	8	PCI	76961038
Analog interface, passive	SmartWORKS LD 809-EH 910-0701-001 AudioCodes USA, Inc.	8	PCIe	76561007
Analog interface, passive	SmartWORKS LD 1609-EH 910-0701-002 AudioCodes USA, Inc.	16	PCIe	76561008
Analog interface, passive	SmartWORKS LD 2409-EH 910-0701-003 AudioCodes USA, Inc.	24	PCIe	76561009

Name	Type	Channels	Interface	ASC no.
Analog interface, passive	SmartWORKS LD 809X 910-0808-001 AudioCodes USA, Inc.	8	PCI	76561012
Analog interface, passive	SmartWORKS LD 1609 910-0803-001 AudioCodes USA, Inc.	16	PCI	76561013
Analog interface, passive	SmartWORKS LD 2409 910-0804-001 AudioCodes USA, Inc.	24	PCI	76561014
PCM30 interface for 2 trunks, passive	SmartWORKS DT 6409-EH 910-0704-002 AudioCodes USA, Inc.	48/60 (E1/T1)	PCIe	76561011
PCM30 interface for 2 trunks, passive	SmartWORKS DT 6409 910-0323-002 AudioCodes USA, Inc.	48/60 (E1/T1)	PCI	76561010

* The **MVTC** basic board can be increased to 16 or 24 recording channels by mounting **MVTC** channel boards (1-2 units).

3.3 Supported software

3.3.1 Supported operating systems

For the recording servers, the following operating system is supported:

- Microsoft Windows 7 Pro English - 64 Bit (only for updates; as ASC image with included operating system for EVOLUTION^{neo} eco)
- Microsoft Windows 10 IoT Enterprise English - 64 Bit (as ASC image with included operating system for EVOLUTION^{neo} eco)
- Microsoft Windows 10 Pro English - 64 Bit (only EVO^{flex})
- Microsoft Windows Server Embedded Standard 2016 English - 64 Bit (as ASC image with included operating system for EVOLUTION^{neo} and EVOLUTION^{neo} XXL)
- Microsoft Windows Server 2012 R2 English - 64 Bit
- Microsoft Windows Server 2012 R2 German - 64 Bit
- Microsoft Windows Server 2016 English - 64 Bit
- Microsoft Windows Server 2016 German - 64 Bit



Only the above-mentioned versions of the respective operating systems are supported. For Microsoft Windows operating systems, Language Interface Packs (**LIP**) for the language of your choice are available. For more information and downloads go to <http://www.microsoft.com>.

If you would like to display the user interface in a different language, you can install the respective language pack (**LIP**) of Microsoft.



For information about installing and configuring Microsoft Windows, refer to the installation manual for system providers *Configuration Windows Server 2012 R2* or *Configuration Windows Server 2016*.



You may only install software approved by ASC on the servers of the **neo** recording system.

3.3.2 Supported browsers

For the web applications, the following browsers are supported:

- Firefox version 65.x or higher
- Internet Explorer 11 - only in connection with Windows 10 Pro 64 Bit operating system
- Microsoft Edge
- Google Chrome version 72 or higher



Before the installation of the *neo* software make sure that the installation and configuration of Microsoft Windows have been carried out according to our demands.



For information about installing and configuring Microsoft Windows, refer to the installation manual for system providers *Configuration Windows Server 2012 R2* or *Configuration Windows Server 2016*.

To install *EVOflex*, implement the following steps:

1. Install the ASC software. For information about the installation refer to the installation manual *Installation of the recording software of ASC*.
2. Install SmartWORKS (see [chapter "Install SmartWORKS", p. 10](#)).

4.1

Install SmartWORKS

To install SmartWORKS, implement the following steps:

1. Start the Windows Explorer.
2. Change to the directory *C:\Program Files (x86)\ASC\ASC Product Suite\thirdparty\SmartWORKS*.
3. Execute the file *AudioCodesInc.SmartWORKS64.msi*.
⇒ The window of the installation wizard opens automatically.
4. Click on the button *Next*.

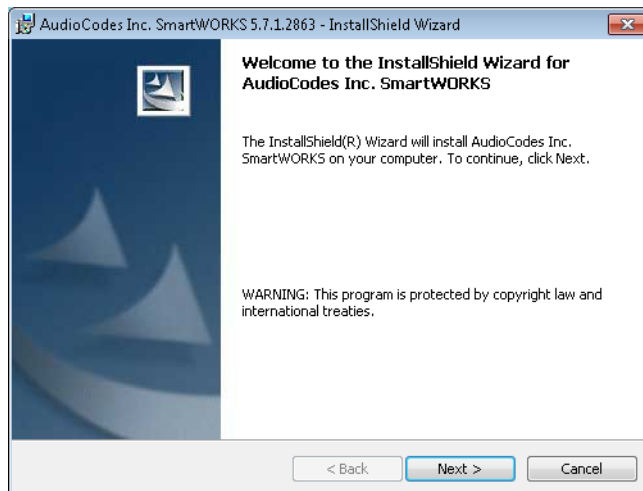


Fig. 1: Welcome screen SmartWORKS installation

5. In order to accept the license agreement, select *I accept the terms in the license agreement* and click on the button *Next*.

