



Waterproof Industrial Touch Panel PC

**WP-9L Series
User Manual**



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Package Contents



Please make sure that the items shown below are included in the package. Should an item be missing, please contact the local retailer from which you purchased this product.

- 1 x Industrial Touch Panel PC
- 1 x DC in Power adapter
- 1 x Power cord
- 1 x CD
- 4 x screws (M3 x 4) for 2.5" HDD or SSD (If customers order 2.5" HDD or SSD from our side, we don't offer 4 screws)

Safety Instructions



1. **Read Instructions:** All the safety and operating instructions should be read before the equipment is operated.
2. **Retain Instructions:** The safety and operating instructions should be retained for future reference.
3. **Cleaning:** Unplug this equipment from the outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
4. **Water and Moisture:** Do not use this equipment near water.
5. **Ventilation:** The openings on the enclosure are provided for ventilation to ensure reliable operation of the equipment and to protect it from overheating. These openings should never be blocked.
6. **Power Sources:** This equipment should be operated only from the type of power source indicated on the rating label. If you are not sure of the type of power supply, consult your dealer or local power company.
7. **Heed Warnings:** All warnings on the equipment and in the operating instructions should be adhered to.
8. **Object and Liquid Entry:** Never push objects of any kind into this equipment through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the equipment.
9. **Servicing:** Do not attempt to service this equipment yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
10. **Damage Requiring Service:** Unplug this equipment from the outlet and refer servicing to qualified service personnel under the following conditions: a) if the power cord or plug is damaged; b) if liquid has penetrated into the equipment; c) if the equipment has been exposed to moisture; d) if the equipment does not work well, or you cannot get it to work according to the user's manual; e) if the equipment has been dropped and damaged; f) if the equipment has obvious signs of breakage.
11. Do not leave this equipment in an environment where the storage temperature is below -10°C or above 70°C . It may damage the equipment.
12. Do not open the sealed enclosure / case of equipment. Once enclosure is disassembled without approval, it will lead in abnormal operating of water proof gel. For Guarantee of water proof function, please make sure configuration / peripheral has been confirmed to install before shipping.

FCC

This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received including interference that may cause undesired operation.

CE

The product(s) described in this manual complies with all applicable European Union (CE) directives if it has a CE marking. For computer systems to remain CE compliant, only CE-compliant parts may be used. Maintaining CE compliance also requires proper cable and cabling techniques.

WP-9L series is a fanless AMD T40N 1.0Ghz fully IP65 Industrial stainless steel touch Panel PC. With its fanless, robust, waterproof and stainless steel feature, it is an ideal solution for noise-free operating environment. Size selection is from 15", 17" to 19" for your choice.

Fully IP65 stainless steel touch panel PCs feature a variety of CPU, flexible memory, rich I/O ports and wireless function, It can work with different operation systems for different application such as industrial automation, food and medical application, etc.

With high quality stainless steel chassis covered around, full IP65 Industrial Panel Computer is completely water proof. Our system is made of industrial grade mother board, waterproof IP65 connectors, compact design chassis construction, industrial LCD display, user-friendly touch screen, I/O connection for network support and VESA mounting support.

Features



- AMD T40N 1.0Ghz
- CPU on board
- Fully IP65 compliant 6 sides stainless steel chassis with hairy brush finish
- Fanless solution and compact design
- Low power consumption
- All IP65 waterproof stainless steel connectors including power switch with green LED indication
- Up to 2 x GLAN
- Up to 3 x RS232
- Up to 2 x USB
- 1024 x 768 dpi (15")
- 1280 x 1024 dpi (17" and 19")

Motherboard Specification



Model Name	KD951- DT40N		
CPU	AMD T40N 1.0GHz, 2 x 512KB L2 cache		
Chipset	AMD A50M		
BIOS	AMI 64 Mbit SPI BIOS		
Memory	1 x 204-pin SODIMM socket supports DDR3 1066MHz up to 8GB		
Display	Controller: AMD® Radeon™ HD 6290 Interface: 1 x VGA, 1 x 24-bit LVDS, 1 x HDMI		
Ethernet	2 x Realtek® RTL8111DL 10/100/1000 Mbps		
Audio	Realtek® ALC886 5.1-channel High Definition Audio		
Storage	1 x SATA 3.0, 1 x CF		
Expansion	1 x Mini PCIe, 1 x connector for daughterboard expansion (2 x PCIe x1, 4 x USB 2.0, 1 x LPC)		
Internal I/O	- 2 x USB 2.0/1.1 - 1 x LCD inverter - 1 x SATA	- 2 x RS-232/422/485 - 1 x 8-bit digital I/O connector	- 1 x LVDS - 1 x Audio
Rear Panel I/O Port	- 1 x HDMI - 2 x USB 2.0/1.1	- 1 x VGA - 1 x 12V DC-in	- 2 x RJ45 LAN
Power	DC 12V input		
Watchdog Timer	Output System reset, Programmable 1 ~ 255 sec/min		
Environment	Operating temperature: 0°C ~ 60°C Storage temperature: -20°C ~ 85°C		

