

## SV-100-M-DVR Operations Manual



TAG 22355 TAG Way Dulles, VA 20166

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## 2 About TAG

## 2.1 Summary of Qualifications

TAG has served as a leading provider of IT solutions to DoD customers over the past 20+ years and has a long-standing and respected history of providing Systems Engineering, Electronic Equipment and Program Management support to US Military warfighters. Headquartered in Dulles, Virginia, TAG's state-of-the-art 35,000 sq. ft. engineering and manufacturing facility provides all the infrastructure, equipment, and manpower necessary to engineer, design, test, manufacture, and certify products to the rugged requirements of the tactical combat theater. Our facilities in Dulles, VA, San Diego, CA, and St. Louis, MO, allow for rapid deployment of products and support across the globe.

TAG quickly, efficiently, and cost-effectively tailors rugged solutions for large DoD programs with specific MIL-STD requirements. TAG's comprehensive Quality Assurance (QA) policy – enforced through application of our UL-registered ISO 9001:2000 certified processes – enables TAG to rapidly deploy systems and solutions that reliably withstand the stresses of the tactical environment. Today, there are over 20,000 TAG systems deployed across various weapons platforms throughout the US Military. TAG effectively balances all corporate assets – our people, expertise, infrastructure, and experience – to consistently and successfully execute and deliver to the DoD.

TAG's success lies in focusing on the corporate Mission Statement and leveraging the tenets of our business model to ensure the customer's expectations are exceeded throughout lengthy program lifecycles.

TAG's Mission is to resolve our customers' IT challenges with World-Class:

- Engineering;
- Manufacturing and Integration; and
- Lifecycle Management

Manufacturing Intergration Engineuring Engineering Engineering Engineering

TAG has a proven track record in

implementing these tenets to serve as a trusted advisor to our Government customers. TAG uses this foundation to ensure risk is mitigated, expectations are exceeded, and the customer can consistently rely on the company, our equipment, and our services.

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### 2.2 Core Competences

#### 2.2.1 Engineering

TAG's engineering methodology is built upon Multi-Disciplinary Optimization (MDO) and rigorous design reviews. Although PMs drive the schedule at TAG, Engineering leverages Computer-Aided Design (CAD) tools, Computational Fluid Dynamics (CFD) models, rapid prototyping processes, and diverse test equipment and facilities to ensure requirements are being met at every step of the design. TAG Engineering follows a proven design-review process, ensuring all entrance and exit criteria are met at each stage. Rigorous documentation is compiled to demonstrate requirement compliance, risks are mitigated, and decisions are prudent – throughout the design process.

TAG prides itself on its engineering laboratories and facilities. Over the past three years, TAG has invested in several pieces of equipment that allow TAG to test and certify products directly onsite to the harshest environmental requirements of military standards – including the MIL-STD-810F and DO 160D.

TAG's onsite test equipment currently includes a Highly Accelerated Lifecycle Testing (HALT) Chamber, an



Electromagnetic Interference (EMI) test chamber, and a high-/low-temperature thermal test chamber. TAG's facility also provides:

- A floor plan designed to support a cellular manufacturing model with modular assembly lines
- A dedicated 24-hour system burn-in room
- A modern production status tracking and Enterprise Resource Planning (ERP) system with external web collaboration capabilities
- Dedicated Quality Assurance workstations for system compliance and validation inspection

## 2.2.2 Manufacturing and Integration

TAG implements Cellular Manufacturing processes through our compartmentalized, state-of-the-art production facility to minimize waste byproducts and maximize production efficiency. TAG's manufacturing facility is physically partitioned to model the major philosophies of Lean Manufacturing. Consistent with the model, each of TAG's production cells are capable of operating in isolation; however personnel and tools are shared across all cells to streamline manufacturing operations, costs, and the

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production/integration schedule. TAG's floor technicians are cross-trained in multiple disciplines so they can be redistributed to any cell that encounters production bottlenecks, which ensures optimal efficiency.

#### 2.2.3 Lifecycle Management

TAG's world-class Program Management discipline models the renowned methodologies of the Project Management Institute (PMI) to ensure successful completion of the task at hand. Our Program Managers (PMs) serve as the voice of the customer – driving requirements to which the rest of TAG's organization answers. As an explicit tenet of TAG's corporate mission statement, the PMs not only track cost, schedule, and technical compliance throughout a project's period of performance, but also ensure the customer is supported well beyond it.



