MBC-140
VGA / LAN
MicroPCI Card

Version 1.0

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Contents

Chapter 1

Introduction

This manual is designed to give you information on the MBC-140 VGA/LAN MicroPCI Card. It is divided into the following sections:

The topics covered in this chapter are as follows:

- Checklist
- Description
- Specifications

Checklist

Please check that your package is complete and contains the items below. If you discover damaged or missing items, please contact your dealer.

- A MBC-140 VGA/LAN MicroPCI Card
- A User's manual
- 1 Disc Containing IPC Serial Driver
- Ribbon cables for MBC-140 only

Description

MBC-140 perhaps one of the smallest and most efficient MicroPCI card in the market. This card from TMC for embedded system utilizes MicroPCI interface. This highly valued MicroPCI Card provides VGA and LAN function with C&T 69000 and Realtek RTL8139B chip. The C&T 69000 with 2-MB SDRAM embedded memory is a highly integrated graphics/flat panel controller. By integrating 2-MB of SDRAM, graphics, flat panel, and CRT control logic on the same die, the 69000 delivers superb 2D video performance, consumes minimal power and reduces PCB real estate for the graphics subsystem. The 69000 provides flexible host bus support with a glueless interface for both PCI and frame AGP bus interfaces. The 69000 offers flexible flat panel support to drive TFT, STN, DSTN, EL, and Plasma panels. The 69000 supports 1/4 VGA, VGA, SVGA, XGA, and SXGA panels. It includes the Chips' proprietary TMED™ technology to support 16 million colors on STN/DSTN panels.
The Realtek RTL8139B is a highly integrated and cost-effective single-chip Fast Ethernet controller that provides 32-bit performance, PCI bus master capability, and full compliance with IEEE 802.3u 100Base-T specifications and IEEE 802.3x Full Duplex Flow Control. It also supports Advanced Configuration Power management Interface (ACPI), PCI power management for modern operating systems that is capable of Operating System Directed Power Management (OSPM) to achieve the most efficient power management.

MBC-140 Specifications

VGA PART

- CRT/LCD: C&T 69000 Chipset
- Embedded 2MB CDRAM display memory
- Simultaneous CRT & LCD display
- LCD panel supports DSTN/TFT
- 1280 X 1024X8bpp colors CRT resolution
- Up to 1280x1024x8bpp colors resolution for color active matrix panels (12,18, and 24 analog) or (12+12), (18+18) double pixel/CLK interface

LAN PART

- Realtek RTL8139B Ethernet controller
- The Realtek8139B is a highly integrated and cost-effective single-chip Fast Ethernet controller that provides 32-bit performance, PCI bus master capability, and full compliance with IEEE 802.3u 100Base-T specifications and IEEE 802.3x full duplex flow Control.

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Chapter 2

Configurations

This chapter provides information on how to use the jumpers and connectors on the MBC-140 VGA/LAN MicroPCI Card in order to set up a workable system. The topics covered are:

MBC-140 VGA / LAN MicroPCI Daughter Card Installation

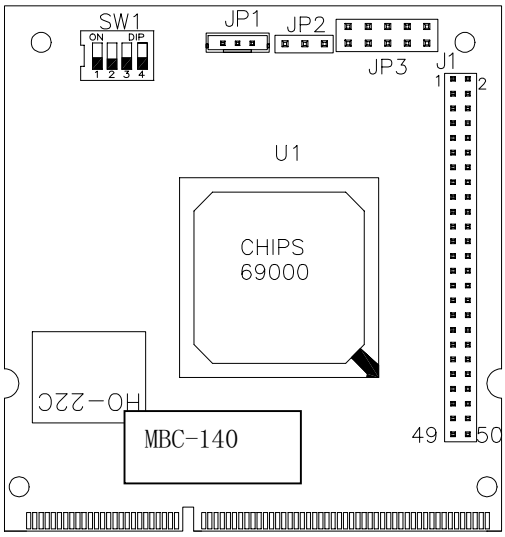
The MBC-140 VGA/LAN MicroPCI Card is integrated with one **MicroPCI socket** that similar to 144-pin socket. This socket can accommodate the VGA, Audio daughter cards.

To insert the MicroPCI daughter card, position it at 30 degrees to the PCB and gently push it into the MicroPCI connector. (The card will not fit when inserted at an angle of 45 degrees or 15 degrees). Once inserted, slowly press the card towards the PCB until it locks on both sides to the clips of the connector. Screw the card to the PCB to secure the installation.

