



Dialogic® Diva BRI Media Boards Installation Guide

Copyright © 2013 Dialogic Inc. All rights reserved.

1. Product Description

The Dialogic® Diva BRI Media Boards are high-performance, partly active PC-based server boards that provide digital, analog, and GSM connections over an ISDN line.

This document provides the quick steps to install your Diva Media Board. The full *Dialogic® Diva Media Boards Installation Guide* is available from the following URL.

http://www.dialogic.com/en/manuals/diva/diva_hw.aspx

2. Before You Begin Protecting the Board from Damage

CAUTION: All computer boards are sensitive to electrostatic discharge. Handle all static-sensitive boards and components at a static-safe work area, and observe anti-static precautions at all times.

If you are not familiar with ESD safety precautions, visit <http://www.dialogic.com/support/hwinstall> to learn more.

Unpacking the Board

Unpack the board according to the following steps:

1. Prepare a static-safeguarded work area.
2. Carefully remove the board from the shipping carton and anti-static packaging. Handle the board by the edges and avoid touching the board's components.
3. Lay the board on the static-dissipative work surface.

Note: Place board in static-shielding bag when carrying board from station to station.

CAUTION: Do not remove the board from the anti-static packaging until you are ready to install it. Observe proper anti-static precautions at all times.

3. Installing the Board

WARNING! Unplug the equipment before performing the procedures described in this section. Failure to disconnect the power before you open the chassis can result in personal injury.

Ensure that the system is disconnected from its power source and from all telecommunications links, networks, or modem lines whenever the chassis cover is removed. Do not operate the system with the cover removed.

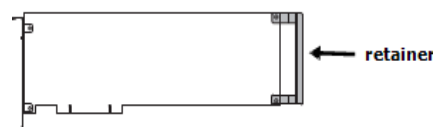
CAUTION: To avoid possible damage to the board, remove power from the computer before beginning installation. Observe proper anti-static precautions at all times while handling and installing the board.

Follow the steps below to install your Dialogic® Diva® Media Board and connecting it to your ISDN BRI line.

Insert your Diva Media Board into your computer as described below:

Note: You may need to consult your computer's manual during the installation of your Diva Media Board.

1. For your safety, disconnect all technical and peripheral devices and all energy sources from the computer.
2. Drain static electricity from your body by touching the metal chassis (the unpainted metal at the back of your computer).
3. Remove any cables, if present, and the power cord from your computer.
4. Remove the cover of the computer as described in your computer's manual.
5. Locate a PCI or PCIe slot in your computer.
6. If there is a metal plate at the end of the slot, remove the screw or loosen the clip and remove the metal plate. Keep the screw for fastening your Diva Media Board.
7. If your Diva Media Board comes with a retainer, and space does not permit the use of the retainer, simply remove it before you insert the Diva Media Board. The retainer is only an installation aid, and does not add functionality to the board.

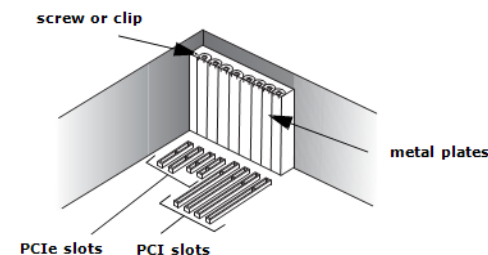


8. Before you insert your Diva Media Board, read the following safety instruction:

CAUTION: To avoid damaging your hardware, insert the Diva Media Board only into a PCI or PCIe slot, according to your board type. Inserting the Diva Media Board into any other type of slot can damage your board, your computer, or both.

Firmly insert the Diva Media Board into the selected slot. Make sure that the Diva board does not touch

the CPU, memory modules, or other parts on the motherboard.



9. Firmly secure the Diva Media Board with the screw or clip.

WARNING! For your safety, make sure that the Diva Media Board's bracket is properly secured to the PC's chassis by fastening the Diva Media Board with the screw or clip. This will ensure proper grounding and avoid personal injuries and damage to your computer, your Diva board, or both.

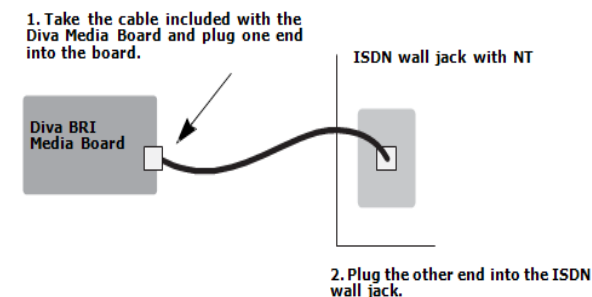
10. Replace the cover of the computer as described in your computer's manual.

