



## AWARD BIOS Description

### Entering Setup

Power on the computer, when the following message briefly appears at the bottom of the screen during the POST (Power On Self Test), press <Del> key or simultaneously press the <Ctrl> + <Alt> + <Esc> keys, to enter the AWARD BIOS CMOS Setup Utility.

#### Press <Del> to enter SETUP

Once you have entered, the Main Menu (Figure 1) appears on the screen. The main menu allows you to select from twelve setup functions and two exit choices. Use the arrow keys to select among the items and press the <Enter> key to accept or enter the sub-menu.

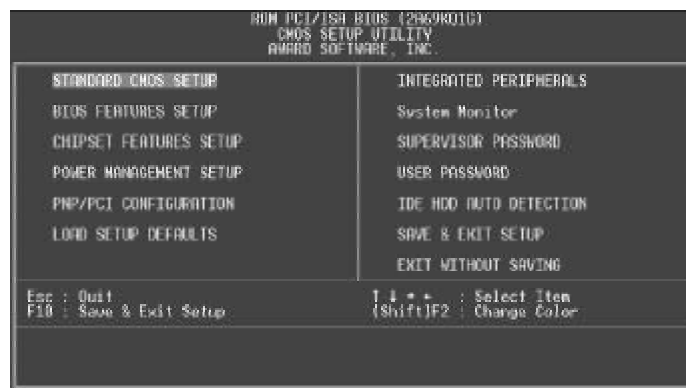


Figure-1 Main Menu

**Note:**The 'System Monitor' item will not be displayed if there is no LM80 supporting chips on the motherboard.

### Load Setup Defaults

The Setup Defaults are common and efficient. It is recommended that users load the setup defaults first, then modify the needed configuration settings.

### Standard CMOS Setup

The basic CMOS settings included in 'Standard CMOS Setup' are Date, Time, Hard Disk Drive Types, Floppy Disk Drive Types, and VGA etc. Use the arrow keys to highlight the item, then use the <PgUp> or <PgDn> keys to select the value you want in each item.

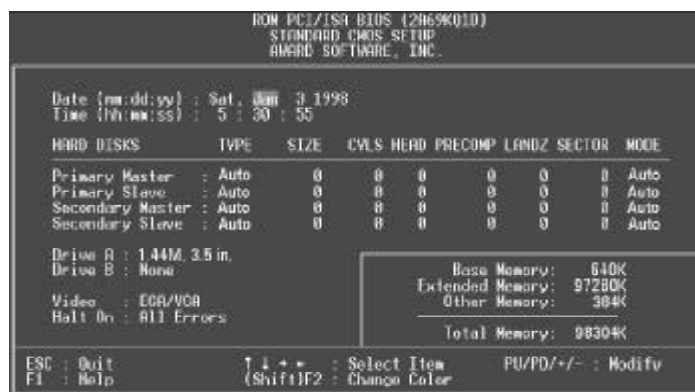


Figure-2 Standard CMOS Setup Menu

## Hard Disk

### Primary Master/Primary Slave/Secondary Master/Secondary Slave

These categories identify the HDD types of 2 IDE channels installed in the computer system. There are three choices provided for the Enhanced IDE BIOS: None, Auto, and User. 'None' means no HDD is installed or set; 'Auto' means the system can auto-detect the hard disk when booting up; by choosing 'user', the related information should be entered regarding the following items. Enter the information directly from the keyboard and press <Enter>:

CYLS	number of cylinders	HEAD	number of heads
PRECOMP	write pre-compensation	LANDZ	landing zone
SECTOR	number of sectors	MODE	HDD access mode

## Video

Set this field to the type of video display card installed in your system.

EGA/VGA	Enhanced Graphics Adapter / Video Graphic Array. For EGA, VGA, SEGA, SVGA, or PGA monitor adapters.
CGA 40	Color Graphic Adapter, powering up in 40 column mode.
CGA 80	Color Graphic Adapter, powering up in 80 column mode.
MONO	Monochrome adapter, including high resolution monochrome adapters.



## Halt On

This category determines whether or not the computer will stop if an error is detected during powering up.