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## **Document Revision History**

Date	Version Number	Updated By	Description of Changes
08/18/2009	1.0	Alan Huckerby	Author

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## 3 About This Manual

#### 3.1 Scope and Audience

This Manual provides an introductory overview of the SV-100-MDVR. Designed to endure the rigors of harsh environments, products can withstand shock and vibration, high and low temperatures, and sand and dust. All of our servers are based on the latest in Intel® Core<sup>™</sup> Duo and Pentium® M technology. Configuration options include extended memory and enhanced video optimization. All of our products are backed by our world-class lifecycle management and post sales support.

#### 3.1.1 Organization:

This manual is divided into the following chapters:

- Chapter 1 provides Cautions and Warnings.
- **Chapter 2** provides operational information. This information is split into two (2) sections
- **Chapter 3** Contains all relevant Procedures and SV-100-M-DVRcomponents.

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## Chapter 1

Cautions and Warnings.

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## **4** Safety Instructions

Read this manual thoroughly, paying special attention to the cautions and warnings.

- 4.1 Types of warnings used in this manual
  - 4.1.1 Safety Symbols and Labels



DANGER



WARNING

CAUTION

These warnings and cautions indicate situations or practice that might result in property damage.

### 4.1.2 Conventions

### 4.1.2.1 Important Messages

Important messages appear where mishandling of components is possible or when work orders can be misunderstood. These messages also provide vital information associated with other aspects of system operation. The word "important" is written as "IMPORTANT," both capitalized and bold and is followed by text in italics. The italicized text is the important message.

## 4.1.2.2Warnings

Warnings appear where overlooked details may cause damage to the equipment or result in personal injury. Warnings should be taken seriously. Warnings are easy to recognize. The word "warning" is written as "WARNING," both capitalized and bold and is followed by text in

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italics. The italicized text is the warning message.

#### 4.1.2.3Cautions

Cautionary messages should also be heeded to help you reduce the chance of losing data or damaging the system. Cautions are easy to recognize. The word "caution" is written as "**CAUTION**," both capitalized and bold and is followed by text in italics. The italicized text is the cautionary message.

#### 4.1.2.4Notes

Notes inform the reader of essential but noncritical information. These messages should be read carefully as any directions or instructions contained therein can help you avoid making mistakes. Notes are easy to recognize. The word "note" is written as "**NOTE**".

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## **Chapter 2**

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## 5 SV-100-M-DVR Workstation Overview



Figure 5-1 SV-100-M-DVR

#### 5.1 Product Information

The SV-100-M-DVR sets the standard for Servers with state-of-the-art technology. The newest server can stand up to the harshest environments, and is designed specifically to be fully customized to support unique, missioncritical applications.

 Small Footprint Chassis, 4"H x 8"W x 8"D &7.1 lbs.

Your system may contain components not described in this User Manual. For detailed information on these components, refer to the manufactures website or contact TAG Technical Support at <u>tech.support@tag.com</u>.

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## 5.2 SV-100-M-DVR



Figure 5-2 SV-100-M-DVR (Front View)

#### 5.2.1 SV-100-M-DVR Specifications Chassis & Power Supply

- Dimensions: 4"H x 8"W x 8"D.
- Weight: 7.1 lbs.
- Internal Power: Built in DC power supply.
- External Power: External DC adapter (90W or 120W).
- Capable of sitting on a desk or mounted on a wall. (Option).

#### System Specifications.

- **CPU:** Intel® T7100 Core 2 Duo Processor 1.86 GHZ, 800MHz FSB.
- Cache: 2MB shared L2 cache per Core.
- Memory: 2GB DDR2 RAM
- **Controller:** On-board serial ATA controllers.
- **Storage:** 160GB SATA Hard Drive.
- Audio: Onboard Realtek ALC888.

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- **Onboard:** Intel 6MA965 graphics controller with integrated Graphics Media Accelerator X3100. (VGA and DVI Connectors).
- PCI-X Video Capture Card
- **Operating System:** Choice of Windows® Vista, Windows® XP Professional or Linux.
- I/O Ports:
  - (2) RJ-45 10/100/1000 Ethernet ports.
  - (10) USB 2.0 ports (6x internal; 4x external).
  - (2) Serial ports.
  - (3) Audio ports (Mic-in, Line-out, Line-in
  - PS/2 keyboard and mouse port.

