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Osicom

INSTALLATION & TROUBLESHOOTING GUIDE

PRODUCTS

2200

2250

2201C3X

PART NUMBER
918-7606

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2200/2250/2201C3X Adapter Installation & Troubleshooting Guide

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4 BASIC INSTALLATION STEPS

1. Unpack and install the adapter.
2. Install Diagnostics to your hard disk (DOS capable machine only).
3. Install one of the available drivers.
4. Check LEDs.



The 2200/2250/2201C3X has no jumpers and configures itself automatically.

Osicom 2200 Series adapters provide high-performance communication between a PCI Bus-based system and an FDDI local area network. The 2200 is installed directly into a station PCI Local Bus backplane.

The 2250 adapter provides communication between a PMC-compatible host board and an FDDI LAN. The 2250 is installed directly onto the host motherboard.

The 2201C3X Series adapters provide high-performance communication between a CompactPCI based system and an FDDI local area network. The 2201C3X is installed directly into the CompactPCI card cage backplane.

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INSTALL ADAPTER

1. Unpack the Fast Ethernet adapter using antistatic precautions. Record the following data now.

Serial no. _____

Host model no. _____

Driver Installed _____

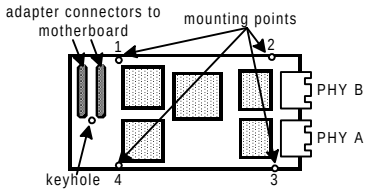
Revision _____

OS release no. _____

2. Switch system power off.

3. **To install the 2200:**
   Slide adapter into selected PCI slot. Engage the board's bus connectors before securing it with the locking screw in the end plate.

   To install the 2250 onto motherboard:
   Place component-side down, aligning the two adapter connectors with their mating connectors on the motherboard. The keyhole receives a standoff plug mounted on the motherboard. Affix at the 4 mounting points. Reinstall motherboard into its card cage.



2250 Adapter

To install the 2201C3X:
Slide adapter into card guides of selected slot. Move injector handle(s) to the closed position. On 3U version, tighten the locking screw at the top of the front panel.

4. Connect cables. [fiber (SC, ST or MIC) or copper (UTP)]
   To connect your 2200/2201C3X adapter card to the network, you may

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require the following parts:

Duplex MIC-MIC coupler, AMP #501805-1

MIC-SC duplex adapter cable (1 meter), AMP #503760-3

Due to the close tolerances involved, the 2250 adapter uses a smaller connector to interface to an OBR. If you want to connect an OBR to a 2250 adapter, either build an adapter cable (to connect your existing OBR to the 2250 adapter) or use an OBR with a 6 pin connector.

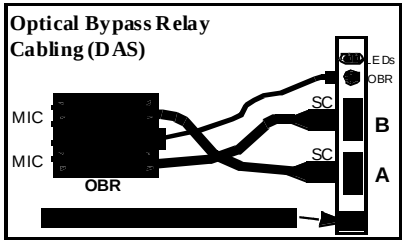
FOR DAS WITH AN OBR

Connect FDDI Adapter to OBR.

Remove protective plugs and caps from the SC receptacles on the adapter and from the ends of SC connectors on the OBR module cables.

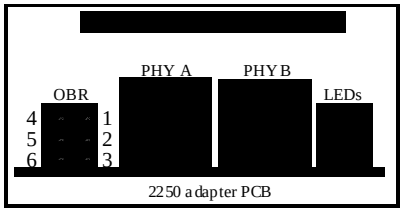
Put each SC connector from the OBR into its matching SC receptacle on the adapter.

Insert the switch-control cable plug into the adapter jack.



For the 2250 adapter, an adapter cable may be required. The 2250 uses a small, rectangular connector, while most OBRs use a round Mini-DIN connector. To connect the 2250 to an OBR, you must either use a rectangular-to-round Mini-DIN adapter cable or use a customized OBR from Amp/Kaptron, 209166-8. You can order the Amp/Kaptron OBR from Osicom or directly from Amp.

To make an adapter cable, use AMP connector 87631-2 with pins 87667-2 to connect to the 2250, and use DIN 84167-1 with shell 84165-2 and pins 84141-2 to connect to a Mini-DIN OBR.



