NEURO CHECK
Industrial Vision Systems

Application Software for Industrial Vision Systems

Meilhaus

Driver

Version 6.2.2
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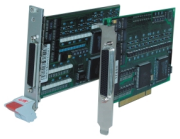
Table of Contents

Introduction

Support for Meilhaus Digital I/O devices



NeuroCheck supports various I/O devices for process communication, e.g. for exchanging status signals with a PLC. With this Digital I/O device driver a some new boards for harsh industrial environments are added to the supported devices of NeuroCheck. The ME-8100/ ME-8200 series provides boards with up to 32 opto-isolated inputs and outputs, see also list of Supported Hardware.

Supported Hardware

NeuroCheck supports some of the Meilhaus Digital I/O boards with this driver. The table below lists the currently supported Digital I/O devices. Please contact your NeuroCheck partner for details or new developments on the Meilhaus digital I/O series.

Meilhaus ME-5000 series

Designation	Inputs	Outputs	Interfaces
ME-5810A (base board ME-5810)	16, opto-isolated	16, opto-isolated	PCI-Express CompactPCI
ME-5810B (ME-5810 base board + ME-5002 add-on board)	32, opto-isolated	32, opto-isolated	PCI-Express CompactPCI

Meilhaus ME-8100 series

Designation	Inputs	Outputs	Interfaces
ME-8100A	16, opto-isolated	16, opto-isolated	PCI, CompactPCI
ME-8100B	32, opto-isolated	32, opto-isolated	PCI, CompactPCI

Meilhaus ME-8200 series

Designation	Inputs	Outputs	Interfaces
ME-8200A	8, opto-isolated	8, opto-isolated	PCI, CompactPCI, PCI Express
ME-8200B	16, opto-isolated	16, opto-isolated	PCI, CompactPCI, PCI Express

Important Note:
A machine vision system consists of a variety of hardware and software components which must be well coordinated (PC system, BIOS, operating system and version, hardware drivers, camera, PCI boards, etc.). In general, NeuroCheck GmbH as producer of only one of these components cannot take responsibility for the complete system, i.e. we cannot guarantee that each possible combination of the above mentioned devices and components works properly. However, your NeuroCheck partner will be glad to help you selecting the right components for your machine vision application.

System Requirements

The minimum system requirements are:

Element	Description
Operating system	Microsoft® Windows® 7 (32 bit and 64 bit) Microsoft® Windows® 8.1 (32 bit and 64 bit) Microsoft® Windows® 10 (32 bit and 64 bit)
PCI Connector	PCI slot, CompactPCI slot or PCI Express X1 (single lane, only ME-8200)

Installation of a Meilhaus Digital I/O device

Please carefully read the system requirements.

Please note necessarily to install the ME-iDS driver software before installing the hardware.
This is for particular relevance for an initial installation under Windows 7.

Driver

- Current ME-iDS Driver Version: V2.1.1 from April 2016.
- Run the file "meIDSWinInstall.exe" from the DeviceDriver directory of the NeuroCheck driver package.
- Follow the dialogs of the installation program. Choose "Typical" setup type.
- Finish the installation wizard.
- Reboot your PC (or just turn it off to install the hardware).

Hardware

- Turn off your computer and unplug the power cable from your computer.
- Attention: Some of the more sensitive components can be damaged by static electricity!
  Therefore: Make sure to ground yourself by touching an exposed metal part of the PC case before handling the board.
- Plug in the Meilhaus Digital I/O card on a free Standard-PCI (Compact-PCI, PCI Express) slot.
- Connect the PC to the power supply and switch on the PC.
- The hardware wizard runs in the background and adds the device to the device manager.
  If not choose the option "Install the software automatically" in the hardware wizard.
  The device will be added to the device manager.
- Check in the Windows device manager, if your Meilhaus Digital I/O card is installed correctly.
  See category Meilhaus Electronic IDS DAQ Boards.

Troubleshooting

What can I do if the Meilhaus Digital I/O board cannot be accessed?

