

Chapter 2.

HARDWARE INSTALLATION

Introduction

As we have mentioned, there are six models in the PC/104 PCMCIA Module series: PCM-3110, PCM-3111, PCM-3115B, PCM-3110B, PCM-3113 and PCM-3114. The components and hardware installation procedures are different for all the models, and separate instructions are provided in this chapter.

Please check to see which model you have purchased before reading these instructions. Read only the instructions referring to the model you have purchased and ignore the other instructions.

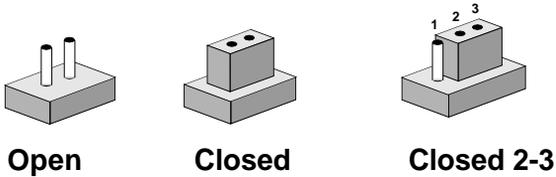
System Requirements (All models)

Please note that all models in the PC/104 PCMCIA Module series require a system conforming to the following specifications:

- IBM PC/AT, including all 80286, 80386, 80486, Pentium and Pentium Pro processor-based computers
- Hard disk drive
- MS-DOS 5.0 or above, Windows 3.1, Windows 95 or Windows NT
- One PC/104 connector
- One empty 3.5" floppy disk drive bay (PCM-3113 and PCM-3114 only)

Setting jumpers

The PCM-3110, PCM-3115B and PCM-3110B requires you to set jumpers in order to configure the module for your specific application. A jumper consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them, thus completing an electric circuit. Closing a jumper means connecting the pins with the metal pin, while opening the jumper requires you to remove the pin.

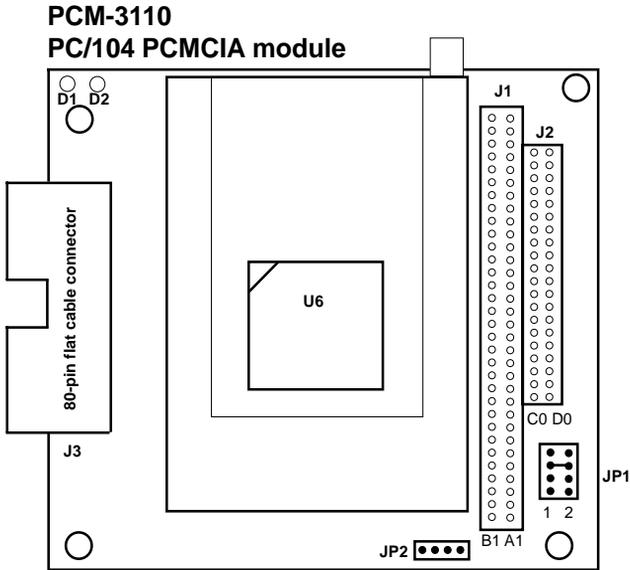


The jumper settings are represented in this manual with the following diagrams:



A pair of nonmagnetic, needle-nosed pliers may be helpful when working with jumpers. In order to prevent an unused jumper from getting lost, you may leave it inserted on a single jumper pin.

PCM-3110 Hardware Installation



D1 LED: Battery LED (Yellow)

D2 LED: Busy LED (Red)

I/O Address: 3E0h/3E1h

IRQ: Interrupt steering for the card status change interrupt

JP2: External power connector

Package Contents Checklist

When you open your PCM-3110 for the first time, first check that all the following items are present:

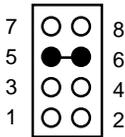
- One PCM-3110 PCMCIA module
- Your choice of one of the following PCMCIA software packages from SystemSoft Corporation: Cardsoft 3.1 for DOS 5.0 or higher, CardWizard for Windows 3.1 or higher, CardWorks for Windows 95, Cardwizard-NT for Windows NT. Additional software is available for purchase separately.
- Spacer and screw
- This user's manual.

If any of the above items is missing or appears to be damaged in any way, please consult with the dealer from whom you purchased your unit immediately.

