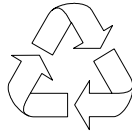


# Acer TravelMate 650 Series

## Service Guide

Service guide files and updates are available on the ACER/CSD web; for more information, please refer to <http://csd.acer.com.tw>



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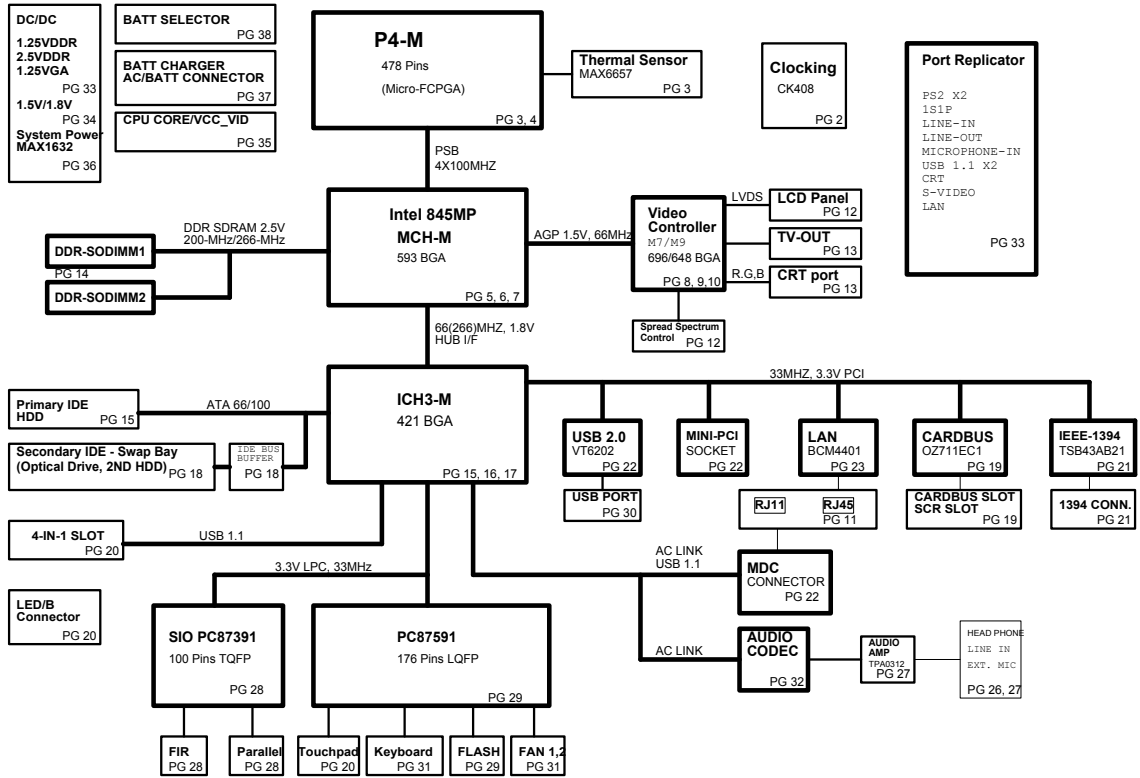
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# System Block Diagram





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## Lock Keys

The keyboard has three lock keys which you can toggle on and off.



Lock Key	Description
Caps Lock	When Caps Lock is on, all alphabetic characters typed are in uppercase.
Num lock (Fn-F11)	When Num Lock is on, the embedded keypad is in numeric mode. The keys function as a calculator (complete with the arithmetic operators +, -, *, and /). Use this mode when you need to do a lot of numeric data entry. A better solution would be to connect an external keypad.
Scroll lock (Fn-F12)	When Scroll Lock is on, the screen moves one line up or down when you press  and  respectively. Scroll Lock does not work with some applications.

## Memory Combinations

Slot 1	Slot 2	Total Memory
0MB	128MB	128MB
0MB	256MB	256MB
0MB	512MB	512MB
128MB	128MB	256MB
128MB	256MB	384MB
128MB	512MB	640MB
256MB	128MB	384MB
256MB	256MB	512MB
256MB	512MB	768MB
512MB	128MB	640MB
512MB	256MB	768MB
512MB	512MB	1024MB

**NOTE:** Above table lists some system memory configurations. You may combine DIMMs with various capacities to form other combinations. On above table, the configuration of slot 1 and slot 2 could be reversed.