System Specification

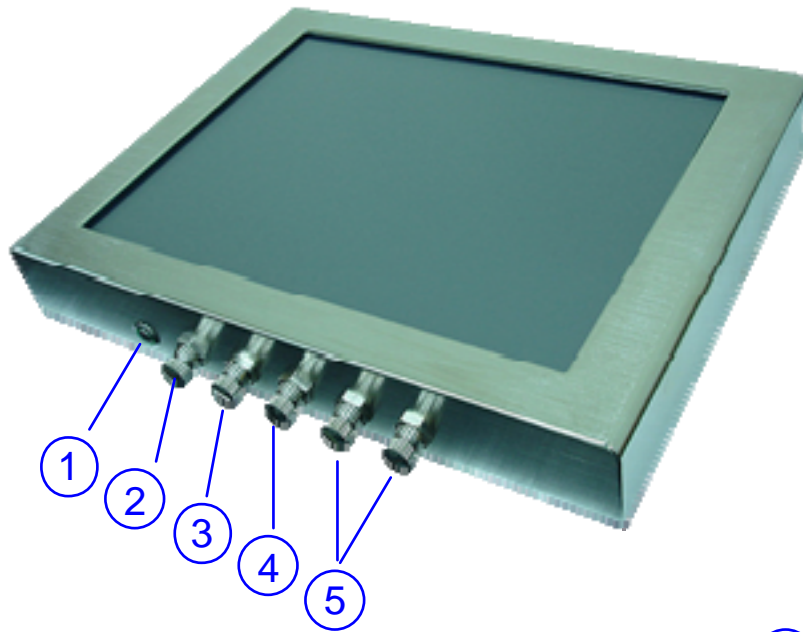


Model Name		WP-9LR15T	WP-9LR17T	WP-9LR19T
CPU		AMD T40N 1.0Ghz		
Chipset		AMD A50M		
Memory		1 x DDR III SODIMM up to 8 GB		
Power Supply		DC in 12V external power adapter (Full IP65 external power adapter optional)		
I/O Ports		2 x COM port, 1 x GLAN, 1 x USB 2.0, 2 x SATA socket Extra second GLAN optional, Extra second USB optional		
I/O Port's Location		Bottom	Back	Back
Expansion		1 x CF card socket, 1 x Mini PCIe slot		
Display	Size/Type	(4:3) 15"	(4:3) 17"	(4:3) 19"
	Resolution	1024 x 768	1280 x 1024	1280 x 1024
	Colors	16.2 M	16.7 M	16.7 M
	Luminance (cd/m ²)	400	300	250
	Contrast Ratio	700:1	800:1	1000:1
	Viewing Angle (H/V°)	140/125	140/125	140/125
	MTBF	50,000 hrs	50,000 hrs	50,000 hrs
	Touch Screen	5-wire resistive	5-wire resistive	5-wire resistive
Installation		VESA mounting 100 x 100 mm		
Dimension (W x H x D)		379 x 288 x 67 mm	425 x 361 x 67 mm	450 x 385 x 67 mm
Weight		8 kg	12 Kg	14 kg
Operation Temperature		0°C ~ 45°C		
Storage Temperature		-10°C ~ 70°C		
Relative Humidity		0% - 95% non-condensing		
OS		Windows 7 Pro, Embedded 7		
Optional Items		No touch screen, Memory, Storage devices, WIFI, OS		

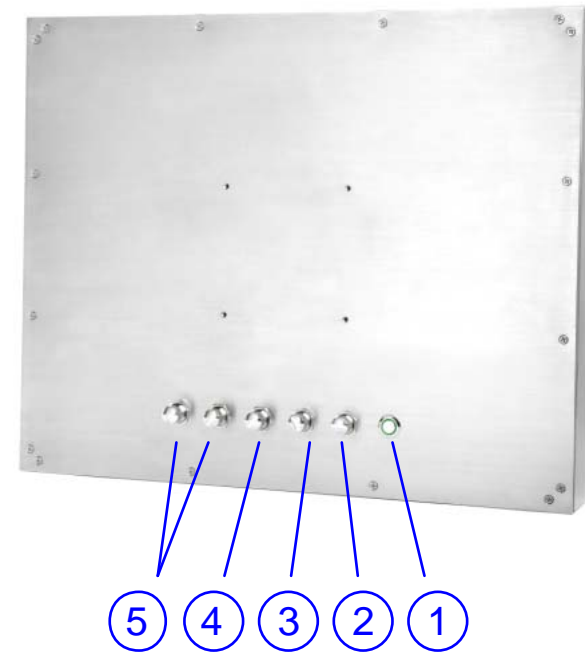
Connector Location



15"

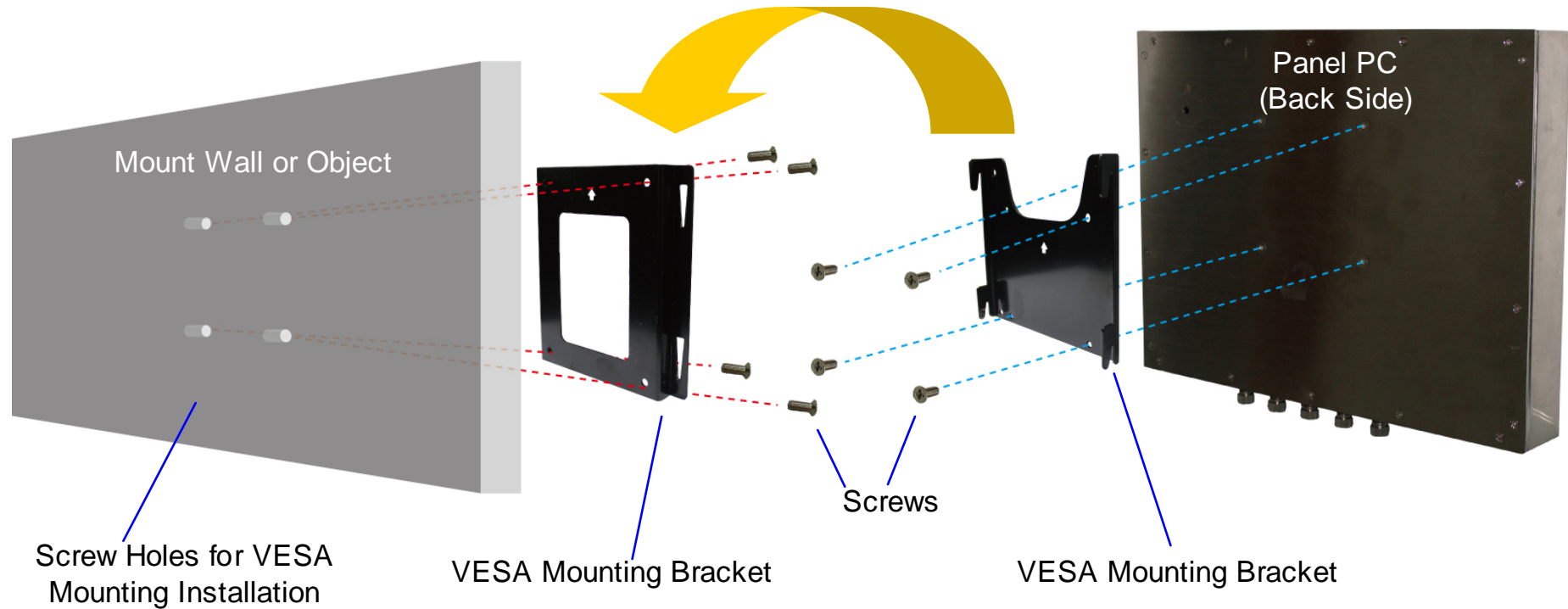


17" or 19"



