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AISR Acer Netbook Technical Review

Technical Review Document

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Product Description:

Product:	Acer Aspire ZG5
Product Line:	Netbook / Mininotebook
Model Number:	AOA150-1049
Serial Number:	85005839625

Specifications:

Operating System	<ul style="list-style-type: none"> Windows® XP Home Edition
Processor	<ul style="list-style-type: none"> Intel® Atom™ Processor N270 (512KB L2 cache, 1.60GHz, 533MHz FSB)
Chipset	<ul style="list-style-type: none"> Mobile Intel® 945GSE Express
Memory	<ul style="list-style-type: none"> 1GB 160GB hard drive SD Card reader
Storage	<p>Multi-in-one card reader:</p> <ul style="list-style-type: none"> - Supports optional MultiMediaCard™, Reduced-Size MultiMediaCard™, Secure Digital, Memory Stick®, Memory Stick PRO™ or xD-Picture Card™ - With optional adapter supports optional Memory Stick Duo™, Memory Stick PRO Duo™, miniSD™, microSD™
Video	<p>8.9" WSVGA (1024 x 600) TFT LCD</p> <p>VGA Port</p> <p>Integrated Intel® Graphics Media Accelerator 950</p>

Audio	<ul style="list-style-type: none"> • Two integrated stereo speakers <p>Integrated digital microphone</p>
	Headphones/speakers/line-out and microphone ports
Interface Ports	<ul style="list-style-type: none"> • DC-in RJ-45 LAN VGA <p>Headphones/speakers/line-out Microphone Three USB 2.0</p>
	<ul style="list-style-type: none"> • SD Card reader
Card Slots	<p>Multi-in-one card reader:</p> <ul style="list-style-type: none"> - Supports optional MultiMediaCard™, Reduced-Size MultiMediaCard™, Secure Digital, Memory Stick®, Memory Stick PRO™ or xD-Picture Card™ - With optional adapter supports optional Memory Stick Duo™, Memory Stick PRO Duo™, miniSD™, microSD™
Communications	<ul style="list-style-type: none"> • Atheros AR5BXB63 • 10/100 LAN
	Integrated Acer® Crystal Eye webcam
	<ul style="list-style-type: none"> • 84-key keyboard, embedded numeric keypad, hotkey controls, 1.6mm minimum key travel, international language support
	12 function, four cursor keys
User Interface	WLAN switch with LED
	Power button with LED
	Touchpad with two buttons
	With Windows® XP Home Edition: one Windows® key
Dimensions & Weight	<ul style="list-style-type: none"> • 9.8" (249.0mm) W x 6.7" (170.0mm) D x 1.1" (29.0) H / 2.2 lb. (995g)
Security	<ul style="list-style-type: none"> • Security Lock Opening
	<ul style="list-style-type: none"> • 30-watt AC adapter
Power	<p>Lithium ion batteries:</p> <ul style="list-style-type: none"> - Six-cell - up to 5.5 hours life with hard drive depending on configuration and usage

- Unless otherwise noted, all models come with a one-year limited warranty

Netbook Market/Industry Scope:

Netbooks is the fastest growing sector in the computer hardware market. With its dimensions and aggressive pricing from vendors, it is very appealing to the general consumer population. Its estimate global shipment is expected to reach 35 million this year (doubled from last year).

Because of this race, hardware standards, software standards, and support, are severely neglected.

- **Hardware Standard Issues**

1. 8.9 to 10.1 to 11.6? – About 3-4 months ago, netbook vendors (about 9; HP, ASUS, DELL, MSI, ACER, Lenovo, Zelybron, Samsung, Sony) announced 10.1-inch screens for their upcoming models (which means the discontinuing of the 8.9-inch screen, making the 10.1-inch as the new screen standard). The 10.1-inch model from Acer was released this past February (There are reports that Acer recently submitted a whole new 11.6-inch screen netbook to the patent office w/ a total revamp of internal hardware schematics).
2. Model #'s and Upgrades – Instead of having a base configuration of their netbook, they have a different model # for the slightest change (from Hard drive size to Netbook Color). There are 40 U.S. models, according to Acer's Webpage, and the current one purchased by AISR is **not** a listed U.S. model.
3. Change in Netbook Manufacturers – In October 2008, Acer dropped Quanta as their netbook manufacturer and chose Compal Winstron to manufacture their second generation of Aspire One Netbook. This change-over will take place by the second quarter of 2009. This could mean a tremendous change of internal hardware on any existing model of the Aspire One or a new line of Aspire all together.
4. Wireless Cards - There are no listed standard wireless cards. I have seen 4 different Atheros cards for the same line on student netbooks (mostly Atheros AR 5007).
5. Enterprise Level Netbook – At this time, the market does **NOT** have an enterprise level netbook. Purchases of all netbooks have been listed only at consumer sites, not enterprise purchase sites. (For example, Dell Minis are only listed in their Dell Home page, not Dell Business.) There are reports that Acer is going to release an enterprise netbook in May 2009. Having spoken to Thomas Jefferson University's Dell Rep, Dell is going to release one at that time too.