PCM-3110 Jumper Settings

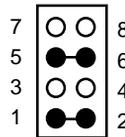
The PCM-3110 includes one jumper JP1 that must be set before installation. These jumpers control the BIOS address:

Read from Boot ROM*



JP1

Write to Boot ROM



JP1

The settings for JP1 are as follows:

- Close pins 1-2: Write data to Flash ROM (28C64)
- Close pins 3-4: Set BIOS address CA000 - CB000 (8KB)
- *Close pins 5-6: Set BIOS address CC000 - CD000 (8KB)
- Close pins 7-8: Set BIOS address CE000 - CF000 (8KB)
- Close pins 5-6/7-8: Disable Boot ROM function

Note: * denotes default setting (shown above, at left)

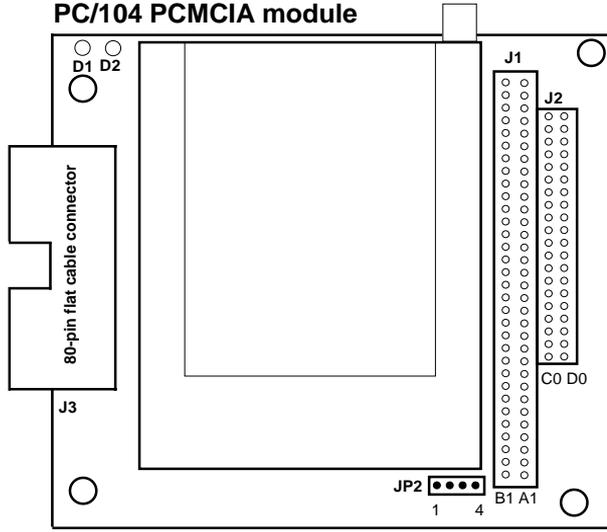
Installation Procedure

To install the PCM-3110 in your system, follow the instructions below.

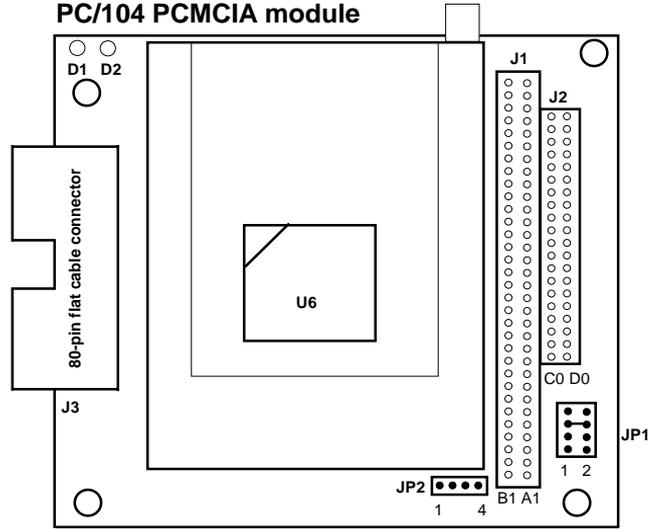
1. Turn off the power to your PC and all peripherals connected to your system.
2. Open your system case. This procedure will vary according to the particular system you own and you should consult with the relevant user's manual for details.
3. Set the jumpers as shown previously.
4. Mount the PCM-3110 in your system as required. You may stack the PCM-3110 on another PC/104 module using the supports, plug the PCM-3110 into a custom carrier board, or else mount it directly on a CPU card with PC/104 connector. The two PC/104 connectors (i.e. the 64-pin J1 and the 40-pin J2) on the bottom of the board fit into the sockets on the device on which you are mounting
5. Your PCM-3110 is now installed. Proceed with the software installation.
6. If you have purchased the PCM-3111 secondary PCMCIA drive, proceed with the instructions in the following section.
7. Close your system case.

Your PCM-3110 is now installed in your system and you should proceed with your software installation.

PCM-3111
PC/104 PCMCIA module



PCM-3110
PC/104 PCMCIA module



Connect connectors J3 with 80-pin flat cable (align red line with pin 1)

- D1 LED: Battery LED (Yellow)
- D2 LED: Busy LED (Red)
- I/O Address: 3E0h/3E1h
- IRQ: Interrupt steering for the card status change interrupt

PCM-3111 Hardware Installation

Package Contents Checklist

When you open your PCM-3111 for the first time, first check that all the following items are present:

- One PCM-3111 PCMCIA module
- Your choice of one of the following PCMCIA software packages from SystemSoft Corporation: Cardsoft 3.1 for DOS 5.0 or higher, CardWizard for Windows 3.1 or higher, CardWorks for Windows 95, Cardwizard-NT for Windows NT. Additional software is available for purchase separately.
- 80-pin flat cable
- Spacer and screw
- This user's manual.

