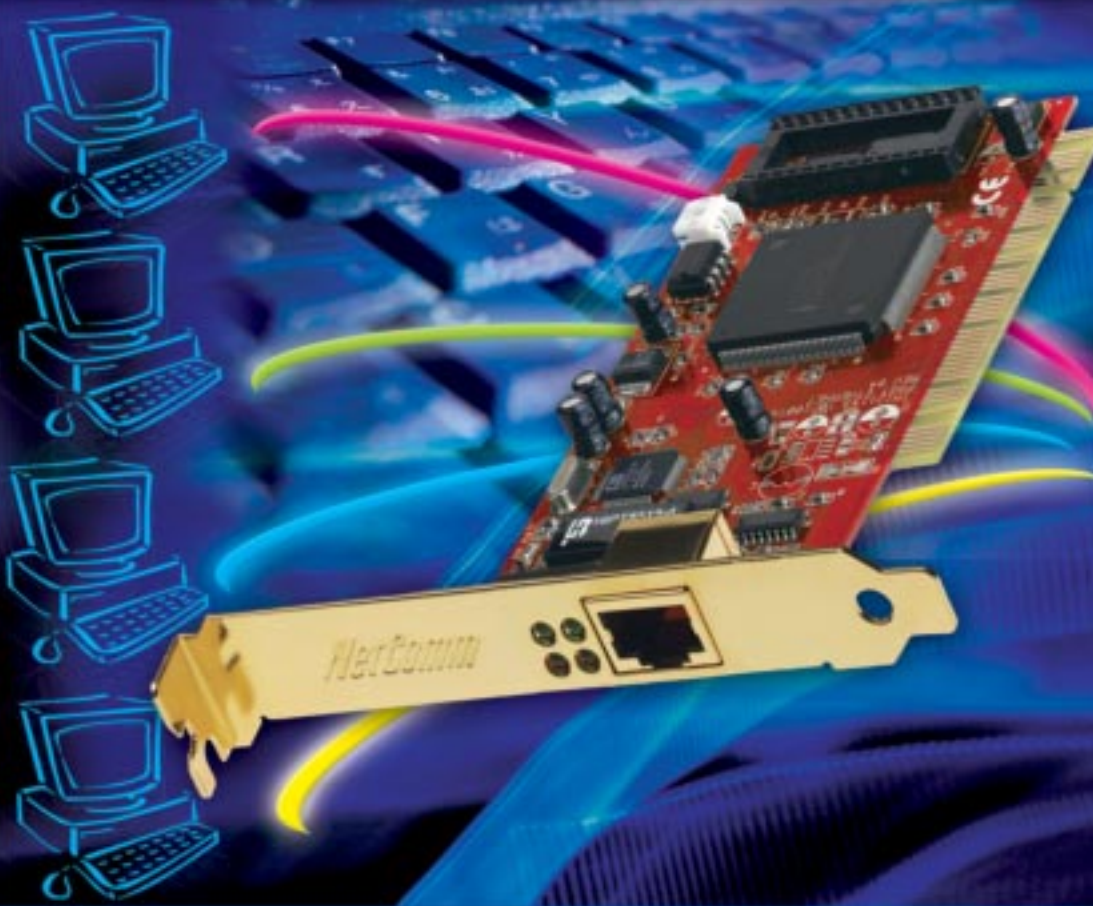


Corporate Network Card



THE INTEL-BASED ADAPTOR THAT REALLY MEANS BUSINESS

Quick Start Guide

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Introduction

Congratulations on your purchase of the NP1500 Fast Ethernet LAN Adaptor. This guide is provided as a *quick start* reference for hardware and software installation, as well as registration of your new NetComm product.

Step 1: Hardware Installation

1. Turn off your computer and disconnect the power cable.
2. Remove the cover from your computer.

Please check your computer's documentation (particularly your warranty details) for instructions and warnings regarding the removal of covers or installation of add-in boards.

3. Select an empty PCI slot and remove the appropriate expansion slot cover from the backplane of the computer.
4. Insert the card into the PCI slot and secure with a screw in the backplane.
5. If supplied connect the WOL (Wake On LAN) cable to the WOL connector on the card and on your motherboard.