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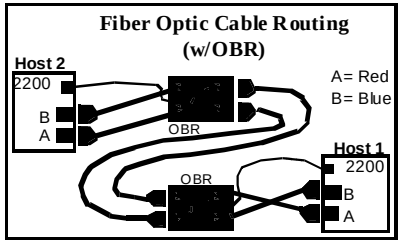
Connect OBR to network

Insert the A plug of one MIC-to-MIC cable and the B plug of the other cable into their matching OBR module jacks.



Port B is closer to the LEDs than Port A.

Verify that one host's port A is connected to the other host's port B and vice versa.



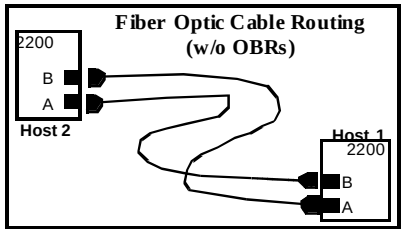
FOR DAS WITHOUT AN OBR

Connect the PHY A of the first host to the PHY B of the second host.

On the second host, connect its PHY A to the PHY B of the third host.

On the third host, connect its PHY A to the PHY B of the fourth host, and so on. Continue around the ring until all hosts are connected.

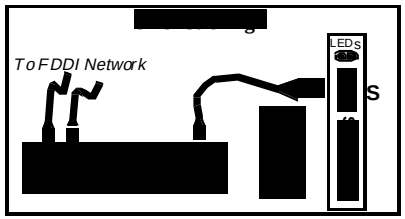
Finally, connect the PHY A of the last host to the PHY B of the first host.



FOR SAS

The SAS adapter can be ordered with either MIC, SC, ST or RJ45 (UTP) connectors. For a SAS configuration, connect the S port of the FDDI adapter directly to the M port of a concentrator.

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FOR UTP CABLING

UTP cabling is installed in a similar fashion to fiber optic cabling. Use a crossover cable (Category 5 UTP) to connect workstations to one another (board to board) or to concentrators (board to hub) at the 2200/2201C3X adapter's RJ-45 connectors.

5. Turn on your host system's power.
    - Proceed to Install Diagnostics.
    - After installing the diagnostics and drivers, reboot your system and check LEDs.

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INSTALL DIAGNOSTICS

Diagnostic routines exercise all the adapter's functions. They start by verifying simple PCI bus read/write transactions and build in complexity until the final test performs a full FDDI packet transmit and receive loopback test.

Diagnostics verify that:

- The host recognizes the adapter.
- The host has properly configured the adapter.
- The adapter is functioning properly.



Osicom adapter diagnostics only execute in the DOS operating system.



Do **not** invoke the diagnostic routines from a DOS shell from within the Windows (3.x, NT, 95 or 97) environment.

To install diagnostics:

1. Insert the floppy diskette labeled *Diagnostics*.

2. Create a directory called *rnstest*.

```
mkdir c:\rnstest
```

3. Copy the files on the floppy to the *rnstest* directory.

```
cd rnstest
copy a:\*.*
```

4. Verify that the following files are copied into the *rnstest* directory:

```
DIAG2200.EXE
README.TXT
```

5. Run the diagnostics. Enter **diag2200**.

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INSTALL A DRIVER

Install NetWare 4.x Server Driver

Execute load install

1. Insert the NetWare server diskette (with the *rns_2200.lan* and *rns_2200.ldi* files on it) into your server's diskette drive.

2. At the server's prompt, type:
   ```
   load install
   ```

3. When the install program comes up, choose the menu item that refers to network drivers. Note that this menu item is in a different place on different NetWare versions (i.e., v4.0x vs. 4.1x).

4. Install the network driver *rns_2200.lan* according to the NetWare manual or use the on-line instructions and help. Repeat steps 3 and 4 for each adapter installed (up to four).

Verify load and bind statements in *autoexec.ncf*

5. To load and bind the *rns_2200.lan* driver every time you start the server, verify that the appropriate load and bind statements are in the autoexec.ncf file. The following statements load the driver and enable all frame types for the adapter:

   ```
   load rns_2200 name=rns2200_1
   frame=fddi_802.2 board_number=1
   bind ipx rns2200_1 net=1001

   load rns_2200 name=rns2200_2
   frame=fddi_snap board_number=1
   bind ipx rns2200_2 net=1002
   ```

   where 0001 – 0002 are NetWare Network Numbers. Use your own network numbers.