Jumpers and Connectors on the MBC-140 VGA/LAN MicroPCI Card

These Jumpers and connectors on the MBC-140 allow you to configure your embedded board according to the needs of your applications. If you have doubts about these jumpers and connectors configuration for your need, contact your dealer or sales representative. The following table lists the jumpers and connectors on MBC-140 and their respective functions.

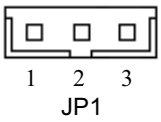
Jumper Locations on MBC-140 VGA/Audio MicroPCI Card (Front side)



Jumpers and connectors location:

JP1: WOL for ATX Power
JP2: LCD Panel Power type
JP3: ALN Connector
J1: LCD Panel Connector
SW1: LCD Panel Support and Resolution Select

JP1: WOL for ATX Power



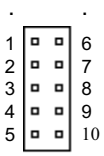
Pin #	Signal Name
1	5VSB
2	GND
3	WOL

JP2: LCD Panel Power type

JP2	Setting	Function
	Pin 1-2 Closed	3.3V
	Pin 2-3 Closed	5V

JP3: LAN Connector

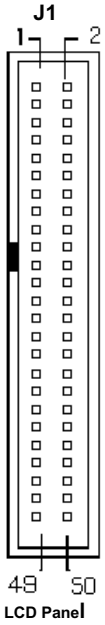
JP3 is used for LAN connector.



Pin #	Signal Name	Pin #	Signal Name
1	NC	6	3VSB
2	TD+	7	TD-
3	LED1	8	LED2
4	RD+	9	RD-
5	GND	10	GND

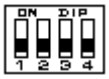
J1: LCD Panel Connector

J1 is the pin header for flat panel LCD display. This following table below shows the pin assignments of this connector.



Signal Name	Pin #	Pin #	Signal Name
GND	1	2	PD33
PD34	3	4	PD31
PD35	5	6	PD32
PD30	7	8	PD28
PD29	9	10	PD27
PD25	11	12	PD26
PD24	13	14	PD24
PD23	15	16	PD22
PD16	17	18	PD20
PD17	19	20	PD18
PD19	21	22	PD14
PD13	23	24	PD12
PD15	25	26	PD11
PD7	27	28	PD10
VDD	29	30	VDD
PD9	31	32	PD8
PD4	33	34	PD6
PD3	35	36	PD5
PD2	37	38	PD1
DE	39	40	PD0
SLCK	41	42	ENBLT
ENPVDD	43	44	FLM
ENPVEE	45	46	LP
GND	47	48	GND
+12V	49	50	+12V

SW1: LCD Panel Support and Resolution Select



SW1

	SW1				Panel Resolution
Pin Number	**Pin 4**	**Pin 3**	**Pin 2**	**Pin1**	**Resolution**
5	Open	Open	Short	Open	640x480 TFT Color, 18bit
6	Short	Open	Short	Open	640X480, TFT Color, 18bit
7	Open	Short	Short	Open	1024X768 TFT, 18bit
8	Open	Open	Short	Open	800X600, TFT Color, 18bit
13	Open	Open	Short	Short	1024X768 TFT Color, 36bit

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Chapter 3

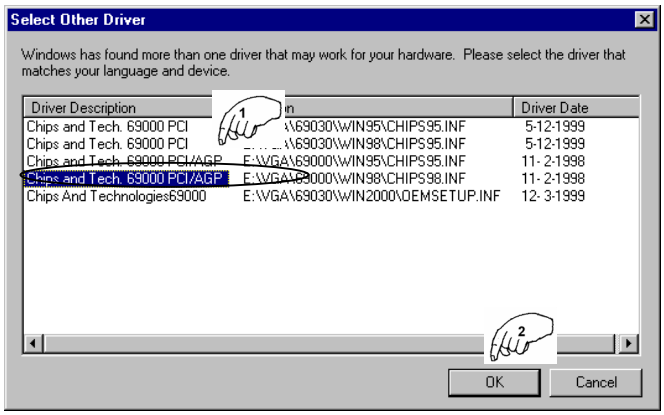
C&T 69000 VGA Driver Installation Guide

This chapter provides information on how to install the C&T 69000 VGA drivers that come in the driver CD with your MBC-140 MicroPCI card. Please follow the instructions set forth in this chapter carefully. Please note that there must be relevant software installed in your system before you could proceed to install the C&T 69000 VGA drivers.
The following items are covered in this chapter:

Installing the VGA Drivers for Windows Millennium Edition

The following section describes the SMI721 driver installation procedures for Windows Millennium Edition.