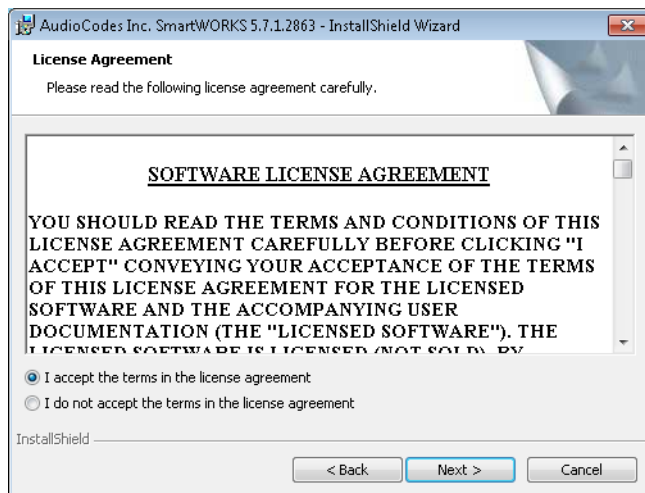


Fig. 2: Accept license agreement

6. Select the item *Complete* and click on the button *Next*.

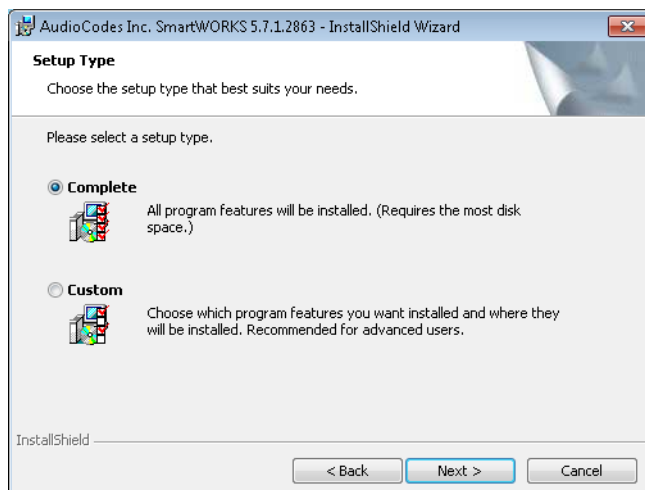


Fig. 3: Select installation scope

7. Start the installation by clicking on the button *Install*.

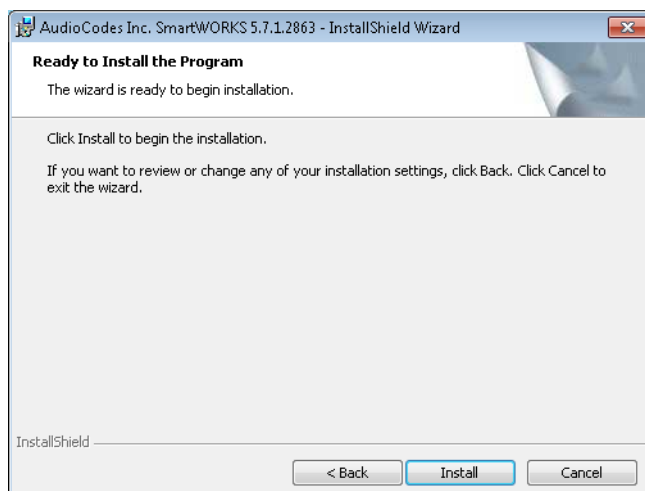


Fig. 4: Start installation

8. Click on the button *Next*.

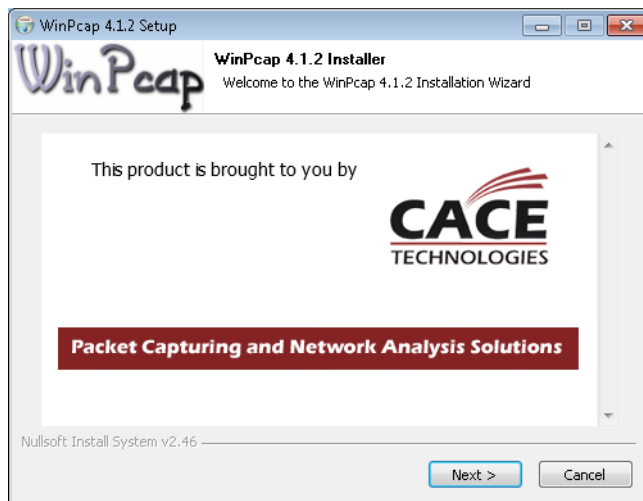


Fig. 5: Welcome screen WinPcap installation

9. Click on the button *Next*.

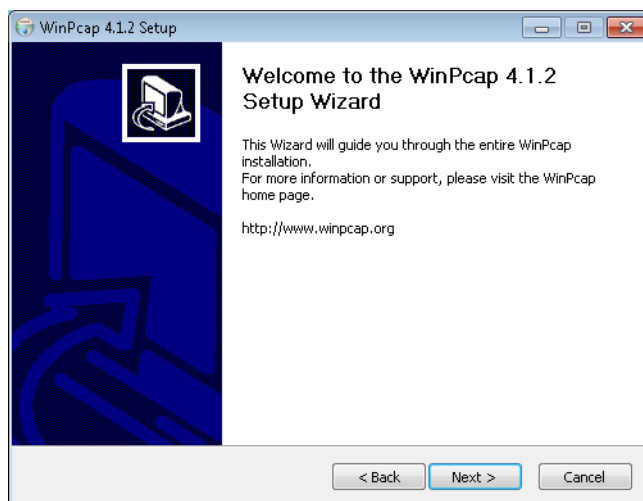


Fig. 6: WinPcap installation

10. Click on the button *I agree*.

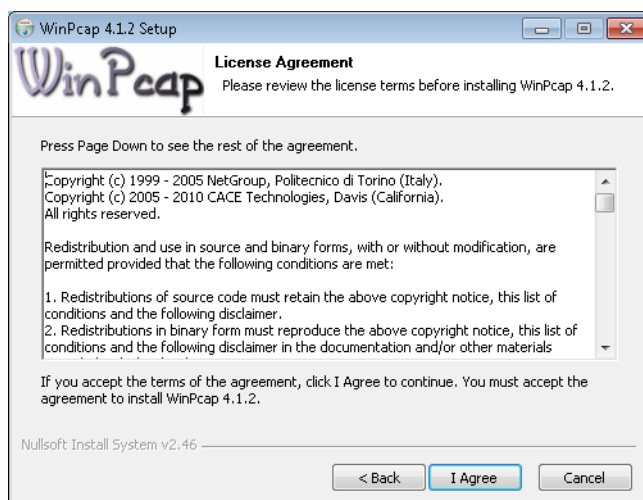


Fig. 7: Accept license agreement

11. Activate the check box *Automatically start the WinPcap driver at boot time* and click on the button *Install*.
- ☒ = Function has been activated.
 - ☐ = Function has been deactivated.

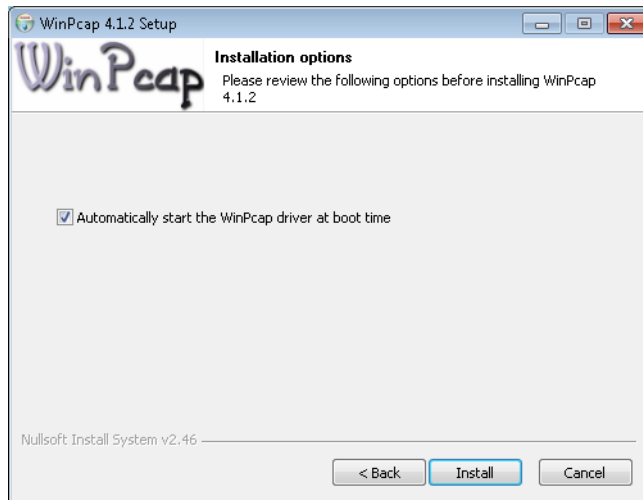


Fig. 8: Select installation option and start installation

12. Click on the button *Finish*.

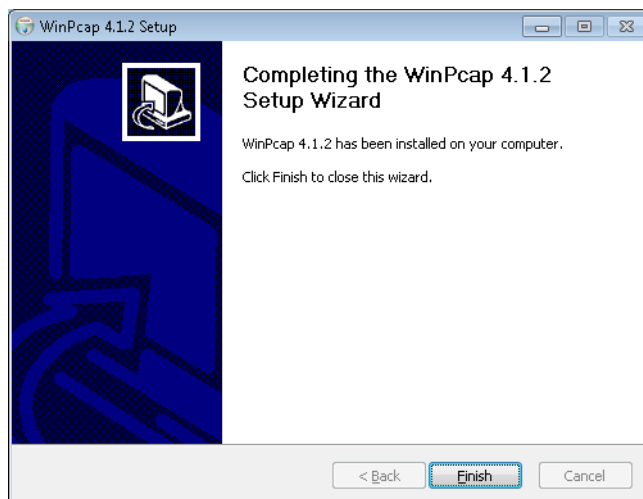


Fig. 9: Finish installation wizard

13. Click on the button *Install*.

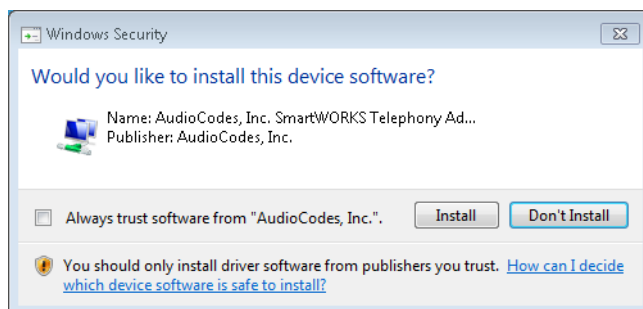


Fig. 10: Install device software

14. Click on the button *Finish*.

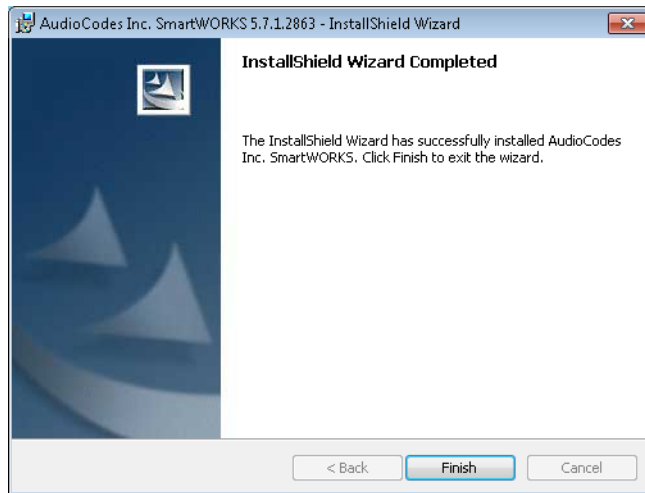


Fig. 11: Finish installation



Once SmartWORKS has been installed successfully, the recorder has to be rebooted.

5 Connect TDM signal sources

The EVOflex system can be connected to different interfaces in different manners, like e. g.:

- PRI (E1)
- PRI (T1)
- Multi Vendor Tap Card
- Analog signal source

5.1 Passive PRI interfaces for E1/T1 lines

A PRI line consists of 2 line sections which connect the NT (network termination device) to the PBX. A high-impedance tap between the NT and the PBX has to be established by one of the following means:

Standard connection

In this case, a passive tap of the PRI trunk is established via a tap line to the recorder. The tap line is connected in parallel to the telecommunication line between the NT and the PBX. The tap is an additional load on the telecommunication line. The length of the line connecting the PBX and the NT may not exceed a length of 50 m. To prevent signal reflections, keep the tap line as short as possible. The tap line may not exceed a length of 10 m. Use as few plug connectors as possible.

The following figure explains the pin assignment of a signal input of the recording card.

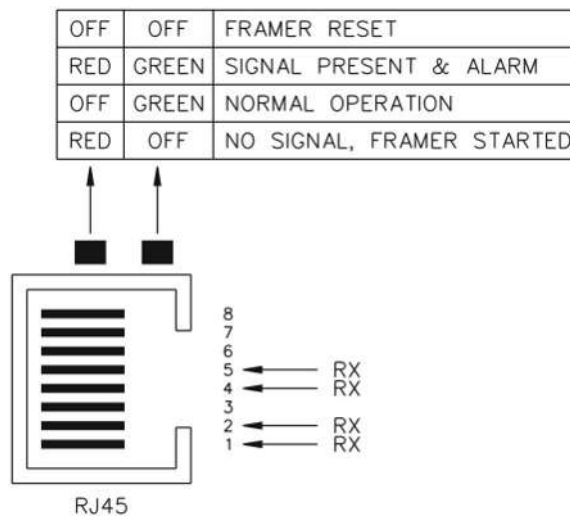


Fig. 12: Pin assignment and signaling of an RJ45 socket (PRI passive DP)