No errors	The system boot will not stop for any errors that may be detected.
All errors	Whenever the BIOS detects a non-fatal error, the system will stop and you will be prompted.
All, But Keyboard	The system boot will not stop for a keyboard error; but it will stop for all other errors.
All, But Diskette	The system boot will not stop for a disk error; but it will stop for all other errors.
All, But Disk/Key	The system boot will not stop for a keyboard or disk error, but it will stop for all other errors.

## Memory

This is a Display-Only Category, determined by POST (Power On Self Test) of the BIOS.

Base Memory	The POST of the BIOS will determine the amount of base (or conventional) memory installed in the system.
Extended Memory	The BIOS determines how much extended memory is presented during the POST.
Other Memory	This is the memory that can be used for different applications. Shadow RAM is most used in this area.
Total Memory	Total memory of the system equals the sum of the above memory.



## BIOS Features Setup



Figure-4 BIOS Features Setup Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
• ChipAway Virus On Guard	<i>Enabled</i>	Guards against boot virus threats early in the boot cycle, before they have a chance to load into your system, ensuring your computer boots to a clean operating system.
	<i>Disabled</i>	Invalidates this function.
• CPU L1/L2 Cache	<i>Enabled</i>	Enables CPU internal Level1/Level2 cache.
	<i>Disabled</i>	Disables CPU internal Level1/Level2 cache.
• CPU L2 Cache ECC	<i>Enabled</i>	Enables CPU L2 Cache ECC (Error Checking and Correction) function.
	<i>Disabled</i>	Disables CPU L2 Cache ECC function.
• Processor Number Feature	<i>Enabled</i>	Pentium®III Processor Number can be readable.
	<i>Disabled</i>	Pentium®III Processor Number can be unreadable.
• Quick Power On Self Test	<i>Enabled</i>	Enables quick POST. BIOS will shorten or skip some check items during POST to speed up POST after you power on the computer.
	<i>Disabled</i>	Normal POST.
• Boot From LAN First	<i>Enabled</i>	Boot from LAN is ahead of any boot sequence selection (LAN Adapter must support this function).
	<i>Disabled</i>	Does not boot from LAN first.
• Boot Sequence	<i>C,A,SCSI,... C,CDROM,A LS/ZIP, C</i>	Any search sequency can be chosen for booting
• Swap Floppy Drive	<i>Enabled</i>	Exchanges the assignment of A&B floppy drives.
	<i>Disabled</i>	The assignment of A&B floppy drives are normal.



• Boot Up Numlock Status	<i>On</i>	Keypad is used as number keys.
	<i>Off</i>	Keypad is used as arrow keys.
• Gate A20 Option	<i>Normal</i>	The A20 signal is controlled by the keyboard controller or chipset hardware.
	<i>Fast</i>	Default setting. The A20 signal is controlled by Port 92 or the chipset specific method.
• Memory Parity/ECC Check	<i>Enabled</i>	Enables the Error Checking & Correction if ECC memory is used.
	<i>Disabled</i>	Disables the ECC function
• Password Setting	<i>System</i>	The system will not boot and access to BIOS Setup will be denied if the correct password is not entered when prompted.
	<i>Setup</i>	The system will boot up, but access to BIOS Setup will be denied if the correct password is not entered when prompted.
	<i>Non-OS2</i>	If your operating system is not OS/2, please select this item.
• OS Select For DRAM>64MB	<i>OS2</i>	If system DRAM is more than 64MB and the operating system is OS/2, please select this item.
	<i>Enabled</i>	Enables S.M.A.R.T hard disk support.
• HDD S.M.A.R.T Capability	<i>Disabled</i>	Invalidates this feature.
	<i>Enabled</i>	Video BIOS will be copied to RAM. Video Shadow will increase the video speed.
• Video BIOS Shadow	<i>Disabled</i>	Video shadow is disabled.
	<i>Enabled</i>	Optional ROM will be copied to RAM by 16K bytes per unit.
• C8000~CBFFF Shadow: DC000-DFFFF Shadow:	<i>Disabled</i>	The shadow function is disabled.
	<i>Enabled</i>	Enables the logo when system boots up
• Show Bootup Logo	<i>Disabled</i>	Logo will not be shown when system boots up.
	<i>Enabled</i>	Does not allow you to upgrade the BIOS.
• Flash Write Protect	<i>Enabled</i>	<b>Note: Enabling this item can protect the system BIOS from being attacked by severe virus such as CIH. Therefore disable this item only when wanting to flash BIOS, afterwards set this item as Enabled (default).</b>
	<i>Disabled</i>	Disabling this item allows you to upgrade the BIOS.