Step 1: Click ***Start*** ⇒ ***Settings*** ⇒ ***Control Panel***.
Step 2: Click ***Display*** ⇒ ***Setting***
Step 3: Click ***Advanced*** ⇒ ***Adaptor*** ⇒ ***Change***.
Step 4: Click ***Next*** ⇒ ***Next***.
Step 5:

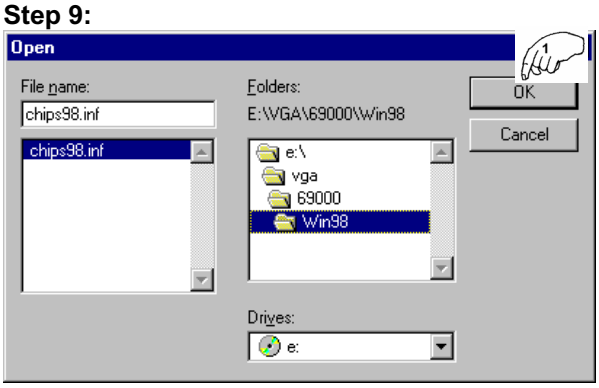


Step 6: Click ***Finish***.
Step 7: Click ***Yes.*** Restart your computer now

Installing the VGA Drivers for Windows 98SE

The following section describes the SMI721 driver installation procedures for Windows 98SE.

Step 1: Click ***Start*** ⇒ ***Settings*** ⇒ ***Control Panel.***
Step 2: Double click ***Display***.
Step 3: Click ***Setting.***
Step 4: Click ***Advanced*** ⇒ ***Adaptor*** ⇒ ***Change.***
Step 5: Click ***Next.***
Step 6: Click ***Display a list of all the drivers in a specific location, so you can select driver you want*** ⇒ ***Next.***
Step 7: Select ***all hardwares*** ⇒ ***Have Disk*** ⇒ ***Browse***
Step 8: Insert Driver CD to CD-ROM
(Assuming that E drive is your CD drive)
Step 9:



Step 10: Click *OK* ⇒ ***OK*** ⇒ ***OK***
Step 11: Click ***Next*** ⇒ ***Finish*** ⇒ ***Yes***.
Step 12: Restart your computer now.

Installing the VGA Drivers for Windows NT 4.0

The following section describes the SMI721 driver installation procedures for Windows NT 4.0.

Step 1: Insert the driver CD into CD-ROM.
(Assuming that D drive is your CD drive)
Step 2: Click ***Control Panel*** ⇒ ***Display*** ⇒ ***Settings***
Step 3: Click ***Display Type*** ⇒ ***Change*** ⇒ ***Have Disk***
Step 4: Type ***D:\vga\69000\winnt40***
Step 5: Click ***OK*** ⇒ ***OK*** ⇒ ***Yes***
Step 6: Click ***OK*** ⇒ ***Close*** ⇒ ***Close***
Step 7: Click ***Yes.*** Restart your computer now

Chapter 4

MBC-140 LAN Driver Installation Guide

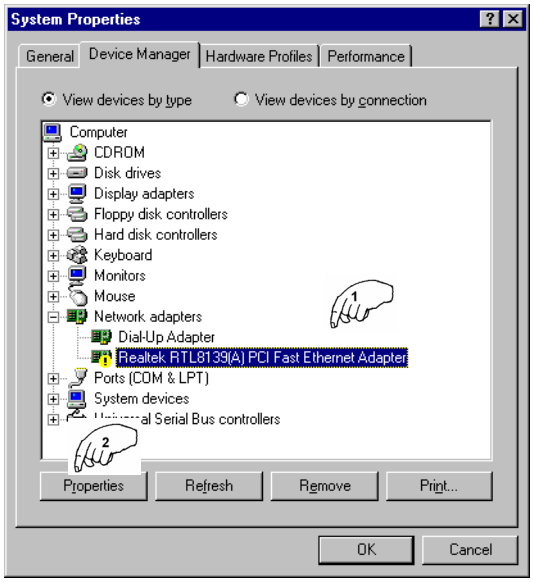
This chapter provides information on how to install the MBC-140 LAN Driver that comes in this CD driver with the package. Please follow the instructions set forth in this chapter carefully. Please note that there must be relevant software installed in your system before you could proceed to install the Audio drivers.

The following items are covered in this chapter:

Installing the LAN Drivers for Windows Millennium Edition

The following section describes the Audio driver installation procedures for Windows Me.