6. Replace the computer's cover.
7. Insert one end of the network cable into the socket on the NP1500 Fast Ethernet LAN Adaptor.
8. Connect the other end of the network cable into a port on your Ethernet hub.
9. Reconnect the power cable and turn on your computer.
10. Follow the section for your operating system overleaf to complete installation

NOTE: *You may be asked for your original Windows® CD during the installation process. Please have it ready. If your computer came with Windows® pre loaded the installation files may be located in c:\windows\option\cabs.*

Step 2: Driver Installation

Please ensure that your hardware has been correctly installed by following the *Step 1: Hardware Installation* instructions before continuing.

Windows 95

1. Turn on your computer. Windows 95 should auto-detect your new adaptor and the **New Hardware Found** dialogue box will appear.
2. Select **Driver from disk provided by hardware manufacturer** and then select **OK**.
3. Insert the driver CD into your CD ROM drive and specify the path **D:\Drivers\WIN95** to copy the driver files to your system.
4. If you have not previously had your computer connected to a network you will now need to configure any network protocols that you require. Do this BEFORE rebooting your computer by going to the **Control Panel** and double clicking on the **Network** icon to install the required protocols.
5. When the driver installation is completed, restart Windows 95.

Windows 98

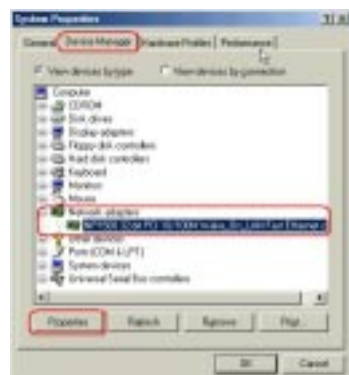
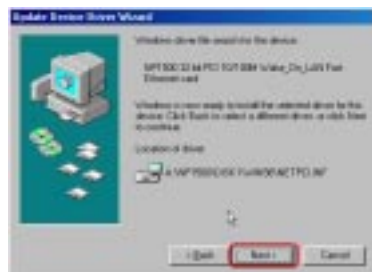
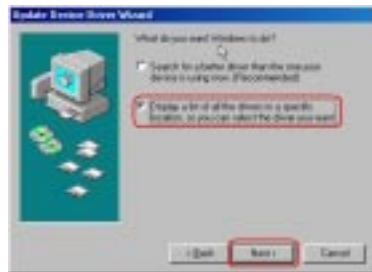
1. Turn on your computer. Windows 98 should auto-detect your new adaptor and install generic Windows drivers. These need to be updated with the drivers shipped with the adaptor.
2. Once the generic Windows drivers have been installed you may be prompted to restart your computer.
3. Select **Start > Settings > Control Panel** and double click on the **System** icon. Select the **Device Manager** tab and click on the + next to **Network Adaptors**. Select the **Intel 21143 Based 10/100 mbps Ethernet Controller** and click on the **Properties** button.
4. Select the **Driver** tab and click on the **Update Driver Wizard** button. The **Update Device Driver Wizard** will now be displayed. Select **Next** to continue.



5. The Wizard will now ask you what you want to do. Select **Display a list of all the drivers in a specific location...** and select **Next**.
6. Insert the driver CD into your CD ROM drive and then specify **Have Disk**. Enter the path of the driver **D:\Drivers\Win98** in the **Copy manufacturers files from** field and then click **OK**.
7. Select the **NP1500 32-bit PCI 10/100M Wake_On_LAN Fast Ethernet card** and select **OK**. At this point Windows may prompt you to insert the Win 98 disk. If so, simply enter the same driver location as in step 6 (**D:\Drivers\Win98**).
8. The Wizard is now ready to complete the installation. Select **Next**. At this point Windows may prompt for the Win 98 disk again. If so, simply enter the same driver location as in step 6 (**D:\Drivers\Win98**).
9. If you have not previously had your computer connected to a network you will now need to configure any network protocols that you require. Do this **BEFORE** rebooting your computer by going to the **Control Panel** and double clicking on the **Network** icon to install the required protocols.
10. When the driver installation is completed, restart Windows 98.