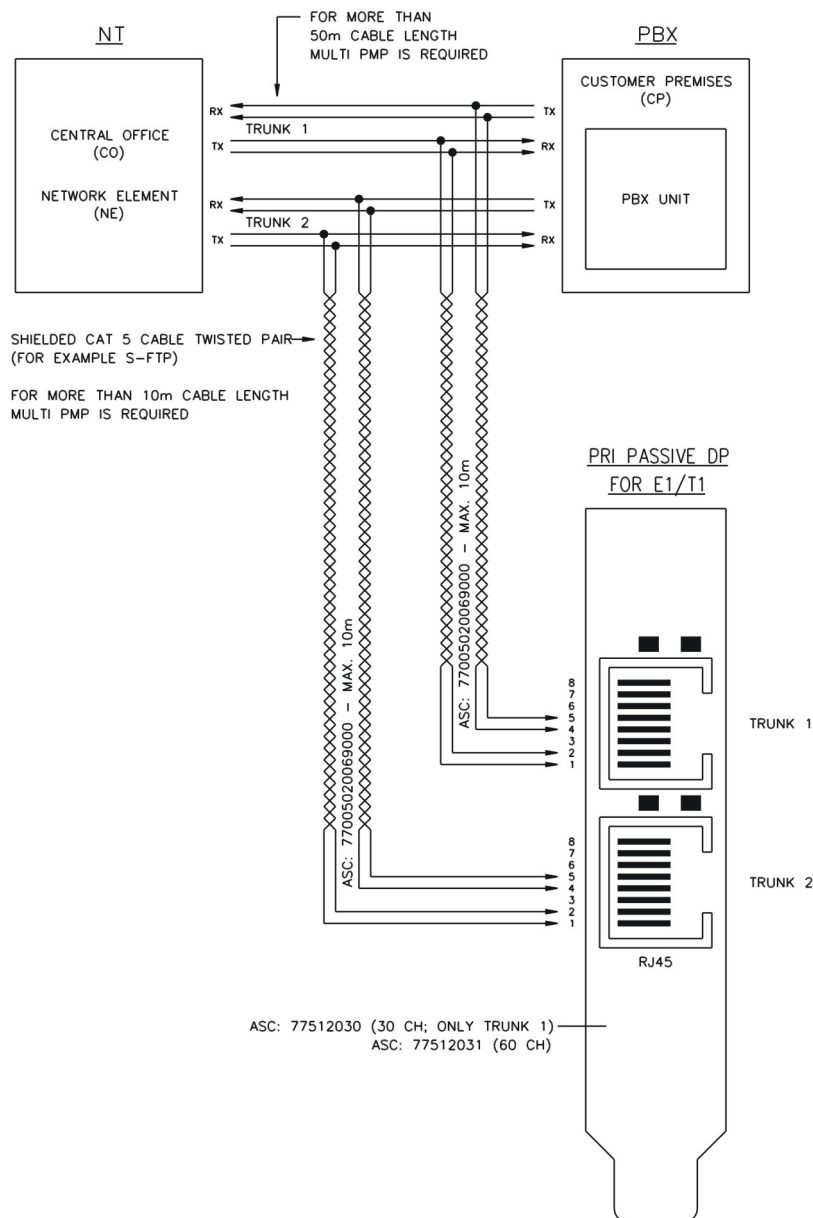


Fig. 13: Passive standard connection (PRI passive DP)

PRI interface for a longer distance

For distances longer than 10 m between PRI interface and PRI line or distances longer than 50 m between the PBX and the NT, a Multi PMP is necessary (see chapter "Multi PMP (High Impedance Passive Monitoring Point)", p. 17).

The connection via a Multi PMP increases the signal quality by reducing reflections.



If the RX and TX lines have been swapped in the PRI card ASC no.: 77512030 and 77512031, no D-channel analysis is possible.

The mapping of the recording card during configuration is made via the serial number of the recording card.

Information about the configuration of the recording card PRI passive DP can be found in the administration manual *TDM Recording Others EVOflex (Universal PRI passive DP)*.

5.1.1 Multi PMP (High Impedance Passive Monitoring Point)

The **Multi PMP** allows connecting the passive **PRI** interfaces (**E1/T1**) of **EVOflex** with the **PRI** trunk lines, free of reflections. In addition, it can transmit the **PRI** signals without loss of data across a cable length of up to 100 m to the recorder.

Up to 10 **PRI** trunk lines can be connected redundantly to a **Multi PMP**.

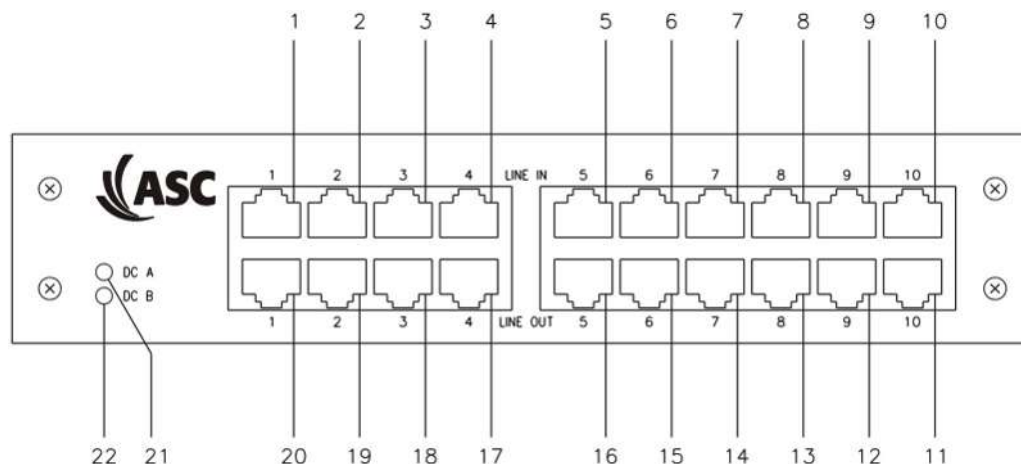


Fig. 14: Front view Multi PMP

1-10	Input (LINE IN) of the PRI trunk line (The PINs 1/2 and 4/5 have been connected internally to loop the PRI trunk line with the corresponding line-out sockets)
11-20	Output (LINE OUT) of the PRI trunk line (The PINs 1/2 and 4/5 have been connected internally to loop the PRI trunk line with the corresponding line-in sockets)
21	Power indicator for power supply unit 1 or Power Distribution for Multi PMP
22	Power indicator for power supply unit 2 or Redundant Power Distribution for Multi PMP

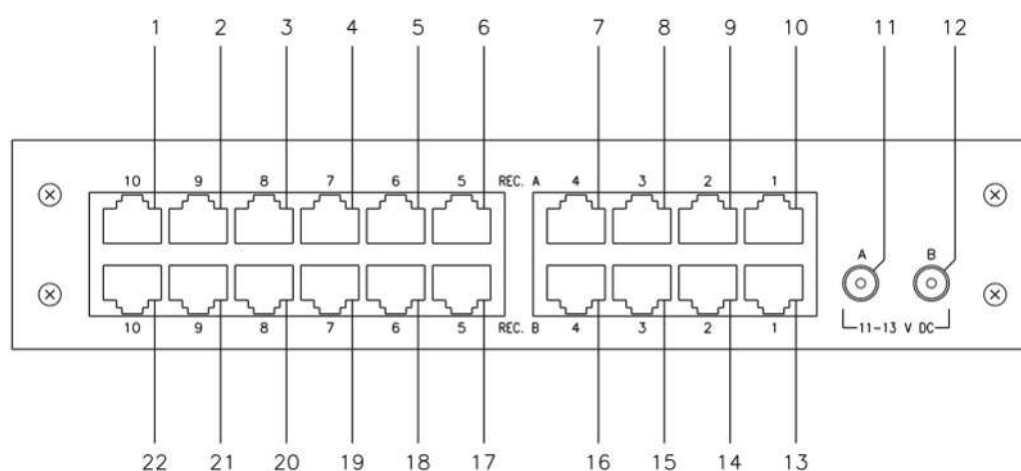


Fig. 15: Rear view Multi PMP

1-10	Signal output (REC A) of the PRI trunk to the recorder (PINs 1/2 and PINs 4/5)
11	Voltage input power supply unit 1 or Power Distribution for Multi PMP
12	Voltage input power supply unit 2 or Redundant Power Distribution for Multi PMP (for redundant power supply of the Multi PMP)

13-22 Signal output (*REC B*) of the **PRI** trunk to a second recorder for redundant recording (PINs 1/2 and PINs 4/5)

If several **Multi PMP**s are operated in one rack, power supply via the **Power Distribution for Multi PMP** is recommended (see chapter "Power Distribution for Multi PMP", p. 19).

ATTENTION!

Downtime of the **PBX** and loss of data caused by incorrect installation

If the installation is done incorrectly, downtime of the **PBX** and loss of data can occur.

The **Multi PMP** has to be looped in the trunk line between the NT and the **PBX** as shown in Fig. 16, p. 19. Make sure that the maximum cable length between NT and **PBX** has not been exceeded and that the directions of the line pairs towards and away from the PBX have not been swapped.

This connection type causes a short interruption of the connection between NT and the PBX. For this reason, in some cases a reboot of the PBX can be necessary to reestablish the connection.

EVOflex is connected with a patch cable to the **Multi PMP** as displayed in Fig. 16, p. 19. The complete length of the connection cable between **Multi PMP** and recorder may not exceed 100 m.

After having established all connections, **EVOflex** should recognize the synchronization of the line automatically and display it in the portal.

Additional corresponding configuration settings for the **PRI** channels can be found in the configuration manual of the respective PBX integration.

