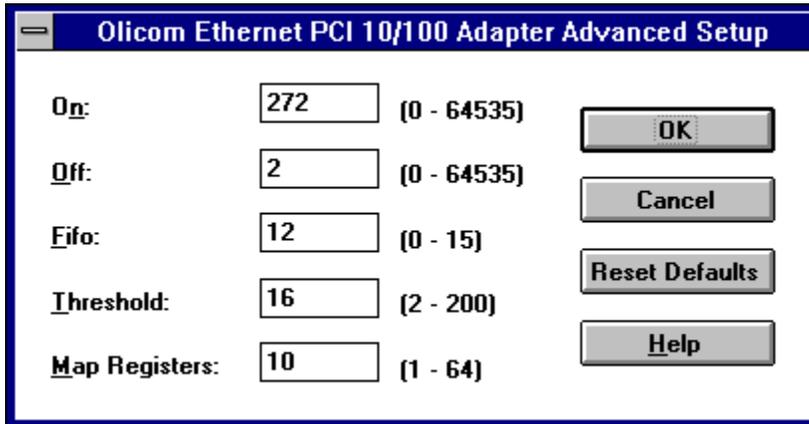


## Olicom Ethernet PCI 10/100 Advanced Configuration Parameters

These options should be altered by an experienced user only.  
Please use the defaults if you do not know what these parameters do.

Click on the dialog box below for help on the indicated parameter.



The image shows a screenshot of a Windows-style dialog box titled "Olicom Ethernet PCI 10/100 Adapter Advanced Setup". The dialog box has a blue title bar with a minus sign icon on the left. Inside the dialog, there are five rows of configuration parameters, each with a label, a text input field, and a range in parentheses. To the right of the input fields are five buttons: "OK", "Cancel", "Reset Defaults", and "Help".

Parameter	Value	Range
<u>O</u> n:	272	(0 - 64535)
<u>O</u> ff:	2	(0 - 64535)
<u>F</u> ifo:	12	(0 - 15)
<u>T</u> hreshold:	16	(2 - 200)
<u>M</u> ap Registers:	10	(1 - 64)

Buttons: OK, Cancel, Reset Defaults, Help

Click on the CANCEL button to abort the configuration changes made.

## **FIFO parameter**

**Recommended setting: FIFO=12**

This parameter defines the FIFO threshold for requesting bus access. For systems with high bus latency, this setting should be increased. For systems with very low latency, this setting may be reduced. For best performance, this should be set as low as possible without causing DMA over/underruns.

The HELP button launches the Ethernet PCI 10/100 help file.

## MAP REGISTERS parameter

### Recommended Settings:

EISA: MapRegisters = 32

PCI: MapRegisters = 10 for NT 3.5 or earlier  
MapRegisters = 32 for NT 3.51 or later

Map registers are system resources which are used in physical to virtual address conversion with bus mastering cards. The MapRegisters parameter specifies how many of these should be allocated to the Ethernet PCI 10/100 driver. As a rule, the higher the value of the MapRegisters parameter, the better the performance. It must be noted, however, that map registers are system resources, and thus if too many are allocated (ie more than the OS has available), the driver will fail to load.

NT3.5 currently has a restriction in the Microsoft Hardware Abstraction Layer (HAL) that causes a shortage of map registers when the computer is configured with extra physical memory. By obtaining an updated HAL.DLL and putting it into NT's SYSTEM32 directory, the MapRegister parameter can be increased for improved performance and support of additional netcards.

**Warning: If the number of map registers configured is not available, the driver will not load, or the system can crash when accessing the floppy disk drive!**

## **NODE ADDRESS parameter**

The Node Address parameter contains the physical ethernet node address burned into each Ethernet PCI 10/100 adapter's on-board ROM. When configuring multiple Ethernet PCI 10/100 adapters, this value is used to assign individual cards to drivers and protocol stacks.

The Ethernet PCI 10/100 setup program will display the node addresses at which Ethernet PCI 10/100 adapters were detected. Select from this list the node address of the adapter to which you wish the driver attached. If installing multiple adapters, each adapter must be configured separately, one at a time.

## **OFF parameter**

**Recommended Setting: OFF=2**

This parameter is the minimum number of clock cycles the Ethernet PCI 10/100 adapter card will remain off the bus between data transfers. For best performance, this setting should be set to a minimum, thus allowing the adapter access as needed.

Click on the OK button to save the currently selected parameter choices.

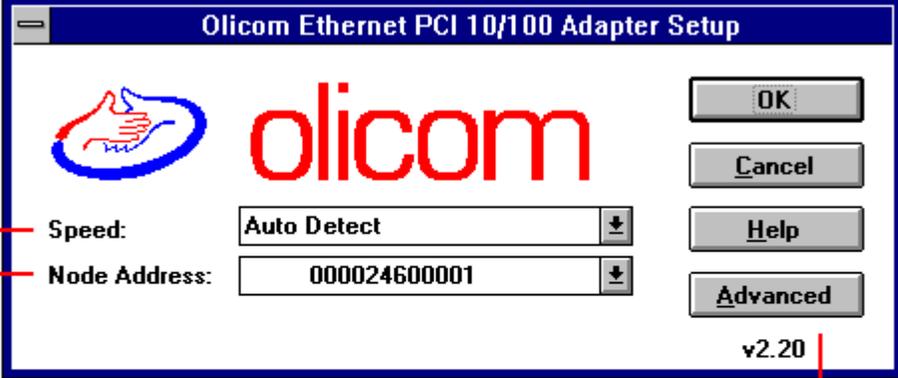
## **ON parameter**

### **Recommended Setting: ON=272**

The ON parameter limits the number of clock cycles the Ethernet PCI 10/100 adapter will hold the bus for data transfers. For best performance, this setting should be high enough for the Transmit FIFO, to be filled, or the Receive FIFO emptied in a single bus access. The default setting for this parameter is 272.

## Olicom Ethernet PCI 10/100 Advanced Configuration Parameters

Click on the dialog box below for help on configuration parameters.



The **NodeAddress** parameter specifies the physical PCI adapter which the driver should use.

**Speed** tells the adapter how fast to transmit and receive.

The **Advanced** button evokes the **Advanced Parameters** configuration dialog box.

## **Reset Defaults Button**

Choose this button to reset all of the parameters for the Olicom Ethernet PCI 10/100 adapter to the factory defaults.

## **SPEED parameter**

The Speed parameter lets the Ethernet PCI 10/100 adapter know what speed to use on the Ethernet wire. The choices are 10Mbits/sec, 100Mbits/sec, and Auto Detect. In Auto Detect mode, the adapter will detect if its environment can support 100Mbit speed, and if so will set speed to 100. Otherwise it will set speed to 10. The default is Auto Detect.

## **THRESHOLD parameter**

### **Recommended Setting: Threshold=16**

The number specified by the threshold parameter is multiplied by 8 to produce the number of bytes at which the adapter will start emptying the Ethernet PCI 10/100's internal transmit FIFO onto the wire. Thus, with Threshold=200, the number of bytes is 1600. This is greater than the max packet size for ethernet, so the adapter will not attempt early transmits. This is obviously the safest setting, but the best performance is achieved when the threshold parameter is as low as possible (without producing underruns). To experiment, first set it at 16 and then increment it if performance seems to drop significantly. It is probably unsafe to set the transmit threshold parameter below 200 for systems with many busmastering cards, or systems with otherwise high latency.