#### **Optional**

- Keyboard: Mobile backlit USB keyboard.
- **Pointer:** Waterproof optical mouse.

#### **Environmental Specifications**

- **Operating Temperature:** Range of -0°C to 55°C, MIL-STD 810F Method 501.4, 502.4.
- Non-operating Temperature: Range of -40°C to 70°C, MIL-STD 810F Method 501.4, 502.4.
- Humidity: Range of 10-9% RH (Relative Humidity), MIL-STD 810F Method.
- **Shock:** MIL-STD-810F Method 516.5 (Tested per Requirement).
- Vibration: MIL-STD-810F Method 519.5 (Tested per Requirement).
- **Fungus/Mold:** MIL-STD-810F Method 508.5 (Tested per Requirement)
- **Sand/Dust:** MIL-STD 810F (Tested per Requirement).
- **Salt/Fog:** MIL-STD-810F Method 509.4 (Tested per Requirement).
- **Fungus/Mold:** MIL-STD-810F Method 508.5 (Tested per Requirement).

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#### Maintenance and Repair

• The SV-100-M-DVR is considered a line replaceable unit (LRU) and will be maintained and spared at the LRU level.



## 5.3 SV-100-M-DVR Connectors

Figure 5-3 SV-100 M-DVR Components and Connectors (Front View)



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Figure 5-4 SV-100-M-DVR Components and Connectors (Rear View)

#### 5.4 SV-100-M-DVR Components

This section provides an overview of the most common components installed in the SV-100-M-DVR. Information is also provided on how to identify specific components within your SV-100-M-DVR. For detailed information on the specific components installed, refer the manufactures website.

#### 5.4.1 Motherboard Model and Type

The version of the SV-100-M-DVRmotherboard can be determined by decoding the last three digits of the board part number.

For example: For the product C44686-703, the number following the "-" is as follows:

7 = Fabrication (FAB) Number 03 = Revision 3.

The board part number can be found on most motherboards.



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Figure 5-5 System Mother Board

#### 5.4.2 System Mother Board Main Features

- Supports Intel® UFC-PGA 478 Core<sup>™</sup> 2 Duo/Celeron® M mobile processor- Intel GME965 and ICH8M
- Two 200-pin SODIMM sockets support up to 4 GB dual channel DDR2 533/667 SDRAM
- Supports dual display for VGA, LVDS, and DVI
- Supports 4 serial ports and 3 SATA ports
- Built-in dual Gigabit Ethernet
- One CompactFlash Type I/II support
- Onboard TPM 1.2 support (optional).

AIMB-256G2-OAIE				
	Chipset	Intel® GME965/ICH8M		
	CPU Type	Socket 478		
Processor	Max Speed	2.2GHz		
	Processor	Intel® Core™ 2 Duo/Celeron M/ULV Core 2 Duo		
Memory	(Max)	4GB DDR2		
Display	Туре	VGA, LVDS, DVI		
1/0	СОМ	4 x RS-232		
WO	USB	10		
Expansion	32-bit PCI	1		

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Supported	AGP	0
	ISA	0
	Mini PCI	0
	PClex1	0
	PClex16	0
	PClex4	0
Network	LAN	2 GbE

Table 5-1 Mother Board Componer	nts
---------------------------------	-----

## 5.4.3 Video Capture Card



Figure 5-6 Video Capture Card

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#### 5.4.4 Features:

- Advanced DMA for ultra-high performance (full 30 fps)
- Hardware audio gain control
- Closed Caption extraction
- AVI or extended AVI capture for use with the most popular 3rd party editing and streaming software applications
- Hardware Cropping and Bitmap Overlay
- PCI-X compatible
- Audio Loop-back
- Simulstream® Ready

### 5.4.5 Specifications:

- Video Input: composite (BNC), S-Video
- Audio Input: balanced stereo (2 x XLR), unbalanced stereo (2 x RCA)
- Audio Output: unbalanced stereo line level (3.5 mm)
- Low-Profile Design Board (includes low-profile bracket)
- 64-bit PCI Interface
- 32-bit/33-MHz PCI Compatible
- 3.3-V PCI 2.3 compliant
- Drivers available for popular Microsoft
   Windows operating systems
- Linux drivers available (Open Source, provided via the Linux community)

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## Chapter 3

Procedures.