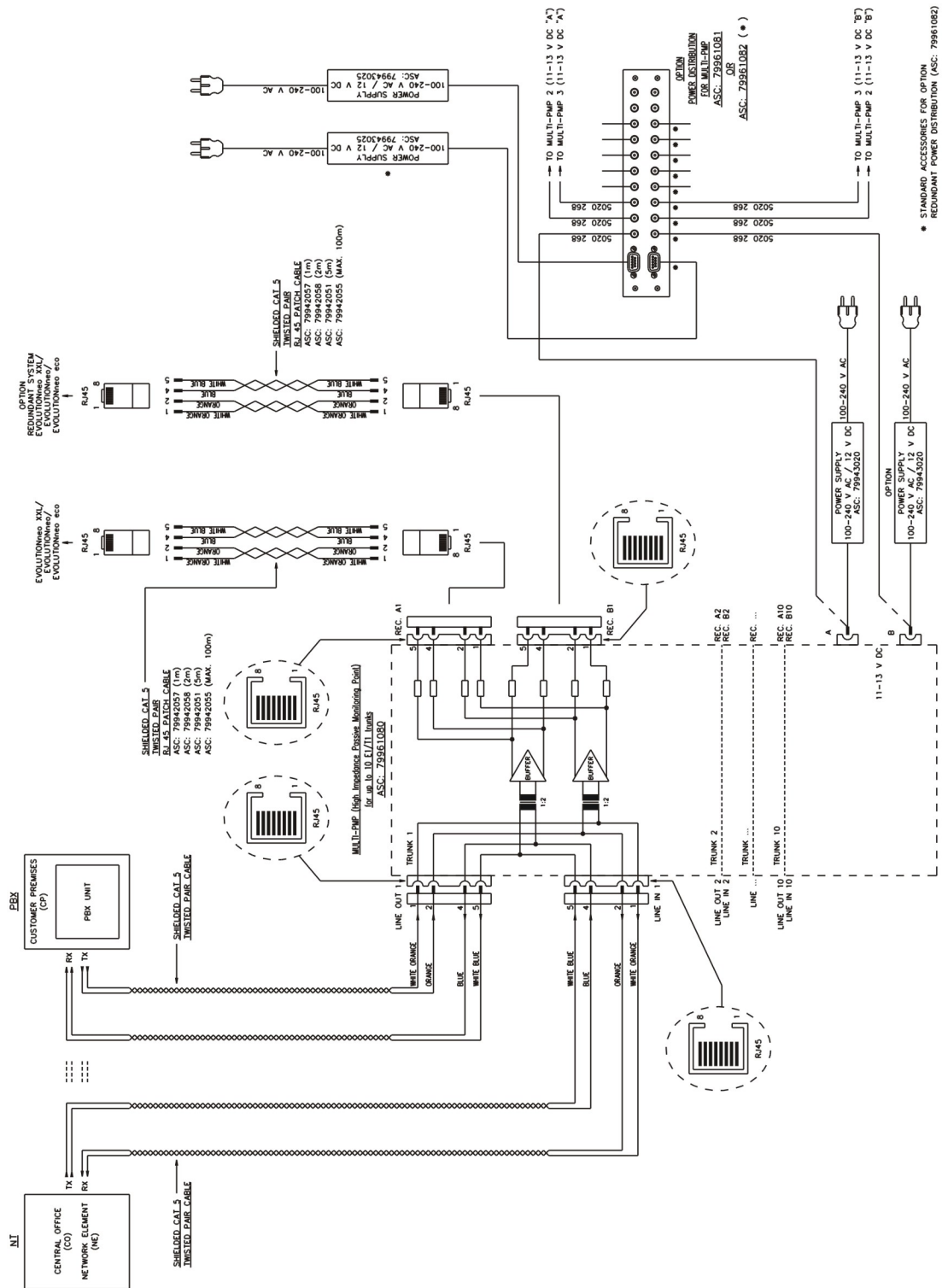


Fig. 16: Connection Multi PMP

5.1.1.1 Power Distribution for Multi PMP

The **Power Distribution for Multi PMP** allows supplying up to 8 Multi PMPs with power via only one power supply unit (see Fig. 16, p. 19). It can also be delivered as **Redundant Power Distribution for Multi PMP** including a second power supply unit and 8 additional DC power cables for the redundant power supply of the Multi PMPs.

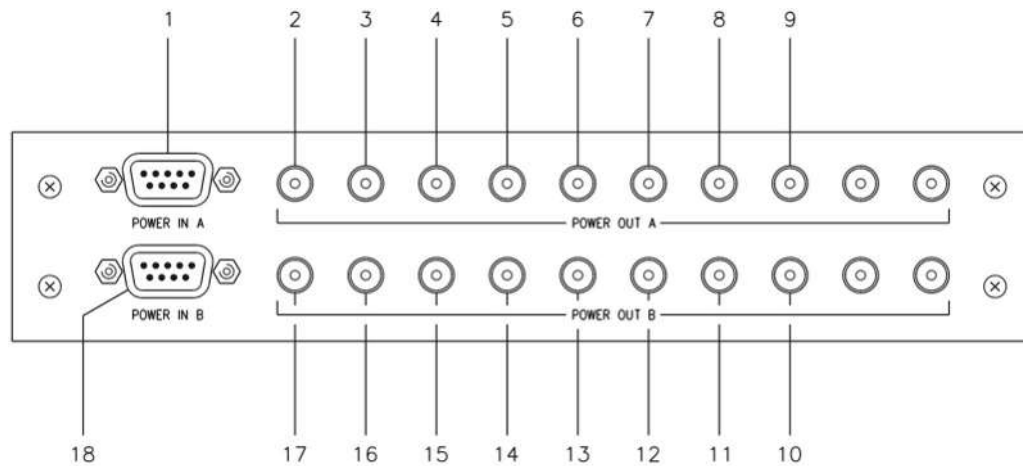


Fig. 17: Rear view Power Distribution for Multi PMP

Standard power supply:

1	Voltage input power supply unit A for voltage output positions 2-9
2-9	Voltage output for the power supply of the Multi PMPs

Redundant power supply:

10-17	Voltage output for the redundant power supply of the Multi PMPs
18	Voltage input power supply unit B for electric tension line out position 10-17

For the installation in a 19" cabinet the [Power Distribution for Multi PMP](#) and 1 [Multi PMP](#) can be screwed together by means of the enclosed connection pieces to result in a 19" unit.

Connection:

Connect the sockets 2-9 (*POWER OUT A*) by means of the enclosed DC power cables 5020 268 to socket 11 (see [Fig. 15, p. 17](#)) and plug the power supply unit into the socket 1 (*POWER IN A*).

For the redundant power supply of the [Multi PMPs](#), additionally connect sockets 10-17 (*POWER OUT B*) by means of the enclosed DC power cables 5020 268 to socket 12 (see [Fig. 15, p. 17](#)). Plug the second power supply unit into socket 18 (*POWER IN B*).

5.1.1.2 Installation of the Multi PMP and the Power Distribution for Multi PMP

An installation kit with mounting components for mounting the device into a 19" rack, for wall fastening or for the usage of a desktop device, is enclosed in every [Multi PMP](#) or [Power Distribution for Multi PMP](#).

The scope of delivery of a [Multi PMP](#) or [Power Distribution for Multi PMP](#) includes the following components:

- 2 19" brackets
- 1 mounting bar for the screw connection of 2 cabinets
- 4 oval-head screws M 4 x 8 DIN 7985
- 4 housing feet (for desktop operation)

The installation components for the 19" rack (screws, nuts...) or for wall fastening (screws, dowels...) will be provided by the local technician during the installation.

The different installation possibilities and the correct installation of the required installation components are described in the following (see [Fig. 18, p. 21](#), [Fig. 19, p. 21](#), [Fig. 20, p. 22](#), [Fig. 21, p. 22](#)).

If only a **Multi PMP** or a **Power Distribution for Multi PMP** is supposed to be mounted into a 19" rack, the filler panel ½ 19" ASC no.: 79931023 is required (see pos. 2 in [Fig. 18](#), p. 21).

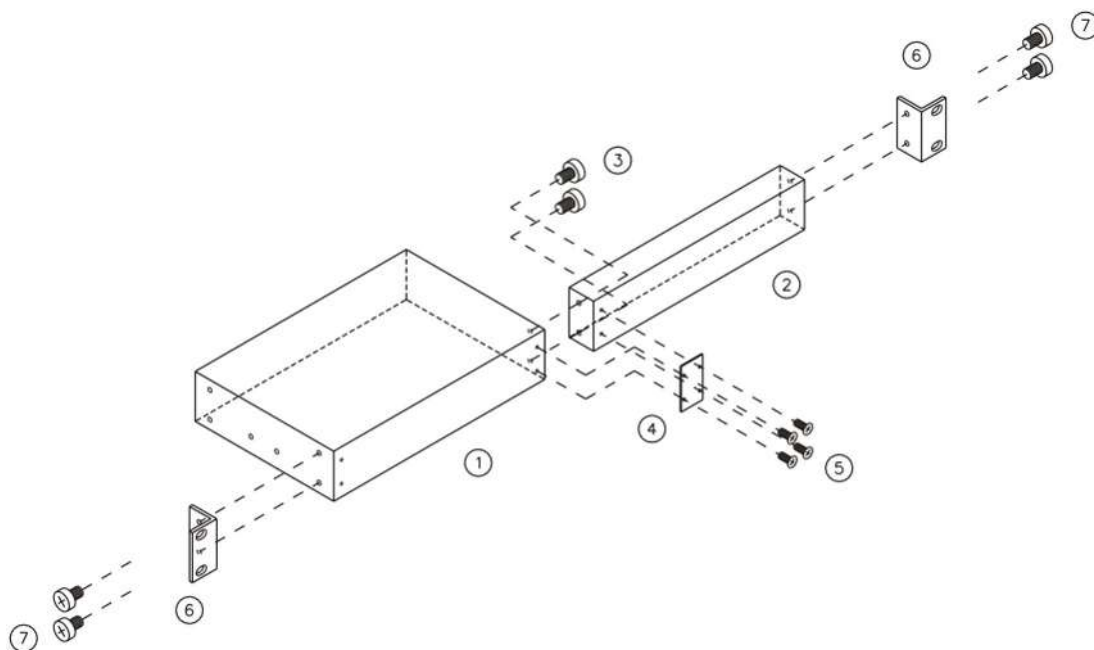


Fig. 18: 19" installation of Multi PMP or Power Distribution for Multi PMP and filler panel ½ 19"