6. Comment out the load and bind statements for FDDI frame types that are not to be used by putting a semicolon ; in front of the line. Save the *autoexec.ncf* file.

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Install NetWare 3.1x Server Driver

Copy the Osicom driver to your NetWare directory

1. Copy the contents of the nwserver directory on the NetWare driver diskette to a directory on your server's hard drive, typically *c:\nwserver*.
   If prompted to overwrite files, answer yes.

Execute load install

2. Bring up the NetWare server and, at the server prompt, enter:
   ```
   load install
   ```
   Choose System Options, then Edit Autoexec.ncf and add the following lines:

   ```
   load c:\nwserver\rns_2200 name=rns2200_1
   frame=fddi_802.2 board_number=1
   bind ipx rns2200_1 net=1001

   load c:\nwserver\rns_2200 name=rns2200_2
   frame=fddi_snap board_number=1
   bind ipx rns2200_2 net=1002
   ```

   These statements load the driver copied to the *c:\nwserver* directory and enable all frame types where 0001 – 0002 are the appropriate NetWare Network Numbers. Use your network numbers instead.

3. Comment out the load and bind statements for FDDI frame types that are not to be used by putting a semicolon (;) in front of the line. Save the *autoexec.ncf* file.

4. Restart the NetWare server.

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Install NetWare ODI Client Driver

Before installing the ODI client driver, ensure that MS-DOS version 3.0 or later is loaded onto your system:

1. Locate the home directory where your NetWare client application resides, typically *\nwclient*.

2. Make sure that the following files (located in the NetWare client home directory) are as current as the versions provided on the Osicom ODI client driver diskette.

   ```
   lsl.com      version 2.14
   ipxodi.com   version 2.20
   ```

   If your existing files are older versions than those provided on the ODI client driver diskette, replace the older files on your system with the newer files on the ODI driver diskette. Note that these two files must reside in the same directory as the NetWare client application.

3. Copy the desired files from the Osicom ODI client driver diskette's *nwclient* directory to the NetWare client directory on your system.

4. Edit the *net.cfg* file, as necessary, to select protocol, line speed, and media type options.

5. To connect to a NetWare server, use the following loading sequence:

   ```
   lsl
   r2200smt (f2200smt for frame services)
   r2200odi
   ipxodi
   vlm (or netx)
   ```

   If the system boots (cycles power), you will have to reenter the loading sequence to connect to the NetWare server.

6. Login to your NetWare server.

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Install Windows NT 4.0 Driver

Access the Network window

1. From the desktop, open the My Computer icon, and then open the Control Panel window.

2. In the Control Panel window, open the Network icon.

   If Windows NT Networking is not yet installed, then follow the instructions to install it. After installation, go to Network by opening the Network icon.

   If Windows NT Networking is already installed, then you should now be at the Network window.

Add the adapter

3. In the Network window, select Adapters.

4. Select Add.

5. Select Have Disk. Insert the Osicom diskette and enter the path for it. The path to the driver on the Osicom diskette is *a:\i386\winnt* (Intel), or *a:\alpha\winnt* (DEC Alpha), or *a:\ppc\winnt* (Power PC), and where *a:* is the diskette drive used. Your diskette drive letter may be different.

6. In the Network Adapters window, you should see the entry:
   - Osicom 2200 PCI FDDI LAN Controller

7. Select and bind the desired protocols to the adapter.

8. If the desired protocols are not present, add them by selecting Protocols in the Network window. Choose the Add option.

9. If you desire bindings other than the defaults given, go to the Network window and select Binding. Then select the desired bindings.

10. Restart your computer.

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Install Windows 95 Driver

When your system starts, Windows 95 automatically detects the new FDDI adapter.

1. Start your computer.
   If the FDDI adapter is properly inserted...
   First, a message states new hardware (FDDI controller) was detected.
   Next, a second New Hardware Found window displays the message:
   "New Hardware Found, PCI Ethernet Controller"
   A list of driver installation options should now be displayed.

2. Select the Driver From Disk Provided From Hardware Manufacturer option and then click OK. The Install From Disk window should now be displayed.