Windows ME

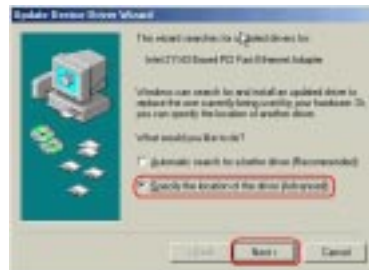
1. Turn on your computer. Windows ME should auto-detect your new adaptor and install generic Windows drivers. These will need to be updated with the drivers shipped with the adaptor.
2. Once the generic Windows drivers have been installed you will be prompted to restart your computer.
3. Select **Start > Settings > Control Panel** and double click on the **System** icon. Select the **Device Manager** tab and click on the + next to **Network adapters**. Select the **Intel 21143 Based PCI Fast Ethernet Adaptor** and click on the **Properties** button.



4. Select the **Driver** tab and click on the **Update driver** button. The **Update Device Driver Wizard** will now be displayed.



5. The Wizard will now ask what you want to do. Select **Specify the location of the driver (Advanced)** and select **Next**.



6. Insert the driver CD into your CD ROM drive and select **Display a list of all the drivers in a specific location, so you can select the driver you want**. Select **Next** to continue.
7. Select **Have disk** and then type in **D:\Drivers\WinME**. Select **OK**.
8. This will display **NP1500 32-bit PCI 10/100M Wake_On_LAN Fast Ethernet card** in the **Select Devices** window. Select this device and click on the **OK** button.



9. Windows ME is now ready to install the selected driver. Select **Next** and then **Finish** to complete the driver installation.



10. If you have not previously had your computer connected to a network you will now need to configure any network protocols that are required. Do this **BEFORE** rebooting your computer by going to the **Control Panel** and double clicking on the **Network** icon to install the required protocols.



11. When the driver installation is completed, restart Windows ME.

Windows XP

1. Turn on your computer and log in with administrator access. Windows XP has drivers built in for this adaptor and will auto-detect and install it as an **Intel 21143 based PCI Fast Ethernet Adaptor (Generic)**.

We recommend you install the updated driver provided on the NetComm CD by performing steps 3 to 10.

2. If your version of Windows XP has no built in driver for the NP1500, please follow steps 5 to 10 to install the driver.
3. Select **Start > Control Panel** and double click on the **System** icon. Select **Hardware > Device Manager**. (You may need to select **Switch to classic view** to see the System icon). Click on the + next to **Network adapters** and select the **Intel 21143 Based PCI Ethernet Adaptor (Generic)**. Select **Properties** to continue.
4. Select the **Driver** tab and click on the **Update Driver** button. This will start the **Upgrade Device Driver Wizard**.



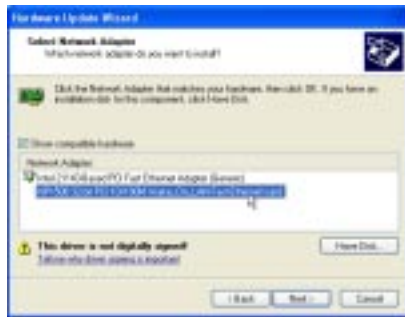
5. The Wizard will now ask what you want to do. Select **Install from a list or specific location (Advanced)** and then select **Next**.



6. Insert the driver CD into your CD ROM drive, select **Don't search. I will choose the driver to install** and then select **Next**. Select **Have disk** and then type in **D:\Drivers\WinXP**. Click **OK** to continue.



7. This will display **NP1500 32-bit PCI 10/100M Wake_On_LAN Fast Ethernet card** in the **Network Adaptor** field. Select **Next**.



8. Windows XP will copy the driver and system files for the network. Windows XP will display a message which says that it **has not passed Windows Logo testing to verify its compatibility with Windows XP**. Please select **Continue Anyway** to complete the installation of the drivers.



9. The **Completing the hardware update wizard** should now be displayed. Select **Finish**.
10. You should now have **NP1500 32-bit PCI 10/100M Wake_On_LAN Fast Ethernet card** displayed in the **Network Adaptors** list.



