



Connecting IDE Devices to the Prometheus CPU

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This document describes how to connect the Prometheus CPU or a desktop computer to an IDE flashdisk module, hard drive, and CD ROM drive.

There are several possible configurations of IDE devices with Prometheus or a desktop computer:

- A. Desktop computer with IDE flashdisk module
- B. Prometheus with flashdisk module mounted directly on board
- C. Prometheus with flashdisk module and IDE notebook drive (44-pin connector)
- D. Prometheus with flashdisk module and IDE desktop drive (40-pin connector)
- E. Prometheus with IDE notebook drive and IDE CD-ROM drive or desktop hard drive
- F. Prometheus with IDE desktop hard drive and IDE CD-ROM drive (both 40-pin connectors)

A. Desktop Computer with IDE Flashdisk Module

This configuration is typically used to load files onto a flashdisk module from a desktop PC. Only cables typically already available inside the PC are required. The PC should be powered off before connecting the flashdisk module to it.

1. Use a 40-pin IDE cable (usually already provided in the PC) to connect the ACC-IDEEXT board to the PC 40-pin IDE connector J4. Note the polarity (pin 1 location). Pin 1 on the ACC-IDEEXT is at the "top" of the board next to the title "Flashdisk Programmer".
2. Next connect power to the ACC-IDEEXT via a free floppy drive (miniature 4-pin) connector on one of the power cables inside the PC. This cable connects to either J5 or J6 on the board. Note the polarity of the cable; the pin voltages are labeled on the board. The PC standard is: red = +5V, black = Ground, and yellow = +12V. Note that -12V is not provided on these cables.
3. Finally install the flashdisk module onto the ACC-IDEEXT. Be sure the Master/Slave jumper setting on the flashdisk module is correct.
4. When you power up your PC, the BIOS may find and recognize the flashdisk module. In some cases you may need to manually enter the configuration data in the BIOS setup and reboot.
5. Depending on previous usage, you may or may not need to format the flashdisk module and create one or more partitions on it before transferring files onto it.

B. Prometheus with Flashdisk Module Mounted Directly on Board

This configuration is used in applications where a low-cost or completely solid-state system with no rotating media is desired. No cables or accessories are required.

The Prometheus must be powered off before connecting or disconnecting the flashdisk module.

1. The flashdisk module comes with hardware consisting of a spacer, a washer, and 2 screws. Install the spacer and washer onto the bottom of the flashdisk module (the side with the female socket on it) and use one screw to hold it in place.
2. Install the flashdisk module directly onto J8 of the Prometheus CPU board and use the second screw to hold it down onto the CPU board.
3. The Master/Slave jumper on the flashdisk module should be set for Master.
4. When you power up the Prometheus CPU, the BIOS should automatically recognize the flashdisk module and select the proper configuration data for it (number of tracks, etc.).

C. Prometheus with Flashdisk Module and IDE Notebook Drive

This configuration is used to transfer files from a notebook hard drive onto a flashdisk module, for example during initial system configuration. It is not typically used in a final application. The ACC-IDEEXT accessory board and two 44-pin IDE cables are required.

The Prometheus must be powered off before connecting or disconnecting drives to it.

1. Set the hard drive jumper for Master and the flashdisk module jumper for Slave. The hard drive will be the boot device.
2. Install the flashdisk module directly onto J2 of the ACC-IDEEXT board so that its position matches the outline shown on the board.
3. Install one 44-pin IDE cable between J8 of the Prometheus CPU board and one of the 44-pin connectors (J1 or J3) on the ACC-IDEEXT board. Note the location of pin 1 on each board.
4. Install the second 44-pin IDE cable between the remaining 44-pin connector on the ACC-IDEEXT board and the hard drive. Note the location of pin 1 on the hard drive.
5. The 44-pin cable carries power from the CPU to the flashdisk module and the hard drive, so no power cable is needed for these devices.
6. When you power up the Prometheus CPU, the BIOS should automatically recognize the flashdisk module and hard drive and select the proper configuration data for each (number of tracks, etc.).

D. Prometheus with Flashdisk Module and IDE Desktop Drive / CD-ROM Drive

This configuration is used to transfer files from a notebook hard drive onto a flashdisk module, for example during initial system configuration. This is an alternate to configuration A above. The ACC-IDEEXT accessory board, a 44-pin IDE cable, a 40-pin IDE cable, and an auxiliary power cable (DSC no. 698006) are required.

The Prometheus must be powered off before connecting or disconnecting drives to it.

Note: Some CD-ROM drives require +12V in addition to +5V. If you do not provide both voltages to the Prometheus CPU and/or the CD-ROM drive, the CD-ROM may not operate properly.

