



Volition™

Network Solutions

VOL-N10VF

VOL-N100VF

VF-45™ Ethernet/Fast Ethernet Adapters

User Guide

NIC Driver Installation Instructions

MS-DOS

Important Note: The MS-DOS NIC driver is available for the VOL-N100VF only. There is no MS-DOS driver available for the VOL-N10VF.

The NIC driver for MS-DOS can be used for MS Windows 3.11, for creating a network boot disk, or for any other specialty application that require an NDIS2 driver. Refer to the instructions that came with these applications for help with installing this 3M NIC driver.

MS Windows 95 OSR2

1. Upon boot up, the 'New Hardware Found' window will appear. Click 'driver from disk provided by hardware manufacturer'.
2. Click 'Browse'. Find the 3M CD-ROM and open the 'Win95' directory. Select: '3M VOL-N10VF 10Mbps Ethernet Card (NDIS3)' or '3M VOL-N100VF 100Mbps Ethernet Card (NDIS3)'.
3. Verify that the correct path has been selected. Click 'OK'.
4. Restart your computer when prompted to do so. After restarting Windows 95, you should be able to connect to your network by double — clicking the Network Neighborhood.

MS Windows NT 4.0

1. Power down the PC
2. Insert the Volition NIC in any available PCI slot
3. Power up the PC
4. Install the NIC driver (this is that assuming NT's Network Services has already been installed)
 - a. Insert the Volition CD-ROM into the PC's CD-ROM drive
 - b. Right-click on "Network Neighborhood" icon from the desktop
 - c. Select "Properties" from the drop down menu
 - d. Click on the "Adapters" tab
 - e. Click on the "Add" button
 - f. Click on the "Have Disk" button
 - g. In the text box provided, type the path: "X:\Win2k" (where "X" is the CD-ROM drive letter). Click on the "OK" button to continue.
 - h. From the list of two available driver options that appear, highlight the option: "3M VOL-N100VF" and click on the "OK" button to continue
5. Reboot the PC for the changes to take effect
6. After reboot, set the desired NIC and network configurations.

MS Windows 98/98SE

1. Power down the PC
2. Insert the Volition NIC in any available PCI slot
3. Power up the PC
4. The “Add New Hardware Wizard” appears
 - a. Note that Windows has erroneously detected the Volition NIC as an: “Intel 21143/2 Based 10/100 Mbps Ethernet Controller”.
 - b. Click on the “Next” button to continue
5. Click on the option “Search for the best driver....”
 - a. Click “Next” to continue
6. Click in the box next to “Specify a Location”
 - a. In the text box provided, type: “X:\Win98” (where “X” is the drive letter assigned to your CD-ROM drive)
 - b. Click “Next” to continue
7. Windows will find the NDIS4 driver on the CD-ROM
 - a. Click next to “The updated driver....”
 - b. Click “Next” to continue
8. Windows will confirm the driver selection
 - a. Click “Next” to continue
9. The driver will install
 - a. Click “Finish” to continue
10. The “Systems Setting Change” dialog box appears
 - a. Click “Yes” to reboot
11. After reboot, set the desired NIC and network configurations.

MS Windows ME

1. Power down the PC
2. Insert the Volition NIC in any available PCI slot
3. Power up the PC
4. The “Add New Hardware Wizard” will not typically appear
 - a. WinME will automatically detect and install the NIC as an: “Intel 21143/2 Based 10/100 Mbps Ethernet Controller”. Note: There is no user intervention capable of stopping this automatic process.
5. “Update” the NIC driver
 - a. Insert the Volition CD-ROM into the PC’s CD-ROM drive
 - b. Open Device Manager
 - c. Right-click on the “Intel 21143” NIC
 - d. Select “Properties” from the drop down menu
 - e. Click on the “Driver” tab
 - f. Click on the “Update Driver” button
 - g. Select the option “Specify the location of the driver”, and click on the “Next” button to continue

- h. Un-check all of the boxes next to all options, and click the box next to the: “Specify a Location” option
 - i. In the text box provided, type the path: “X:\Win2k” (where “X” is the CD-ROM drive letter). Click on the “OK” button to continue.
 - j. Click on the “Finish” button to continue
 - k. Close any underlying screens that didn’t automatically close
6. Reboot the PC for the changes to take effect
 7. After reboot, set the desired NIC and network configurations.