If any of the above items is missing or appears to be damaged in any way, please consult with the dealer from whom you purchased your unit immediately.

The PCM-3111 does not have any jumpers to set.

Installation Procedure

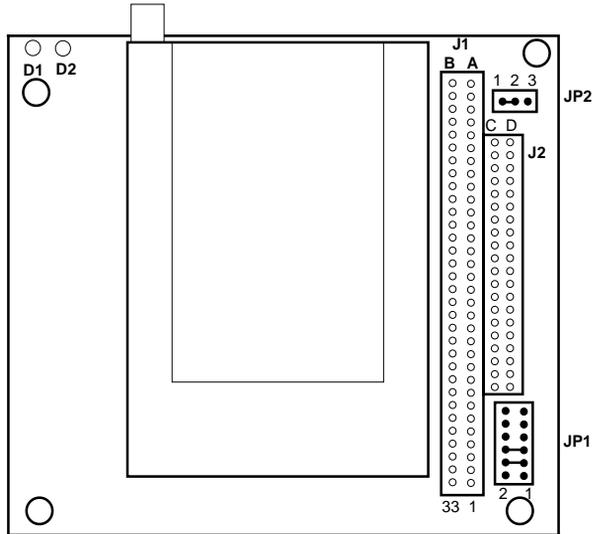
To install the PCM-3111 in your system, follow the instructions below.

1. Turn off the power to your PC and all peripherals connected to your system.
2. Open your system case. This procedure will vary according to the particular system you own and you should consult with the relevant user's manual for details.
3. Install your PCM-3110 according to the directions in the previous section.
4. Mount the PCM-3111 in your system as required. The PCM-3111 cannot be used by itself; it must be used in conjunction with PCM-3110. You may stack the PCM-3111 on another PC/104 module (such as your PCM-3110) using the supports, plug the PCM-3111 into a custom carrier board, or else mount it directly on a PC/104 CPU card. The two PC/104 connectors (i.e. the 64-pin J1 and the 40-pin J2) on the bottom of the board fit into the sockets on the device on which you are mounting
5. Connect an 80-pin flat cable between connectors J3 on your PCM-3110 and PCM-3111. Make sure that pin 1 of PCM-3110 is connected to pin 1 of PCM-3111.
6. Your PCM-3111 is now installed. Proceed with the software installation.
7. Close your system case.

Your PCM-3111 is now installed in your system and you should proceed with your software installation.

PCM-3115B Hardware Installation

PCM-3115B 2-slot PC/104 PCMCIA module



D1 LED: Busy LED (Red)

D2 LED: Busy LED (Red)

I/O Address: 3E0h/3E1h

IRQ: Interrupt steering for the card status change interrupt

Package Contents Checklist

When you open your PCM-3115B for the first time, first check that all the following items are present:

- One PCM-3115B, 2-slot PCMCIA module
- Your choice of one of the following PCMCIA software packages from SystemSoft Corporation: Cardsoft 3.1 for DOS 5.0 or higher, CardWizard for Windows 3.1 or higher, CardWorks for Windows 95, Cardwizard-NT for Windows NT. Additional software is available for purchase separately.
- Spacer and screw
- This user's manual.

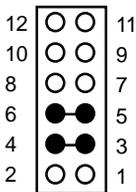
If any of the above items is missing or appears to be damaged in any way, please consult with the dealer from whom you purchased your unit immediately.

PCM-3115B Jumper Settings

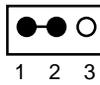
The PCM-3115B includes two jumpers, JP1 and JP2, that must be set before installation. These jumpers control the BIOS address (Boot ROM function):

Read from Boot ROM*

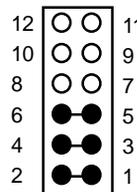
Write Data to Boot ROM



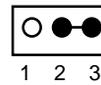
JP1



JP2



JP1



JP2

JP2 controls the ability to write data to the Boot ROM. Closing pins 2-3 enables writing. Using the Boot ROM requires pins 1-2 to be closed.