4. Connect your Dialogic® Diva® BRI Media Board

Note: If you plan to use your Diva BRI Media Board as network termination for back-to-back operation or connection to PBX networks go to "NT Mode".

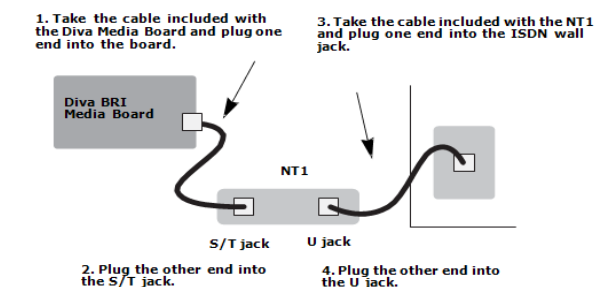
In Europe and most countries worldwide:

In Europe as well as most countries except North America and Japan, connect your ISDN line with a standard ISDN cable.



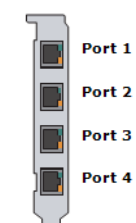
In North America, Japan, and a few other countries, you need an NT1 to connect your ISDN line. Make sure that a power supply is available for the NT1 of this line. Usually, a PBX is installed in the same area

as the NT1 and the service provider can use the power supply of the PBX for the ISDN line as well. If this is not the case, you have to order a combo device from your service provider. This device consists of an installation rack into which an NT1 module and a power supply module is mounted.



Note for Dialogic® Diva® 4BRI Media Boards:

The Diva 4BRI Media Boards have four ports for connecting to four separate ISDN BRI lines. Connect all four cables as described above. You can use any port; typically, you must specify the port number during software configuration. The port numbers are shown below. The diagram is oriented with the edge connector pointing downwards.



NT Mode

Connecting Dialogic® Diva® BRI Media Boards in NT mode:

The Dialogic® Diva® System Release software enables you to configure Diva BRI Media Boards as network termination (NT). This means your Diva Media Board can serve as an NT for PBXs, for example, when coupling PBXs with the Q.SIG protocol, and it can be used for back-to-back operation.

When connecting the Diva Media Board to a PBX that acts as terminal equipment and therefore requires an NT to provide a clocking signal, configure the Diva board as an NT. Wire the Diva board to the PBX as shown in the diagram below by applying the appropriate assignment to the PBX connectors. Use the required termination resistors.

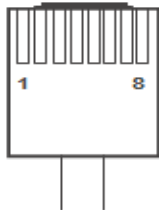
When using two Diva Media Boards in back-to-back operation, configure one Diva board as an NT and the other one as terminal equipment (TE). Connect the boards using a crossover cable. The cable wiring must correspond to the diagram below and the cable must have the required termination resistors.

Pole (contact) assignments for 8-pole connections (plugs and jacks):

	TE Side		Wiring	NT Side	
Pins on RJ45	Wire	Signals		Wire	Signals
1 not used					
2 not used					
3	2a	TX +		1a	TX+
4	1a	RX +		2a	RX+
5	1b	RX-		2b	RX -
6	2b	TX -		1b	TX -
7 not used					
8 not used					

Termination resistors
100 Ohm, 5%

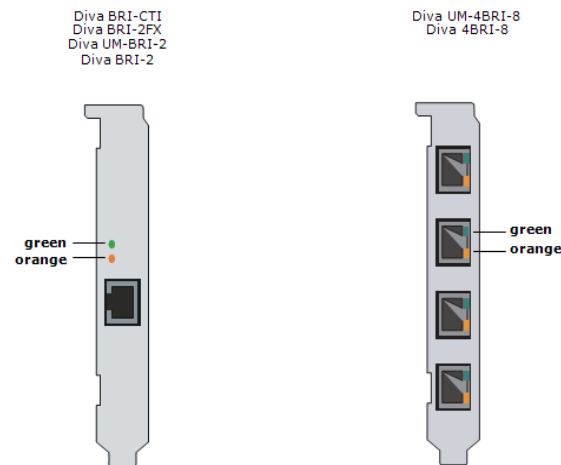
Note: Looking at the RJ45 connector with the exposed connector pins facing you, the pins are numbered from 1 to 8 from left to right (as shown below).