MS Windows 2000

1. Power down the PC
2. Insert the Volition NIC in any available PCI slot
3. Power up the PC
4. The “Add New Hardware Wizard” will not typically appear
 - a. Win2K will automatically detect and install the NIC as an: “Intel 21143/2 Based 10/100 Mbps Ethernet Controller”. Note: There is no user intervention capable of stopping this automatic process.
5. “Update” the NIC driver
 - a. Insert the Volition CD-ROM into the PC’s CD-ROM drive
 - b. Open Device Manager
 - c. Right-click on the “Intel 21143” NIC
 - d. Select “Properties” from the drop down menu
 - e. Click on the “Driver” tab
 - f. Click on the “Update Driver” button
 - g. Click on the “Next” button
 - h. Click the radio button next to the option: “Search for a suitable driver....”, and click “Next” to continue.
 - i. Un-check all of the boxes next to all options, and click the box next to the: “Specify a Location” option.
 - j. In the text box provided, type the path: “X:\Win2k” (where “X” is the CD-ROM drive letter). Click on the “OK” button to continue.
 - k. Click on the “Finish” button to continue
 - l. Close any underlying screens that didn’t automatically close
6. Do not reboot the PC
7. Uninstall the Volition NIC driver
 - a. Open Device Manager
 - b. In the list of devices, right-click on the “Intel 21143” NIC
 - c. Select “Uninstall” from the drop-down menu
 - d. Click on the “OK” button to continue
 - e. Do not exit out of the Device Manager
8. Re-install the Volition NIC driver
 - a. Click on “Action” from the toolbar menu at the top of the screen
 - b. Select “Scan for Hardware Changes” from the drop-down menu
 - c. Win2K will correctly detect the Volition NIC, and the NIC driver installation process will begin

- d. Click on the “Yes” button at the “Digital Signature Not Found” screen
- e. The NIC driver installation process will complete
9. A final reboot is not necessary in order for the NIC to start working correctly
10. Set the desired NIC and network configurations.

Novell Netware 4.x / 5.x

1. From the Console (applicable to 4.x only) enter 'load CD-ROM' then enter 'cd volume list'. Note the volume number.
2. Enter 'CD mount #' where # represents the volume number. Then enter 'volumes' to verify the CD volume is mounted.
3. At the NetWare console screen, type 'LOAD INSTALL' (for NetWare 4) or 'NWCONFIG' (for NetWare 5).
4. At the 'Installation Options' menu, select 'Driver Options'.
5. At the 'Driver Options' menu, select 'Configure Network Drivers'.
6. Two windows will appear: 'Selected Network Drivers' and 'Additional Driver Actions'. From the menu select 'Select a driver'.
7. When the window listing the drivers appears, press the Ins or Insert key to load a driver from disk.
8. At the prompt, press F3 to specify a different path than the default. Enter the path 'N10XVF_V2:\novell\nwserver\4.x' or 'N10XVF_V2:\novell\nwserver\5.x'.
9. Select 'M10VF.LAN' or 'M100VF.LAN' from list.
10. When prompted to copy the driver, click 'Yes'.
11. If asked to save the existing files 'M10VF.LAN' and 'M10VF.LDI' or 'M100VF.LAN' and 'M100VF.LDI', click 'No' to overwrite them with the new version from the CD.
12. A screen will appear containing three windows, labeled "Protocols", "Parameters", and "Board Actions".
13. Refer to the NetWare manual for information on configuring the protocols and completing the installation process.

Sun Solaris (Sparc, Sparc64, x86)

1. If the system is already on, enter su [ENTER]. You will be prompted for the root password. Otherwise, power up the system, and enter the root password when prompted.
2. Place the CD in the CD-ROM drive. We recommended that you use the command 'volcheck' to mount the CD-ROM drive. Enter: #volcheck [ENTER]
3. Add the driver packages. To install the 3M drivers, add the 3M packages by entering the appropriate command from those listed below:

```
#pkgadd -d/CD-ROM/3mvol-n10vf/solaris/sparc or
#pkgadd -d/CD-ROM/3mvol-n100vf/solaris/sparc
```

or

```
# pkgadd -d /CD-ROM/3mvol-n10vf/solaris/sparc64 or
# pkgadd -d /CD-ROM/3mvol-n100vf/solaris/sparc64
```

for 64 Bit sparc systems

or

```
# pkgadd -d /CD-ROM/3mvol-n10vf/solaris/x86 or
# pkgadd -d /CD-ROM/3mvol-n100vf/solaris/x86
```

for the Solaris x86 systems.

A list of packages is displayed.

```
mmm 10fl 3M VOL-N10FL Driver For PCI 10BaseFL Adapter (sparc) 1.0 or
mmm 100fx 3M VOL-N100FL Driver For PCI 100BaseFL Adapter (sparc) 1.0
```

4. Select package(s) you wish to process (or 'all' to process all packages).
5. You can either select the package by number or press:

```
a — to install all of the packages (recommended)
q — to quit
```

6. Configure the Hosts File.

IRIX

Important Note: You need to be logged on as a root user to install this driver.