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## 6 Procedures

The procedures within this Chapter contain relevant information to ensure the SV-100-M-DVR maintains its maximum performance potential.

#### 6.1 SV-100-M-DVR Startup

- 1. Check to make sure that all the cables are seated and connected correctly to the back of the unit such as keyboard, mouse, monitor video cable and both power cables.
- 2. Connect video, touch screen USB, audio and power cables to the display CBP-19SW.
- 3. Press the momentary power switch on the server one time to turn the server on.
- 4. Press the power button on the display to turn the display on.
- 5. Once the server starts, System will go thru Power On self Test (POST) (no action is required at this time)
- 6. At windows dialog box press **Ctrl+Alt+Delete** at once to login
- 7. Type in the correct user name and password and then press enter to login
- 8. Once the operator is logged on to the unit they could use the computer as they wish.

## NOTE: Assuming the SV-100-M-DVR is not connected to any network.

#### 6.2 SV-100-M-DVR Shutdown

- 1. The operator needs to save all data, and then close all applications.
- 2. Once all data is saved and applications are closed, click on Start menu, select shutdown and then click OK to shutdown the computer.

#### 6.2.1.1 Passwords

In most cases a user (startup) password and a supervisor (setup) password can be set in the CMOS. When a Setup password is required, the computer will prompt for it when you try to

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access the BIOS setup. When a Startup password is configured, the computer will prompt for it at every startup.

The CMOS password can be reset by shortening the "CMOS restore to factory defaults jumper" or by temporarily removing the CMOS battery.

## 7 Identifying Server Components Using Device Manager

The Device Manager is one of Windows' most useful diagnostic tools. It lets you see all of the devices attached to your computer, and which resources they are each using. To access the Device Manager do the following:

1. Click **Start**, point to **Settings**, and then click **Control Panel**. (Figure 7-1).



Figure 7-1 Control Panel

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System Restor	e Automa	atic Updates	Remote
General	Computer Name	Hardware	Advance
	S	retem:	
		Microsoft Window	vs XP
		Professional	
		Version 2002	
		Service Pack 2	
	U. R	egistered to:	
	.0	TAG Engineering	
		TAG	
		55274-640-07051	44-23712
	Co	omputer:	
		Intel(R) Pent	ium(R) M
		processor 1.73GH	łz
		794 MHz, 1.00 GI	8 of RAM
		Physical Address	Extension

#### 2. Double-click the **System** icon. (Figure 7-2).

Figure 7-2 System Properties

3. Click the **Hardware** tab, and then click the **Device Manager** button. (Figure 7-3).



Figure 7-3 Device Manger

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After opening Device Manager, you will see a list of all the devices Windows detected on your system. The Device Manager display is recreated each time the computer is started, or whenever a dynamic change to the computer configuration occurs, such as addition of a new device while the system is running.

NOTE: To include hidden devices, on the View menu, click Show hidden devices. A check mark next to Show hidden devices indicates hidden devices are showing. Click it again to clear the check mark. Hidden devices include non-PnP devices and devices that have been physically removed from the computer but have not had their drivers uninstalled.

The devices shown represent the computer's current hardware configuration information. Any non-functioning devices are displayed with an exclamation point, indicating that a problem exists with the device; disabled devices are displayed with a small red "x" over the icon.

You can use Device Manager to enable or disable devices, troubleshoot devices, update drivers, use driver rollback, and change resources such as interrupt requests (IRQs) assigned to devices.