Windows NT

1. Click on **Start > Settings > Control Panel**.
2. Double click on the **Network** icon.
3. If this is the first time a Network device is being installed on your computer, the system will ask if you wish to install a Network Adaptor. Select **Yes**. If a Network adaptor has previously been installed, click on **Adaptors** and then select **Add**.
4. From the **Add Network Adaptor** dialog box you will be presented with several models. Do not select any of these. Click **Have Disk** to continue.
5. Insert the driver CD into your CD ROM drive then type the path **D:\Drivers\WINNT40** and select **OK**.
6. Select **NP1500 32-bit PCI 10/100M Wake_On_LAN Fast Ethernet card** from the **Select OEM Option** box and then select **OK**. More than one may be displayed. Select one of the **NP1500 32-bit PCI 10/100M Wake_On_LAN Fast Ethernet card** listed.
7. Select the appropriate operating mode from the list presented:

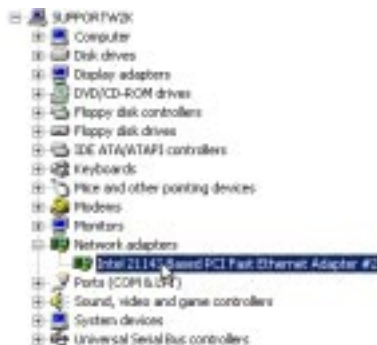
* AutoSense	Senses dynamically the media ports
10BaseT (TP)	To connect 10BaseT Ethernet hubs
10BaseT (TP) Full Duplex	To connect 10BaseT Full Duplex hubs
10BaseT (TP) No_Link_Test	To connect hubs not supporting the Link Integrity Test
100BaseTx (TP 100)	To connect 100BaseTx Ethernet hubs
100BaseTx (TP 100) FDx	To connect 100BaseTx Full Duplex hubs
* Default - Recommended for most modern networks	
8. Upon completion, the selected adaptor is added to the **Installed Adapter Cards** list the **Network Setting** box (the number prefixing the adaptor is the adaptor number).
9. Click on **Close** to complete the Network Setting initialization. You may be prompted to setup your network at this point. Do this and select **Apply** and then **OK**.
10. Shutdown and reboot the system when prompted.

Windows 2000

1. Turn on your computer and log in with administrator access. Windows 2000 has drivers built in for this adaptor and will auto-detect and install it as an **Intel 21143 based PCI Fast Ethernet Adaptor**.

We recommend you install the updated driver provided on the NetComm CD by performing steps 3 to 10.

2. If your version of Windows 2000 has no built in driver for the NP1500, please follow steps 5 to 11 to install the driver.
3. Select **Start > Settings > Control Panel** and double click on the **System** icon. Select **Hardware > Device Manager** and click on the + next to **Network adapters**. Select the **Intel 21143 Based PCI Ethernet Adaptor** and then select **Properties**.



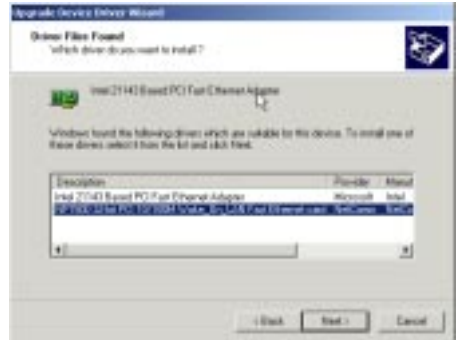
4. Select the **Driver** tab and click on the **Update Driver** button to start the **Upgrade Device Driver Wizard**. Select **Next** to continue.



5. The Wizard will now ask what you want to do. Select **Display a list of the known drivers for this device so that I can choose a specific driver** and select **Next** to display the **Locate driver file** window. Select **Specify a location** and then **Next**.



6. Insert the driver CD into your CD ROM drive, and then specify the path **D:\Drivers\WIN2000** to copy the driver files to your system.
7. The search will bring up more then one result. **DO NOT** use the driver that Win2000 recommends (It is already installed in Step 1). Select **Install one of the other drivers** and then select **Next**.
8. This will display **NP1500 32-bit PCI 10/100M Wake_On_LAN Fast Ethernet card** as well as the **Intel 21143 Based PCI Ethernet Adaptor**. Select the **NP1500 32-bit PCI 10/100M Wake_On_LAN Fast Ethernet card** and then **Next**.
9. Windows 2000 will copy the driver and system files for the network. If Windows 2000 displays a **Digital Signature Not Found** window, please select **Yes**.
10. The **Completing the upgrade device driver wizard** will be displayed. Select **Finish** to complete the installation.
11. You should now have **NP1500 32-bit PCI 10/100M Wake_On_LAN Fast Ethernet card** displayed in the **Network Adaptors** list. Select **Close**.
12. Restart your computer to complete installation.