3. Specify the floppy drive and path name where the adapter driver diskette is by entering:
   A:\i386\win95
   Click on OK.

4. Windows will now prompt you for the Windows 95 CD or diskettes. Follow the instructions onscreen.

5. Remove the Osicom driver diskette from the A: drive.

6. Open the Network icon in the Control Panel window.
   The Network window should now display three menu options:
   - Identification
   - Configuration
   - Access Control

7. Select the Identification option.

8. Provide Computer and Workgroup names to identify yourself on the network.

9. Select the Configuration option.
   The menu displays the list of local network components loaded on your system by default.
   See the area of the window labeled "The Following Network Components Are Installed".

10. Verify that the FDDI adapter is properly recognized by the driver software.

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You should see this entry in the list:
Osicom 2200 PCI FDDI Network Adapter
Select the entry, click on Properties, and then verify its properties.

11. Add the desired protocols and bindings and configure the system as necessary. Refer to your Windows 95 documentation for more information.

12. If you want your files to be accessible to others,
    - Go to the main Network menu.
    - Enable file sharing by clicking on File and Print Sharing.
    - Select the item “I Want To Be Able To Give Others Access To My Files”.
    - Click OK. You should now be at the main Network menu. The driver configuration is complete.
    - Click OK.

13. When prompted to restart your computer, click YES.

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ABOUT THE DIAGNOSTICS

Diagnostics determine if the PCI system host has found the FDDI adapter, if the system host has configured the adapter correctly, and if the adapter is functioning properly. Run these diagnostics **only** from the DOS command line; do **not** run them from under the "MSDOS" icon in Windows.

There are three types of diagnostic commands:

- commands that execute diagnostic tests
- commands that modify parameters
- commands that provide status

diag2200 [*iterations*] [-e | -o# | -q | -s# | -z | c# | i# | p# | -nb | ? | -b | -bx | -f | -j | -jx | -w]

[...]	Brackets enclose optional parameters or an argument list. The brackets themselves "[ ]" are not entered.
|	Vertical bars separate mutually exclusive keywords. Enter only one key word. The bar itself "|" is not entered.
[x|y|z]	Choose only one of the options (x, y or z) or choose none.
#	Enter an integer in place of the pound sign "#".
italics	Parameters that have values assigned are indicated by italics.

Execute Diags	Command Description
diag2200	Perform a series of 7 tests on the adapter and report the results: *W/R PCI Registers, Chk IDPROM, onboard BIST, PCI interrupt, ELM Register, Host DMA, Internal Loopback.*
diag2200 iterations	Run the tests *iterations* times or until the first test fails (default =1).
diag2200 -e	Perform 7 tests plus *External Loopback*. External Loopback routine is normally off. You need an FDDI Loopback cable, which performs WRAPA & WRAPB.
diag2200 -o#	Run test numbers you designate with # [e.g., **-o12** runs tests 1 and 2].
diag2200 -q	Run the 7 tests continuously in quiet mode until the keyboard is struck. On the screen, one dot corresponds to the conclusion of the battery of tests or a designated number of tests.
diag2200 -s#	Skip the test numbers you designate with # [e.g**., -s125** skips tests 1, 2 and 5]. Do **not** put a space between test numbers.
diag2200 -z	Continue testing on error.

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Modify Diags	
diag2200 –c#	Set fraction of FDDI bandwidth used in Loopback tests. For #= [1, 2, 3, 4], the packet size=[full (4500 bytes), 1/2 (2300), 1/4 (1200), 1/8 (600)]. For #= 5, it tries full, 1/2, 1/4, and then 1/8 once.
diag2200 –i#	Change the number of times (#) test 6 (DMA) and test 7 (INT) cycle. Default=1000
diag2200 –p#	Set packet size used in tests 6 & 7 to any value (#) from 16 to 4550 bytes.
diag2200 –nb	Disables buffer memory for loopback tests.
Show Status	
diag2200 ?	Display the command's syntax on the screen.
diag2200 -b	Show status of all devices on PCI bus/ host computer motherboard for all four ports.
diag2200 -bx	Display all devices on host PCI bus. Note: There may be PCI devices installed directly on host motherboard in addition to adapters installed in PCI connector slots.
diag2200 -f	Display contents of the ERROR file at the conclusion of the routine.
diag2200 -j	Display contents of the ID PROM, including the adapter's physical address.
diag2200 -jx	Display entire contents of the ID PROM (in hex).
diag2200 -w	Display the contents of the PCI configuration space.

