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This Help system includes topics that you can call directly from the Advantech Device Installation application. To get context-sensitive help from Device Installation, press Shift+F1 and click on any element of the application window. You can also highlight any menu command using the keyboard and press F1 to get help on the command.

The Index contains a list of all Help topics available for the Advantech Device Installation Program. For information on how to use Help, press F1 or choose Using Help from the Help menu.

Setup Menu

The Setup menu includes commands that enable you to install, add, or remove an I/O device.

For more information, select the Setup menu command name.

Device

File Menu

The File menu includes the Exit command, which enables you to exit the Device Installation program.

For more information, select the File menu command name.

Exit

Glossary

I/O Device

Install

Remove

Add

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Installing an I/O Device

This topic explains how to Install an I/O device for use in WINDOWS.

To set up a device, a device driver (DLL) must first be installed outside of the Device Installation (DEVINST) program for the corresponding I/O device. Only one device driver is installed for each I/O device, but the driver can be accessed by many I/O devices of the same type.

To install a device driver (DLL) in WINDOWS, you must access the CONTROL PANEL in the MAIN Window. When in the Control Panel window, Click on the Icon marked "DRIVERS". Choose the ADD button, and highlight the entry in the list box "Unlisted or Updated Driver". Press the OK button, and insert a floppy or name the path to the location of the device driver you wish to install. Once the driver is installed, you should see that it is now listed. There should be only one instance of each type of I/O device or board installed in WINDOWS. Once each device is installed, it remains installed unless you remove it by using the REMOVE button in the DRIVERS dialog box. Now you can enter the Advantech Device Installation Program (DEVINST) to install and configure each instance of that I/O device driver you installed.

To Add and Set up each I/O device in the Advantech Device Installation program, go into the SETUP menu, and click DEVICE. Choose the ADD button, and you should see a pop-up box (List of Devices) containing a list of the device driver type you just installed. Highlight this device and press INSTALL, or double click on the device. This will bring you to a device specific dialog box that allows you to configure the device. Configure the device, and when you're satisfied with your entries, press OK. This will bring you back to the I/O Device Installation dialog box, where you can add another I/O device (double click, or INSTALL). You can install as many I/O devices as you want (you are only restricted by your hardware and memory). When you have completed your device installation and setup, there should be a listing reflecting your installation displayed in the I/O DEVICE INSTALLATION dialog box.

Once an I/O device is Installed, you may change its parameters by either double clicking on its entry in the INSTALLED DEVICES list box, or highlighting and pressing the Setup button.

Adding a Device

This topic explains how to Add an instance of an I/O device that was previously installed as a windows device driver (DLL).

To **ADD** and set up each I/O device in this program, go into the SETUP menu, and click DEVICE. Choose the Add button, and you should see a pop-up box (List of Devices) containing a list displaying the device driver type(s) you have previously installed. Highlight the device and press INSTALL, or double click on it. This will bring you to a device-specific dialog box that allows you to configure the new device. Configure the device, and when you're satisfied with your entries, press OK. This will bring you back to the List of Devices box, where you can add another I/O device of the same type (double click, or INSTALL). When you have completed your device installation and setup, there should be a displayed list reflecting all installations in the I/O DEVICE INSTALLATION dialog box.

Removing a Device

This topic explains how to **REMOVE** an instance of an I/O device that was previously installed as a windows device driver (DLL).

To Remove a previously set up I/O device in this program, go into the SETUP menu, and click DEVICE. Highlight the device instance you wish to remove in the I/O DEVICE INSTALLATION dialog box, and then press the REMOVE button. You should see that the device has been removed at this time. When you have completed your device installation and setup, there should be a displayed list reflecting all installations and removals. The Remove button in the I/O DEVICE INSTALLATION dialog box will only remove each instance of the I/O device -- not the driver itself.

To remove the driver itself from WINDOWS, you must exit this program and click on the Drivers icon in the Control Panel, main Window. When the driver has been removed, you must exit and re-enter WINDOWS, or re-boot.

Setting Up or Configuring a Device

This topic explains how to **SETUP**, or Configure an instance of an I/O device that was previously installed as a windows device driver (DLL).

To Set up or Configure/re-configure each I/O device in this program, go into the SETUP menu, and click on DEVICE. Highlight the previously installed I/O device you wish to set up, and press the Setup button. This will bring you to a device-specific dialog box that allows you to configure or re-configure the device. Configure the device, and when you're satisfied with your entries, press OK. This will bring you back to the I/O DEVICE INSTALLATION dialog box, where you can see a displayed list reflecting your I/O device configuration.