Please check the following points:

1. Check, if the requirements for Digital I/O card operation are served: System Requirements.
2. Go to the Windows Device Manage and check if the board was correctly installed.
   If the board (category Meilhaus Electronic IDS DAQ Boards) is marked with a warning icon please update the driver.
   Use the latest driver version as written down in page Installation, topic driver.
3. Start the ME-iDC Configuration Utility and check if the board is listed in the device list.
   Start > Programs > Meilhaus Electronic > ME-iDS > ME-iDC (Config Tool).
4. For more technical assistance contact your NeuroCheck Support, see Support Services.

Which models or Meilhaus Digital I/O series are supported?

- In theory, Meilhaus Intelligent Driver System ME-iDS supported various Digital I/O types with different features and interfaces. However, we only recommend to use hardware that we indeed have tested, see Supported Hardware. For any other hardware we cannot guarantee full functionality.

Which operating systems are supported?

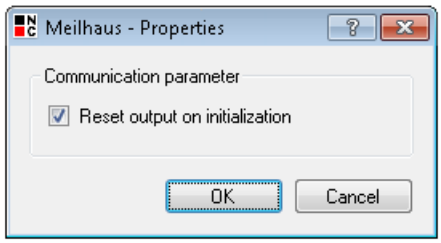
- The Meilhaus ME-iDS driver is available for all common Windows operating systems, see page System Requirements for details.

Can I use more than one Meilhaus Digital I/O board in NeuroCheck?

- Yes, the number of boards is not limited in NeuroCheck.

Device Properties

Screenshot of Properties Dialog

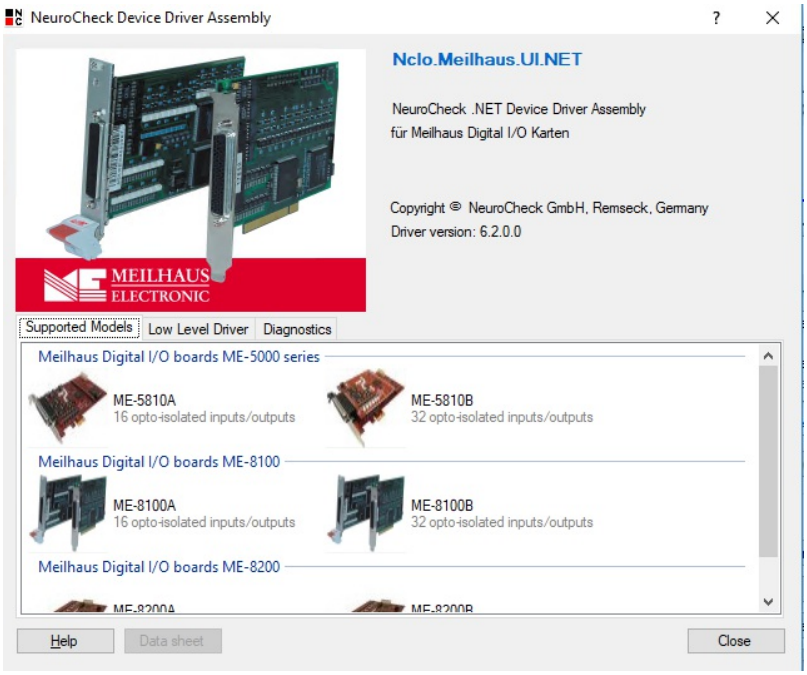


The properties of the Digital I/O device can be shown in the Properties Dialog of the device. To open this dialog, select the device in NeuroCheck Device Manager and click the button **Properties**.

Communication parameter

Element	Description
Reset output on initialization	Flag to indicate whether to reset the device output image during NeuroCheck startup process. Useful for multi instance operations.

Info Dialog



This dialog displays information about the NeuroCheck driver DLL. You can select between three pages with specific information the dialog provides. On each page the context menu provides a further function.

Element	Description
Help	Click here to open this help file you are currently reading.
Data sheet	If a data sheet is available you can see that button to open the data sheet of the selected Digital I/O model. (Only available on page Supported Models.).
Enable logging	Check the box to activate logging. Please note that the creation log messages can slow down the system. (On page Diagnostics only.)

Page Supported Models

This page provides information about the models that are supported by this NeuroCheck driver DLL.