## Chipset Features Setup



Figure-5 Chipset Features Setup Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
• Auto Configuration	<i>Enabled</i>	Automatically configures DRAM Timing according to the value of ' DRAM Speed Selection' .
	<i>Disabled</i>	Manually configures. <b>*Note: It is recommended that the ' Enabled' option be chosen by common users.</b>
• EDO DRAM Speed Selection	50ns, 60ns	This item is of selected EDO DRAM read/write timing. You must ensure that your DIMMs are as fast as 50ns, otherwise 60ns should be selected .
• EDO CAS# MA Wait State	2	One additional wait state is inserted before the assertion of the first CAS# for page hit cycles. This allows one additional clock of MA setup time to the CAS# for the leadoff page hit cycle. Page miss and row miss timing are not affected by this bit.
• EDO RAS# Wait State	1	Without additional wait state.
	2	One additional wait state is inserted before RAS# is asserted for row misses. This provides one clock of additional MAX[13:0] setup time to RAS# assertion. This bit does not affect page misses since the MAX[13:0] lines are setup several clocks in advance of RAS# assertion for page misses.
	1	Without additional wait state.



• SDRAM CAS Latency Time	2	Defines the CLT timing parameter of SDRAM. Latency Time=2x system clocks.
	3	Latency Time=3x system clocks.
• SDRAM Percharge Control	<i>Enabled</i>	Default setting is suggested.
	<i>Disabled</i>	
• DRAM ECC Select	<i>ECC</i>	Provides ECC (Error Checking and Correction) function.
	<i>Non-ECC</i>	Disables ECC function.
• Video BIOS Cacheable	<i>Enabled</i>	Beside conventional memory, video BIOS area is also cacheable.
	<i>Disabled</i>	Video BIOS area is not cacheable.
• Video RAM Cacheable	<i>Enabled</i>	Besides conventional memory, video BIOS area is also cacheable.
	<i>Disabled</i>	Video BIOS area is not cacheable.
• 8 Bit I / O Recovery Time.	1~ 8	Defines the ISA Bus 8 bit I/O operating recovery time.
	NA	8 bit I/O recovery time does not exist.
• 16 Bit I / O Recovery Time	1~ 4	Defines the ISA Bus 16 bit I/O operating recovery time.
	NA	16 bit I/O recovery time does not exist.
• Memory hole at 15M-16M	<i>Enabled</i>	Memory hole at 15-16M is reserved for expanded ISA card
	<i>Disabled</i>	Does not set this memory hole.
• Passive Release	<i>Enabled</i>	Default setting is suggested.
	<i>Disabled</i>	
• Delayed Transaction	<i>Enabled</i>	Default setting is suggested.
	<i>Disabled</i>	
• AGP Aperture Size (MB)	4~256	Sets the effective size of the Graphics Aperture to be used in the particular PAC Configuration.
• Clock Spread Spectrum	<i>Enabled</i>	Enables Clock Spread Spectrum to reduce EMI.
	<i>Disabled</i>	Disables Clock Spread Spectrum.
• Close Empty DIMM/PCI Clk	<i>Enabled</i>	Closes empty DIMM clock or PCI clock to reduce EMI.
	<i>Disabled</i>	Does not close empty DIMM or PCI clock.
• Spread Spectrum Modulated	<i>Enabled</i>	Enables Spread Spectrum Modulated to reduce EMI.
	<i>Disabled</i>	Disables Spread Spectrum Modulated



## Power Management Setup



Figure-6 Power Management Setup Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
• ACPI function	<i>Disabled</i>	Invalidates ACPI function.
	<i>Enabled</i>	Validates ACPI function.
• Power Management	<i>Disabled</i>	Global Power Management (PM) will be disabled.
	<i>User Define</i>	Users can configure their own Power Management Timer.
	<i>Min Saving</i>	Pre - defined timer values are used. All timers are in their MAX values.
	<i>Max Saving</i>	Pre - defined timer values are used. All timers are in their MIN values.
• PM Control by APM	No	System BIOS will ignore APM when Power Management is enabled.
	Yes	System BIOS will wait for APM's prompt before entering any PM mode e.g. Standby or Suspend. <b>Note: If APM is installed, and there is a task running, even when the timer is time out, the APM will not prompt the BIOS to put the system into any power saving mode. But if APM is not installed, this option has no effect.</b>
• Video Off Method	<i>Blank Screen</i>	The system BIOS will only blank off the screen when disabling video.
	<i>V / H SYNC +</i>	In addition to Blank Screen, BIOS will also turn off the V-SYNC & H - SYNC signals from VGA cards to monitor.