Exiting

To Exit, go into the File menu, and press EXIT.

Installation Example: Install an I/O Device

This topic provides you with an Installation Example using the Advantech PCL-818.

1) Install the PCL-818 device driver (DLL) in WINDOWS. To do this, access the Control Panel in the Main Window. When in the Control Panel window, Click on the Icon marked "Drivers". Choose the Add button, and highlight the entry in the list box "Unlisted or Updated Driver". Press the OK button, and insert a floppy containing the "adPCL818.drv" device driver and "OEMSETUP.INF" file. Choose PCL-818, and the driver will be installed into the DRIVER section of the SYSTEM.INI file in the WINDOWS directory. Once the driver is installed, you should see that it is now listed in the list box. There should be only one driver for the PCL-818 I/O device installed in WINDOWS. Once the PCL-818 driver is installed, it remains installed unless you remove it by using the same dialog box (Remove). Now you can enter the Device Installation Program (this program) to install and configure each instance of the PCL-818 I/O device driver you installed.

2) To Add and Set up each PCL-818 I/O device in this program, go into the SETUP menu, and click DEVICE. Choose the Add button, and you should see the pop-up box containing a list displaying the PCL818 device driver you just installed. Highlight PCL818 and press INSTALL, or double click on it. This will bring you to the PCL-818 device specific dialog box that allows you to configure each PCL-818. Configure the device by changing the base address, A/D range, etc., corresponding to your hardware's switch and jumper positions. When you're satisfied with your entries, press OK. (There is Device-specific HELP provided by clicking on the HELP button in the PCL-818 configuration dialog box). This will bring you back to the I/O DEVICE INSTALLATION dialog box, where you can either add another PCL-818 I/O card at a new base address (INSTALL), or you can REMOVE, change the SETUP, or CANCEL to exit the program. When you have completed your device installation and setup, there should be a listing reflecting your installation displayed in the I/O DEVICE INSTALLATION dialog box, such as "PCL-818 I/O = 300H".

3) Once the PCL-818 is Installed, you may change its parameters by either double clicking on its entry (such as "PCL-818 I/O = 300H") in the list box, or highlighting the listing and pressing the Setup button.

File Exit Command

The EXIT command allows you to exit the Device Installation Program.

Setup Device Command

The Device command allows you to enter the I/O DEVICE INSTALLATION Dialog Box. In this Dialog Box, you will be able to both Add and Setup or Configure I/O Devices.

Main Window

The Main Window for the Device installation Program is only used as a template for calling the Dialog Boxes used for Device Configuration and Device Installation/Addition.

Maximize Icon

The Maximize Icon is used for maximizing the Window when it is minimized. Clicking on this Icon will Maximize the Window for the Device Installation Program.

Minimize Icon

The Minimize Icon is used for minimizing the Window when it is maximized. Clicking on this Icon will Minimize the Window for the Device Installation Program.

Sizing Border

The sizing border is used to re-size the Window for the Device installation program. Moving the cursor with the mouse to the border will cause the cursor shape to change. Holding the mouse button and dragging the border will cause the Window for the Device Installation program to change in size.

System Menu

The system menu is the menu used for the Windows system.

Title Bar

The title bar that is used for the Device Installation Program is used to display the Program's name.

I/O Device Installation Dialog Box

This dialog box is used for Setting up, Adding, or Removing a Device Instance. If there is an I/O device that has been previously configured, the configured device is displayed here, reflecting configuration parameters. Highlight the device you wish to re-configure, and press the **Setup button**. If no device is displayed, you need to either:

1) Add a device instance -- press the **Add button** and configure the I/O device (see below)

or, if the device you wish to install is not seen in either list box:

2) Install the device driver DLL in Windows by exiting this program (see below).

To install a device driver (DLL) in WINDOWS, you must access the CONTROL PANEL in the MAIN Window. When in the Control Panel window, Click on the Icon marked "DRIVERS". Choose the ADD button, and highlight the entry in the list box "Unlisted or Updated Driver". Press the OK button, and insert a floppy or name the path to the location of the device driver you wish to install. Once the driver is installed, you should see that it is now listed. There should be only one instance of each type of I/O device or board installed in WINDOWS. Once each device is installed, it remains installed unless you remove it by using the REMOVE button in the DRIVERS dialog box. Now you can enter the Advantech Device Installation Program (DEVINST) to install and configure each instance of that I/O device driver you installed.