The settings for JP1 are as follows. To enable the Boot ROM function pins 3-4 must be closed:

Close pins 1-2

*Close pins 3-4

*Close pins 5-6:

Close pins 7-8:

Close pins 9-10:

Close pins 11-12:

Load data to Flash ROM (28F1000)

Enable Boot ROM*

Set BIOS address C8000-CFFF(32KB)

Set BIOS address D8000-DFFF(32KB)

Set BIOS address E0000-E7FFF(32KB)

Set BIOS address E8000-EFFFF(32KB)

Note: * denotes default setting (shown above at left)

Installation Procedure

To install the PCM-3115B in your system follow the instructions below.

1. Turn off the power to your PC and all peripherals connected to your system.
2. Open your system case. This procedure will vary according to the particular system you own and you should consult with the relevant user's manual for details.
3. Set the jumpers as shown previously.
4. Mount the PCM-3115B in your system as required. You may stack the PCM-3115B on another PC/104 module using the supports, plug the PCM-3115B into a custom carrier board, or else mount it directly on a PC/104 CPU card. The two PC/104 connectors (i.e. the 64-pin J1 and the 40-pin J2) on the bottom of the board fit into the sockets on the device on which you are mounting.
5. Your PCM-3115B is now installed. Proceed with the software installation.
6. Close your system case.

Your PCM-3115B is now installed in your system and you should proceed with your software installation.

Socket Configuration on the PCM-3115B

It is important to note that with two PCMCIA sockets, one is always Socket 1 and Socket 2. The socket configuration for the PCM-3115B is as follows:

- Lower socket= Socket 1
- Upper socket = Socket 2

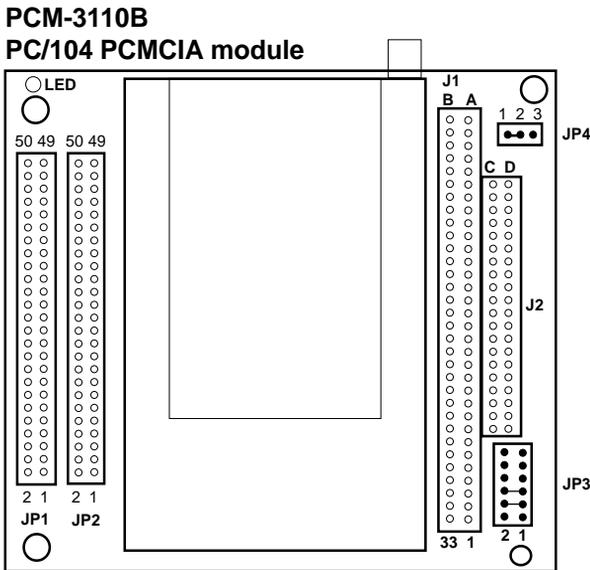
PCM-3110B Hardware Installation

Package Contents Checklist

When you open your PCM-3110B for the first time, first check that all the following items are present:

- One PCM-3110B PCMCIA module
- Your choice of one of the following PCMCIA software packages from SystemSoft Corporation: Cardsoft 3.1 for DOS 5.0 or higher, CardWizard for Windows 3.1 or higher, CardWorks for Windows 95, Cardwizard-NT for Windows NT. Additional software is available for purchase separately.
- Spacer and screw
- This user's manual.

If any of the above items is missing or appears to be damaged in any way, please consult with the dealer from whom you purchased your unit immediately.

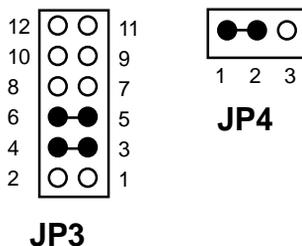


I/O Address: 3E0h/3E1h
IRQ: Interrupt steering for the card status change interrupt
LED: Busy LED (Red)

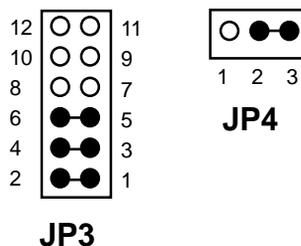
PCM-3110B Jumper Settings

The PCM-3110B includes two jumpers JP3 and JP4 that must be set before installation. These jumpers control the BIOS address:

Read from Boot ROM*



Write to Boot ROM



JP4 controls the ability to write data to the Boot ROM. Closing pins 2-3 enables writing. Using the Boot ROM requires pins 1-2 to be closed.