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## 7.1 Working with Device Properties

To display a device's properties do the following:

1. Access the Device Manager as described in steps 1 through 3. (Figure 7-4).



Figure 7-4 Device Manager

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 In the Device manager dialog box (Figure4-4\), double-click the device, or select the device and then click the **Properties** toolbar button. (Figure 7-5).

ieneral	Driver Details	Resources
9	ALL-IN-WONDE	R 9800 SERIES
	Device type:	Display adapters
	Manufacturer:	ATI Technologies Inc.
	Location:	PCI bus 1, device 0, function 0
the second second second	17 S. 19 S. 19 S. 17 S.	
Devic	device is working r	roperlu
Devic This If yo start	ce status device is working p u are having proble the troubleshooter.	properly.
Devic This If yo start	ce status device is working p u are having proble the troubleshooter.	properly. ms with this device, click Troubleshoot to
- Devic This If yo start	ce status device is working p u are having proble the troubleshooter.	properly. ms with this device, click Troubleshoot to Troubleshoot
Device	e status device is working p u are having proble the troubleshooter.	properly. ms with this device, click Troubleshoot to

Figure 7-5 Properties Dialog Box

In the device's Properties dialog box, there might be several tabs. You can view the status and configuration information, as well as the device manufacturer, device type, and location in the upper portion of the General tab.

The Device status box in the middle of the General tab displays the status of the device, including any errors. If the device has any problems, the Device Status box briefly describes the problem, and usually describes the appropriate course of action to correct the problem.

3. Click **Troubleshoot...** to use the built-in mechanisms for detecting the nature of the problem.

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Other tabs include the Driver tab, which displays the details of the driver being used. This tab also lets you update or uninstall the driver. The Resources tab displays the hardware resources being used. This tab allows you to see and resolve any conflicts caused by non-PnP devices. Along with these tabs, some devices have additional advanced settings or tabs for device-specific settings.

#### 7.2 Installing and Removing Hardware in Windows

Plug and Play (PnP) is a standard that makes installing new hardware devices easier. Prior to PnP, installing new hardware meant finding and installing peripheral drivers and making sure the new device didn't conflict with another device. Theoretically, if you have a computer designed for PnP and are using a PnP operating system (like Windows), installing a printer, sound card, modem, or other peripheral is a simple matter of plugging in the device.

It's not always quite this simple. Assuming you are using a PnP computer, when you attach a PnP device, you may see a message indicating that Windows has recognized the new deviceeither immediately or the next time you start up your system. If Windows needs a driver that is not currently installed, you may at that point be asked to insert a disk or the Windows CD-ROM. If you don't see a message but the device appears to be working, you can assume that everything is fine.

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#### 7.2.1 Using the Add New Hardware Wizard

If the device is not working properly, try using the Add New Hardware Wizard. To run this wizard, do the following:

1. From the **Start** menu, point to **Settings** and then click **Control Panel**. (Figure 7-6).



Figure 7-6 Control Panel

2. Double-click the **Add Hardware** icon. (Figure 7-7).



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#### Figure 7-7 Add hardware Wizard

### 7.3 Installing Legacy Peripherals

When you install what Microsoft calls a legacy peripheral, you will need to use the Add Hardware Wizard, as described to let Windows know about the new device.

NOTE: The term legacy refers to anything that's no longer on the cutting edge.

#### 7.3.1 Removing Legacy Peripherals

When removing a legacy peripheral from your system, you need to let Windows know that the device is gone. This enables Windows to reuse the resources (places in memory and internal communications channels) that it previously allocated to that device.

To tell Windows that you have removed a legacy device, perform the following steps:

 From the Start menu, point to Settings and then click Control Panel. (Figure 7-8).



Figure 7-8 Control Panel

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System Prope	rties			? 🔀
System Re	store	Automa	atic Updates	Remote
General	Comp	uter Name	Hardware	Advanced
		R	vstem: Microsoft Window Professional Version 2002 Service Pack 2 segistered to: TAG Engineering TAG 55274-640-07051 amputer: Intel(R) Pentit processor 1.73GH 794 MHz, 1.00 GE Physical Address	44-23712 44-23712 tum(R) M tz 3 of RAM Edension
-8		0	Cancel	Apply

2. Double-click the **System** icon. (Figure 7-9).

Figure 7-9 System Properties

- 3. Click the **Hardware** tab.
- 4. Click the **Device Manager** button. (Figure 7-10).

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Figure 7-10 Device Manager

- 5. Click the **name** of the item you have removed from your system. If you don't see the item, look for a category heading that describes the type of device you removed, and then click the plus sign to its left to display a list of items in that category.
- 6. From the Action menu, click Uninstall.
- 7. Click OK.