Context menu element	Description
Data sheet	Click here to open the data sheet of the selected Digital I/O model.

Page Low Level Driver

This page provides a list of all driver files from the Meilhaus driver system.

Additionally to the drivers name the list provides information about the version, the location on your computer, the date and time of the last change and the size of the driver file.

Context menu element	Description
Copy to clipboard	Click here to copy the entire list of driver files to the clipboard. From the clipboard you can paste the list to a word processor, text editor or E-mail client.

Page Diagnostics

This page provides a list of all the last events that occurred within the driver. The list is empty if the logging is disabled. If logging is enabled and the logging of NeuroCheck is enabled as well, all events are written to the NeuroCheck log file (`NcLog.XML`). Every entry in the list contains the priority, the date and time when it occurred and a description of the event.

Context menu element	Description
Copy to clipboard	Click here to copy the entire list of events to the clipboard. From the clipboard you can paste the list to a word processor, text editor or E-mail client.

Support Services

For technical support, please contact your local NeuroCheck partner or NeuroCheck GmbH:

Phone: +49 (0) 7146 - 89 56-40

E-Mail: support@neurocheck.com

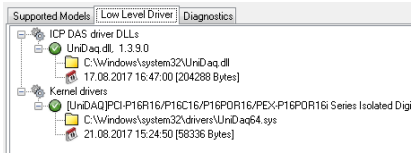
Web: www.neurocheck.com

Before contacting us, please provide some important information about your system:

- **Information about your NeuroCheck installation and your PC setup:**
  Use the NeuroCheck Diagnostics tool to check your installation and computer configuration.
  The NeuroCheck Diagnostics is installed in the "Tools" folder within your NeuroCheck installation.

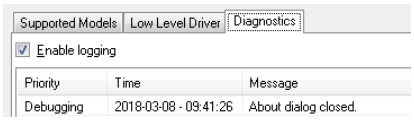
- **Information about the installed Digital I/O cards:**
  the number and the model names of the connected Digital I/O cards can be seen in the Device Manager of NeuroCheck.

- **Information about your low level driver installation:**
  this can be found in the Info Dialog of the NeuroCheck driver DLL which can be opened by clicking the info button when the Digital I/O device is selected in the Device Manager of NeuroCheck. On page Low Level Driver you see the list of installed low-level drivers. Copy this list to your E-mail by right clicking.



- **Log file information:**
  Logging for the driver can be activated in the Info Dialog of the NeuroCheck driver DLL. It can be opened by clicking the info button when the Digital I/O device is selected in the Device Manager of NeuroCheck. On page Diagnostics of the Info Dialog check the box Enable logging.

  Please note that logging will be written to the NeuroCheck log file which must be activated, too. Logging for NeuroCheck is activated in the Software Settings on page Diagnostics.