1. Set the hard drive jumper for Master and the flashdisk module jumper for Slave. The hard drive will be the boot device.
2. Install the flashdisk module directly onto J2 of the ACC-IDEEXT board so that its position matches the outline shown on the board.
3. Install the 44-pin IDE cable between J8 of the Prometheus CPU board and one of the 44-pin connectors (J1 or J3) on the ACC-IDEEXT board. Note the location of pin 1 on each board.
4. Install the 40-pin IDE cable between J4 on the ACC-IDEEXT board and the desktop hard drive. Note the location of pin 1 on the hard drive.
5. The 44-pin cable carries power from the CPU to the flashdisk module. However the 40-pin IDE cable does not carry power. Connect the auxiliary power cable between J12 on Prometheus and the power connector on the desktop hard drive. The power cable has a Y configuration. The center connector attaches to J12 on Prometheus, and the large connector attaches to the hard drive. All connectors are polarized to prevent incorrect connection.
6. When you power up the Prometheus CPU, the BIOS should automatically recognize the flashdisk module and hard drive and select the proper configuration data for each (number of tracks, etc.).

E. Prometheus with IDE Notebook Hard Drive and IDE CD-ROM Drive / Desktop Hard Drive

This configuration is used to transfer files from a CD-ROM onto a notebook hard drive, for example when installing an operating system onto the notebook hard drive. It can also be used with a desktop hard drive instead of the CD-ROM drive. The ACC-IDEEXT accessory board, a 44-pin IDE cable, a 40-pin IDE cable, and an auxiliary power cable (DSC no.698006) are required.

The Prometheus must be powered off before connecting or disconnecting drives to it.

Note: Some CD-ROM drives require +12V in addition to +5V. If you do not provide both voltages to the Prometheus CPU and/or the CD-ROM drive, the CD-ROM may not operate properly.

1. Set the CD-ROM jumper for Master and the hard drive module jumper for Slave. The CD-ROM drive will be the boot device.
2. The 44-pin IDE cable has three connectors. Install one of the end connectors onto J8 of the Prometheus CPU board. Install one of the remaining connectors onto one of the 44-pin connectors (J1 or J3) on the ACC-IDEEXT board. Note the location of pin 1 on each board. Finally, install the last connector onto the notebook hard drive, and note the location of pin 1 on the drive as well.
3. Install the 40-pin IDE cable between J4 on the ACC-IDEEXT board and the CD-ROM drive or desktop hard drive. Note the location of pin 1 on the drive.
4. The 44-pin cable carries power from the CPU to the flashdisk module. However the 40-pin IDE cable does not carry power. Connect the auxiliary power cable between J12 on Prometheus and the power connector on the CD-ROM drive or desktop hard drive. The power cable has a Y configuration. The center connector attaches to J12 on Prometheus, and the large connector attaches to the drive. All connectors are polarized to prevent incorrect connection.
5. When you power up the Prometheus CPU, the BIOS should automatically recognize the notebook hard drive and CD-ROM drive and select the proper configuration data for each (number of tracks, etc.). You may need to enter the BIOS and select the proper boot order so that the CD-ROM is the primary boot device.

F. Prometheus with IDE Desktop Hard Drive and IDE CD-ROM Drive

This configuration is similar to a typical desktop PC. The ACC-IDEEXT accessory board, a 44-pin IDE cable, a 40-pin IDE cable, an auxiliary power cable (DSC no. 698006), and a desktop power splitter cable (Y configuration) are required.

The Prometheus must be powered off before connecting or disconnecting drives to it.

Note: Some CD-ROM drives require +12V in addition to +5V. If you do not provide both voltages to the Prometheus CPU and/or the CD-ROM drive, the CD-ROM may not operate properly.

1. Set the CD-ROM jumper for Master and the hard drive module jumper for Slave. The CD-ROM drive will be the boot device.
2. Install the 44-pin IDE cable between J8 of the Prometheus CPU board and one of the 44-pin connectors (J1 or J3) on the ACC-IDEEXT board. Note the location of pin 1 on each board.
3. The 40-pin IDE cable has three connectors. Install one of the end connectors onto J4 of the ACC-IDEEXT board. Note the location of pin 1 on the board. Install the two remaining connectors onto the hard drive and CD-ROM drive. Note the location of pin 1 on each drive. Either connector may be attached to either drive.
4. The auxiliary power cable has a Y configuration. Attach the center connector to J12 on Prometheus. Attach the center connector of the power splitter cable to the large connector on the auxiliary power cable. Attach the two open ends of the power splitter cable to the two IDE drives. All connectors are polarized to prevent incorrect connection.
5. When you power up the Prometheus CPU, the BIOS should automatically recognize the hard drive and CD-ROM drive, and it should also automatically select the proper configuration data for the hard drive (number of tracks, etc.). You may need to enter the BIOS and select the proper boot order so that the CD-ROM is the primary boot device.