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## 7.4 TAG Approved BIOS

The BIOS (basic input/output system) is the program stored on the CMOS that the server's microprocessor uses to get the system started after you turn it on. The BIOS also manages data flow between the computer's operating system and attached devices such as the hard disk, video adapter, keyboard, and mouse.

**CAUTION:** The BIOS installed on your server was loaded and tested with all the devices initially installed in your system. If you desire to have the BIOS updated, consult TAG technical support in advance as updates to your approved BIOS may cause your system to become unstable or inoperable.

#### 7.4.1 BIOS Configuration for BIOS Version 08-00-14

Load the BIOS version 08.00.14. Enter BIOS by pressing **Delete** when prompted in POST. Once the BIOS Configuration Utility has been entered scroll to the exit tab using the arrow keys. Under the exit menu option select "Load Optimal Defaults" when prompted select OK to load optimal defaults. Scroll back to the Main menu and ensure that all of the settings seen in the screenshots below are set. Upon exit ensure that settings are saved upon exit.

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#### Enter BIOS then Press F9. On the Setup Popup Configuration Screen menu select YES and press Enter. (Figure 7-11).



Figure 7-11 Default Selection Screen

2. On the Advanced option select ACPI Configuration and Press Enter. (Figure 7-12).



Figure 7-12 ACPI Configuration Screen

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3. On the ACPI screen drop down menu select ACPI v2.0, Press Escape to return back to the Advanced menu screen. (Figure 7-13).



Figure 7-13 ACPI Option Screen.

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 On the Advanced options screen, scroll down and select APM Configuration. Press Enter. (Figure 7-14). Figures 7-15, 7-16 show the various default settings. Leave on Default then press Escape to return back to the Advanced options screen.



Figure 7-14 APM Configuration Screen.

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APM Configuration		Enable or disable
Power Management/APM Video Power Down Mode Mard Disk Power Down Mode Suspend Time Out Throttle Slow Clock Ratio Keyboard & PS/2 Mouse	(Enabled) (Suspend) (Disabled) (50%) (MONITOR)	- nm.
Power Button Mode	10n/0ff]	
Advanced Resume Event Controls		
Resume On Ring	[Enabled]	<ul> <li>Select Screen</li> </ul>
Resume On Gbe8111B_1	[Enabled]	11 Select Item
Resume On Gbe8111B_2	[Enabled]	+- Change Uption
Resume On RTC Alarm	[Disabled]	F1 General help
Kesume Un Keyboard	ISpecific Keyl	FIG Save and LATC
Resume On Mouse	[Disabled]	

**5.** Default settings for APM Configuration, Press **Escape**. (Figure 7-15).

Figure 7-15 APM Default Settings Screen.

**6.** Default settings for APM Configuration, Press **Escape**. (Figure 7-16).

		- 3 cases a turn DN/tu
Power Management /APM	[Enabled]	J cases - turn on/tur
Uideo Pover Down Mode	[Suspend]	
Hard Disk Power Down Mode	[Suspend]	
Suspend Time Out	[Disabled]	
Throttle Slow Clock Ratio	[50%]	
Keyboard & PS/2 Mouse	[MONITOR]	
Power Button Mode	10n/0ff1	
Advanced Resume Event Controls	3	
Resume On Ring	[Enabled]	
Resume On Gbe8111B_1	[Enabled]	<ul> <li>Select Screen</li> </ul>
Resume On Gbe8111B_2	[Enabled]	11 Select Item
Resume On RTC Alarm	[Disabled]	+- Change Option
Resume On Keyboard	[Specific Key]	F1 General Help
Specific Key for PowerOn		F10 Save and Exit
Resume On Mouse	[Disabled]	ESC Exit
Ac Loss State		

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Figure 7-16 APM Default Settings Screen.

 On the Advanced options screen, scroll down and select PCIPnP. Press Enter. (Figure 7-18). Figures 7-19, 7-20, show the various default settings. Leave on Default then press Escape to return back to the Advanced settings Screen. (Figure 7-17).



Figure 7-17 PCIPnP Screen.

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## 8. Default settings for PCIPnP Configuration, Press Escape. (Figure 7-18).



