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                                yk51x86.txt
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Readme File for YK51X86.sys v8.25.1.3
Marvell Yukon Ethernet Controller

NDIS5.1 Miniport Driver for Windows XP and Server 2003 (x86)

This file contains
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1  Overview
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YK51X86.sys is the NDIS5.1 32-bit Miniport driver.


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2  Required Files
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To install the driver, the following files are required:
YK51X86.sys NDIS5.1 Miniport driver
YK51X86.inf installation setup script
YK51X86.CAT digital signature (only if the driver is certified)
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3  Installation
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3.1  Installing the driver
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Read the installation instructions in the adapter manual carefully.
Follow these instructions to install the adapter in your computer.


Due to the plug & play facility, the operating system is able to find,
identify, and configure an adapter automatically.

If the adapter is not detected during installation by the operating system
the adapter is installed as "Ethernet Controller" under "Other Devices".
To install the driver you have to perform a driver update as described
in the next section.

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3.2  Updating the driver
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To update the driver, proceed as follows:

1.  On the desktop right click on MY COMPUTER.
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2.   Select MANAGE.
3.   In the "Device Manager" select the adapter you wish to update.
4.   Double click.
5.   Select DRIVER.
6.   Click UPDATE DRIVER ... .
7. Follow the instructions given by the operating system to locate the
driver.
8.   If the driver which is found to be the latest is not the one you want
     to install, select the checkbox "Install one of the other drivers".
9.   Click NEXT.
10. Select the driver to be installed in the next listbox.
11. Click NEXT.
     If a message is displayed saying that the driver is not digitally signed
     by Microsoft, click YES.
12. The message "Windows has finished installing the software for this
     device" is displayed.
13. Click FINISH to complete the installation.

Please note that the latest version of the YK51X86 driver is
available for download from our web site.

4   Parameters
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The YK51X86.sys driver allows you to modify several options in order to
optimize the operation of your adapter.

1.   In "Network Connections" right click on the adapter you
     want to configure.
2.   Select "Properties".
3.   Click "Configure".
4.   Click "Advanced".
5.   In the "Property" box, select the option that you want to change.
6.   Enter the desired value in the "Value" box.
7.   When finished, click OK .
 The operating system will reload the driver with the changed settings.

The parameters supported by the driver are described below.

Network Address

Default value: burned-in adapter address
Valid range: 02-00-00-00-00-01 to FE-FF-FF-FF-FF-FF (hexadecimal),
                 where at least the "multicast" bit(Bit 0) must not be set
                 (it indicates that the address field contains an
                 individual address)and the "locally administered" bit (Bit 1)
                 is set (the address has been assigned by a local
                 administrator). These two bits are first and second
                 bits transmitted on the LAN medium.

CAUTION: Each individual network MAC address can only be used once in a
         network. Assigning the same address to more than one adapter in
         the same network is not allowed and can cause serious network
         problems.

To use a network MAC address other than the one burned into the adapter,
enter the network address in the following hexadecimal format:

        e.g.: 02-00-5A-98-12-34

If the network address field blank is left blank (or a different number of
digits is specified), the network address burned into the adapter will
be used.

Jumbo Frame Support

Default value: "Disabled"
Valid values:
        -"Disabled"
        -"4088"
        -"9014"

This parameter specifies the frame size that the driver will support.
The performance of your network usually increases If "Jumbo" frames are
used. Do not enable this option if you are not sure that your network
supports jumbo frames.

Note: For Fast Ethernet adapters the valid range is limited to 1514.

Hardware Checksuming

Default value: "On"
Valid values:
        -"On"
        -"Off"

This parameter is used to disable the hardware checksum offload for
TCP/IP. There should be no need to disable checksum offload.

Wake Up Capabilities

Default value: "Magic Packet and Pattern Magic"
Valid values:
        -"None"
                wake on LAN capabilities are disabled
        -"Magic Packet"
                wake up with MagicPacket from ShutDown state,
                OS Controlled from Hibernate or Standby state
        -"Pattern Match"
                wake up with a packet containing a special pattern
                from ShutDown state, OS Controlled from Hibernate
                or Standby state
        -"Magic Packet and Pattern Match"
                wake up with both from ShutDown state, OS Controlled
                from Hibernate or Standby state
        -"Link Change"
                wake up with link change from ShutDown state,
                OS Controlled from Hibernate or Standby state

Wake From Shutdown

Default value: "Off"
Valid values:
        -"Off"
                disable the capabilities of the NIC to wake the computer
                from shutdown.
        -"On"
                enable the NIC to be capable to wake the computer from shutdown.

Number of Receive Buffers

For Yukon family based ethernet controllers the following values are used:
Default value: 50 (decimal)
Valid range: 3..500 (decimal)

For Yukon2 family based ethernet controllers the following values are used:
Default value: 256 (decimal)
Valid range: 256..512 (decimal)

This parameters defines the number of receive buffers allocated by the
driver. If the system does not have enough resources the driver will fail
to load. Increasing this value may improve performance.

Number of Transmit Buffers

For Yukon family based ethernet controllers the following values are used:
Default value: 50 (decimal)
Valid range: 4..200 (decimal)

For Yukon2 family based ethernet controllers the following values are used:
Default value: 256 (decimal)
Valid range: 256..512 (decimal)

This parameters defines the number of transmit buffers allocated by the
driver. If the system does not have enough resources the driver will
fail to load. Increasing this value may improve performance.

