



TECHNICAL REFERENCE GUIDE

ACE MUSTANG SERIES

MODEL: W640



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INTRODUCTION

Audience

This manual is mainly written for professional system integrators, PC technicians, and end of life recycling facilities, with the exception of the Energy Management Section, which is written to provide additional guidance on standard energy settings and configurable energy settings for the end user.

Resources

If you have any questions regarding this manual or computer system, please contact our support team through Ace Computers Support page at support.acecomputers.com

This manual may be periodically updated without notice. Please check the Ace Computers website for possible updates to the manual revision level.



ENERGY STAR AND POWER MANAGEMENT

What is Energy Star?

Created by the Environmental Protection Agency (EPA) and the United States Department of Energy (DOE), the Energy Star program is a strict set of specifications that residential appliances and construction elements (washers, dryers, refrigerators, freezers, dishwashers, televisions, tablets, computers, monitors, water heaters, HVAC units, dehumidifiers, air cleaners and purifiers, lighting, insulation and more) must meet through evaluation and testing to achieve certification.

The Energy Star rating assures consumers that the product has been EPA and DOE certified to function as well or better than its peers, while saving money, energy and the environment due to its greater energy efficiency.

Benefits of Energy Star

- Increased Efficiency
- Reduced Energy Use
- Reduced Utility Bills
- Reduced Power Plant Emissions and Carbon Footprint
- Wide Selection, Rebates, and Convenience

W640 Power Management Settings “As Shipped”

The default Power Management settings have been selected for compliance with Energy Star and are recommended by the Energy Star program for optimal energy savings.

Power Management Option	Setting
System Sleep Mode	After 30 min. of user inactivity
Display Sleep Mode	After 10 min. of user inactivity
Primary Hard Drive – “Hard Disk Turn Off”	20 min.

How to wake your computers or monitor from Sleep or Hibernate Mode?

To wake up your computer or monitor from sleep or hibernate, move the mouse or press any key on the keyboard. If this does not work, press the power button to wake up the computer.

Wake Management

- Capable of both remote (via network) and scheduled (via real time clock) wake events from Sleep Mode.
- Provide clients with the ability to centrally manage (via vendor tools) any wake management settings that are configured through hardware settings if the manufacturer has control over such features.

WoL (Wake on LAN)

WoL Capabilities/Default Settings	Yes	No
Has the ability to Enable and Disable WoL for Sleep Mode	<input checked="" type="checkbox"/>	
WoL Enables from Sleep by default:		<input checked="" type="checkbox"/>
WoL Enabled from Off by default:		<input checked="" type="checkbox"/>

WoL from Sleep:

WoL from Sleep - Default Settings	Yes	No
Shipped Enabled Under All Conditions		<input checked="" type="checkbox"/>
Shipped Enabled When Operating on AC power only		<input checked="" type="checkbox"/>
Shipped Disabled	<input checked="" type="checkbox"/>	
Shipped Disabled with both client OS and Network Controls to Enable Feature		<input checked="" type="checkbox"/>

ILLUSTRATED SYSTEM DISASSEMBLY/REASSEMBLY INSTRUCTIONS

Introduction

This section of the technical reference guide is intended to provide the following information:

- Information on parts requiring selective treatment per WEEE Directive
- Disassembly process for removal of external enclosure without tools
- Disassembly instructions, including required tools, as applicable
- Diagram and/or pictorial representation of all parts in the system

This section of the user manual is intended to provide guidance to end of life recyclers on the presence of materials and components that require selective treatment, per Article 15 of the EU WEEE Directive 2012/19/EU.

The provided information should also help direct recyclers to proper methods for removing parts and general product disassembly instructions. This Chapter also outlines specific substances, mixtures, and components that must be removed from any separately collected electronic waste component and shall be disposed or recovered in compliance with Directive 2008/98/EC.

Please note: All the illustrations in the below disassembly instructions are for demonstration only. The system and components shown in this section are a representative sample.

Replacement Parts

Refer to section “UPGRADES, SERVICE, AND REPAIR” for information on how to obtain replacement components for your W640.



NOTE: While the components of this computer can be replaced by the end user, Ace Computers does not recommend that an end user without previous computer repair experience perform the upgrades and/or replacement of said components. Computer components are delicate and can easily be damaged. If you are uncertain about replacement or upgrade of your computers, the Ace Computers technical support team does offer “depot” services for on-site system repair and upgrade. Please contact the Ace Computers Technical Support team for additional information and pricing.