- ① Power Switch
- ② DC-in
- ③ GLAN
- ④ USB
- ⑤ RS232

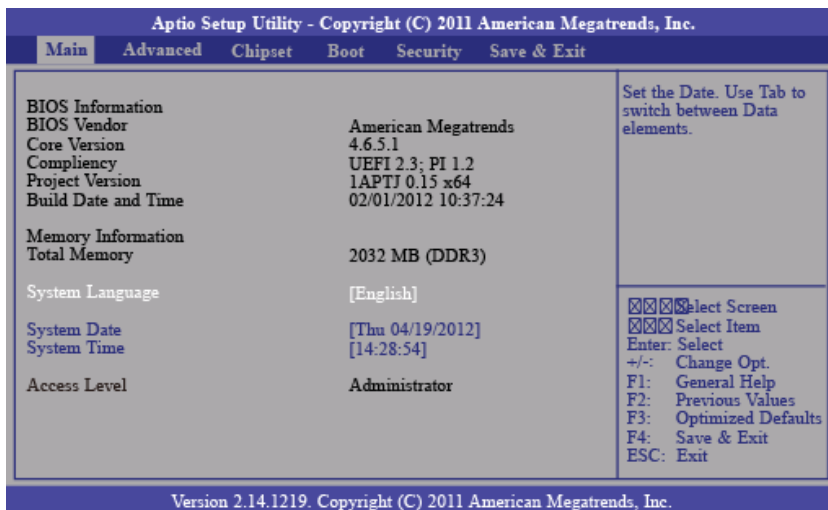
VESA Mounting Installation



- Sep 1: screw the VESA mounting plate to the Panel PC
- Step2: screw the VESA mounting bracket to the front of a wall or the front / back of an object dependingly
- Step3: slide the VESA mounting plate onto the VESA mounting bracket

Main

The Main menu is the first screen that you will see when you enter the BIOS Setup Utility.



System Date

The date format is <day>, <month>, <date>, <year>. Day displays a day, from Sunday to Saturday. Month displays the month, from January to December. Date displays the date, from 1 to 31. Year displays the year, from 1980 to 2099.

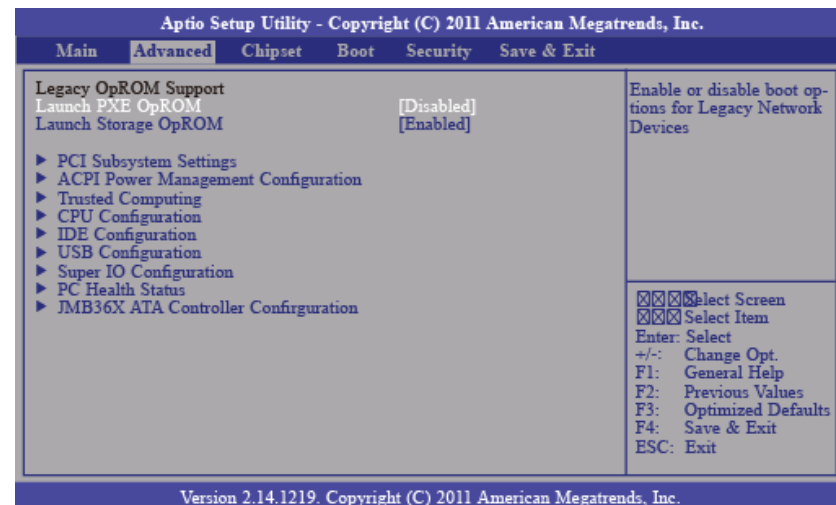
System Time

The time format is <hour>, <minute>, <second>. The time is based on the 24-hour military-time clock. For example, 1 p.m. is 13:00:00. Hour displays hours from 00 to 23. Minute displays minutes from 00 to 59. Second displays seconds from 00 to 59.

Advanced

The Advanced menu allows you to configure your system for basic operation. Some entries are defaults required by the system board, while others, if enabled, will improve the performance of your system or let you set some features according to your preference.

Important: Setting incorrect field values may cause the system to malfunction.



Launch PXE OpROM

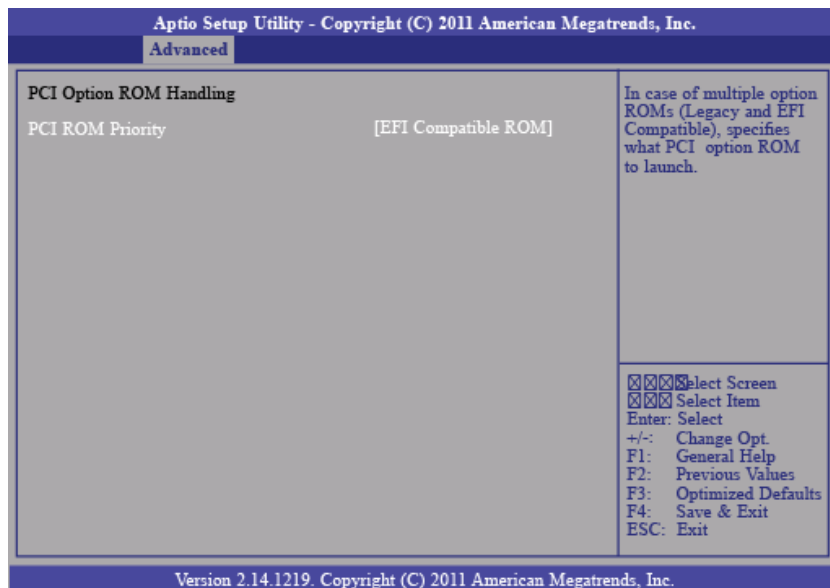
Enables or disables the boot option for legacy network devices.

Launch Storage OpROM

Enables or disables the boot option for legacy mass storage devices with option ROM.