To enable the Boot ROM function, pins 3-4 must be closed. The settings for JP3 are as follows:

Close pins 1-2	Load data to Flash ROM (28F1000)
*Close pins 3-4	Enable Boot ROM
*Close pins 5-6	Set BIOS address C8000-CFFFF (32KB)
Close pins 7-8:	Set BIOS address D8000-DFFFF (32KB)
Close pins 9-10:	Set BIOS address E0000-E7FFF (32KB)
Close pins 11-12:	Set BIOS address E8000-EFFFF (32KB)

Note: * denotes default setting (shown above at left)

Installation Procedure

To install the PCM-3110B in your system follow the instructions below.

1. Turn off the power to your PC and all peripherals connected to your system.
2. Open your system case. This procedure will vary according to the particular system you own and you should consult with the relevant user's manual for details.
3. Set the jumpers as shown previously.
4. Mount the PCM-3110B in your system as required. You may stack the PCM-3110B on another PC/104 module using the supports, plug the PCM-3110B into a custom carrier board, or else mount it directly on a PC/104 CPU card. The two PC/104 connectors (i.e. the 64-pin J1 and the 40-pin J2) on the bottom of the board fit into the sockets on the device on which you are mounting
5. Your PCM-3110B is now installed. Proceed with the software installation.
6. If you have purchased the PCM-3113 secondary PCMCIA drive or the PCM-3114 dual 3.5" FDD/PCMCIA drive, proceed with the instructions in the following section.
7. Close your system case.

Your PCM-3110B is now installed in your system and you should proceed with your software installation.

PCM-3113 Hardware Installation

Package Contents Checklist

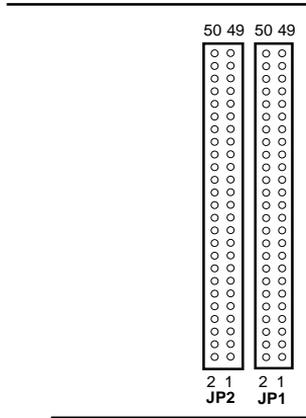
When you open your PCM-3113 for the first time, first check that all the following items are present:

- One PCM-3113 PCMCIA module
- 2 x 50-pin flat cable
- Mounting screws
- This user's manual.

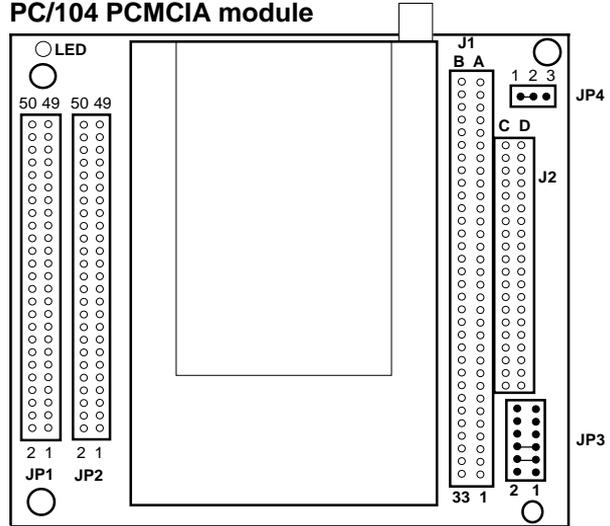
If any of the above items is missing or appears to be damaged in any way, please consult with the dealer from whom you purchased your unit immediately.

There are no jumpers to set on the PCM-3113.