CAUTION: Always power off the system and unplug the power cord(s) before opening the side panel to access the internal components.



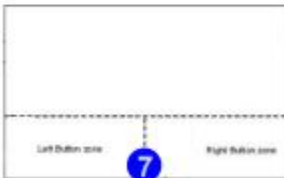
ATTENTION: Electrostatic discharge potential.
Your computer’s internal components are highly susceptible to risk of damage from electrostatic discharge (static electricity, which occurs naturally on your body due to friction). To avoid damaging your equipment, always earth yourself to your computer system before opening the computer’s chassis or handling any internal component(s).

Representative Desktop Component Layout

Please note the illustration below is a representative sample of the W640, your PC may include additional components or variations of this family configuration.

Figure 1 - 2
LCD Panel Open

1. Built-In PC Camera (Optional)
2. PC Camera LED
3. Built-In Array Microphone
4. LCD
5. Power Button
6. Keyboard
7. Touchpad & Buttons
8. Fingerprint Reader Sensor
9. LED Indicators



Note that the Touchpad and Buttons valid operational area is that indicated within the red dotted lines above.

System Map: LCD Panel Open



System Map: Left View of W640 Model

Figure 1 - 7
Left View

1. DC-In Jack
2. External Monitor Port
3. RJ-45 LAN Jack
4. 1 * Type-A Powered USB 3.0 Port (USB 3.1 Gen 1)
5. 1 * Type-A USB 3.0 Port (USB 3.1 Gen 1)
6. HDMI Out Port
7. Mini DisplayPort 1.2
8. 1 Type-C USB 3.1 Port (USB 3.1 Gen 2)
OR
(Factory Option)
1 * USB 3.1 Gen 2 (Type C) Thunderbolt™ 3 Combo Port (* See notes overleaf)
9. Multi-In-1 Card Reader



System Map: Right & Rear Views of W640 Model

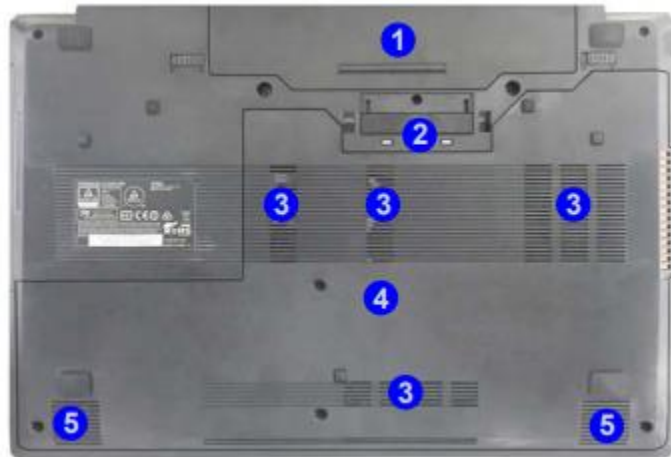
Figure 1 - 8
Right & Rear Views

1. 1 * USB 2.0 Port
2. Microphone-In Jack
3. 2-in-1 Audio Jack (Headphone Out/ S/PDIF Out Jack)
4. Optical Device Drive Bay (for DVD Device)
5. Security Lock Slot
6. Smart Card Reader
7. Battery