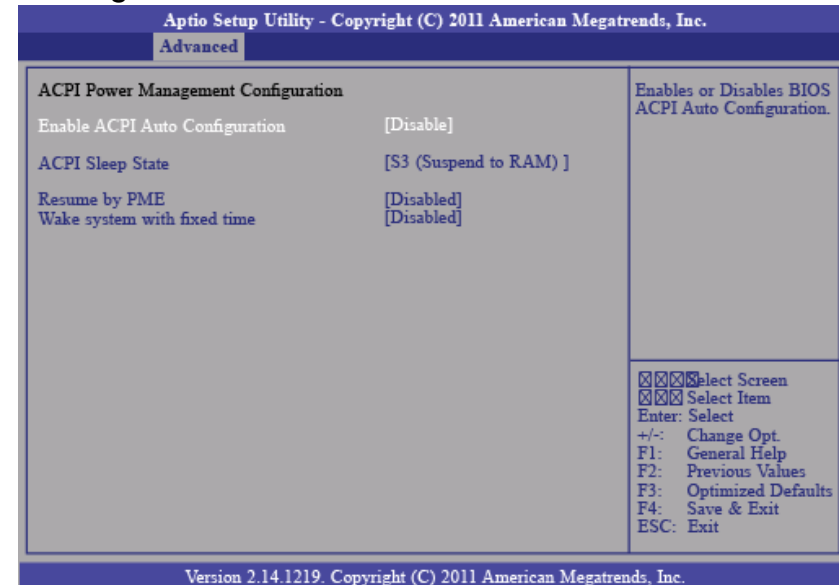
PCI Subsystem Settings

This section is used to configure the PCI subsystem settings.



ACPI Power Management Configuration

This section is used to configure the ACPI Power Management.



ACPI Sleep State

Selects the highest ACPI sleep state the system will enter when the Suspend button is pressed.

S1(POS) Enables the Power On Suspend function.

S3(STR) Enables the Suspend to RAM function.

Resume by PME

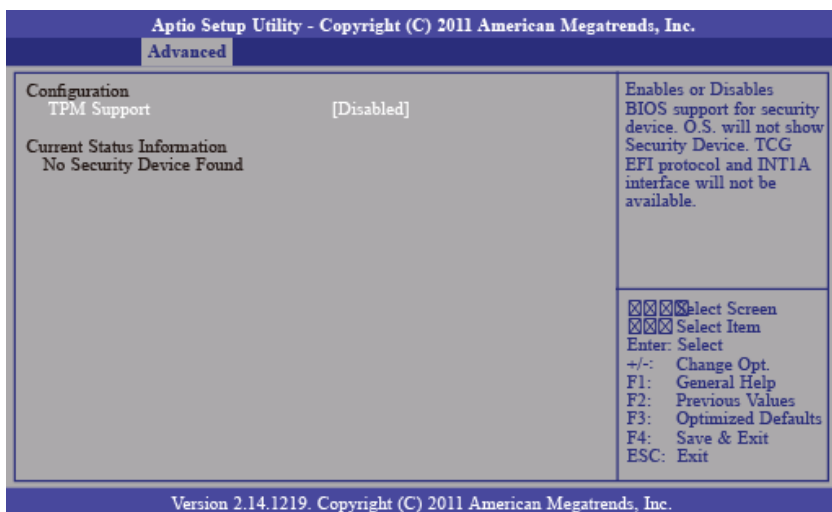
Enable this field to use the PME signal to wake up the system.

Wake system with fixed time

Enable or disable system wake on alarm event. When enabled, system will wake on the hr::min::sec specified.

Trusted Computing (optional)

This section configures settings relevant to Trusted Computing innovations.

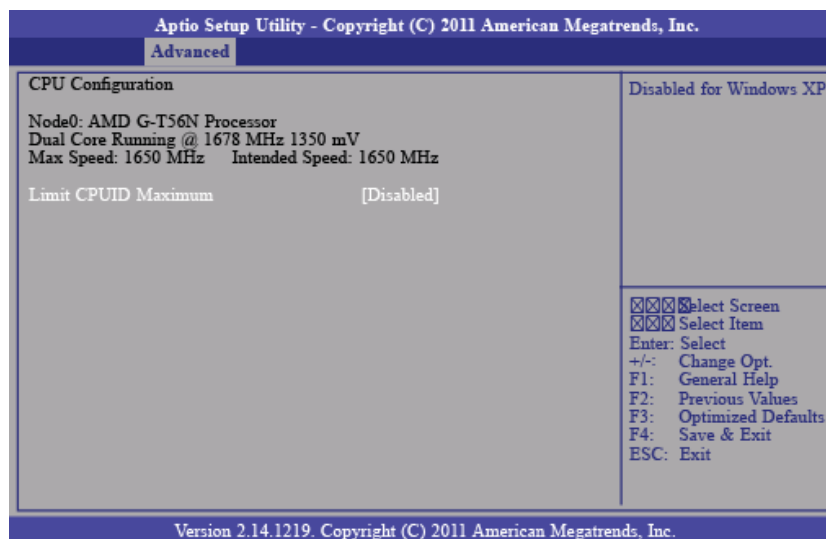


TPM Support

Enables or Disables TPM. O.S. will not show TPM. Resetting the platform is required.

CPU Configuration

This section is used to configure the CPU. It will also display the detected CPU information.

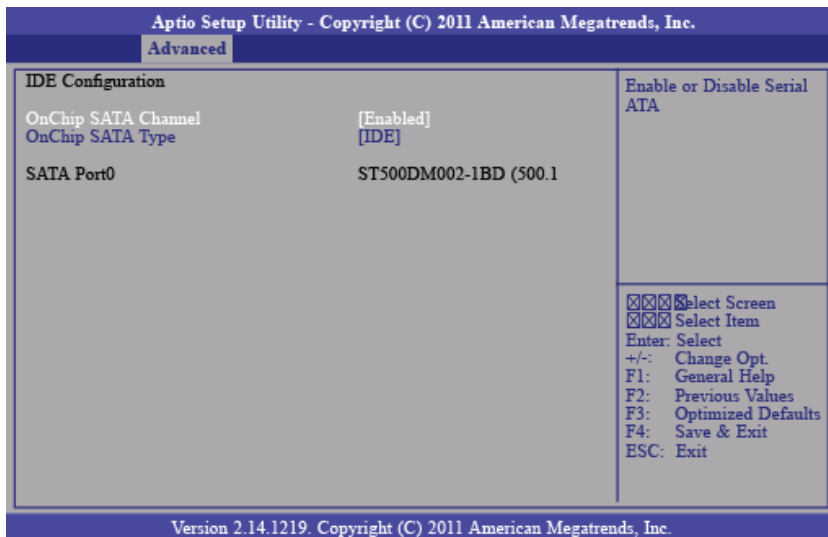


Limit CPUID Maximum

The CPUID instruction of some newer CPUs will return a value greater than 3. The default is Disabled because this problem does not exist in the Windows series operating systems. If you are using an operating system other than Windows, this problem may occur. To avoid this problem, enable this field to limit the return value to 3 or less than 3.