Figure 7-18 PCIPnP Default Settings Screen

Advanced			
OffBoard PCI/ISA IDE Card	[Auto]	▲ Size of me to reserve	mory block for legacy
TRO3	[Available]	ISA device	S.
TR04	[Available]		
TROS	[Available]		
TR07	[Available]		
TR09	[Available]		
IR010	[Available]		
IR011	[Available]		
IR014	[Available]		
IRQ15	[Available]		
DMA Channel 0	[Available]	+ Selec	ct Screen
DMA Channel 1	[Available]	TI Sele	ect Item
DMA Channel 3	[Available]	+- Unai	nge uption
DMA Channel 5	[Available]	FI Gene	and Frit
DMA Channel 6	[Ava i lable]	FIG Save	
DMA Channel 7	[Ava i lable]	LOC LAID	•
Reserved Memory Size		-	
02.64.60.0	14 100E 2006 Amorica	Megatrends, Ir	10.

9. Default settings for PCIPnP Configuration, Press Escape. (Figure 7-19).

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#### Figure 7-19 PCIPnP Default Settings Screen

10. On the Advanced options screen, scroll down and select Chipset. Press Enter. (Figure 7-20). Figures 7-21, 7-22, show the various default settings. Leave on Default then press Escape to return to the Advanced options screen.



Figure 7-20 Chipset Options Screen.

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#### **11.** On the **Advanced Chipset Settings** Screen select **CPU Configuration**, Press **Enter** to see settings. (Figure 7-21).



Figure 7-21 CPU Configuration Screen.

12. Default CPU Advanced Settings (Figure 7-22). Then press Escape to return to Advanced options screen.

Configure advanced CPU settings Module Version:3F.03		This should be enabled in order to enable or	
Manufacturer:Intel Intel(R) Core(TH)2 Duo CPU Frequency :1.806Hz FSB Speed :800MHz Cache L1 :64 KB Cache L2 :2048 KB Ratio Actual Value:9	T7100 ₽ 1.80GHz	- disable the Hardware Prefetcher Disable Feature.	
Hardware Prefetcher Adjacent Cache Line Prefetch Intel(R) Virtualization Tech Execute-Disable Bit Capability Core Multi-Processing Intel(R) SpeedStep(tm) tech	[Enabled] [Enabled] [Enabled] [Enabled] [Enabled] [Enabled]	<ul> <li>Select Screen</li> <li>Select Item</li> <li>Change Option</li> <li>General Help</li> <li>Save and Exit</li> <li>ESC Exit</li> </ul>	

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Figure 7-22 CPU Advanced Settings Screen.

13. On the Advanced options screen, scroll down and select Video Function
Configuration screen. Press Enter.
(Figure 7-23). Figures 7-24, 7-25, show the various default settings. Leave on Default then press Escape to return back to the Advanced settings Screen.



Figure 7-23 Video Function Configuration screen.

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14. On Video Configuration screen set display as required Figure 7-24). Then press Escape to return to Main BIOS screen.



Figure 7-24 Display Configuration Screen.

**15.** On the **Advanced Chipset** Settings screen Scroll down to **USB Configuration**, Press **Enter**. (Figure 7-25).



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Figure 7-25 USB Configuration Screen.

16. Default USB Functions Settings (Figure 7-26). Then press Escape to return to Advanced options screen.

USB Configuration		Options
Module Version - 2.24.2-13.4 USB Functions USB 2.0 Controller USB Devices Enabled : None	[10 USB Ports] [Enabled]	Disabled 2 USB Ports 4 USB Ports 6 USB Ports 8 USB Ports 10 USB Ports
Legacy USB Support BIOS EHCI Hand-Off Hotplug USB FDD Support	[Enabled] [Enabled] [Auto]	<ul> <li>Select Screen</li> <li>Select Item</li> <li>Change Option</li> <li>General Help</li> <li>Save and Exit</li> <li>ESC Exit</li> </ul>

Figure 7-26 USB Functions Settings Screen.

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17. On the Advanced options screen, scroll down and select Onboard Devices screen. Press Enter. (Figure 7-27 and Figure 7-28 show the various default settings. Leave on Default then press Escape to return back to the Advanced settings Screen Press Enter (Figure 9-28).



Figure 7-27 Onboard Devices Screen.

 Default Onboard Devices Settings (Figure 7-28). Then press Escape to return to Advanced options screen.