1. If the system is already on, enter su [ENTER]. You will be prompted for the root password. Otherwise power up the system, and enter the root password when prompted.
2. Insert the CD into the CD-ROM drive.
3. At the prompt, enter df [ENTER] to verify that 'mediad' is running. If 'mediad' is not running, enter cdrom [ENTER] to determine the SCSI address of your CD-ROM drive.
4. Use the mount command to mount the CD-ROM drive. Enter mount -r/dev/dsk/dks1d#s7, substitute the SCSI address of the CD-ROM drive for the 0#0 character, and press [ENTER].
5. For systems using the IRIX™ 6.5 operating system, enter inst -f/CD-ROM/IRIX/6.5/dist [ENTER].
6. Enter go [ENTER].
7. Enter quit [ENTER] to complete installation.
8. Reboot the system by entering shutdown-go [ENTER].

HP-UX

Important Note: You need to be logged on as a root user to install this driver.

1. If the system is already on, enter `su` [ENTER]. You will be prompted for the root password. Otherwise, power up the system, and enter the root password when prompted.
2. Place the CD in the CD-ROM drive. We recommend that you use HP-UX 's graphical system management interface, `sam` (1M), to mount the CD-ROM drive. To start `sam`(1M), enter: `#/usr/sbin/sam` [ENTER]
3. Click 'Disks and File Systems'.
4. Click 'Disk Devices' and select the appropriate CD-ROM entry.
5. Select 'Add not using the logical volume manager' from the 'Actions' menu. We suggest you use '/CD-ROM' as the mount point.

Installing the driver for HP-UX 10.20 or later:

Important Note: You need to be logged on as a root user to install this driver.

The following examples assume that you mounted the CD-ROM in the '/CD-ROM' directory. Otherwise, make adjustments to the following commands as necessary:

1. Run the standard HP-UX `sw` install program to install the system software, rebuild the kernel and reboot. Enter: `# swinstall-s/CD-ROM/HP-UX-x software_view=products` [ENTER] (This command should be on one line.)
2. Following standard `swinstall` practices, install the software product 'MQFE_1020'.
3. The final stage of the `swinstall` process will reboot your system with a new kernel that contains the 'mfl' driver. The new network interface names are 'mfl'. After the computer has rebooted, login again as a root user and verify that the new interface is present by using the 'ifconfig' command. Enter this command: `# ifconfig mfl0` [ENTER] Which will return: `m fl0:flag s = 822 <BROADCAST, NOTRAILERS>`

Linux

Important Note: You need to be logged on as a root user to install this driver.

1. Enter the following command to mount the CD-ROM:
 - a. `# mount -o map = off/dev/CD-ROM/mnt/CD-ROM`
(note: With `map = off` no name translation is done)
2. Change directory to `/mnt/CD-ROM/Linux`:
 - a. `# cd/mnt/CD-ROM/Linux`
3. Enter the following command to install the proper driver and control files into the appropriate directories. This includes the '3Mvf.ofile' in the modules directory and the 'MFLControl' and 'mfl_control' files in

the '/usr/bin directory'. Linux 2.0.36, 2.2.1, 2.2.5, 2.2.10 from RedHat 5.2 and 6.0 are presently supported. Versions 2.2.5 and 2.2.10 also have smp support.

install_3m

4. The 3Mvf driver can also be hard linked into the kernel as set forth in the README_3M.nonmodule file. The necessary .o files are in the respective 'nonmodule' directory for the version of Linux. If you do not have a matching version of Linux, the 3Mvf.o driver closest to your version of Linux may work. You will need to copy the closest version of the driver to your modules directory and you may also need to run 'insmod-f' to load the driver.

Macintosh 8.x/9.x

1. There are two driver extensions for each NIC. One extension for Half Duplex functionality, and another for Full Duplex functionality:
 - a. VOL-N10VF extensions:
 - i. VOL-N10VF Half Duplex
 - ii. VOL-N10VF Full Duplex
 - b. VOL-N100VF extensions:
 - i. VOL-N100VF Half Duplex
 - ii. VOL-N100VF Full Duplex
2. Insert the VOL-N100VF or VOL-N10VF in any available PCI slot in the Macintosh.
3. Copy the appropriate NIC driver extension from the "Mac" directory of the CD-ROM to the "System Folder" in the Mac system running OS versions 8.x or 9.x . Select the extension based on the Duplex Mode that is needed.
4. Reboot the Mac for the changes to take effect.
5. **Important:** If both extensions (half and full duplex) were copied to the "System Folder" in Step # 4 above, one of these extensions should now be manually disabled. The NIC may not function properly if both the Half Duplex and Full Duplex extensions are enabled at the same time.
6. Within "Extensions Manager", locate and uncheck the undesired driver extension. Reboot for the changes to take effect.
7. Enable the NIC to use the TCP/IP and/or Appletalk protocols, via the Control Panel.
8. Set the desired network settings.

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Telecom Enterprise Department 3M Telecommunications

6801 River Place Blvd.
Austin, TX 78726-9000
800/426-8688
www.3M.com/volition

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