IDE Configuration

This section is used to configure IDE functions.



OnChip SATA Type

This field is used to configure the SATA devices supported by the AMD T56N/T40N.

Native IDE This option configures the Serial ATA drives as Parallel ATA storage devices.

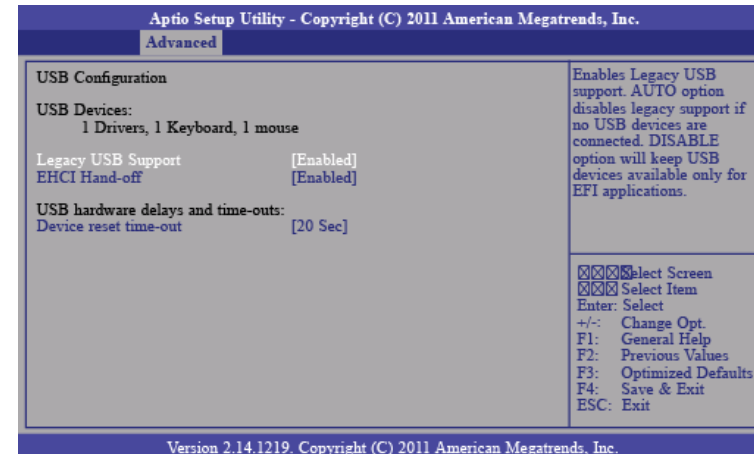
RAID This option allows you to create RAID on Serial ATA devices.

AHCI This option allows the Serial ATA devices to use AHCI (Advanced Host Controller Interface).

Legacy IDE This option configures the Serial ATA drives as Legacy IDE storage devices.

USB Configuration

This section is used to configure USB.



Legacy USB Support

Enabled

Enables legacy USB.

Auto

Disables support for legacy when no USB devices are connected.

Disabled

Keeps USB devices available only for EFI applications.

EHCI Hand-off

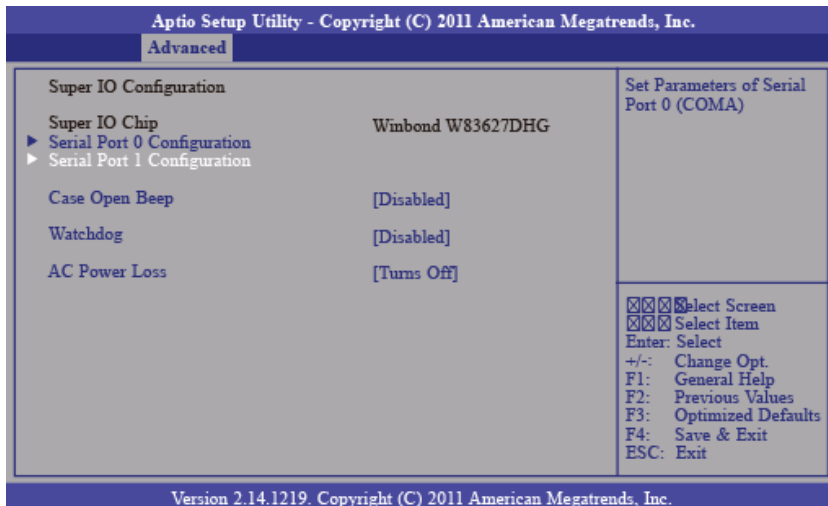
This is a workaround for OSES that does not support EHCI hand-off. The EHCI ownership change should be claimed by the EHCI driver.

Device reset time-out

Selects the USB mass storage device start unit command timeout.

Super IO Configuration

This section is used to configure the serial port functions.



Case Open Beep

Set this field to Enabled to allow the system to alert you of a chassis intrusion event.

Watchdog

This field is used to enable or disable the Watchdog Timer function.

AC Power Loss

Turns Off

When power returns after an AC power failure, the system's power is off. You must press the Power button to power-on the system.

Turns On

When power returns after an AC power failure, the system will automatically power-on.

Former-Sts

When power returns after an AC power failure, the system will return to the state where you left off before power failure occurs. If the system's power is off when AC power failure occurs, it will remain off when power returns. If the system's power is on when AC power failure occurs, the system will power-on when power returns

Serial Port 0 Configuration to Serial Port 1 Configuration

Aprio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.

Advanced

Serial Port 0 Configuration		Select an Optimal Setting for Super IO device
Serial Port	[Enabled]	
Device Settings	IO=3F8h; IRQ=4;	
Change Settings	[Auto]	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Select Screen <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.

Aprio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.

Advanced

Serial Port 1 Configuration		Select an Optimal Setting for Super IO device
Serial Port	[Enabled]	
Device Settings	IO=2F8h; IRQ=3;	
Change Settings	[Auto]	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Select Screen <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.

Serial Port

Enables or disables the serial port.

Change Settings

Selects the IO/IRQ setting of the I/O device.

PC Health Status

This section displays the SIO hardware health monitor.

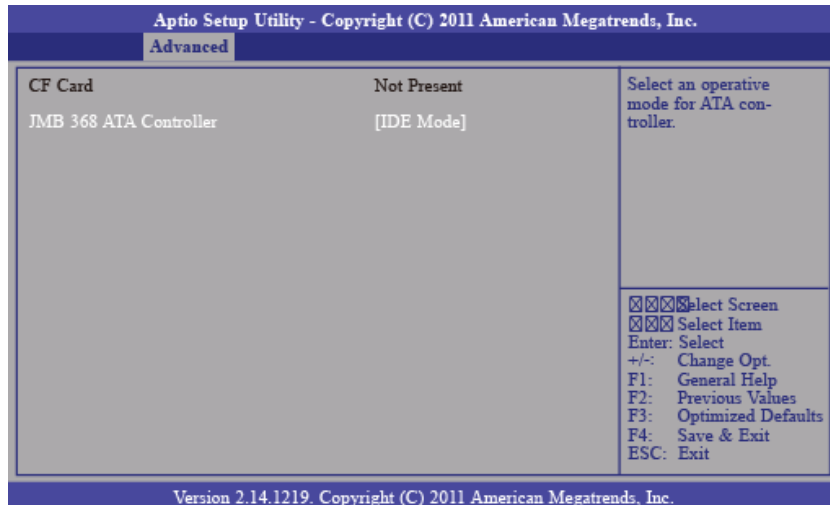
Aprio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.