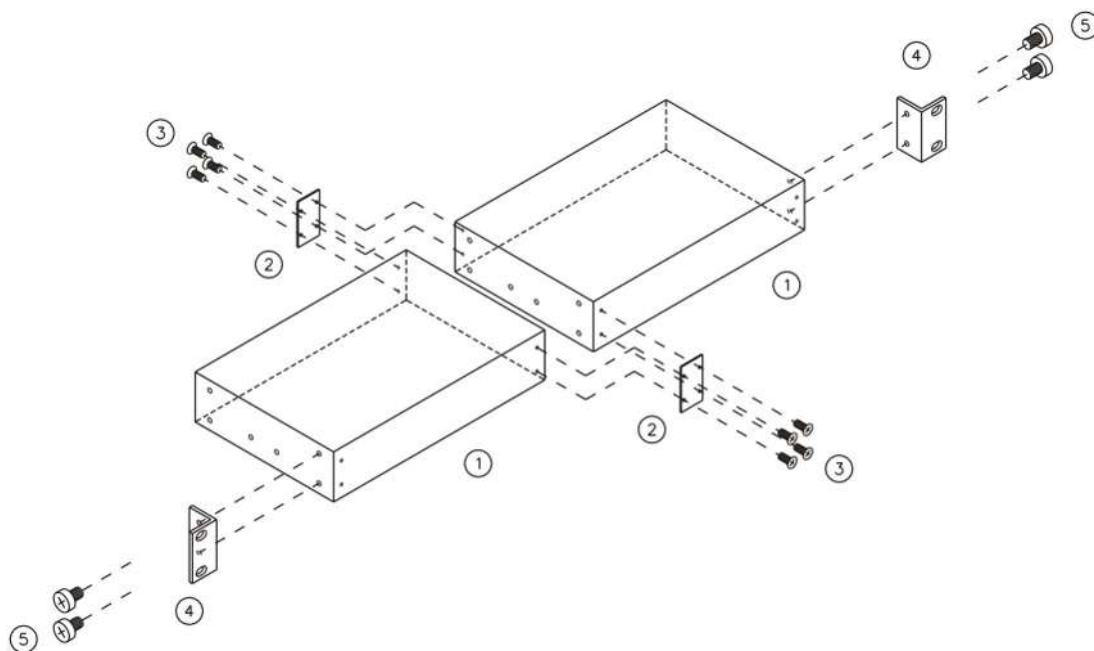


Fig. 19: 19" installation of Multi PMP and Power Distribution for Multi PMP

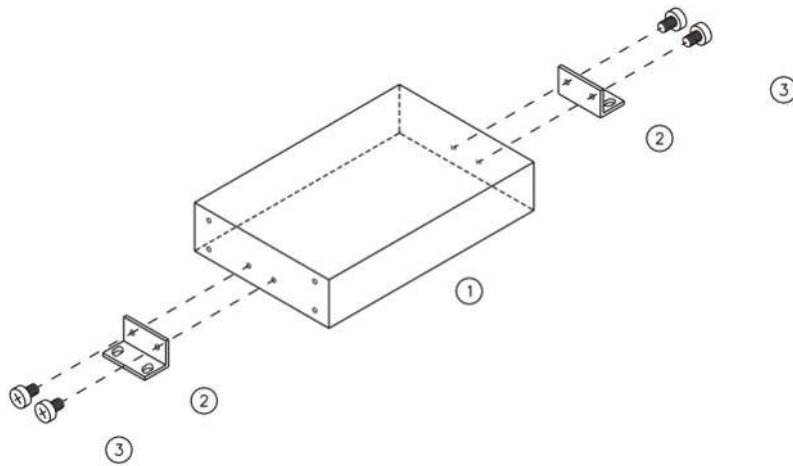


Fig. 20: Wall mounting of Multi PMP or Power Distribution for Multi PMP

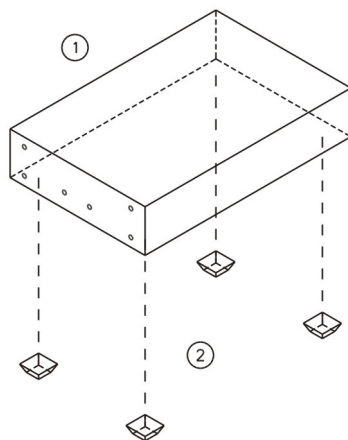


Fig. 21: Desktop operation of Multi PMP or Power Distribution for Multi PMP

5.2

PCM30 DT Card

A [PCM30](#) DT card has 2 RJ45 sockets which can each be connected to a [PCM30](#) trunk. The length of the cable may not exceed 100 m.

The time slots 0 and 16 do not contain audio data during the [PCM30](#) recording. This means a trunk consists of 30 audio channels.

The following figure explains the pin assignment and the signaling of a RJ45 socket.

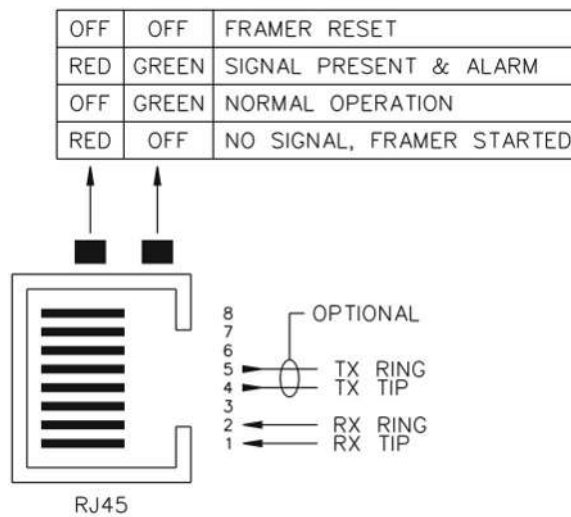


Fig. 22: Pin assignment and signaling of a RJ45 socket (PCM30 DT)

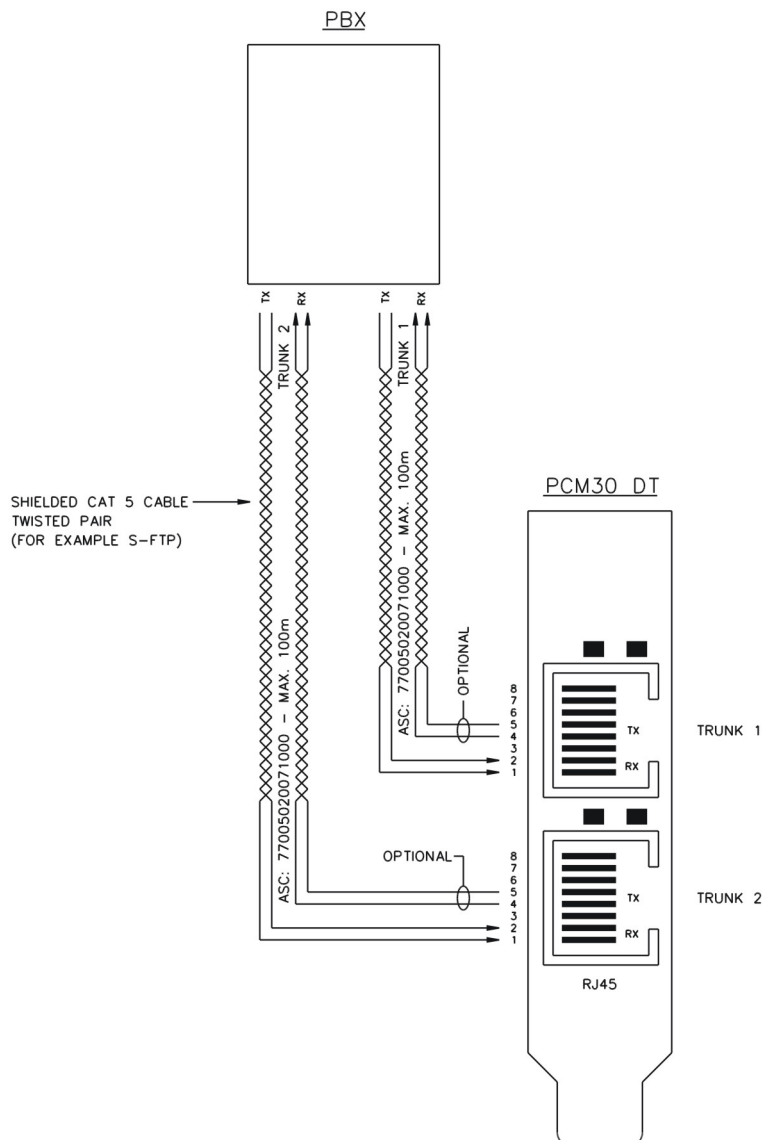


Fig. 23: Standard connection (PCM30 DT)

The mapping of the recording card during configuration is made via the serial number of the recording card.

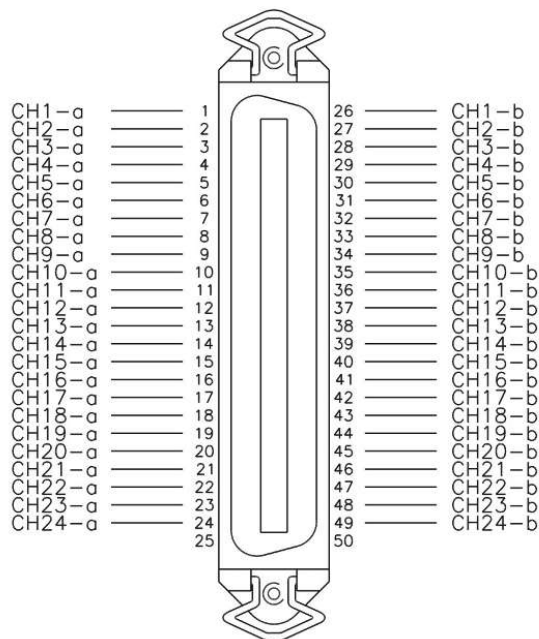
Information about the configuration of the recording card **PCM30 DT** can be found in the administration manual *TDM Recording Others EVOflex (Universal PCM30 DT)*.