	<i>DPMS</i>	This function is enabled only for the VGA card supporting DPMS. <b>Note: When the green monitor detects the V/H-SYNC signals, the electron gun will be turned off.</b>
• Video Off After	<i>N/A</i>	System BIOS never turns off the screen.
	<i>Suspend</i>	Screen blanks after the system enters Suspend mode.
	<i>Standby</i>	Screen blanks after the system enters Standby mode.
	<i>Doze</i>	Screen blanks after the system enters Doze mode.
• MODEM Use IRQ	<i>3,7,5,7,9,10,11</i>	Special wake-up event for Modems.
	<i>NA</i>	Invalidates this feature.
• Doze mode	<i>Disabled</i>	The system never enters Doze mode.
	<i>1Min ~ 1 Hr</i>	Defines the continuous idle time before the system enters Doze mode. If any items defined in 'Reload Global Timer Events' are On and activated, the system will be woken up.
• Standby Mode	<i>Disabled</i>	The system never enters Standby mode.
	<i>1 Min ~ 1Hr</i>	Defines the continuous idle time before the system enters Standby mode. If any items defined in 'Reload Global Timer Events' are On and activated, the system will be woken up.
• Suspend Mode	<i>Disabled</i>	The system never enters Suspend mode.
	<i>Min ~ 1Hr</i>	Defines the continuous idle time before the system enters Suspend mode. If any items defined in 'Reload Global Timer Events' are On and activated, the system will be woken up.
• HDD Power Down	<i>Disabled</i>	HDD's motor will not be off.
	<i>1 ~15 Min</i>	Defines the continuous HDD idle time before the HDD enters the power saving mode (motor off).
• Throttle Duty Cycle	<i>12.5%</i>	Selects the duty cycle of the STPCLK# signal, slowing down the CPU speed when the system enters the green mode.
	<i>25%</i>	
	<i>37.5%</i>	
	<i>50 %</i>	
	<i>62.5%</i>	
	<i>75%</i>	
	<i>87.5%</i>	
• VGA Active Monitor	<i>Enabled</i>	VGA active reloads global timer.
	<i>Disabled</i>	VGA active has no influence to global timer.
• Soft-Off by PWR-BTTN	<i>Instant-Off</i>	The system will power off immediately once the 'Power' button is pressed.
	<i>Delay 4 Secs</i>	The system will not power off until the 'Power' button is pressed continuously for more than 4 seconds.



## Award BIOS Description

- | • Resume by Ring       | <i>Enabled</i>                                       | Allows the system to be powered on when a ring indicator signal comes up to UART1 or UART2 from an external modem or comes up to WOM header from an internal modem card.                    |
|------------------------|--|---|
| • Resume by Alarm      | <i>Disabled</i><br><i>Enabled</i>                    | Does not allow Ring Power-On.<br>RTC alarm can be used to generate a wake event to power up the system which is in power-off status. You can set any date, any time to power up the system. |
| • Wake Up on Lan       | <i>Disabled</i><br><i>Enabled</i>                    | RTC has no alarm function.<br>Allows the system to be powered on when a remote wake up signal comes up to the WOL header from LAN adapter.  |
| • IRQ8 Break suspend   | <i>Disabled</i><br><i>Enabled</i><br><i>Disabled</i> | Does not allow wake up on LAN<br>Generates a clock event.<br>Does not generate a clock event.   |
| • IRQ [3-7, 9-15], NMI | <i>Enabled</i><br><i>Disabled</i>                    | Reloads global timer.<br>Does not influence the global timer.   |
| .....                  |  |   |
| Parallel Port          |  |   |