Advanced

PC Health Status	Smart Fan Function
SYSTIN Temperature : +32 C CPUTIN Temperature : +40 C System FAN Speed : N/A CPU FAN Speed : 4218 RPM CPUVCORE : +1.384V +5V : +4.872 V +3.3V : +3.360V CPUVNB : +0.960 V VDIMM : +1.544 V +12V : +12.335 V 3VSB : +3.344 V VBAT : +3.088 V	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Select Screen <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

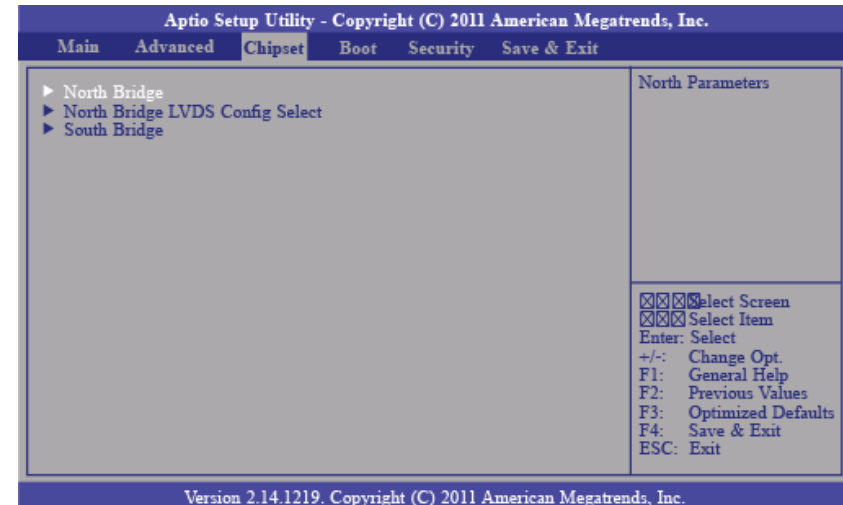
Version 2.14.1219. Copyright (C) 2011 American Megatrends, Inc.

JMB36X ATA Controller Configuration

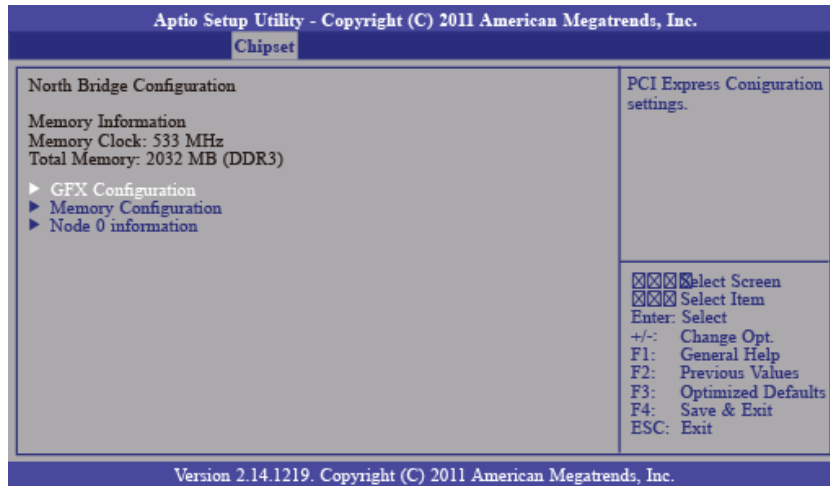


Chipset

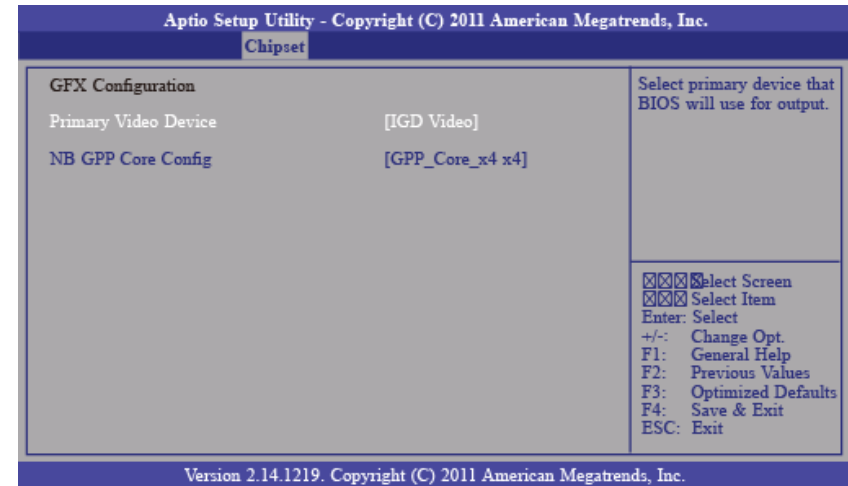
Configures relevant chipset functions.



North Bridge Configuration



GFX Configuration



NB GPP Core Config

Selects the NB GPP Core configuration.

Memory Configuration

Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.

Chipset

Memory Configuration	Enable Integrated Graphics Controller.
Integrated Graphics [Auto]	

☒☒☒ Select Screen
☒☒☒ Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit

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Node 0 Information

Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.

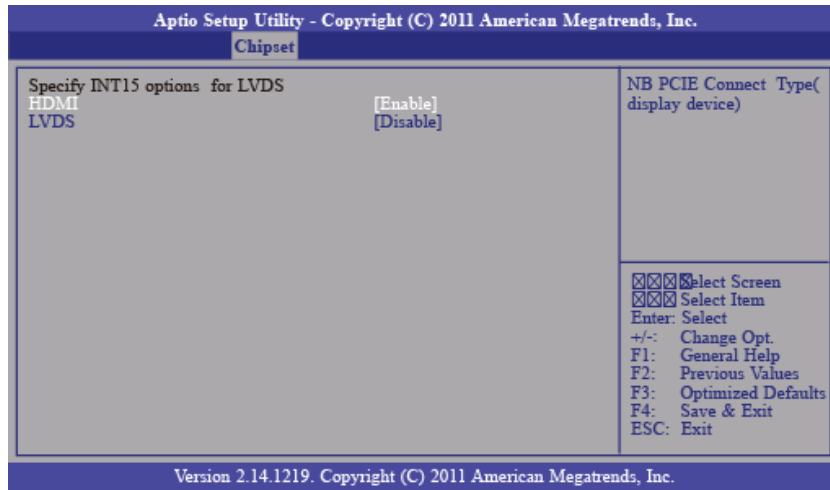
Chipset

Node0 Information	
Starting Address: 0 KB Ending Address: 2097151KB	
DIMM0: Size = 2048 MB, speed = 533MHz	