Pinout ME-5810A/B

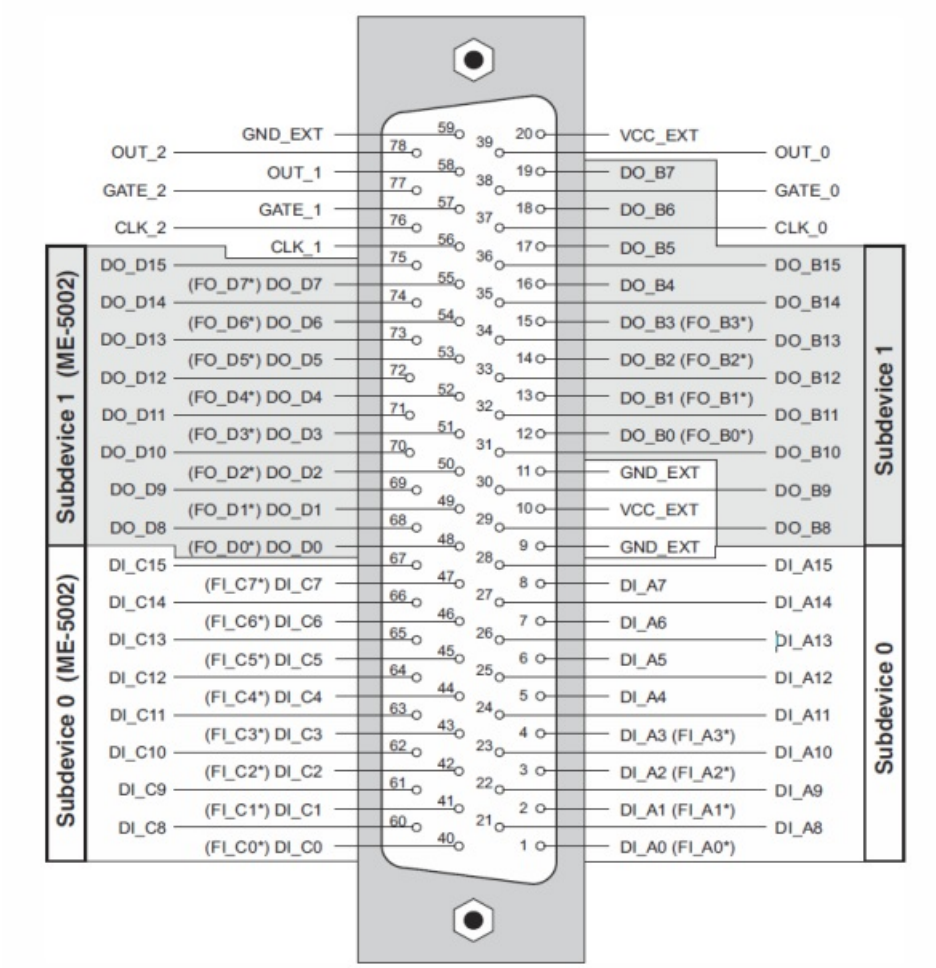


Abb. 24: 78pol. Sub-D-Buchse ME-5810 (ST1)

Pinout ME-8100A/B

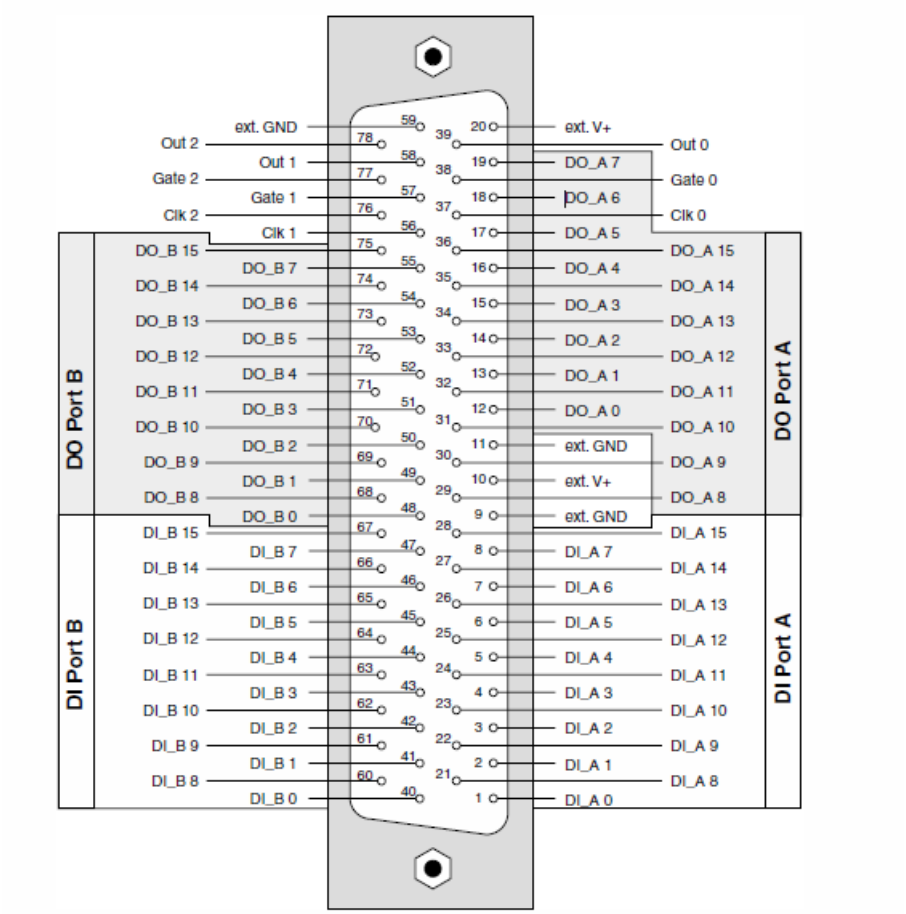


Diagram 12: Pinout of the 78pin female D-Sub on ME-8100A/B

Pinout ME-8200A/B - D-Sub Connector (ST1)