LEDs		**Board Status**
Yellow	**Green**	
Off	Off	Fail
Off	On	Ring op
On	Off	Cable error
On	On	Ring op/wrapp

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FDDI bandwidth used in Loopback
4], the packet size=[full (4500 00), 1/4 (1200), 1/8 (600)]. es full, 1/2, 1/4, and then 1/8 once.
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mmand's syntax on the screen.
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ts of the ID PROM, including the cal address.
contents of the ID PROM (in hex).
ntents of the PCI configuration



CHECK LEDS

Use the LEDs on the FDDI adapter to troubleshoot network problems. The following table explains how to interpret the yellow and green LEDs on the adapter.

LEDs		Board Status	Description
Yellow	Green		
Off	Off	Fail	Adapter not functional or driver not loaded
Off	On	Ring op	Ring operation: THRU (DAS) or Wrap S (SAS)
On	Off	Cable error	Adapter not able to connect; possible cable problem
On	On	Ring op/wrapped	Ring operation: Wrap A or B (DAS) or unused (SAS)

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TROUBLESHOOTING HINTS

Adapter does not pass diagnostics.

- ✓ The *emm386.exe* program may be installed. It shouldn't be.
  - If *emm386.exe* is installed, add "REM" to the beginning of the line so that you can run the diags.
- ✓ The FDDI adapter may not be recognized by BIOS.
  - To verify recognition, execute **diag2200 -b**.
  - Look for a line: `subclass FDDI`. If you do not find this line, the PCI BIOS has not recognized the 2200 adapter.
  - Reboot the PC and enter the BIOS setup screens. Enable the adapter's PCI slot.
- ✓ The adapter's PCI slot may not be configured correctly by the host computer to be a bus master.
  - Verify that the adapter's PCI slot is enabled by the host BIOS to be a bus master.
- ✓ The adapter's PCI slot may not be configured correctly by the host computer for interrupts.
  - Execute **diag2200 -b** to show the interrupts allocated.
- ✓ PCI devices can share the same interrupt but cannot share interrupts with ISA, EISA, or VLB devices.
  - Reallocate an interrupt to the adapter.
- ✓ The Address or IRQ may be set incorrectly.
  - ✓ If the BIOS finds the adapter but fails the diagnostic tests...
    - Execute **diag2200 -w**.
    - Verify that the base address and IRQ are not equal to 0. If they are, fix it in the BIOS setup screens.
  - ✓ An IRQ **must** be allocated to the PCI card for proper operation. If no IRQ resources are free...
    - Consult the PC manual to see which IRQs are assigned to each installed ISA and/or PCI device.
  - ✓ PCI devices can share interrupts with other PCI devices, but ISA devices cannot share interrupts with PCI devices.
    - Enable the specific PCI slot and IRQ the adapter will be using.
- ✓ If test 4 (INT) fails...
  - Verify, in the BIOS setup screens, that an interrupt has been assigned to the adapter.
  - Verify that you have the latest revision of the diagnostics.
- ✓ If test 6 (DMA) fails...
  - Change the BIOS setup to enable master mode (for the slot with the FDDI adapter) and verify *emm386.exe* is not loaded.

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Message indicates that no FDDI adapter is installed.

- ✓ Is the PCI adapter installed properly and seated firmly?
  - Check for proper installation.
- ✓ Does the host computer have the appropriate PCI slot enabled?
  - Execute **diag2200 –b** to examine all PCI devices. Examine the BIOS setup screens.
- ✓ Does the host computer support PCI-PCI bridging?
  - The host must support PCI-PCI bridging to inter-operate with the adapter.

Diag2200 and PC hangs.

- ✓ Diags will fail if executed from Windows NT.
  - Execute diags from DOS command line, **not** a DOS emulator window.

Host BIOS cannot find adapter.

- ✓ Some older versions of PCI BIOS require all used PCI slots to be enabled.
  - Check the BIOS setup screens.