## LAN Interface

Item	Specification
Chipset	BroadCom 4401
Supports LAN protocol	10/100 Mbps
LAN connector type	RJ45
LAN connector location	Rear panel

## Modem Interface

Item	Specification
Data modem data baud rate (bps)	56K
Supports modem protocol	V.90 MDC
Modem connector type	RJ11
Modem connector location	Rear panel

## Blue-MODEM Interface

Item	Specification
Chipset	CSR BC02 (Blue-tooth)/Agere Scorpio I (MODEM)
Data throughput	200k bps (Blue-tooth)/56K bps (MODEM)
Protocol	Blue-tooth 1.1
Interface	USB 1.1+MDC
Connector type	RJ11 (MODEM)

## Wireless Module 802.11b (optional device)

Item	Specification
Chipset	Intersil Prism 3
Data throughput	11M bps
Protocol	802.11b
Interface	Mini-PCI type III

**Info.**

PhoenixBIOS Setup Utility					
Info.	Main	Advanced	Security	Boot	Exit
					Item specific Help
CPU Type :	Pentium (R) Pentium 4				
CPU Speed	3.06GHz				
IDE1 Mode Name:	TOSHIBA/IK3018GAP-(P M)	Manufacturer & Model String			
IDE1 Serial Number:	Y2554027T				
IDE2 Model Name:	Slimtype DVD-ROM SD-081-(SM)	Manufacturer & Model String			
IDE2 Serial Number:					
SYS BIOS Ver:	Vx.xx				
VGA BIOS Ver:	ATIM7-P V0.2				
KBC BIOS Ver:	Vx.xx				
Serial Number:	xxxxxxxxxxxxxxxxxxxxxx	22 Byte			
Asset Tag #:	N/A 32 Byte				
Product Name:	TravelMate 650 16 Byte				
Manufacturer:	Acer 16 Byte				
UUID:	xxxxxxxxxxxxxxxxxxxxxx	32 Byte			
F1 Help	↕ Select Item	F5/F6 Change Values		F9 Setup defaults	
Esc Exit	←→ Select Menu	Enter Select ▸ Sub-Menu		F10 Save and Exit	

Parameter	Description
Floppy Disk Drive	Shows floppy drive type informaiton.
Serial Number	This field displays the serial number of this unit.
UUID Number	UUID=32bytes

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## BIOS Flash Utility

The BIOS flash memory update is required for the following conditions:

- New versions of system programs
- New features or options
- Restore a BIOS when it becomes corrupted.

Use the Phlash utility to update the system BIOS flash ROM.

**NOTE:** If you do not have a crisis recovery diskette at hand, then you should create a **Crisis Recovery Diskette** before you use the Phlash utility.

**NOTE:** Do not install memory-related drivers (XMS, EMS, DPMS) when you use the Phlash.

**NOTE:** Please use the AC adaptor power supply when you run the Phlash utility. If the battery pack does not contain enough power to finish BIOS flash, you may not boot the system because the BIOS is not completely loaded.

Follow the steps below to run the Phlash.

1. Prepare a bootable diskette.
2. Copy the Phlash utilities to the bootable diskette.
3. Then boot the system from the bootable diskette. The Phlash utility has auto-execution function.

## System Diagnostic Diskette

This diagnostic diskette is for the Acer TravelMate 650 series notebook machine. However, system diagnostic utility is not ready as service CD released. Acer HQ CSD will upload the utility to CSD website as soon as it is ready.

# Disassembling the Main Unit

## Remove the function key board and the keyboard

1. Take the wireless antenna out of the hook on the function key board.
2. Disconnect function key board connector
3. Unscrew the three screws holding the function key board.

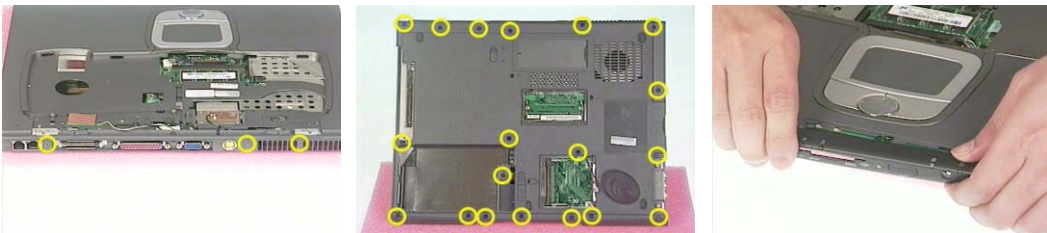


4. Remove the three screws that secure the keyboard.
5. Turn over the unit and remove the two screws as the picture shows.
6. Turn over the keyboard. Disconnect the keyboard FFC then remove the keyboard.