- **Software Standard Issues**

1. Operating System - Linux and Windows XP Home are the only options available to the netbook. We need to upgrade the netbooks to Windows

XP Professional in order to join it to our domain and secure the netbook. However, by doing so we run into three issues:

- a) According to our Microsoft License agreement, we would have to purchase the Windows XP upgrade from Home to Professional on every netbook.
 - b) We could void the manufacturer's warranty by installing another operating system.
 - c) If the manufacturer's warranty is not voided by installing another O/S, Microsoft will not support Windows XP Professional on this netbook.
2. Wireless Software – Simply put, there is none. Wireless software is needed to set the system to use the logged in user's credentials to authenticate to the wireless environment. Without it, we are unable to set multiple user logins for the netbook. With it, we can:
 - Monitor Traffic/Usage
 - Perform computer forensics, if security issues arise
 3. Office Software – Will Office be also needed in the netbook? Once again, there would be a need to discuss the software licensing on the netbook.
 4. Testing Limitations – Unfortunately, the Netbook was not purchased with a disk drive. I could not perform a Windows installation test and/or a wipe.

- **Support Issues**

1. On Acer's main site Netbook is a category separate from Notebooks. On Acer's support site, there is no category for Netbooks.
2. What is the warranty agreement? I did not receive any documentation on the device; and considering it is not a listed U.S. model on the Acer website, does it fall under international warranty?
3. I entered the Serial number in the AcerSupport (not a typo, there is no spaces in between) Site (listed below) and could not look up the warranty status or submit a service request.
<http://www.acerpanam.com/synapse/forms/webpage.cfm?website=AcerPanAm.com/us&siteid=7293&areaid=7>
4. According to the support, site the submission of the entire unit is required for any part repair.
5. Are repairs sent to the Acer Depot Repair? If so, where is it?
6. Are we buying the Netbooks directly from Acer?
7. What are the options for support with Acer?
8. Is there an Acer Partnership program? If so, what does it entail?
9. Can these laptops be purchased with a 3-year manufacturer's warranty?

Summary:

Faced with all the changes with Acer internally (industry standard changes, licensing issues, and lack of support from the vendor), I find the current netbook unsupportable. Creating Altiris images for these machines would require additional testing and modification. Without support and a promise of standardization from the vendor, it would be a constant race to complete images before the next change in the product line occurs. Modification of the Altiris images is required not only if there is a change of wireless card, but also if there is a change of the motherboard, video adapter, sound, etc.

As I finish this technical review, the market shows signs of an end to this current product's life cycle (the 8.9-inch netbook). Vendors are not standardizing hardware or software, because of the price wars and consumer end preferences. If we rush into the middle of this emerging market, we would be caught in the middle of support issues and/or obsolete hardware. By having the vendors and us standardize hardware, it will help with the quality of support (*ability to do hardware repairs or request of service*), compatibility (*with existing software/hardware/network on campus*), interoperability (*transfer data/image onto other machines on campus*), and safety (*ability to manage and load computrace or other computer forensic software*) of the computers on campus.

Even if we were to purchase the Acer 10.1-inch netbook that came out in February, I will not be surprised if it turns obsolete sometime during the fall. With promises of an enterprise line netbook from Dell (I was told Warranty Parts Direct and 3-year warranties are available for the enterprise level netbooks), I recommend our clients wait for the product and for Jeff IT's technical review on the Dell netbook. Netbooks show a great deal of potential and customer interest, but given the current market, I think it needs a little more time to define its own market standard.