5.3 Multi Vendor Tap Card (MVTC)

Information about which **PBXs** are supported in connection with which end devices can be found in the partner area of our website. To access the information on our website, log in to the partner area of **ASC XCHANGE** via <https://www.asctechnologies.com>. In the menu item *Documents > Technical Documents*, the directories of all technical documents are listed. The compatibility list can be found under *Compatibility Lists >*

There are 3 connection possibilities:

- Multi Vendor Tap Card - 2-wire connection



FEMALE PLUG CENTRONICS (AMPHENOL), 50-POLE

Fig. 24: Connection assignment of the Multi Vendor Tap Card, 2-wire connection

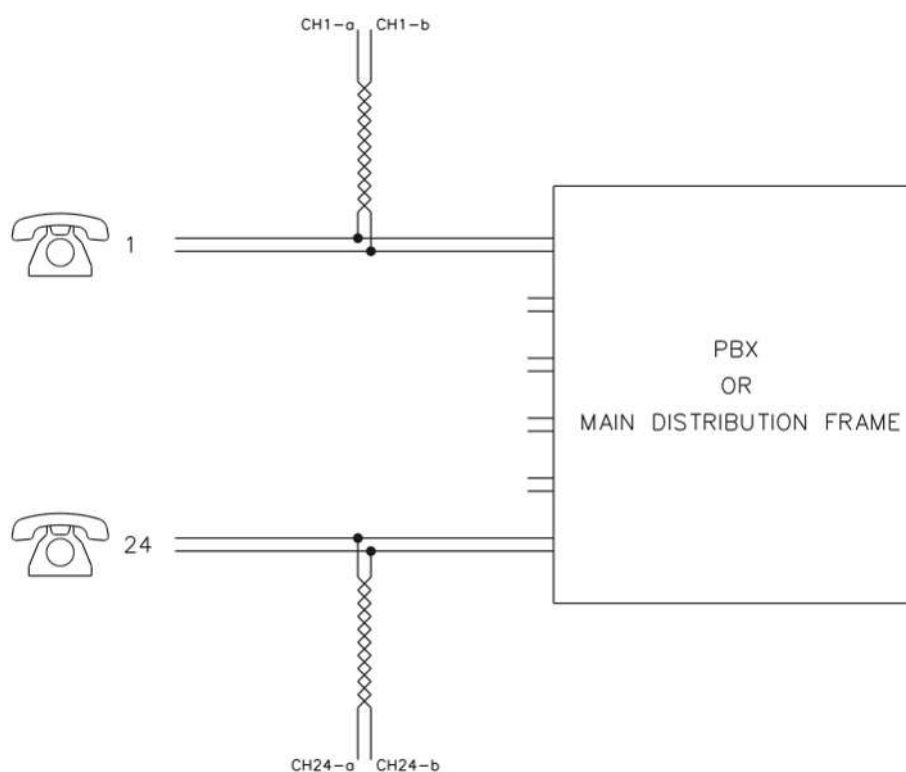


Fig. 25: 2-wire MVTC connection to the PBX



The 2-wire **MVTC** connection supports a maximum of 24 channels per card. Additional information about the connecting cable can be found under [Fig. 28, p. 27](#).

- Multi Vendor Tap Card - 4-wire connection

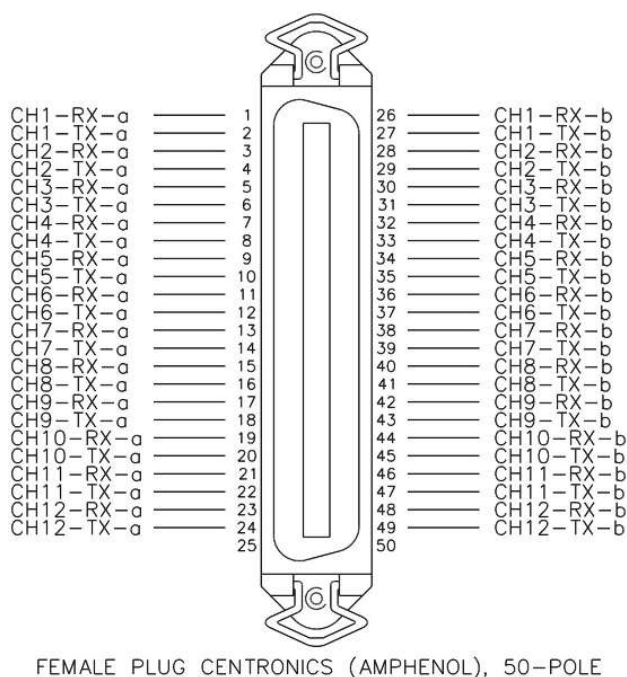


Fig. 26: Connection assignment of the Multi Vendor Tap Card, 4-wire connection

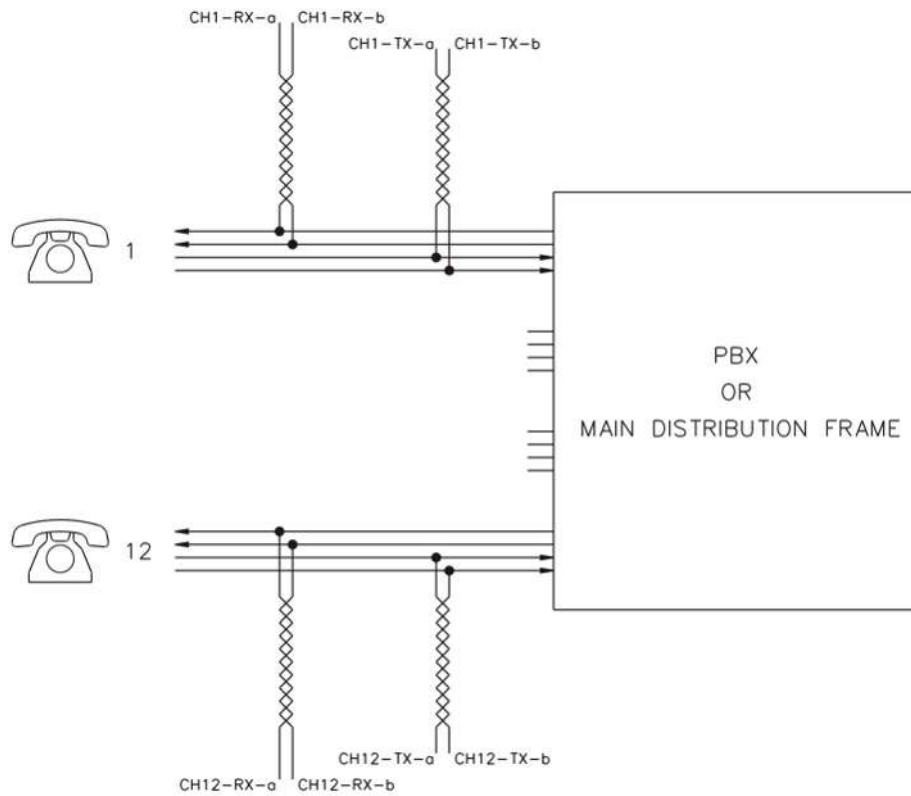


Fig. 27: 4-wire MVTC connection to the PBX



The 4-wire **MVTC** connection supports a maximum of 12 channels per card.

Exception: Systems with 2 B-channels per connection can support up to 24 channels per card (e. g. EURO-ISDN S0).

Additional information about the connecting cable can be found under [Fig. 28, p. 27](#).



The assignment of the standard connection cable (6 m) ASC no. 77542001 is the same as for the connection cable ASC no. 77542002 (see [Fig. 28, p. 27](#)).

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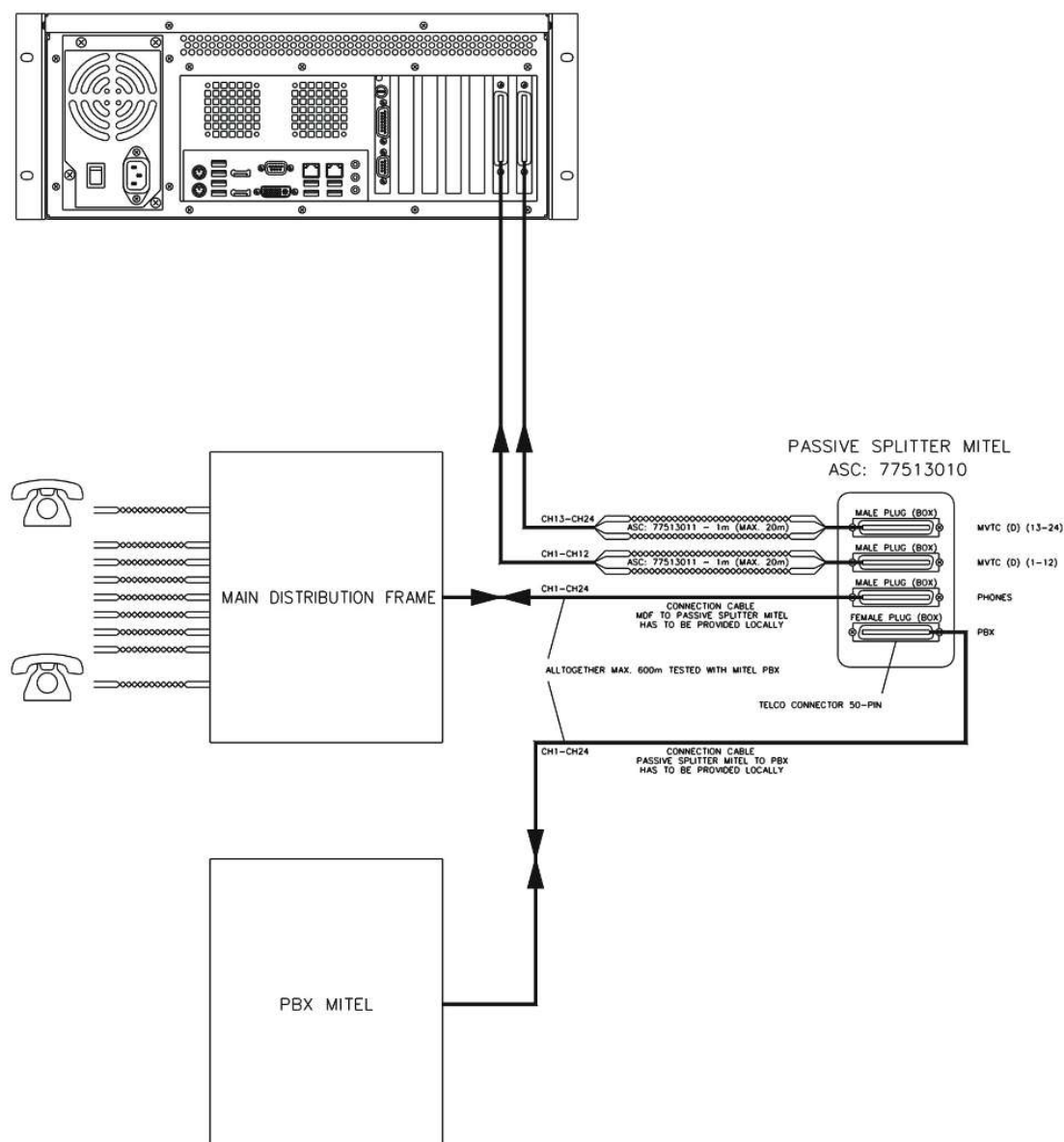
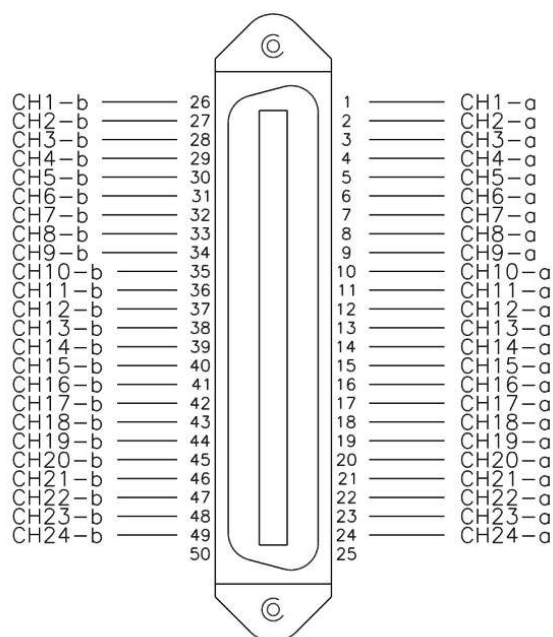