## Separate the main unit into the logic upper and the logic lower assembly

1. Remove the three screws on the rear panel.
2. Unscrew the 19 screws on the bottom panel.
3. Detach the front bezel from the main unit.



4. Remove the two screws. Then take the right and the left antenna off the main unit.
5. Disconnect the touchpad cable.
6. Pull out the right and the left wireless LAN antenna, then detach the logic upper assembly from the logic lower assembly.

- 
- External keyboard

If any of these devices do not work, reconnect the cable connector and repeat the failing operation.

## Memory check

Memory errors might stop system operations, show error messages on the screen, or hang the system.

1. Boot from the diagnostics diskette and start the doagmpstotics program (please refer to main board).
2. Go to the diagnostic memory in the test items.
3. Press F2 in the test items.
4. Follow the instructions in the message window.

**NOTE:** Make sure that the DIMM is fully installed into the connector. A loose connection can cause an error.

## Power System Check

To verify the symptom of the problem, power on the computer using each of the following power sources:

1. Remove the battery pack.
2. Connect the power adapter and check that power is supplied.
3. Disconnect the power adapter and install the charged battery pack; then check that power is supplied by the battery pack.

If you suspect a power problem, see the appropriate power supply check in the following list:

- "Check the Battery Pack" on page 64

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## Undetermined Problems





The diagnostic problems does not identify which adapter or device failed, which installed devices are incorrect, whether a short circuit is suspected, or whether the system is inoperative.

Follow these procedures to isolate the failing FRU (do not isolate non-defective FRU).

**NOTE:** Verify that all attached devices are supported by the computer.

**NOTE:** Verify that the power supply being used at the time of the failure is operating correctly. (See “Power System Check” on page 63):

1. Power-off the computer.
2. Visually check them for damage. If any problems are found, replace the FRU.
3. Remove or disconnect all of the following devices:
  - Non-Acer devices
  - Printer, mouse, and other external devices
  - Battery pack
  - Hard disk drive
  - DIMM
  - PC Cards
4. Power-on the computer.
5. Determine if the problem has changed.
6. If the problem does not recur, reconnect the removed devices one at a time until you find the failing FRU.
7. If the problem remains, replace the following FRU one at a time. Do not replace a non-defective FRU:
  - System board
  - LCD assembly

Picture	No.	Partname And Description	Part Number
		TOUCHPAD	56.T23V7.001
Speaker			
		SPEAKER SET	6K.T23V7.002
Heatsink			
		HEATSINK W/FAN	6K.T23V7.003
Reader			
		SMART CARD READER	60.T23V7.007
		4 IN 1 READER	6K.T23V7.004
Microphone			
		MICROPHONE	23.T23V7.001
Others			
		LCD LATCH W/O SPRING	6K.T23V7.005
		LCD SCREW RUBBER UPPER	47.T23V7.001
		LCD SCREW RUBBER LOWER	47.T23V7.002
Screws			
		NUT-I/O	86.T23V7.001
		SCREW M1.6X4.0-I-NI-NYLOK	86.T23V7.002
		SCREW M2.0X2.5-I-NI-NYLOK	86.T23V7.003
		SCREW M2.0X3.0-I-NI-NYLOK	86.T23V7.004
		SCREW M2.0X3.5-I-NI-NYLOK	86.T23V7.005
		SCREW M2.0X5-I-NI-NYLOK	86.T23V7.006
		SCREW M2.5X3-I-NI-NYLOK	86.T23V7.007
		SCREW M2.5X4.0-B-NI-NYLOK	86.T23V7.009
		SCREW M2.5X4-I-NYLOK	86.T23V7.010
		SCREW M2.5X5.0-I-NI-NYLOK	86.T23V7.011

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Item	Specifications
Bluetooth	Logitech M-BD58 Logitech M-UA34 Logitech M-UB48 Microsoft IntelliMouse Explorer
Port Replicator	Acer Port Replicator

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