To **ADD** an instance of an I/O device that was previously installed as a windows device driver (DLL):

In the Device Installation Program, use the **ADD button**. You will then see a pop-up **List of Devices** box containing a listing of the device driver type(s) you previously installed with the Windows Control Panel Drivers program. Highlight the device and press **INSTALL**, or double click on the device. This will bring you to a configuration dialog box specific to the device. Configure the device, and when you're satisfied with your entries, press OK. This will bring you back to the I/O DEVICE INSTALLATION dialog box, where you can add another I/O device of the same type (double click, or INSTALL). When you have completed your device installation and setup, there should be a list of all installations in the INSTALLED DEVICES section of the dialog box.

To **SETUP or Configure/re-configure** an I/O device in this dialog box, highlight the I/O device you wish to configure, and press the Setup button or double click on the listing. This will bring you to a device-specific configuration dialog box. Configure the device, and when you're satisfied with your entries, press OK. This will bring you back to this dialog box, where you can see a list reflecting I/O devices that have been configured.

To **REMOVE** a previously set up I/O device, highlight the device instance you wish to remove and press the REMOVE button.

Windows Keys

Choose from the following list to review the keys used in Windows:

[Cursor Movement Keys](#)

[Dialog Box Keys](#)

[Editing Keys](#)

[Help Keys](#)

[Menu Keys](#)

[System Keys](#)

[Text Selection Keys](#)

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Cursor Movement Keys

| Key(s) | Function |
|-------------------------|---|
| DIRECTION key | Moves the cursor left, right, up, or down in a field. |
| End or Ctrl+Right Arrow | Moves to the end of a field. |
| Home or CTRL+Left Arrow | Moves to the beginning of a field. |
| PAGE UP or PAGE DOWN | Moves up or down in a field, one screen at a time. |


Dialog Box Keys

| Key(s) | Function |
|----------------------|---|
| TAB | Moves from field to field (left to right and top to bottom). |
| SHIFT+TAB | Moves from field to field in reverse order. |
| ALT+letter | Moves to the option or group whose underlined letter matches the one you type. |
| DIRECTION key | Moves from option to option within a group of options. |
| ENTER | Executes a command button. Or, chooses the selected item in a list box and executes the command. |
| ESC | Closes a dialog box without completing the command. (Same as Cancel) |
| ALT+DOWN ARROW | Opens a drop-down list box. |
| ALT+UP or DOWN ARROW | Selects item in a drop-down list box. |
| SPACEBAR | Cancels a selection in a list box. Selects or clears a check box. |
| CTRL+SLASH | Selects all the items in a list box. |
| CTRL+BACKSLASH | Cancels all selections except the current selection. |
| SHIFT+ DIRECTION key | Extends selection in a text box. |
| SHIFT+ HOME | Extends selection to first character in a text box. |
| SHIFT+ END | Extends selection to last character in a text box |

Editing Keys

| Key(s) | Function |
|---------------|---|
| Backspace | Deletes the character to the left of the cursor. Or, deletes selected text. |
| Delete | Deletes the character to the right of the cursor. Or, deletes selected text. |

Help Keys

| Key(s) | Function |
|---------------|--|
| F1 | <p>Gets Help and displays the Help Index for the application. If the Help window is already open, pressing F1 displays the "Using Windows Help" topics.</p> <p>In some Windows applications, pressing F1 displays a Help topic on the selected command, dialog box option, or system message.</p> |
| SHIFT+F1 | <p>Changes the pointer to  so you can get Help on a specific command, screen region, or key. You can then choose a command, click the screen region, or press a key or key combination you want to know more about.</p> <p>(This feature is not available in all Windows applications.)</p> |

Menu Keys

| Key(s) | Function |
|---------------------|---|
| Alt | Selects the first menu on the menu bar. |
| Letter key | Chooses the menu, or menu item, whose underlined letter matches the one you type. |
| Alt+letter key | Pulls down the menu whose underlined letter matches the one you type. |
| LEFT or RIGHT ARROW | Moves among menus. |
| UP or DOWN ARROW | Moves among menu items. |
| Enter | Chooses the selected menu item. |

System Keys

The following keys can be used from any window, regardless of the application you are using.