Interrupt Moderation

Default value: "On"
Valid values:
        -"On"
        -"Off"

If more than the specified rate of interrupts occur, the function
Interrupt Moderation groups these interrupts so that several data packets
can be handled per interrupt. This will lead to lower CPU utilization
but may increase the latency.

Max IRQ per Sec

Default value: 5000 (decimal)
Valid range: 1000..30000 (decimal)

This parameter specifies the interrupt rate for Interrupt Moderation. If
Interrupt Moderation is set to "Off" it will be ignored.

Log Status Messages

Default value: "Status Messages"
Valid values:
        -"All Messages":
                This option should only be used for test purposes.
        -"Status Messages":
                In this mode the driver will generate an event log
                entry every time the link status changes.
        -"Warnings":
                In this mode you will only receive warning or error
                messages.
        -"Errors":
                In this mode you will only receive error messages.
        -"None":
                All driver messages will be suppressed. It is not
                recommended to use this value.

This parameter specifies the messages, which are to be logged in the
Event Log.

Speed & Duplex

Default value: "Auto-Sense"
Valid range:
        -"Auto-Sense"

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        -"10Mbps Half Duplex"
        -"10Mbps Full Duplex"
        -"100Mbps Half Duplex"
        -"100Mbps Full Duplex"
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This parameter contain information regarding autonegotiation,
duplex capabilities and link speed. Only if the setting is "Auto" the
Autonegotiation is set to "On", in every other settings it is turned "Off".

NOTE: This parameter is not valid for fiber adapter.

Preferred Port

Default value: "A"
Valid range:
        -"A"
        -"B"

NOTE: This parameter is only available for dual link adapters.

Use this parameter to set the preferred port the RLMT (Redundant
Link Management Technology) will use for all network traffic, if more than
one port has an active link to the network.

RLMT Mode

Default value: "CLS"
Valid range:
        -"CLS" (Check Link State):
                RLMT uses the link state reported by the
                adapter hardware for each individual port to determine whether a

                port can be used for all network traffic or not.

        -"CLP" (Check Local Port):
                In this mode, RLMT monitors the network path
                between the two ports of an adapter by regularly exchanging
packets
                between them. This mode requires a network configuration in
which
                the two ports "see" each other (i.e. there must not be any
router
                between the ports).

        -"CLPSS" (Check Local Ports and Segmentation Status):
                This mode supports
                the same functions as the CLP mode and additionally checks
network
                segmentation by sending BPDU hello packets. Thus, this mode is
only
                to be used if Gigabit Ethernet switches are installed on the
network
                that have been configured to use the Spanning Tree protocol.

NOTE: RLMT modes "CLP" and "CLPSS" are designed to operate in
        configurations where a network path between the ports on one adapter
        exists. Moreover, they are not designed to work where adapters are
        connected back-to-back.
        This parameter is only available for dual link adapters.

802.1p Support

Default Value: "Off"
Valid Values:
        -"Off"

            -"On"

This parameter will enable/disable the quality of service for specified
port. By default this option is not enabled at the first install of
the driver.

BatteryModeLinkDetection

Default Value: "EnergyDetect+™"
Valid Values:
        -"NoEnergySaving":
                No Energy saving functions are switched on in the NIC.

        -"MaximumEnergySaving":
                The NIC is switched off if there is no link in battery mode.
                The driver wakes up the NIC every 20 seconds to check
                if there is a new link.

        -"EnergyDetect+™":
                If battery-powered the NIC is set to "EnergyDetect+"(TM) mode.
                The link is activated faster than in "MaximumEnergySaving" mode,

                but the NIC requires more power.

This parameter will set the mode in which the NIC is working if there
is no link and the PC is battery-powered.

BatterySpeedSettings

Default Value: "FullSpeed"
Valid Values:
        -"SmartSpeedDown":
                If the computer is battery-powered, the NIC speed is
                switched to 10/100Mbit/s to reduce the power consumption.

        - "FullSpeed":
                If the computer is battery-powered the NIC is working with
                maximum speed and maximum power consumption.
                If the computer is supplied by AC power all power saving
features
                are switched off, and the NIC is working with maximum speed.

This parameter will sets the Line speed for the NIC if PC is
battery-powered.

FlowControl

Default value: "On"
Valid range:
        -"Off":
                No link partner is allowed to send PAUSE frames.

        -"On":
                Both link partners are allowed to send PAUSE frames.

This parameter can be used to set the flow control capabilities the port
reports during auto-negotiation. This parameter can be set for each port
individually, which is helpful if the port at the other end of the cable
cannot handle all possible combinations. Using the default setting, the
adapter should automatically detect the capabilities of the peer port.

TCP Segmentation

Default value: "On"
Valid range:
        -"On":
                The big packets are segmented on the NIC before to be sent to
the
                network. Using this method the processor will be not loaded to
do
                this job.

        -"Off":
                The packets are not segmented by the NIC.

NOTE: This parameter is only available starting with the NICs based on
                Yukon2 chip.

*** End of Readme File ***