## PNP/PCI Configuration Setup

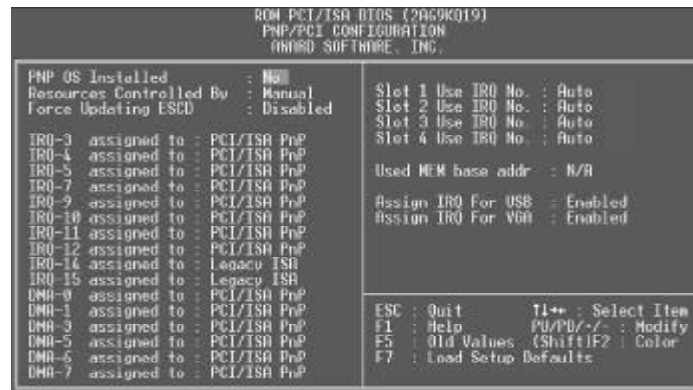


Figure-7 PNP/PCI Configuration Setup Menu

The following indicates the options for each item and describes their meaning.

<u>Item</u>	<u>Option</u>	<u>Description</u>
• PNP OS Installed	Yes	Device resources assigned by PnP OS.
	No	Device resources assigned by BIOS.
• Resources Controlled By	Manual	Assigns the system resources (IRQ and DMA) manually.
	Auto	Assigns system resources (IRQ and DMA) automatically by BIOS.
• Force Updating ESCD	Enabled	The system BIOS will force updating ESCD once, then automatically set this item as Disabled.
	Disabled	Disables the forced update ESCD function.
• IRQ-3~IRQ-15 assigned to	Legacy ISA	The specified IRQ-x will be assigned to ISA only.
	PCI/ISA PnP	The specified IRQ-x will be assigned to ISA or PCI.
• DMA-0~DMA-7 assigned to	Legacy ISA	The specified DMA-x will be assigned to ISA only.
	PCI/ISA PnP	The specified DMA-x will be assigned to ISA or PCI.
• Slot 1/2/3/4 use IRQ No.	Auto,3,4,5,7,9	Assigns an IRQ for slot1/2/3/4 manually or automatically.
• Used MEM base addr	10,11,12,14,15	Claims a memory space to be occupied by legacy ISA card. The memory address and the memory size (8/16/32/64K) can be chosen from the options.
	C800/8 ~ 64K	
	N/A	Invalidates this feature.



- |                      |                 |   |
|----------------------|-----------------|---|
| • Assign IRQ for USB | <i>Enabled</i>  | Assigns an IRQ for USB. If an USB device is used, enable this item.                             |
|                      | <i>Disabled</i> | Does not assign an IRQ for USB. If no USB device used, disabling this item can release the IRQ. |
| • Assign IRQ for VGA | <i>Enabled</i>  | Assigns the needed IRQ for the VGA Card.  |
|                      | <i>Disabled</i> | Does not assign an IRQ for the VGA card, in order to release the IRQ.                           |



## Integrated Peripherals



Figure-8 Integrated Peripherals Menu

The following indicates the options for each item and describes their meaning.

Item	Option	Description
• IDE HDD Block Mode	<i>Enabled</i>	Allows IDE HDD to read/write several sectors at once.
	<i>Disabled</i>	IDE HDD only reads/writes a sector once.
• IDE Primary/ Secondary Master/Slave PIO	<i>Auto</i>	Defines the IDE primary/secondary master/ slave PIO mode.
	<i>Auto</i>	The IDE PIO mode is defined by auto -detection.
• IDE Primary/ Secondary Master/Slave UDMA	<i>Disabled</i>	Ultra DMA mode will be enabled if ultra DMA device is detected.
	<i>Disabled</i>	Disables this function.
• On-chip Primary/Secondary PCI IDE	<i>Enabled</i>	On-chip primary/secondary PCI IDE port is enabled.
	<i>Disabled</i>	On-chip primary/secondary PCI IDE port is disabled.
• USB Keyboard Support	<i>Enabled</i>	USB Keyboard Support is enabled.
	<i>Disabled</i>	USB Keyboard Support is disabled.
• Init Display First	<i>PCI SLOT</i>	Initializes the PCI VGA first. If a PCI VGA card and an AGP card are installed together in the system, the one initialized first functions.
	<i>AGP</i>	Initializes the AGP first.
• POWER ON Function	<i>Keyboard 98</i>	“Wake” key on keyboard 98 can be used to power up the system.
	<i>BUTTON ONLY</i>	Use the power button to power up the system.