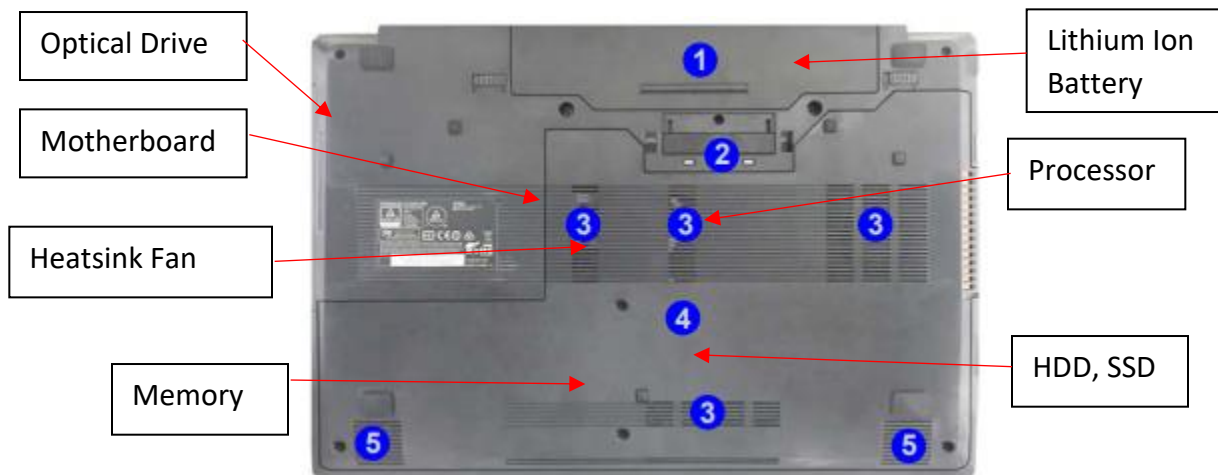
System Map: Bottom View of W640 Model

- Figure 1 - 9**
Bottom View
1. Battery
 2. Docking Port
 3. Fan Intake/Vent
 4. Component Bay Cover
 5. Speakers



W640 Disposal/Selective Treatment

The following section outlines the components of the W640 that required Selective Treatment/Special Handling Per Annex VII, Directive 2012/19/EU:



The HDD, SSD, Memory, Motherboard, Optical Drive, and External Power Supply each contain one printed circuit board of greater than 10 sq. cm and must be removed from the device and must be disposed of, or recovered, in compliance with the requirements of Directive 2008/98/EC.

Any plastic components within the heatsink fan must be removed separately due to the presence of brominated flame retardants and shall be disposed or recovered in compliance with Directive 2008/98/EC.

The processor must be disposed of, or recovered, in compliance with the requirements of Directive 2008/98/EC.

A lithium-ion battery resides on the bottom rear of the laptop and a lithium-ion coin cell battery resides on the motherboard within the laptop. Both batteries must be removed separately from the laptop and shall be disposed or recovered in compliance with Directive 2008/98/EC.

The LCD (liquid crystal display) screen is greater than 100 sq. cm and must be removed separately from the laptop and shall be disposed or recovered in compliance with Directive 2008/98/EC.

Any external electrical cables must be removed separately and shall be disposed or recovered in compliance with Directive 2008/98/EC.

The processor must be disposed of, or recovered, in compliance with the requirements of Directive 2008/98/EC.

Battery



Handle used batteries carefully. Do not damage the battery in any way; a damaged battery may release hazardous materials into the environment. Do not discard a used battery in the garbage or a public landfill. Please comply with the regulations set up by your local hazardous waste management agency to dispose of your used battery properly.

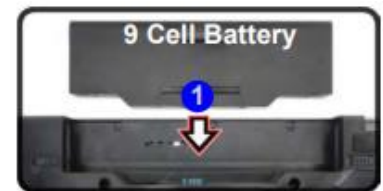
Location: The battery is located on the bottom rear of the laptop, see illustration below.

Type and number of fastenings: Interference snap fit

Tools required: None.

Procedure:

Step 1: Ensure the computer is off, unplugged, and any potential energy is dissipated. Turn the laptop over.

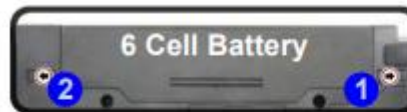


Step 2: Slide latch “1” in the direction indicated below, then slide hold latch “2” in place and slide the battery out in the direction of arrow “3”.

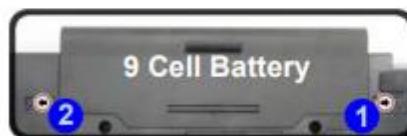


Reinstallation

Step 4: Turn the computer off, and turn it over



Step 5: Slide the battery into the compartment in the direction of the arrow “1”.



Step 6: Slide the latched “2” and “3” in the direction of the arrows to lock the battery.

Disposal:



Selective Treatment/ Special Handling Per Annex VII, Directive 2012/19/EU: A lithium-ion battery resides on the bottom rear of the laptop and a lithium-ion coin cell battery resides

on the motherboard within the laptop. Both batteries must be removed separately from the laptop and shall be disposed or recovered in compliance with Directive 2008/98/EC.

External Power Cable

Location: The inlet to the power cable is located on the I/O panel on the left view of the laptop.

Type and number of fastenings: None, direct pressure connection method.