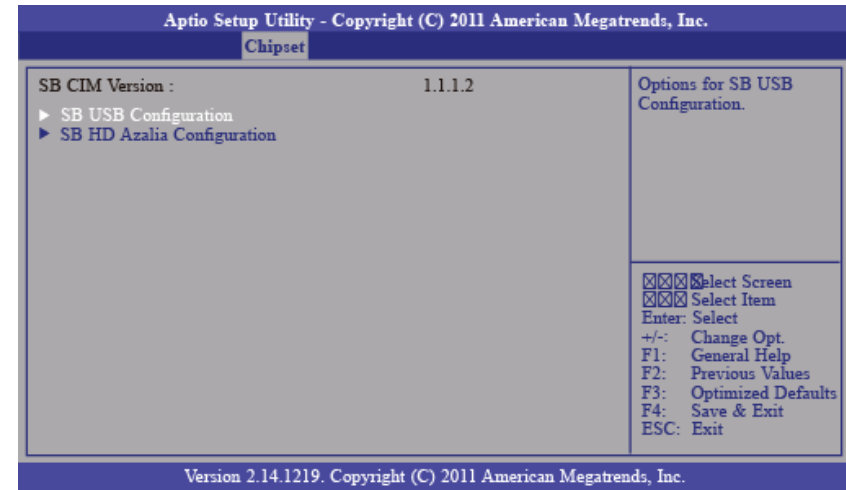
☒☒☒ Select Screen
☒☒☒ Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit

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North Bridge LVDS Config Select



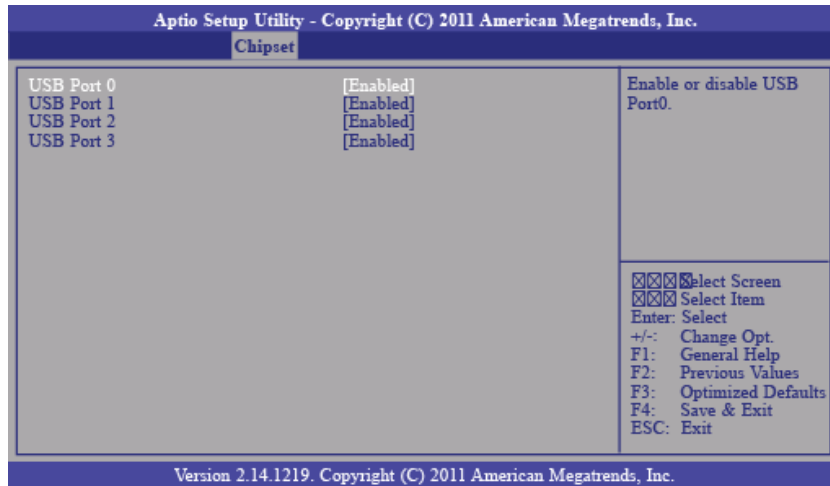
South Bridge



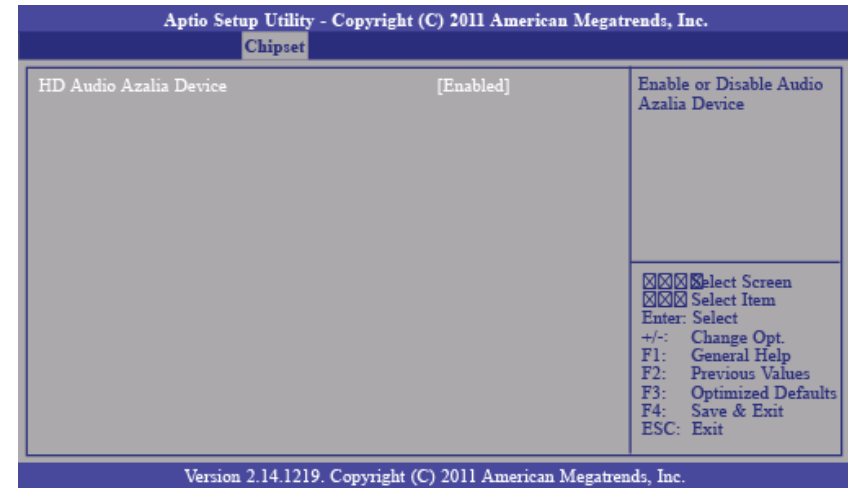
LVDS

This field is used to enable or disable the LVDS Panel

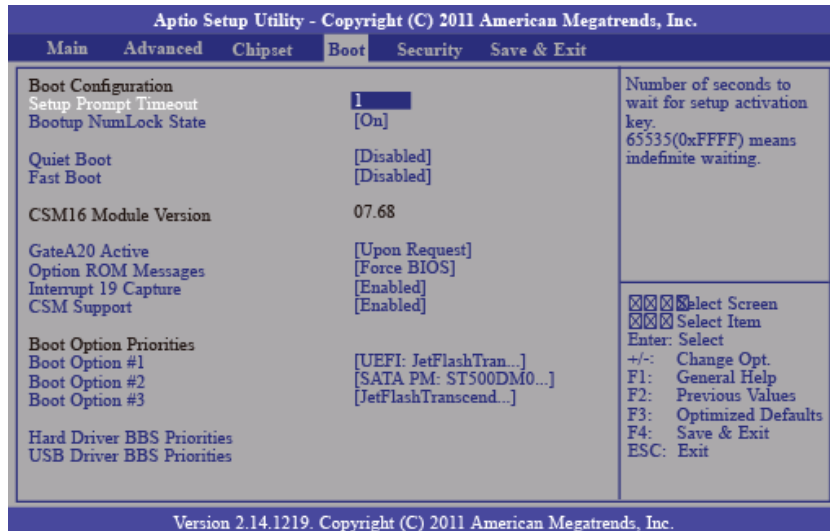
SB USB configuration



SB HD Azalia configuration



Boot



Setup Prompt Timeout

Selects the number of seconds to wait for the setup activation key. 65535(0xFFFF) denotes indefinite waiting.

Bootup NumLock State

This allows you to determine the default state of the numeric keypad. By default, the system boots up with NumLock on wherein the function of the numeric keypad is the number keys. When set to Off, the function of the numeric keypad is the arrow keys.

Quiet Boot

Enables or disables the quiet boot function.

