



Product:	ControllerSetup
Product version:	V1.1
Document ID:	UM-ControllerSetup
Doc revision:	A
Written/Appr.:	RE / SL
Date:	17. Oct. 2008

Industrial Control Design AS



ControllerSetup

User Manual

The content of this document is confidential information not to be published without the consent of Industrial Control Design AS.

Industrial Control Design AS, www.icd.no, support@icd.no, forum.icd.no

Contents

1. INTRODUCTION.....	3
1.1. About.....	3
1.2. Starting ControllerSetup.....	3

2. SETTING UP A DEVICE.....	7
------------------------------------	----------

1. Introduction

1.1. About

The ControllerSetup application is a tool to aid in setting up a controller/Industrial PC (IPC) for the first time. The following requirements must be met:

1. The Controller architecture must be x86 based, and it must have an Ethernet interface (a monitor and keyboard must also be attached).
2. The Ethernet interface must be supported by OnTime RTOS32 version 5.11
3. The controller / IPC must have a disk of at least 16 MB capacity. *Note: If the disk contains no data, or files can not be put onto the disk, the controller must have support for Pre-boot eXecution Environment (PXE).* This means that you must be able to boot a PXE image from the network, see chapter 2 for more details.

The ControllerSetup application is actually two programs in one; it consists of a simple DHCP server and a TFTP server. DHCP is used for the BOOTP protocol, and TFTP is used for file-transfer.

Note that ControllerSetup can also be used to assign an IP-Address to an I/O-Node or other devices that send BOOTP requests.

1.2. Starting ControllerSetup

This section describes how to use the controller setup from a PC.

1. From the start-menu, select 'Programs'-'>'CDP'-'>'Tools'-'>'ControllerSetup'. A program interface similar to the picture below should pop up.



2. Click Next.

3. Type the IP-Address that you want the controller to receive. After typing the last number, hit the TAB key to validate the IPAddress and enable the Next button. See picture below.

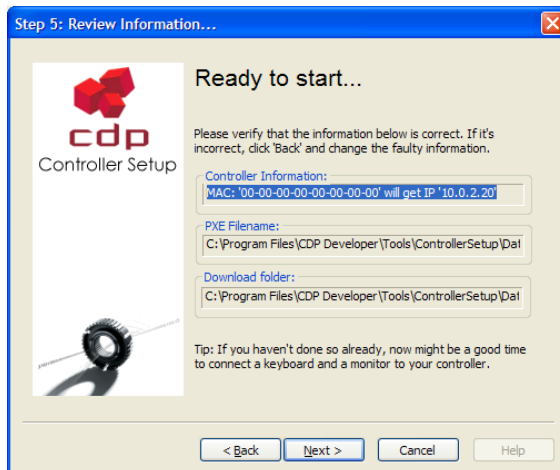


4. Click Next.



- If you have a lot of controllers or PC's booting up, you might want to select which controller to give the IP-Address that you typed in at step 3. This is done by specifying the MAC address. If you do not know the MAC address of the device, leave the default value '00-00-00-00-00-00'. If the MAC address only consists of 6 separated numbers (like the picture in the dialog above) , make sure you add '-00-00' after the 6 numbers. Click Next when done.





9. The DHCP-Server and TFTP-Server will now start. As soon as a controller requests data, this will show up in the dialog. When you are done setting up the controller, click Cancel.



2. Setting up a device

Make sure you have performed the steps in chapter 1.2 before going through this chapter. You might have a zipped (PkZip) archive of an application to put on the controller. If so, the program downloaded to the controller will automatically do the necessary unpacking of the archive.

1. Connect power to the controller and turn it on
2. Enter the controller BIOS
 1. Enable boot from PXE (this might be listed as Boot device: LAN, Realtek Boot, Boot ROM, or PXE Boot). On some systems you have to enable the LAN BOOT functionality, reboot, and then select LAN BOOT as the first boot device.
 2. Make sure that the first boot device is listed as PXE boot.
 3. Save settings and exit bios (causes the controller to re-boot).
3. Network-boot should now start. The controller will now request a boot image from the ControllerSetup application, and transfer it to RAM Disk A:\, then boot from it. A menu with a red background should now show on the controller screen. This is the CDP Boot Menu shown as by the FreeDOS operating system (www.freedos.org).
4. Select the item that says command prompt.
5. In command prompt, enter 'fdisk'. Normally, C: is the drive you want to partition.
 1. Select the partitions you want
 2. make sure that one of the partitions are set as active.
 3. Exit fdisk
 4. **Remember to reboot.**
6. After network-booting again, select command prompt once more.
7. Format the bootable partition with the command 'format x: /s /v:label' , (x is drive-name, label is volume name). Make sure you type the letters 'y','e','s' when prompted to format. Any other partitions can be formatted with the command 'format x: /v:label' (/s transfers the system).
8. Type 'copy a:\pcilist.txt c:\' (assuming c: is the bootable drive).
9. Reboot.
10. Enter bios
 1. disable network boot
 2. make sure you set the disk-drive to boot.
 3. Save settings and exit.
11. Boot normally. You should again get the red ICD BOOT menu.

12. Select 'Controller Setup' from the menu.
13. Follow the instructions on-screen. Use the arrow-keys to select the file to download if prompted, or type the name of the file to download. The file will download (and, if zipped; unpack) from the ControllerSetup\Data folder.
14. Reboot the controller.
15. Stop the ControllerSetup application (chapter 1.2), as you are now done setting up the controller.