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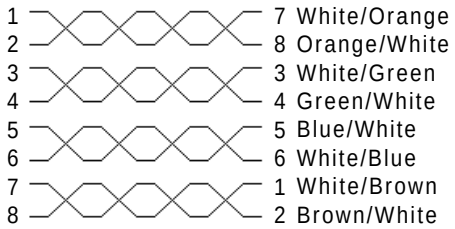
RJ-45 CONNECTOR

The UTP connection is made using a standard RJ-45 phone style connector. The following table describes the pins, according to the TP-PMD Rev. 2.1 standard.

Pin	Signal	Description
1	TX+	Transmit +
2	TX–	Transmit –
3		Not Used
4		Not Used
5		Not Used
6		Not Used
7	RX+	Receive +
8	RX–	Receive –

HOW TO MAKE CROSSOVER CABLES

Use a crossover cable to directly connect a UTP adapter to another UTP adapter (board to board) or to a hub (board to hub). All wires must be terminated. Following is an example of a correctly built crossover cable.



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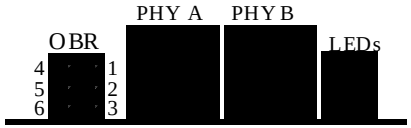
	Description
	Transmit +
	Transmit –
	Not Used
	Not Used
	Not Used
	Not Used
	Receive +
	Receive –

OPTICAL BYPASS RELAY CONNECTOR (J12)

The optical bypass relay is controlled through a cable supplied as part of the optional optical bypass relay package.

Pin	Signal	Description
1, 2	VCC	+5V power (fused)
3	PRIEN*	PRIMARY ENABLE When low, enables primary ring insertion.
4	SECEN*	SECONDARY ENABLE When low, enables secondary ring insertion.
5	GND	GROUND Logic ground, +5V Return.
6	RELAY*	When low, indicates that optical bypass relay is installed.

The next figure shows where the pins are located on an OBR connector for a 2250 PMC board.



2250 adapter PCB

For the 2250 adapter, an adapter cable may be required, depending upon the type of connector available on your OBR. Because of the small spaces involved with the PMC form factor, the 2250 uses a smaller, rectangular connector to connect to an OBR. However, most OBRs use a round Mini-DIN connector.

To connect the 2250 to an optical bypass relay (OBR), you must either use a rectangular-to-round Mini-DIN adapter cable to interface the 2250 to your existing OBR or use a customized OBR from Amp/Kaptron, 209166-8. You can order the Amp/Kaptron OBR from Osicom or directly from Amp.

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RELEASE INFORMATION

Outstanding Issues

Driver Compatibility With Older Adapters

The B2.1 revisions of the drivers have been optimized for 2200 series adapters at -10 revision and higher, and B2.1 drivers will work with older versions of the 2200 series adapters.
However, drivers issued previous to the B2.0 revision will not work correctly on 2200 series adapters at -10 revision and higher. Do not use older drivers (pre-B2.0) on newer adapters (-10 or higher). Use drivers at B2.0 revision or later on newer adapters.

NetWare Server Driver

Osicom provides the MSM.NLM and FDDITSM.NLM files on the NetWare driver diskette. If the MSM.NLM and FDDITSM.NLM files currently residing on your NetWare server are older than the files that we provide, consider replacing them with the two files on the NetWare driver diskette. Consult your NetWare documentation for the appropriate instructions.

Windows NT Drivers Have Moved

Because we have added support for Windows NT for the Power PC and Dec Alpha platforms, the driver locations on the floppy have been changed.
The driver was previously at a:\winnt. In “Install Windows NT Driver” section of the User’s Guide, use one of the following paths instead of the path a:\winnt:

- For Intel x86 platforms, use the path a:\i386\winnt.
- For Power PC platforms, use the path a:\ppc\winnt.
- For Dec Alpha platforms, use the path a:\alpha\winnt.

Multiple Adapters in Windows NT Not Supported

For Dec Alpha and Power PC platforms running Windows NT, multiple adapters are **not** supported. Please call us if you have any questions.

Windows 95 Driver Has Moved

The location of the Windows 95 driver (for x86 platforms) has been moved to a:\i386\win95. The driver was previously at a:\win95. In the “Install Windows 95 Driver” section of the User’s Guide, use the path a:\i386\win95 instead of the path a:\win95.