Fast Boot

Enables or disables boot with initialization of a minimal set of devices required to launch active boot option. Has no effect for BBS boot options.

GateA20 Active

Upon Request- GA20 can be disabled using BIOS services.

Always- Do not allow disabling GA20; this option is useful when any RT code is executed above 1MB.

Option ROM Messages

Set display mode for option ROM.

Interrupt 19 Capture

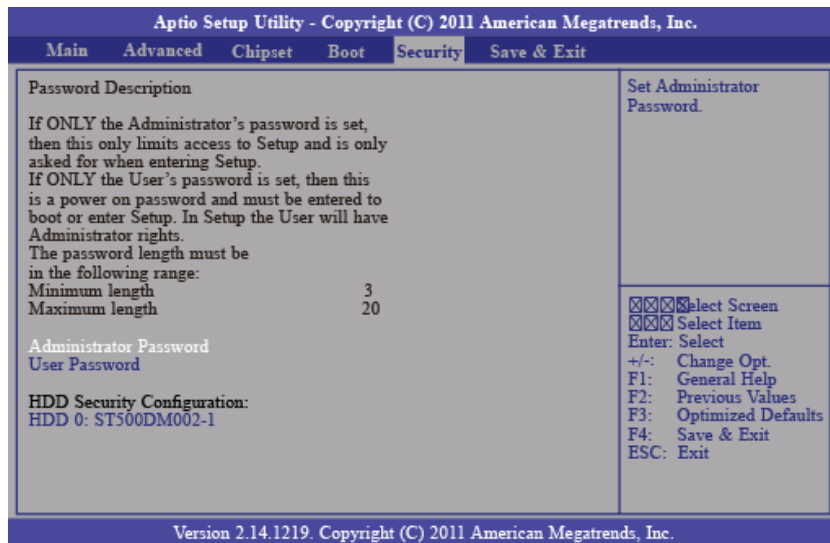
Enabled: Allows option ROMs to trap Int 19.

Disabled:

CSM Support

Enabled/ disabled CSM support. If auto is selected, based on OS, CSM will be enabled/ disabled automatically.

Security



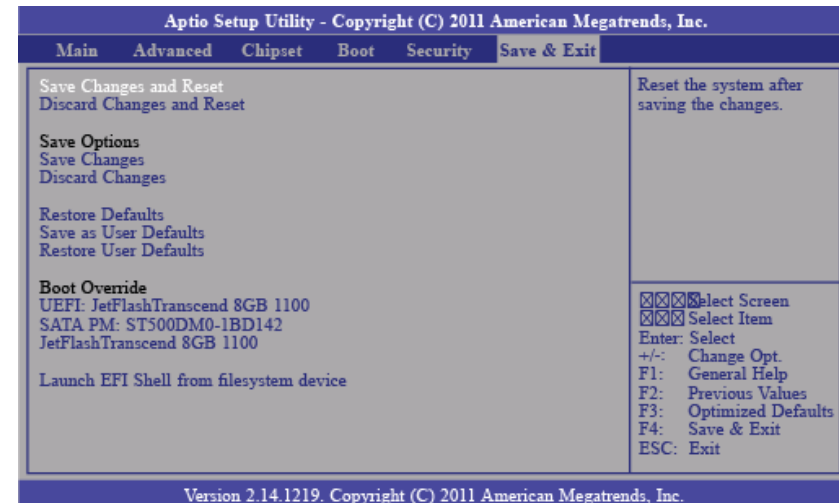
Administrator Password

Sets the administrator password.

User Password

Sets the user password.

Save & Exit



Save Changes and Reset

To save the changes, select this field and then press <Enter>. A dialog box will appear. Select Yes to reset the system after saving all changes made.

Discard Changes and Reset

To discard the changes, select this field and then press <Enter>. A dialog box will appear. Select Yes to reset the system setup without saving any changes.

Save Changes

Save the changes done so far to any of the setup options.

Discard Changes

Discard the changes done so far to any of the setup options.

Restore Defaults

To restore and load the optimized default values, select this field and then press <Enter>. A dialog box will appear. Select Yes to restore the default values of all the setup options.

Save as User Defaults

To save changes done so far as user default, select this field and then press <Enter>. A dialog box will appear. Select Yes to save values as user default.

Restore User Defaults

To restore user default to all the setup options, select this field and then press <Enter>. A dialog box will appear. Select Yes to restore user default.

Updating the BIOS

To update the BIOS, you will need the new BIOS file and a flash utility, AFUDOS.EXE. Please contact technical support or your sales representative for the files.

To execute the utility, type:

```
A:> AFUDOS BIOS_File_Name /b /p /n
```

then press <Enter>.

```
C:\AFU\AFUDOS>afudos filename /B /P /N
-----
                AMI Firmware Update Utility(APTIO) v2.25
                Copyright (C)2008 American Megatrends Inc. All Rights Reserved.
-----
Reading file ..... done
Erasing flash ..... done
Writing flash ..... done
Verifying flash ..... done
Erasing BootBlock ..... done
Writing BootBlock ..... done
Verifying BootBlock ..... done

C:\AFU\AFUDOS>
```

The WP-9L Series comes with an AutoRun CD-ROM that contains all drivers and utilities that can help you to install the driver automatically.

Insert the driver CD, the driver CD-title will auto start and show the installation guide. If not, please follow the sequence below to install the drivers.

Step 1 – Install Chipset Driver

1. Click on the STEP1-CHIPSET folder and select the OS folder your system is
2. Double click on the .exe file located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

Step 2 – Install VGA Driver

1. Click on the STEP2-VGA folder and select the OS folder your system is
2. Double click on the Setup.exe file located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

Step 3 –Install LAN Driver

1. Click on the STEP3-LAN folder and select the OS folder your system is
2. Double click on the .exe file located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

Step 4 –Install Touch Driver (Optional)

1. Click on the STEP4-TOUCH (Option) folder and select the OS folder your system is
2. Double click on the .exe located in each OS folder
3. Follow the instructions that the window shows
4. The system will help you install the driver automatically

Step 5 –Install Rapid Storage Driver (Optional)

1. Click on the STEP5-RAPID STORAGE (Option) folder and double click on the setup.exe
2. Follow the instructions that the window shows
3. The system will help you install the driver automatically

Contact Information



Any questions, please contact your local dealer or contact us via the following means:

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Website: www.kingdy.biz



Inspiring a reliable solution