Step 1: Click ***Start*** ⇒ ***Settings*** ⇒ ***Control Panel***.
Step 2: Click ***System***.
Step 3:

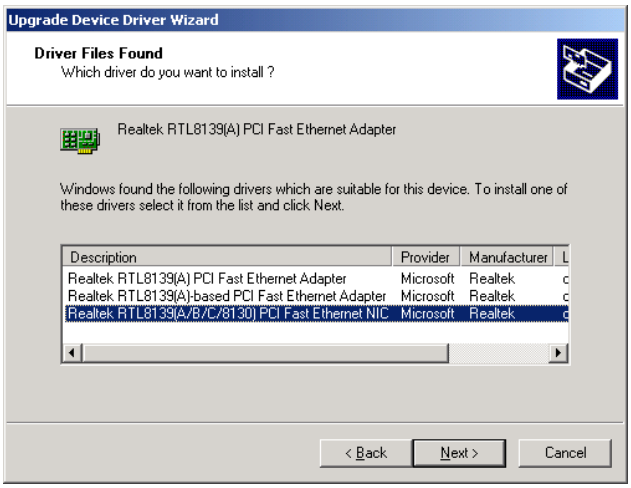


Step 4: Click ***Driver*** ⇒ ***Update Driver***.
Step 5: Select ***Specifiy location of the driver*** ⇒ ***Next.***
Step 6: Insert driver CD into CD-ROM.
(Assuming that D drive is your CD drive)
Step 7: Type: ***D:\LAN\rtl8139\win98*** ⇒ ***Next.***
Step 8: Select ***Install one of the other driver*** ⇒ ***View List.***
Step 9: Click ***OK*** ⇒ ***Next*** ⇒ ***Next.***
Step 10: Type: ***D:\LAN\rtl8139\win98.***
Step 11: Click ***OK*** ⇒ ***Yes*** ⇒ ***Finish.***
Step 12: Click ***Yes.*** Restart your computer now.

Installing the LAN Drivers for Windows 2000

The following section describes the Audio driver installation procedures for Windows 2000.

Step 1: Click ***Start*** ⇒ ***setting*** ⇒ ***control Panel.***
Step 2: Click ***System.***
Step 3: Click ***Device manager*** ⇒ ***Driver*** ⇒ ***Update driver.***
Step 4: ***Next.***
Step 5: ***Next.***
Step 6: Insert driver CD into CD-ROM.
Step 7: Select ***Specify a location*** ⇒ ***Next.***
(Assuming that D drive is your CD drive)
Step 8: Type ***D:\LAN\rtl8139\win2000.***
Step 9: Click ***OK.***
Step 10: Select ***install one of the other drivers*** ⇒ ***Next.***
Step 11:

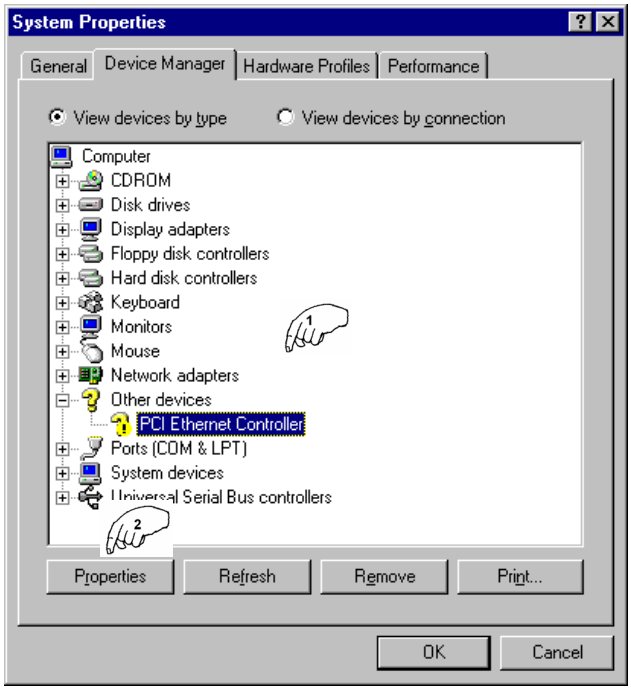


Step 12: Click ***YES*** ⇒ ***YES*** ⇒ ***Finish.***
Step 13: Restart your computer now.