Fig. 29: MVTC connection with splitter box

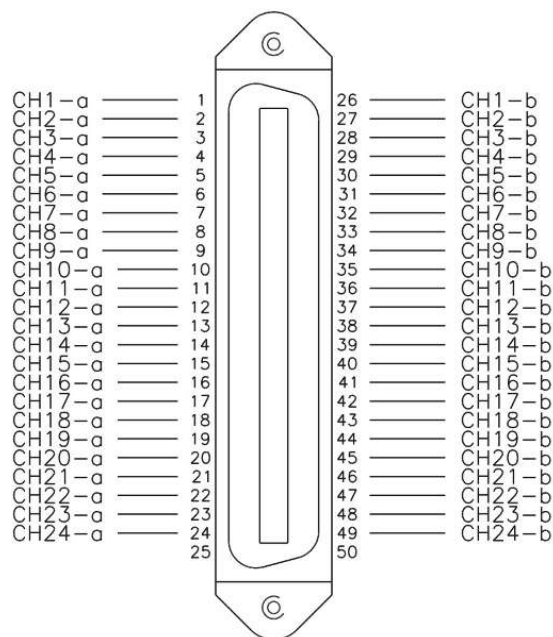


If the Multi Vendor Tap Card is used with a splitter box, a maximum of 12 channels can be connected.



MALE PLUG CENTRONICS (AMPHENOL), 50-POLE

Fig. 30: Connection assignment of the telephone connection of the splitter box



FEMALE PLUG CENTRONICS (AMPHENOL), 50-POLE

Fig. 31: Connection assignment of the PBX of the splitter box



5.3.1 Termination of the connection

ATTENTION!

Loss of data with too large cable lengths

If the cable length is too large, the Multi Vendor Tap Card cannot synchronize the signal correctly anymore which may cause loss of data.

For 2-wire connections, cable lengths have to be observed as described in [Fig. 33, p. 31](#).

For 4-wire connections, cable lengths have to be observed as described in [Fig. 34, p. 31](#).

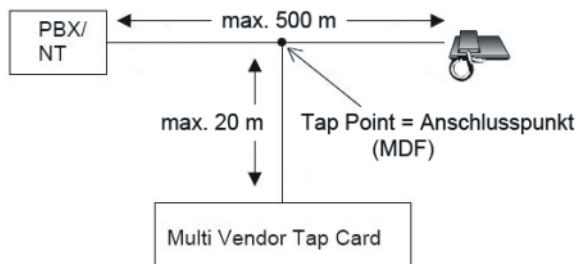


Fig. 33: Definition of the connection length for 2-wire MVTC connections

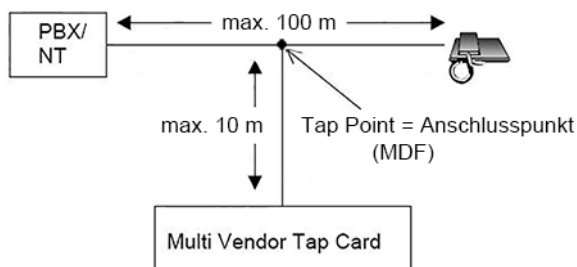


Fig. 34: Definition of the connection lengths for 4-wire (BRI S0) MVTC connections

To avoid involuntary reflections in the cable, the **MVTC** offers the possibility to terminate the connection between **MVTC** and the point of interconnection.

The setting of whether a termination is required (120 ohm) or not (HI-Z, High Impedance) depends on various factors such as the length of the cable between the **MVTC** and the **MDF** as well as the location of the **MDF** between the PBX and the end device.

Therefore, there are no hard and fast rules about whether a termination is required. Instead, it is important to check for each installation which settings deliver the best recording results. Information about the configuration with the program *SmartControl (32-bit)* can be found in the administration manual *TDM Recording Others EVOflex (Universal MVTC)*. Basically, the default setting without a termination (HI-Z) applies.

System | Board | CPM | Parameters | Digital Network

Select Board

Board Number: 0 PCI Bus No: 2 PCI Slot No: 0 Total Channels: 24

Base | DC1 | DC2

Information For Board 0(Base Board)

PBX Type: Avaya Definity 2W

PBX Version: 01.01.00

Board Type: SmartTAP NGX PCIe

Channels: 8

Serial Number: 40C3

DateCode: 1249

Firmware Version: 05.07.01 Build 1038

OEM Info: AudioCodes, Inc.
Copyright © 2007 AudioCodes, Inc. All rights reserved.

DChannel Options

- ☒ D Channel
- ☐ Event Updates
- ☐ Call Control

Termination

- ☐ 120 Ohm
- ☒ HI-Z

TDM Encoding

- ☐ u-law
- ☒ A-law

Board Switch ID: 00

CT Bus Type

- ☒ H.100
- ☐ MVP

CT Bus Termination

- ☐ Enable

CT Mode

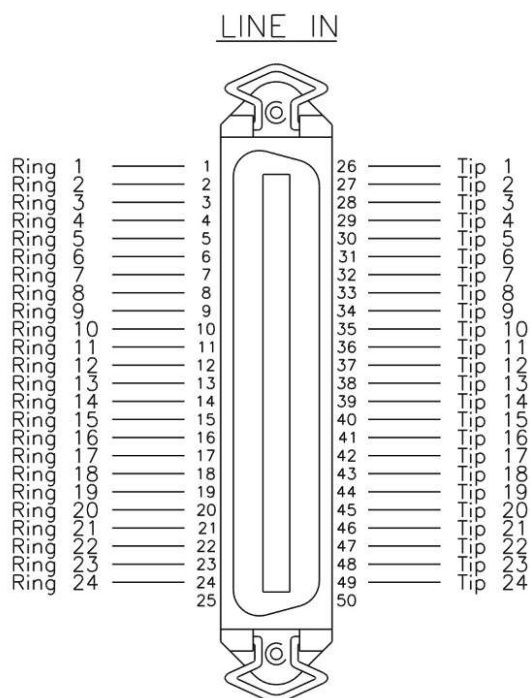
- ☐ Master
- ☒ Slave
- ☐ MasterA
- ☐ MasterB

Defaults

Apply OK Cancel

Fig. 35: SmartControl - tab Board - group field Termination: HI-Z (Example)

5.4 Analog LD Card



FEMALE PLUG CENTRONICS (AMPHENOL), 50-POLE

Fig. 36: Connection assignment of the Analog LD Card *

* On the Analog LD Card ASC no.: 76561012 (PCI, 8-channel) or ASC no.: 76561007 (PCIe, 8-channel) only connections 1-8 and 26-33 are used.

* On the Analog LD Card ASC no.: 76561013 (PCI, 16-channel) or ASC no.: 76561008 (PCIe, 16-channel) only connections 1-16 and 26-41 are used.



To avoid cross talk, channels which have not been connected physically to the line, have to remain closed within your application.



The assignment of the standard connection cable (6 m) ASC no. 77542001 is the same as for the connection cable ASC no. 77542002 (see [Fig. 28, p. 27](#)).

The maximum cable length of the connection cable ASC no.: 77542002 (see [Fig. 28, p. 27](#)) for the Analog LD card is 100 m.

Information about the configuration of the recording card Analog LD can be found in the administration manual *TDM Recording Others EVOflex (Universal analog LD)*.

6

Change IP address

1. Press the Windows key.
2. Open the window *Network and Sharing Center* via *Control Panel > Network and Sharing Center*.
3. Click on the network connection.