	<i>Password</i>	Enables the Keyboard Password Power-on function and disables the power button's power-on function. Other than choosing this option, the password should be entered to implement this function. <b>Note: If this option (Password) is chosen, the jumper JP2 must be set as PIN1 &amp; PIN 2 closed, or this will prevent you from powering up your system.</b>
• Onboard FDC Controller	<i>Enabled</i> <i>Disabled</i>	Onboard floppy disk controller is enabled. Onboard floppy disk controller is disabled.
• Onboard Serial 1/2	<i>3F8/IRQ4,</i> <i>2F8/IRQ3,</i> <i>3E8/IRQ4,</i> <i>2E8/IRQ3,</i> <i>Auto</i>	Defines the onboard serial port address and required interrupt number.  Onboard serial port address and IRQ are automatically assigned.
• Serial Port 2 Mode	<i>Disabled</i> <i>Normal</i> <i>ASK/IR</i>  <i>IrDA</i>	Onboard serial port is disabled. Defines Serial Port 2 as standard serial port. Supports SHARP ASK-IR protocol with maximum baud rate up to 57600bps. Supports IrDA version 1.0 SIR protocol with maximum baud rate up to 115.2Kbps.
• Onboard Parallel Port	<i>378/IRQ7,</i> <i>278/IRQ5,</i> <i>3BC/IRQ7</i> <i>Disabled</i>	Defines onboard parallel port address and IRQ channel.  Onboard parallel port is disabled.
• Parallel Port Mode	<i>SPP</i> <i>EPP</i> <i>ECP,</i> <i>ECP+EPP</i>	Defines the parallel port mode as Standard Parallel Port (SPP), Enhanced Parallel Port (EPP), or Extended Capabilities Port (ECP).
• PWRON After PWR-Fail	<i>Off</i>  <i>on</i>  <i>Former_sts</i>	The system remains off when the AC power supply resumes. The system will be powered up when the AC power supply resumes. whatever the system status is, before the AC power supply cuts off, the system resumes in the previous status (ON/OFF) when the AC power supply resumes.



## System Monitor

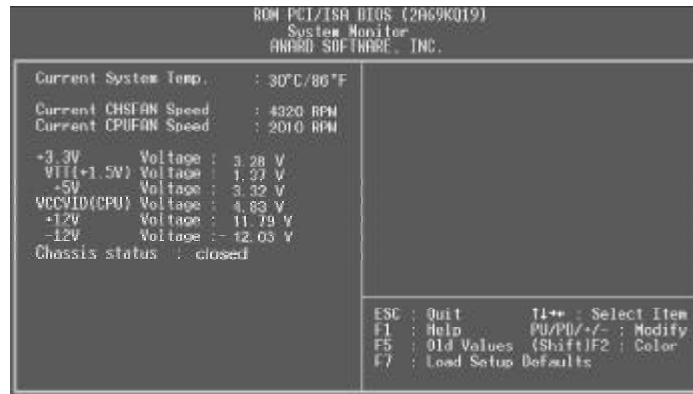


Figure-9 System Monitor Menu

The following describes the meaning of each item.

<u>Item</u>	<u>Current Data Shown</u>	<u>Description</u>
<ul style="list-style-type: none"> <li>Current System Temp.</li> <li>Current CHSFAN Speed</li> <li>Current CPUFAN Speed</li> </ul>	30°C/ 86°C 2010RPM 4320RPM	The temperature inside the chassis. RPM( Revolution Per Minute) speed of fan connected to the fan header CPUFAN or CHSFAN. Fan speed value is based on an assumption that tachometer signal is two pulses per revolution; In other cases, you should regard it relatively.
<ul style="list-style-type: none"> <li>+ 3.3V Voltage</li> <li>VTT (+1.5) Voltage,</li> <li>+ 5V</li> <li>VCCVID(CPU) Voltage</li> <li>+12V</li> <li>-12V</li> </ul>	3.28V 1.37V 4.83V 11.79V -13.50V	Displays current Voltage values including all the most important voltages of the mainboard. +3.3V, +5V, +12V, -12V are voltages from the ATX power supply, VTT (+1.5) Voltage is GTL Termination Voltage from the on-board regulator, and VCCVID (CPU) Voltage is CPU Core Voltage from the on board switching Power Supply.
<ul style="list-style-type: none"> <li>Chassis Status</li> </ul>	Closed Opened	Indicates status of chassis is closed. Indicates status of chassis is opened.