Linux

The procedure to activate NP1500 on linux is as follows:

1. Compile:

The instruction for compiling the driver is include at the end of the driver file. (Run this instruction at /usr/src/linux)

2. Insert the driver as module:

```
insmod tulip.o
```

(Run 'lsmod' to see if the module is inserted)

3. Bind your card to an IP address

```
/sbin/ifconfig eth0 ${IPADDR} broadcast ${BROADCAST}  
netmask ${NETMASK}
```

(Run 'netstat -i' to see if there is a interface 'ne0')

4. Add your card to IP routing table, then add gateway also your card:

```
/sbin/route add -net ${NETWORK} netmask ${NETMASK} eth0
```

(You should be able to ping local network now)

Gateway:

```
/sbin/route add default gw ${GATEWAY} netmask 0.0.0.0 metric 1
```

5. Start inet daemon.

```
/usr/sbin/inetd
```

(You should now be on the network)

- * Make sure that your kernel is built with network, fast Ethernet and module support. Otherwise, you have to rebuild your kernel.

(1: go to /usr/src/linux directory

2: run 'make menuconfig' or 'make config'

3: mark the options list above.

4: exit and rebuild your kernel.

```
make dep;make clean;make zImage
```

the file 'zImage' will be at /usr/src/linux/arch/i386/boot/zImage

5: modify /etc/lilo.conf.(this file specify where kernel image is)

6: run 'lilo')

You can run 'netconfig' which will do step 4,5,6 for you. This will create '/etc/rc.d/inet1' and 'inet2' files. These two files will run at boot time.

Then just add a line at the beginning of 'inet1'.

```
'insmod /your driver'path/tulip.o'
```

Your driver will now work every time you boot.

Other Operating systems

For installation instructions for any of the following operating environments please see the appropriate **Readme.txt** file on the driver CD ROM:

- Windows NT 3.51
- LanServer for OS2
- LanManager for DOS
- NDIS 2
- NetWare Client
- NetWare Server

Troubleshooting

If you experience any problems with the NP1500 Fast Ethernet LAN Adaptor, first verify that the appropriate driver is loaded, that the proper grade of cable is employed for the network connection, and that the supporting hub is functioning properly. If the Card is still not working properly, the follow these steps before contacting NetComm's Customer Support Department:

1. Ascertain that the card is fully and firmly seated in the slot connector.
2. Check the length and rating of connecting cables.
3. Ascertain that the card's PCI slot is not deactivated at the BIOS level. The CMOS Setup utility in PCI computers ordinarily provides the option to activate or deactivate PCI slots.
4. If you have another PCI slot available, please try the card in the next slot.
5. Install the questioned card in another PCI computer and run the tests again.
6. Remove all other PCI cards from the computer and run the diagnostic tests again. If the verification/diagnostic run is not normal, then there is probably an interrupt number conflict, which will have to be resolved manually by a CMOS Setup utility. Reinstall all of the cards before running the utility.

Step 3: Registering your NetComm Product

To ensure that the conditions of your warranty are complied with, please go to the NetComm web site for quick and easy registration of your product at

www.netcomm.com.au

Alternatively, you can print out a copy of the Warranty Registration Form and mail it to NetComm Limited, PO Box 1200, Lane Cove NSW 2066.

Note: The Warranty Registration Form can be found at "D:\Manuals\Warranty Registration Form.pdf" where D:\ is the letter of your CD-ROM drive.

Contact Information

If you have any technical difficulties with your produce, please do not hesitate to contact NetComm's Customer Support Department.

Email: support@netcomm.com.au

Fax: (02) 9424-2010

Web: www.netcomm.com.au

Product Warranty

The warranty is granted on the following conditions:

1. This warranty extends to the original purchaser (you) and is not transferable;
2. This warranty shall not apply to software programs, batteries, power supplies, cables or other accessories supplied in or with the product;
3. The customer complies with all of the terms of any relevant agreement with NetComm and any other reasonable requirements of NetComm including producing such evidence of purchase as NetComm may require;
4. The cost of transporting product to and from NetComm's nominated premises is your responsibility; and,
5. NetComm does not have any liability or responsibility under this warranty where any cost, loss, injury or damage of any kind, whether direct, indirect, consequential, incidental or otherwise arises out of events beyond NetComm's reasonable control. This includes but is not limited to: acts of God, war, riot, embargoes, acts of civil or military authorities, fire, floods, electricity outages, lightning, power surges, or shortages of materials or labour.
6. The customer is responsible for the security of their computer and network at all times. Security features may be disabled within the factory default settings. NetComm recommends that you enable these features to enhance your security.