5. Checking the Status LEDs

The Dialogic® Diva® BRI and PRI Media Boards have two or four status LEDs that indicate a specific status of the Diva Media Board.

The Diva BRI-CTI, Diva BRI-2FX, Diva BRI-2, Diva UM-BRI-2, Diva 4BRI-8, and Diva UM-4BRI-8 Media Boards have two LEDs for each port:



Color	Status	Description
green	off	Layer 1 is not active.
	lit	Layer 1 is active. The cabling and the connection to the ISDN work properly.
yellow	off	Layer 2 is not active.
	lit	Layer 2, that is, the D-channel, is active. In Europe, the status of the D-channel depends on the switch configuration; the LED might remain lit for the duration of the call or it might remain lit continuously. In North America, the D-channel is always active and, as such, the LED remains lit.

6. Warranty Period

For specific warranty information for this board, refer to the Warranty section of the Products page located at the following URL:

<http://www.dialogic.com/warranties/>

7. Contacting Technical Support

For Dialogic technical support issues, refer to the Dialogic Service Center at www.dialogic.com/support.

8. Returning a Product

To return a board for warranty repair or for any other returns, please refer to www.dialogic.com/support/hwfaults.

All contents of this document are furnished for informational use only and are subject to change without notice and do not represent a commitment on the part of Dialogic Inc. or its subsidiaries ("Dialogic"). Reasonable effort is made to ensure the accuracy of the information contained in the document. However, Dialogic does not warrant the accuracy of this information and cannot accept responsibility for errors, inaccuracies or omissions that may be contained in this document.

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH DIALOGIC® PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN A SIGNED AGREEMENT BETWEEN YOU AND DIALOGIC, DIALOGIC ASSUMES NO LIABILITY WHATSOEVER, AND DIALOGIC DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF DIALOGIC PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHT OF A THIRD PARTY.

Dialogic products are not intended for use in medical, life saving, life sustaining, critical control or safety systems, or in nuclear facility applications.

Due to differing national regulations and approval requirements, certain Dialogic products may be suitable for use only in specific countries, and thus may not function properly in other countries. You are responsible for ensuring that your use of such products occurs only in the countries where such use is suitable. For information on specific products, contact Dialogic Inc. at the address indicated below or on the web at www.dialogic.com. It is possible that the use or implementation of any one of the concepts, applications, or ideas described in this document, in marketing collateral produced by or on web pages maintained by Dialogic may infringe one or more patents or other intellectual property rights owned by third parties. Dialogic does not provide any intellectual property licenses with the sale of Dialogic products other than a license to use such product in accordance with intellectual property owned or validly licensed by Dialogic and no such licenses are provided except pursuant to a signed agreement with Dialogic. More detailed information about such intellectual property is available from Dialogic's legal department at 9800 Cavendish Blvd., Suite 500, Montreal, Quebec, Canada H4M 2V9. Dialogic encourages all users of its products to procure all necessary intellectual property licenses required to implement any concepts or applications and does not condone or encourage any intellectual property infringement and disclaims any responsibility related thereto. These intellectual property licenses may differ from country to country and it is the responsibility of those who develop the concepts or applications to be aware of and comply with different national license requirements.

Dialogic, Dialogic Pro, Dialogic Blue, Veraz, Brooktrout, Diva, Diva ISDN, Making Innovation Thrive, Video is the New Voice, VisionVideo, Diastar, Cantata, TruFax, SwitchKit, SnowShore, Eicon, Eiconcard, NMS Communications, NMS (stylized), SIPcontrol, Exnet, EXS, Vision, PowerMedia, PacketMedia, BorderNet, inCloud9, I-Gate, ControlSwitch, NaturalAccess, NaturalCallControl, NaturalConference, NaturalFax and Shiva, among others as well as related logos, are either registered trademarks or trademarks of Dialogic Inc. and its affiliates or subsidiaries. Dialogic's trademarks may be used publicly only with permission from Dialogic. Such permission may only be granted by Dialogic's legal department at 9800 Cavendish Blvd., Suite 500, Montreal, Quebec, Canada H4M 2V9. Any authorized use of Dialogic's trademarks will be subject to full respect of the trademark guidelines published by Dialogic from time to time and any use of Dialogic's trademarks requires proper acknowledgement.

The names of actual companies and products mentioned herein are the trademarks of their respective owners.