| Key(s) | Function |
|---------------|---|
| Ctrl+Esc | Switches to the Task List. |
| Alt+Esc | Switches to the next application window or minimized icon, including full-screen programs. |
| Alt+TAB | Switches to the next application window, restoring applications that are running as icons. |
| Alt+PrtSc | Copies the entire screen to Clipboard. |
| Ctrl+F4 | Closes the active window. |
| F1 | Gets Help and displays the Help Index for the application. (See Help Keys) |

Text Selection Keys

| Key(s) | Function |
|--------------------------------|--|
| SHIFT+LEFT or RIGHT ARROW | Selects text one character at a time to the left or right. |
| SHIFT+DOWN or UP | Selects one line of text up or down. |
| SHIFT+END | Selects text to the end of the line. |
| SHIFT+HOME | Selects text to the beginning of the line. |
| SHIFT+PAGE DOWN | Selects text down one window. Or, cancels the selection if the next window is already selected. |
| SHIFT+PAGE UP | Selects text up one window. Or, cancels the selection if the previous window is already selected. |
| CTRL+SHIFT+LEFT or RIGHT ARROW | Selects text to the next or previous word. |
| CTRL+SHIFT+UP or DOWN ARROW | Selects text to the beginning (UP ARROW) or end (DOWN ARROW) of the paragraph. |
| CTRL+SHIFT+END | Selects text to the end of the document. |
| CTRL+SHIFT+HOME | Selects text to the beginning of the document. |

Window Keys

| Key(s) | Function |
|---------------|--|
| ALT+SPACEBAR | Opens the Control menu for an application window. |
| ALT+Hyphen | Opens the Control menu for a document window. |
| Alt+F4 | Closes a window. |
| Alt+Esc | Switches to the next application window or minimized icon, including full-screen programs. |
| Alt+TAB | Switches to the next application window, restoring applications that are running as icons. |
| Alt+ENTER | Switches a non-Windows application between running in a window and running full screen. |
| DIRECTION key | Moves a window when you have chosen Move from the Control menu. Or, changes the size of a window when you have chosen Size from the Control menu. |

I/O Device

An I/O device is a hardware device capable of data input and output. Generally, this would encompass Analog to digital Conversion (A/D), Digital to Analog conversion (D/A), and Digital Input and Output. The devices capable of such I/O can be in the form of plug-in I/O cards and/or remote devices. The I/O device's hardware should be configured (if necessary) first, and then the software can be configured to match the hardware's settings. Some I/O devices can be configured directly through the software's settings. Check your hardware manufacturer's manual for how to configure the hardware. After any hardware configuration is done, the software configuration can be set up by use of the Advantech Device Installation Program, as long as a device driver has been previously installed using the DRIVERS program in the CONTROL PANEL (Main Window).

Install

To install a device means to:

- 1) Install its device driver in WINDOWS, using the device DRIVERS installation utility provided in the Control Panel, Main window.
- 2) Once the driver is installed, devices of the driver's type (instances) may be installed (set up or configured), and added by using the Advantech Device Installation Program.

Remove

To remove a device means:

Once the driver is installed, devices of the driver's type (instances) may be removed, by highlighting the listing in the dialog box of the Advantech Device Installation Program and pressing the remove button.

To remove the driver means:

Remove the device's driver from WINDOWS, using the device DRIVERS utility provided in the Control Panel, Main window.

Add

To add a device means to increase the number of I/O devices of the same type as the installed device driver. When a device is added to the system, only one driver is installed (using the device DRIVERS utility provided in the Control Panel, Main Window). Configuration information is then added by using the Advantech Device Installation program. You may use more than one I/O device of the same type installed in a system at one time. To add an I/O card, for instance, you would press the ADD button in the Advantech Device Installation Program and then configure the base address, and possibly other parameters.

Setup

To set up an I/O device, is to set the parameters for use with the software the same as the settings of the actual I/O device. The values set in the device-specific dialog box should reflect those of the switches and jumpers you have set on the I/O device, board, or card. Alternatively, if you are using a software programmable device, the device can be configured directly through the device-specific dialog box (in most cases).

Configure

To configure an I/O device, is to set the parameters for use with the software the same as those set on the actual I/O device. The values set in the device-specific dialog box should reflect those of the switches and jumpers you have set on the I/O device, board, or card. When an instance of a device is added, it must be configured before it can be used with the software.

Instance

An instance of an I/O device is a device that has been added and configured uniquely. For instance, there may be three Advantech PCL-818 multi-I/O cards installed in a system. Each PCL-818, installed at separate base addresses and having different parameters configured for each, is an "instance" of the PCL-818 driver (DLL) that was installed in WINDOWS.