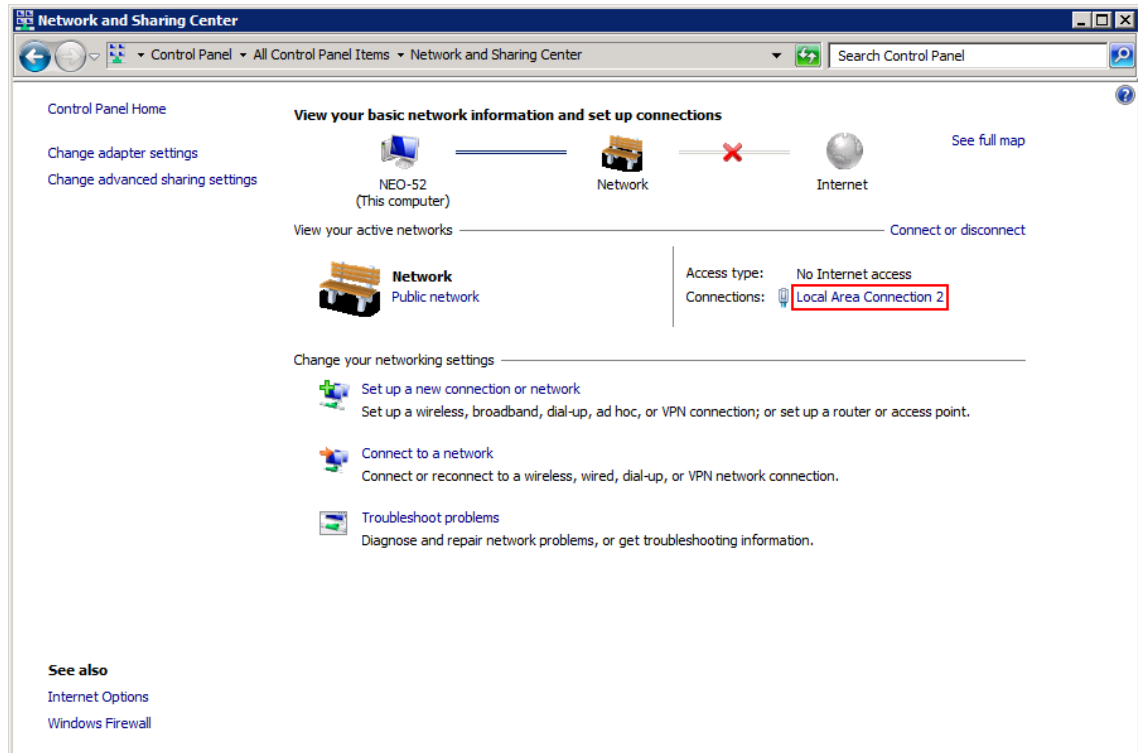


Fig. 37: Network and Sharing Center (example)

4. Click on the button *Properties*.

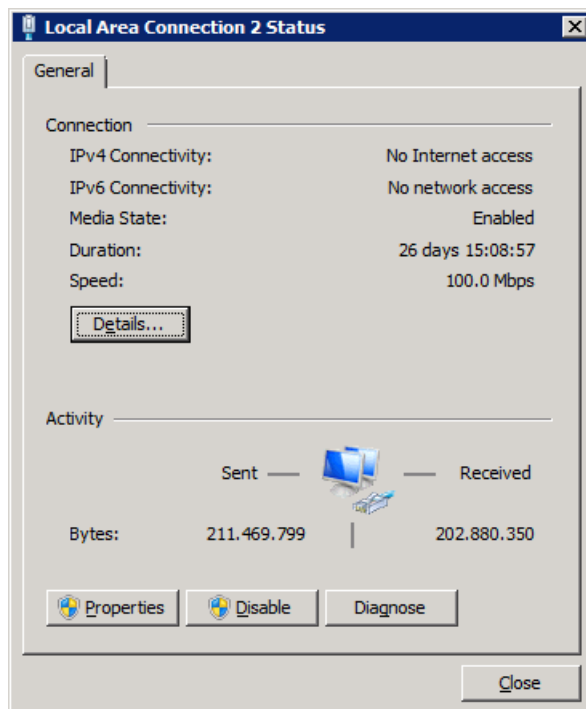


Fig. 38: Status of the network connection (example)

5. Deactivate all protocol dependencies except *Client for Microsoft Networks* and *Internet Protocol Version 4 (TCP/IPv4)*.
6. Click on *Internet Protocol Version 4 (TCP/IPv4)*.
7. Click on the button *Properties*.

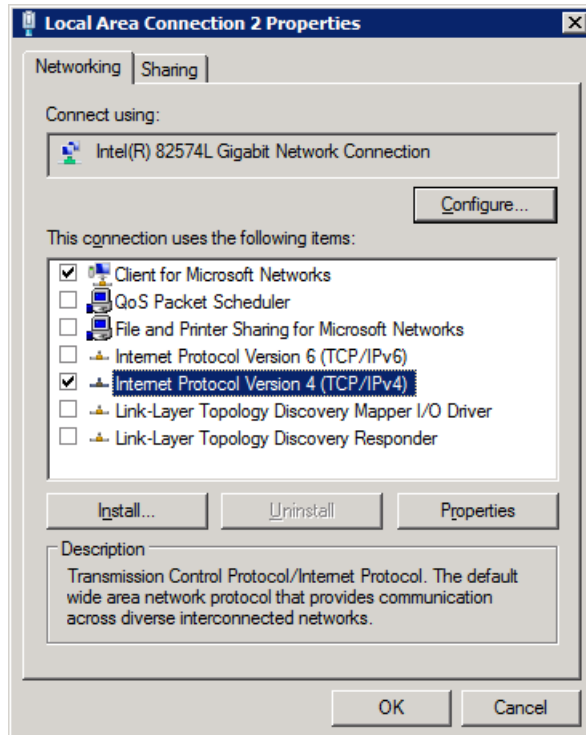


Fig. 39: Properties of the network connection (example)

8. In *Use the following IP address*, enter the IP address, the subnet mask, and the default gateway.
9. To save the entries and close the window, click on the button *OK*.
To discard the entries and close the window, click on the button *Cancel*.

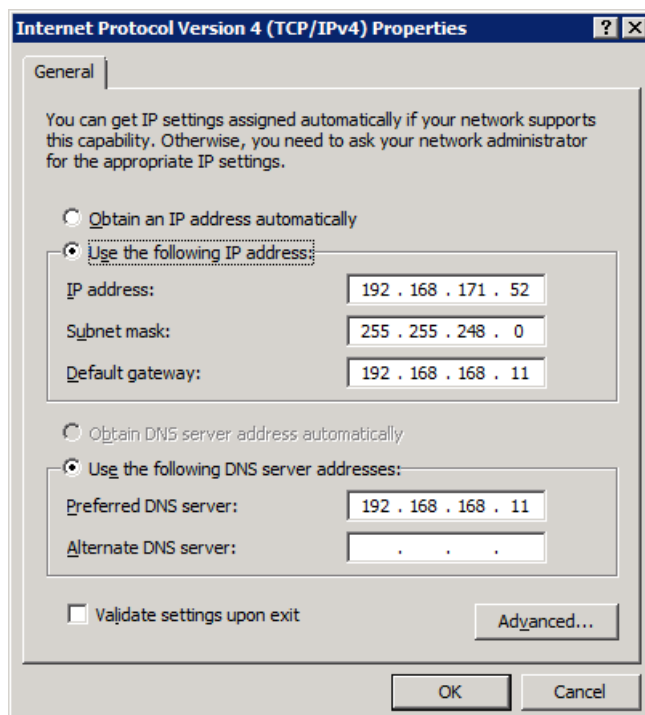


Fig. 40: Internet Protocol Version 4 (TCP/IPv4) Properties (example)

7 Connect VoIP applications

For the recording of **VoIP** only those network cards may be used which have been particularly designated for this purpose. Only network cards released by ASC may be used. The network interfaces of the slot **CPU** are only intended for the communication with the recorder and not for the recording.

Additional information about the configuration and administration can be found in the configuration manual of the respective PBX integration.

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Glossary

CPU

Central Processing Unit

E1

32 E0 channels, 1 of them a synchronization channel and another a service channel. E1 is used in Europe.

LIP

Language Interface Pack

MDF

Main Distribution Frame

Multi PMP

Passive Monitoring Point; device for recording primary multiplex connections free of reactions

MVTC

Multi Vendor Tap Card; recording card for digital extensions and ISDN-S0 trunks

PBX

Private Branch Exchange

PCM

Pulse Code Modulation is an uncompressed pulse modulation method which transforms a time- and value-continuous analog signal into a time- and value-discrete digital signal. It is used in audio technology, for example in the context of the G.711 standard and in video technology for digital video signals in compliance with the ITU-R BT 601 standard. (Source: Wikipedia 12th June 2018)

PCM30

Pulse code modulation, modulation type for digital transmission of phone calls standardized according to ITU G.703. The interface defines a trunk of 32 time slots which allow transmitting 30 digital audio channels encoded according to ITU G.711 in one direction. Time slot 0 and time slot 16 are used for synchronization and signaling purposes. (Source: Wikipedia 12th June 2018)

PMP

Power Distribution for Multi PMP; operating voltage distributor for an easier installation when using several Multi PMPs

PRI

Primary Rate Interface An interface which allows to transmit 30 telephone conversations bidirectionally in 2 PCM30 channels. PRI interfaces are controlled via a D-channel protocol which is transmitted in time slot 16. Examples for this are EDSS1, DASS2, DPNSS, QSIG.

RAID

Redundant Array of Independent Disks

RAM

Random Access Memory

RX

Receiver, RX is the term for a receiver, i. e. for receiving a radio package in radio communication or of computer data (downloading); Rx stands for receiver whereas the x is a variable for the letters behind the R

SAS

Serial Attached SCSI

T1

24 DS0 channels 64 kbit/s, one of them a service channel. T1 is used in North America.

TDM

Time Division Multiplexing is an umbrella term for time-slot-oriented interfaces, ITU G.703 defined. The term is used ASC-wide representative for conventional telephony.

TX

Transmitter, TX is the term for a sender, i. e. for sending a radio package in radio communication or of computer data; Tx stands for transmitter whereas x is a variable for the letters behind the T

VoIP

Voice over IP