PCM-3113
PCMCIA drive with 3.5" FDD form factor



PCM-3110B
PC/104 PCMCIA module



Connect with 2 x 50-pin flat cable (align red line with pin 1)

I/O Address: 3E0h/3E1h

IRQ: Interrupt steering for the card status change interrupt

PCM-3113

PCM-3110B

D1 LED: Power LED (Green)

LED: Busy LED (Red)

D2 LED: Battery LED (Yellow)

D3 LED: Busy LED (Red) {Not shown}

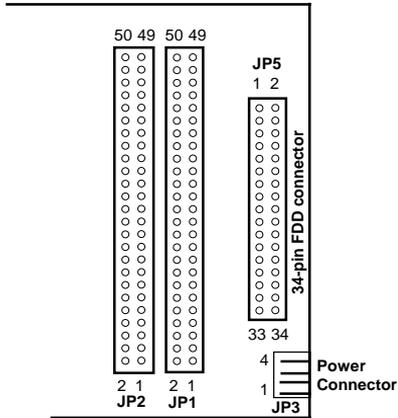
Installation Procedure

To install the PCM-3113 in your system follow the instructions below.

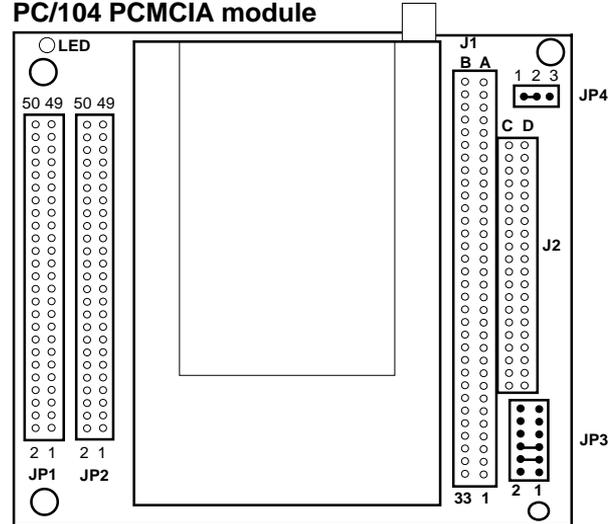
1. Turn off the power to your PC and all peripherals connected to your system.
2. Open your system case. This procedure will vary according to the particular system you own and you should consult with the relevant user's manual for details.
3. Install the PCM-3110B according to the previous instructions.
4. Mount the PCM-3113 in a free 3.5" FDD bay, normally found on the front of your computer.
5. Connect a 2 x 50-pin flat cable between connectors JP1 and JP2 on your PCM-3110B and PCM-3113. Make sure that pin 1 of PCM-3110B is connected to pin 1 of PCM-3113. Align the red line on the flat cable with pin 1.
6. Close your system case.

Your PCM-3113 is now installed in your system.

PCM-3114
Dual FDD/PCMCIA combination drive



PCM-3110B
PC/104 PCMCIA module



Connect with 2 x 50-pin flat cable (align red line with pin 1)

I/O Address: 3E0h/3E1h

IRQ: Interrupt steering for the card status change interrupt

PCM-3114

PCM-3110B

LED: Busy LED (Red)

LED: Busy LED (Red)

PCM-3114 Hardware Installation

Package Contents Checklist

When you open your PCM-3114 for the first time, first check that all the following items are present:

- One PCM-3114 combination PCMCIA module and 3.5" FDD drive
- 2 x 50-pin flat cable
- Mounting screws
- This user's manual.

If any of the above items is missing or appears to be damaged in any way, please consult with the dealer from whom you purchased your unit immediately.

There are no jumpers to set on the PCM-3114

Installation Procedure

To install the PCM-3114 in your system follow the instructions below.

1. Turn off the power to your PC and all peripherals connected to your system.
2. Open your system case. This procedure will vary according to the particular system you own and you should consult with the relevant user's manual for details.
3. Install the PCM-3110B according to the previous instructions.
4. Mount the PCM-3114 in a free 3.5" FDD bay, normally found on the front of your computer.
5. Connect a 2 x 50-pin flat cable between connectors JP1 and JP2 on your PCM-3110B and PCM-3114. Make sure that pin 1 of PCM-3110B is connected to pin 1 of PCM-3114. Align the red line on the flat cable with pin 1.
6. Connect a 34-pin FDD cable between connector JP5 on your PCM-3114 and the FDD controller on your system's main board. Consult your main board's user's manual for the location of the FDD connector.
7. Connect a 4-pin mini power cable to the power connector on the PCM-3114. This supplies power to the 3.5" FDD drive.
6. Close your system case.

Your PCM-3114 is now installed in your system and you should proceed with your software installation.