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	Advanced	BIOS SETUP UTILITY	
1	Serial Port1 Address Serial Port2 Address Serial Port3 Address Serial Port3 IRQ Serial Port4 Address Serial Port4 Address Serial Port4 IRQ HDA Controller Gbe0111B.1 Gbe0111B.2	(366/1894) (286/1893) (388) (5) (288) (10) (Enabled) (Auto) (Auto)	Allows BIOS to Select Serial Porti Base Addresses.
			<ul> <li>Select Screen</li> <li>Select Item</li> <li>Change Option</li> <li>F1 General Help</li> <li>F10 Save and Exit</li> <li>ESC Exit</li> </ul>
	v02.61 (C) Copyr	right 1985-2006, America	n Megatrends, Inc.
		Dell	0 = - + O

Figure 7-28 Default Onboard Devices Settings Screen.

On the Advanced options screen, scroll across and select Boot tab. Press Enter. (Figure 7-29). Figure 7-30, 7-31, and 7-32 show the various default settings. Leave on Default then press Escape to return back to the Advanced settings Screen. (Figure 8-29).



Figure 7-29 Boot Devices Screen.

**3.** Default **Boot Devices Settings** (Figure 7-30). Then press **Escape** to return to **Boot** options screen.

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Figure 7-30 Boot Devices Settings Screen.

4. Default **Boot Devices Settings.** Then scroll down a further **Boot** options screen. (Figure 7-31) and (Figure 7-32).

hard Just Ir mes		Specifies the bort
lst. Drive	(SHDH-PH-PUUTSU MH)	available devices.
		Select Screen     Select Ites     Change Option     File Seneral Help     File Same and Enit     EXC Enit

Figure 7-31 Boot Device Screen.

5. Default **Boot Devices Settings** (Figure 7-32). Then press **Escape** to return to **Boot** options screen.

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BIOS SETUP UTIL	.ITY		
CD/DVD Drives 1st Drive CCD/DVD:3M-Ma	ATSHITAJ	Specifies the boot sequence from the available devices.	1
		<ul> <li>Select Screen</li> <li>Select Item</li> <li>Change Option</li> <li>General Help</li> <li>F10 Save and Exit</li> <li>ESC Exit</li> </ul>	2 - 4 - 6
v02.61 (C)Copyright 1985-2006, Am	merican Meg	atrends, Inc.	
DØLL			

Figure 7-32 Boot Device Screen.

 On the Boot options screen, scroll across and select Security tab. Press Enter. Change or renew your password then Press Escape to return back to the Security settings Screen. (Figure 7.33).



Figure 7-33 Password Screen.

7. On the **Security** options screen, scroll across and select **Boot** tab. Press **Enter**.

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Ensure Quick Boot is **Enabled** (Figure 7-34).

Boot Settings Configuration	on	Allows BIOS to ski
Quick Boot Quiet Boot Bootup Num-Lock Wait For 'F1' If Error Gbe8111B LAN Boot	LEnabled] Disabled] LOn] LEnabled] Disabled]	Certain tests whi booting. This will decrease the time needed to boot the system.
		<ul> <li>Select Screen</li> <li>Select Item</li> <li>Change Optio</li> <li>General Help</li> <li>F10 Save and Exi</li> <li>ESC Exit</li> </ul>

Figure 7-34 Boot Settings Configuration Screen.

 On the BIOS Setup Utility screen, scroll across and select Exit tab. Press F10. (Figure 7-35).

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Figure 7-35 Exit Option screen.

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BIOS SETUP UTILITY Main Advanced HW Monitor Boot Exit	
Exit Options Save Changes and Exit Discard Changes and Exit Discard Changes	<ul> <li>Exit system setup after saving the changes.</li> <li>F10 key can be used for this operation.</li> </ul>
Load Optimal I Load Failsafe Save configuration changes and OK ICand	exit setup? cell I Se ect Item Enter Go to Sub Screen F1 General Help F10 Save and Exit ESC Exit
v02.61 (C)Copyright 1985-2006, America	an Megatrends, Inc.
D¢LL	

**9.** On the **Exit Options** screen select **OK**. Then Press **Enter**. (Figure 7-36).

Figure 7-36 Save Configurations Screen

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#### CONTACT



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