Tools required: None.

Procedure:

Step 1: Ensure your computer is powered down.

Step 2: Disconnect the external power cable from the main laptop assembly.

Reinstallation

Step 3: Connect the external power cable from the left view of the laptop into the motherboard connection point.



Disposal:



Selective Treatment/Special Handling Per Annex VII, Directive 2012/19/EU: Any external electrical cables must be removed separately and shall be disposed or recovered in compliance with Directive 2008/98/EC. The external power supply contains one printed circuit board greater than 10 sq. cm and must be removed from the device and must be disposed of, or recovered, in compliance with the requirements of Directive 2008/98/EC.

Chassis Bottom Cover Removal

Location: In order to access the internal components of your system, you will need to remove the bottom cover of the chassis.

Type and number of fastenings: Four Phillips head screws

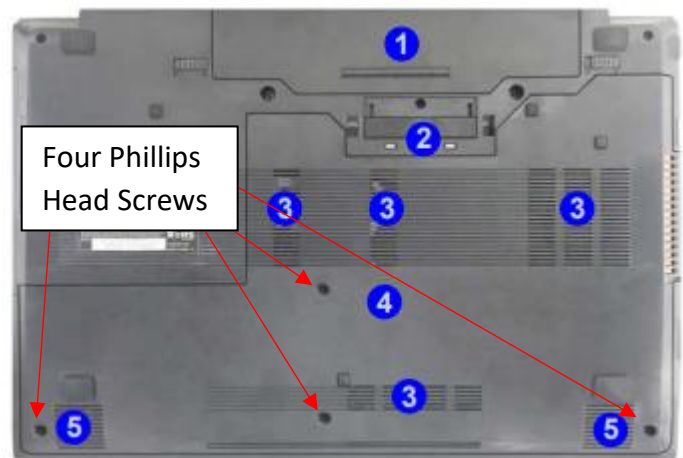
Tools required: Phillips head screwdriver

Procedure:

Step 1: Ensure the desktop is off, unplugged, and any potential energy is dissipated.

Step 2: Unfasten the (4) Phillips screws on the bottom front side rear of the chassis.

Step 3: Once removed, carefully slide the chassis bottom panel directly upward.



Contact Ace Computers Support Desk for help

Ace Computers staffs a technical support desk and is always ready to help.



You can contact the team at support@acecomputers.com

- or-

call 877-223-2667

-or-

visit the [acecomputers.com](https://www.acecomputers.com) and click “Support” to start a new support ticket online.

UPGRADES, SERVICE, AND REPAIR

Replacement and Repair Services are available for a minimum of three years after date of purchase, and often times if a direct replacement is not available and upgrade replacement can be found for several years beyond the initial 3-year mark, ensuring the longest possible utilization of your PC.

Ordering Parts, Requesting Repair, or Talking to Technical Support

The Ace Computers technical support team is ready and available to help in providing replacement parts, helping to identify compatible upgrades, or to answer software questions.

Please have your serial number available for reference when contacting Ace Computers.

You can contact the team at support@acecomputers.com

- or -

call 877-223-2667

-or-

visit the support.acecomputers.com site online.



Spare Parts List

Component Description	Part Number
Laptop	W640
External Power Connection Cable	XXXXXXXXYY* Power Connection Spare Part
Docking Station	XXXXXXXXYY* Docking Station Spare Part
*Where XXXXXXXYY is the initial 9 characters of the computer serial number.	
<i>Spare parts can be purchased by contacting the Ace Computers Technical Support Team.</i>	

PRODUCT TAKE BACK, END OF LIFE PROCESSING, and E-WASTE PROGRAM

Nation Wide Take Back Services

If your PC has reached its end of life or is no longer useable, Ace Computers is excited to offer a Nation-Wide take back service. We will work with you to get the product back and will ensure it is proper disposed of with a certified R2 electronics recycling facility.

Ace Computers has partnered with a local R2-certified electronics waste recycling facility near our HQ in Des Plaines, IL.

For additional information and steps to take regarding our Product Take-Back, End-of-Life Processing, and E-Waste Program, please visit our website at <https://acecomputers.com/company/sustainability/> > EPEAT Take-Back/EOL/E-Waste Program Tab.

REVISION HISTORY

Release Date	Changes
9.26.2022	Initial Release
9.28.2022	Updated disposal information for batteries, LCD module, and external power supply.