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Windows 95 Packet Size Limitation

To ensure accurate data transfers, Osicom strongly recommends that you update the Registry to compensate for a packet size limitation in Windows 95. To update the Registry, perform this procedure:

1. Before you begin, make a backup copy of the registry file. Refer to your Windows 95 documentation for instructions.
2. Click the Start button in the bottom, left-hand corner of the screen and select Run in the window that is displayed.
3. Enter regedit and click on OK to invoke the Registry Editor.



Do NOT make any changes to the registry except as explicitly stated here. Changing the Registry can corrupt your system's software, which may require you to reload Windows 95.

4. Browse through the hierarchical structure displayed in the windows finding each of the following folders and opening them by double clicking the icon.

   HKEY_LOCAL_MACHINE
   System
   CurrentControlSet
   Services
   Class
   Net

Under Net, find and select the folder representing the 2200 adapter (0000, 0001, etc.). When you have the right folder, you'll see the notation Driver Description = Osicom 2200 PCI FDDI Network Adapter.

5. Find the Edit pull-down menu and select New and String Value.
6. A new item New Value #1 should now be displayed in the list of items comprising the 2200 adapter.
7. Edit that item to be MaxFrameSize (case-sensitive).
8. Select MaxFrameSize by double clicking on it and assign a value of 4096 in the window.
9. Close the Registry Editor.

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FCC INSTRUCTIONS TO THE USER

This equipment (2200 and 2250) has been tested and found to comply within the limits for a class B digital device, pursuant to part 15 of the FCC Rules. This equipment (2201C3X Series) has been tested and found to comply within the limits for a class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment on or off, the user is encouraged to try to correct the interference using one or more of the following measures:

- Reorient or relocate receiving antenna.
- Increase the separation between the equipment with the difficulty and the device.
- Connect the equipment into an outlet on a circuit different from that to which the receiver antenna of equipment with difficulty is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment has been certified to comply with the limits for a class B computing device, pursuant to FCC rules. In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to equipment without the approval of manufacturer could void the user's authority to operate this equipment.

FCC COMPLIANCE INFORMATION STATEMENT

Trade Name:	PCI FDDI adapter, PMC FDDI adapter CPCI FDDI adapter
Model Numbers:	2200, 2250, 2201C3X
Responsible Party:	Osicom Technologies, Inc.

A Declaration of Conformity and report details are on file.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

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CE NOTICE

Marking by the symbol above indicates compliance of this equipment to the EMC directives of the European Community. This equipment meets or exceeds the following technical standards:

- EN 55022: "Limits and methods of measurement of radio interference characteristics of Information Technology Equipment."
- EN 50082-1: "Electromagnetic compatibility, generic immunity standard, Part 1: Residential, commercial, and light industry."
- IEC 801-2: "Electromagnetic compatibility for industrial-process measurement and control equipment Part 2: Electrostatic discharge requirements."
- IEC 801-3: "Electromagnetic compatibility for industrial-process measurement and control equipment Part 3: Radiated electromagnetic field requirements."
- IEC 801-4: "Electromagnetic compatibility for industrial-process measurement and control equipment Part 4: Electrical fast transient/burst requirements."

A "Declaration of Conformity" in accordance with the above standards has been made and is on file at Osicom Technologies, Inc.

WARNING TO USER (2250)

This PMC product exceeds the maximum power dissipation as stated in the PMC Standard (IEEE P1836/Draft 2.0). System designers should follow the recommendations as stated in the PMC specification (P1386.1/Draft 2.0); use the power dissipation values in the table to determine the amount of cooling air required for your system.

The values for the current drawn on the 5V and 3.3V power pins follow.

2250 Power Consumption

Configuration	Typical (A)	Max (A)
DAS with BM & OBR	2.3	2.4
DAS with BM	2.1	2.3
DAS with OBR	2.0	2.1
DAS	1.9	2.0

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Technical Assistance

If you have technical questions regarding installation and configuration, contact the Authorized Dealer who sold you the product. If you require further support, please contact Osicom Technical Support.

Technical Support	1 (800) 359-2273
Email	support@osicom.com
FTP	ftp.osicom.com
WWW server	http://www.osicom.com
Main office	1 (301) 317-7710
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Mail	Osicom Technologies, Inc. 9020 Junction Drive Annapolis Junction, MD 20701

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