The warranty is automatically voided if:

1. You, or someone else, use the product, or attempts to use it, other than as specified by NetComm;
2. The fault or defect in your product is the result of a voltage surge subjected to the product either by the way of power supply or communication line, whether caused by thunderstorm activity or any other cause(s);
3. The fault is the result of accidental damage or damage in transit, including but not limited to liquid spillage;
4. Your product has been used for any purposes other than that for which it is sold, or in any way other than in strict accordance with the user manual supplied;
5. Your product has been repaired or modified or attempted to be repaired or modified, other than by a qualified person at a service centre authorised by NetComm; and,
6. The serial number has been defaced or altered in any way or if the serial number plate has been removed.

Limitations of Warranty

The Trade Practices Act 1974 and corresponding State and Territory Fair Trading Acts or legalisation of another Government (the relevant acts) in certain circumstances imply mandatory conditions and warranties which cannot be excluded. This warranty is in addition to and not in replacement for such conditions and warranties.

To the extent permitted by the Relevant Acts, in relation to your product and any other materials provided with the product (the Goods) the liability of NetComm under the Relevant Acts is limited at the option of NetComm to:

- Replacement of the Goods; or
- Repair of the Goods; or
- Payment of the cost of replacing the Goods; or
- Payment of the cost of having the Goods repaired.

All NetComm ACN 002 490 486 products have a standard 12 months warranty from date of purchase. However some products have an extended warranty option (refer to packaging). To be eligible for the extended warranty you must supply the requested warranty information to NetComm within 30 days of the original purchase by registering on-line via the NetComm web site at www.netcomm.com.au.

NetComm reserves the right to request proof of purchase upon any warranty claim.

Corporate Network Card

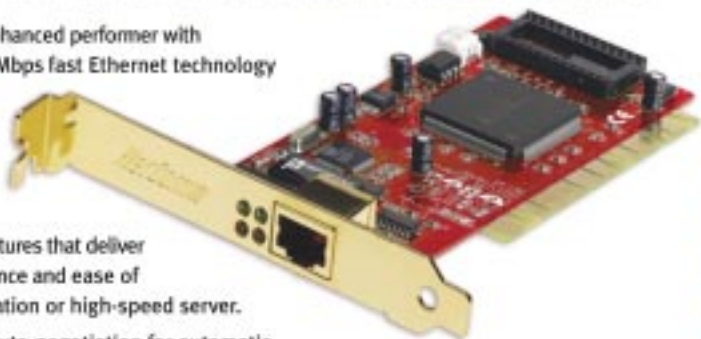
THE INTEL-BASED LAN ADAPTOR THAT REALLY MEANS BUSINESS

NetComm's NP1500 is an enhanced performer with auto-sensing 32-bit 10/100Mbps fast Ethernet technology for desktop PCs.

Specially developed with business users in mind, this Intel chipset-based adaptor is equipped with advanced features that deliver reliability, superior performance and ease of installation for any workstation or high-speed server.

This card features N-Way auto-negotiation for automatic selection of the network speed and full duplex mode to double network data rates up to 20/200Mbps. In fast full-duplex mode, the adaptor's embedded flow control protects against possible data loss during transmission.

A comprehensive set of software drivers is included for the most popular PC Network Operating Systems including Microsoft Windows @ 95, 98, ME, NT, 2000 and XP.



KEY FEATURES

- 10/100Mbps auto-sensing single shielded RJ-45 connector
- 32-bit PCI Bus Master high-speed operation of Rev.2.1 specification
- Full duplex mode doubles network data rate to 20/200Mbps
- Wake-on-LAN (WOL) function – cable included
- IEEE 802.3x flow control
- IP multicast address filter
- Low network command processing overhead
- Operates within Windows @ 95, 98, ME, NT, 2000 and XP

3 YEAR WARRANTY*

1 year warranty out of the box.
Extra 2 years **FREE** with online
registration at www.netcomm.com.au

* Conditional upon registration online.

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Specifications are subject to change without notice. **Product Code: NP1500**

... it has to be a *NetComm*®