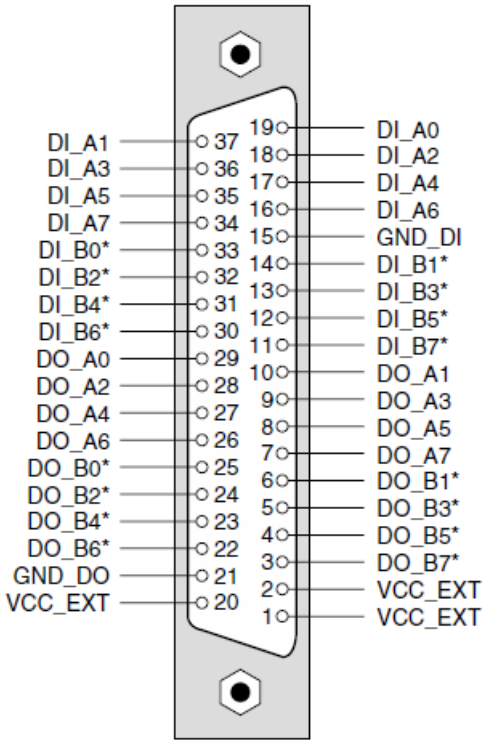


Diagram 13: Pinout of the 37pin D-Sub female connector

*The pins DI_B7…0 and DO_B7…0 are not connected on the ME-8200A.

Pinout ME-8200A/B - Pinout Auxiliary Connector (ST2)

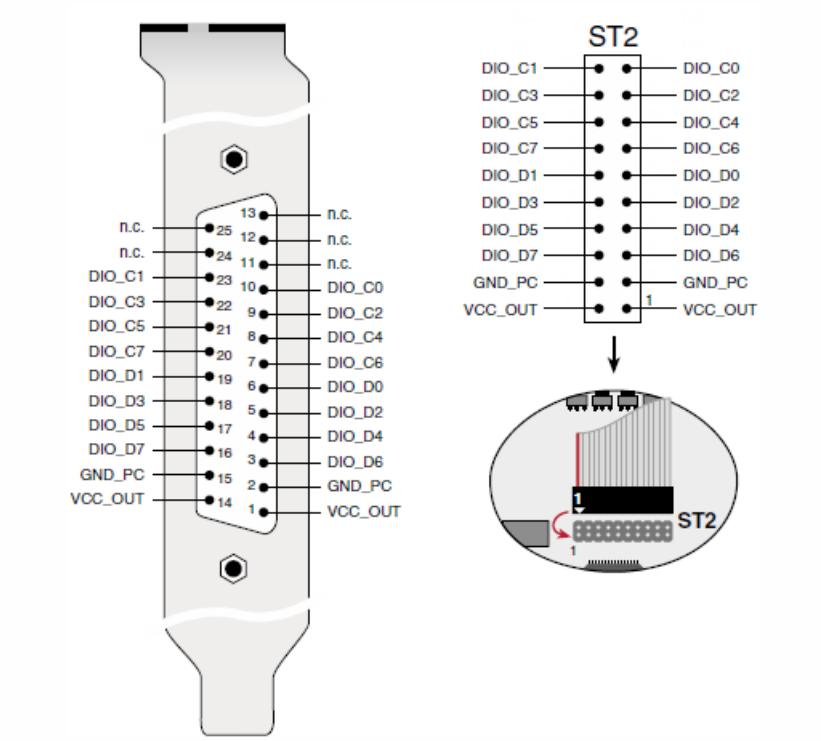


Diagram 14: Auxiliary connector ST2 for ME-8200 (top view)