Installing the LAN Drivers for Windows 98SE

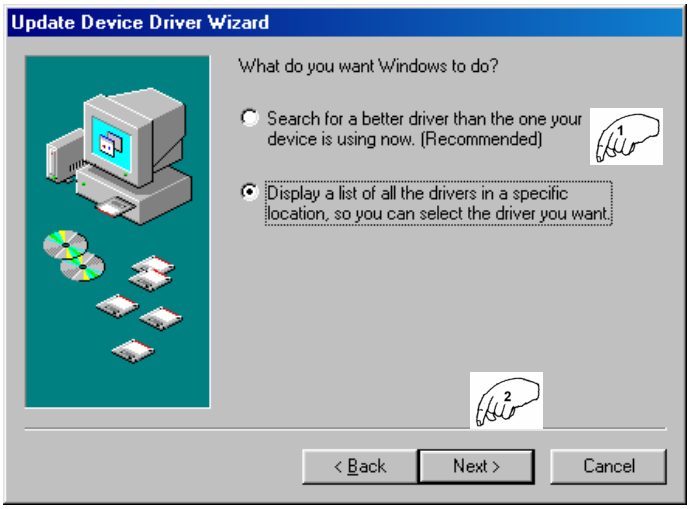
The following section describes the Audio driver installation procedures for Windows 98SE.

Step 1: Click ***Start*** ⇒ ***Settings*** ⇒ ***Control Panel.***
Step 2: Click ***System***.
Step 3:



Step 4: Click ***Driver*** ⇒ ***Update Driver***.
Step 5: Click ***Next***.

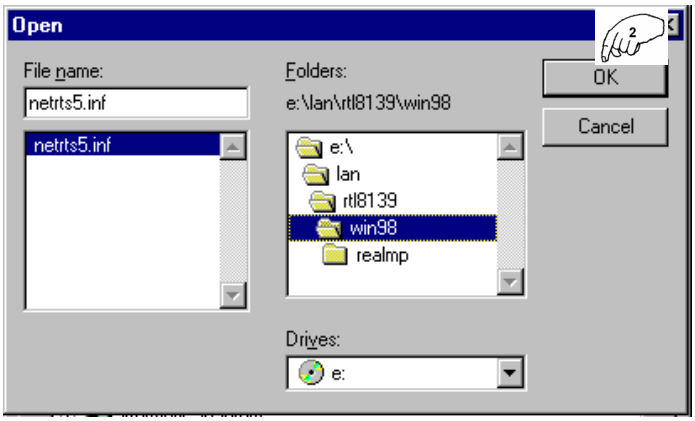
Step 6:



Step 7: Click ***Network Adaptor ⇒ Next.***

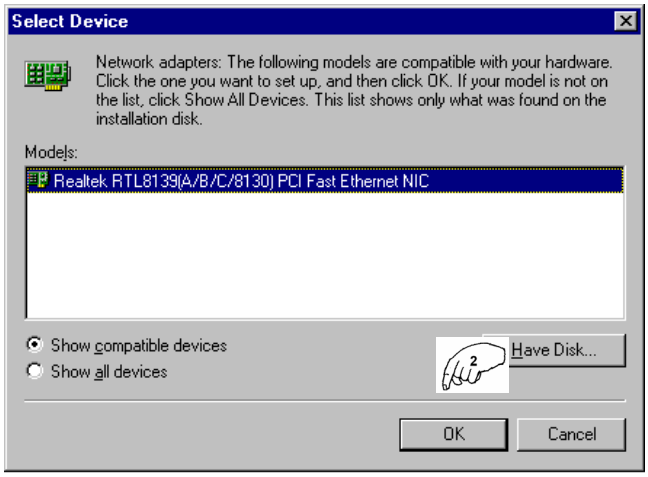
Step 8: Click ***HaveDisk ⇒ Browse.***

Step 9:



Step 9: Click ***OK.***

Step 10:



Step 11: Click ***OK*** ⇒ ***Next.***
Step 12: Insert 98SE CD into CD-ROM ⇒ ***OK.***
(Assuming that D drive is your CD drive)
Step 13: Type*:* ***D:\win_98se\setup\win98.***
Step 14: Click ***OK*** ⇒ ***Yes.*** Restart your computer now.

Installing the LAN Drivers for Windows NT 4.0

The following section describes the Audio driver installation procedures for Windows NT 4.0.
Before install Windows NT 4.0, You have to install Service Pack 3 or above first.

Step 1: Click ***Start*** ⇒ ***setting*** ⇒ ***control Panel.***
Step 2: Click ***Network*** ⇒ ***Adapters*** ⇒ ***Add.***
Step 3: Click ***HaveDisk***.
Step 4: Insert driver CD into CD-ROM.
(Assuming that D drive is your CD drive)
Step 5: Type ***D:\LAN\rtl8139\winnt40.***
Step 6: Click ***OK*** ⇒ ***OK*** ⇒ ***OK*** ⇒ ***Close.***
Step 7: Click ***Yes.*** Restart your computer now.