Technical Manual

Of

Intel Cedar Trail Series CPU

& NM10 Chipset

Based

3.5’’ SBC

NO.G03-NF36-F

Revision: 5.0

Release date: May 31, 2013

Trademark:

*** Specifications and Information contained in this documentation are furnished for information use only, and are subject to change at any time without notice, and should not be construed as a commitment by manufacturer.**

Environmental Protection Announcement

Do not dispose this electronic device into the trash while discarding. To minimize pollution and ensure environment protection of mother earth, please recycle.

TABLE OF CONTENT

Environmental Safety Instruction

- Avoid the dusty, humidity and temperature extremes. Do not place the product in any area where it may become wet.

- 0 to 60 centigrade is the suitable temperature. (The figure comes from the request of the main chipset)

- Generally speaking, dramatic changes in temperature may lead to contact malfunction and crackles due to constant thermal expansion and contraction from the welding spots' that connect components and PCB. Computer should go through an adaptive phase before it boots when it is moved from a cold environment to a warmer one to avoid condensation phenomenon. These water drops attached on PCB or the surface of the components can bring about phenomena as minor as computer instability resulted from corrosion and oxidation from components and PCB or as major as short circuit that can burn the components. Suggest starting the computer until the temperature goes up.

- The increasing temperature of the capacitor may decrease the life of computer. Using the close case may decrease the life of other device because the higher temperature in the inner of the case.

- Attention to the heat sink when you over-clocking. The higher temperature may decrease the life of the device and burned the capacitor.

USER'S NOTICE

Manual Revision Information

Reversion	Revision History	Date
5.0	Fifth Edition	May 31, 2012

Item Checklist

- ☑ Motherboard
- ☑ User's Manual
- ☑ CD for motherboard utilities
- ☑ DVI-VGA Converter
- ☑ Cable(s)

Chapter 1
Introduction of the Motherboard

1-1 Feature of Motherboard

- Onboard Intel® Cedar Trail Processor + NM10 Chipset, with low power consumption never denies high performance
- Support SODIMM DDRIII 800Single Channel, up to 2GB(for **NF36-2600** Series)
- Support SODIMM DDRIII 800/1066 Single Channel, up to 4GB (for **NF36-2800 & NF36-2550** Series)
- Support 1 * SATAII Device
- Support CFast card Slot and Mini PCIE slot
- Onboard dual Realtek RTL 8111E Gigabit Ethernet LAN chip
- Integrated with 2-CH Realtek ALC662 HD Audio CODEC
- Integrated with 1 * 18-bit / 24-bit Single Channel LVDS header & 1 * 24-bit Dual Channel LVDS header
- Support DVI-I Output
- Support USB 2.0 data transport demands.
- Support RS232/422/485 function
- Support CPU Smart FAN
- Compliance with ErP standard
- Support Watchdog function

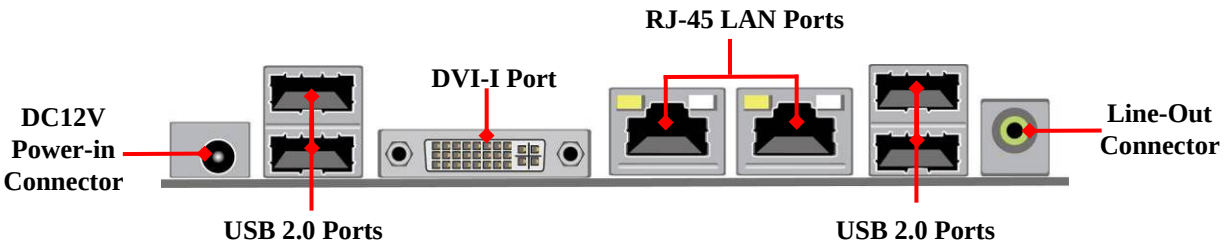
1-2 Specification

Spec	Description
Model	**NF36-2600 / NF36-2800 / NF36-2550**
Design	● 3.5”SBC 6 layers; PCB size: 14.8x 10.2 cm
Chipset	● Intel®NM10 Express chipset
Embedded CPU	● Intel® Cedar Trail M-N2600 / 1.6GHz (for NF36-2600 series) ● Intel® Cedar Trail M-N2800 /1.86GHz(for NF36-2800 series) ● Intel® Cedar Trail D-D2550/ 1.86GHz(for NF36-2550 series)
Memory Slot	● 1 * DDRIII SODIMM Slot for un-buffered Single Channel DDRIII 800 MHz SDRAM, expandable to 2GB(for NF36-2600 series) ● 1 * DDRIII SODIMM Slot for un-buffered Single Channel DDRIII 800-1066 MHz SDRAM, expandable to 4GB(for NF36-2800 & NF36-2550 series) ***Notice:*** **Support Small Outline DIMMs Raw Cards RC-B(1Rx8), and RC-F (2Rx8). Does not support RC-A (2Rx16), RC-C (1Rx16), RC-D (2Rx16 dual die), and RC-E(2Rx16)*
Expansion Slots	● CFast card slot x1 ● Mini-PCI E slot x1
Dual LAN	● Integrated with dual Realtek RTL8111E PCI-E Gigabit LAN chip. ● Support Fast Ethernet LAN function of providing 10/100/1000Mbps Ethernet data transfer rate
HD Audio	● Realtek ALC662-GR 2-channel HD Audio Codec integrated ● Audio driver and utility included
BIOS	● AMI 16MB Flash ROM
Rear I/O	● DC12V power-in connector x1 ● USB 2.0 port x 4 ● DVI-I port x1 ● RJ-45 LAN port x2

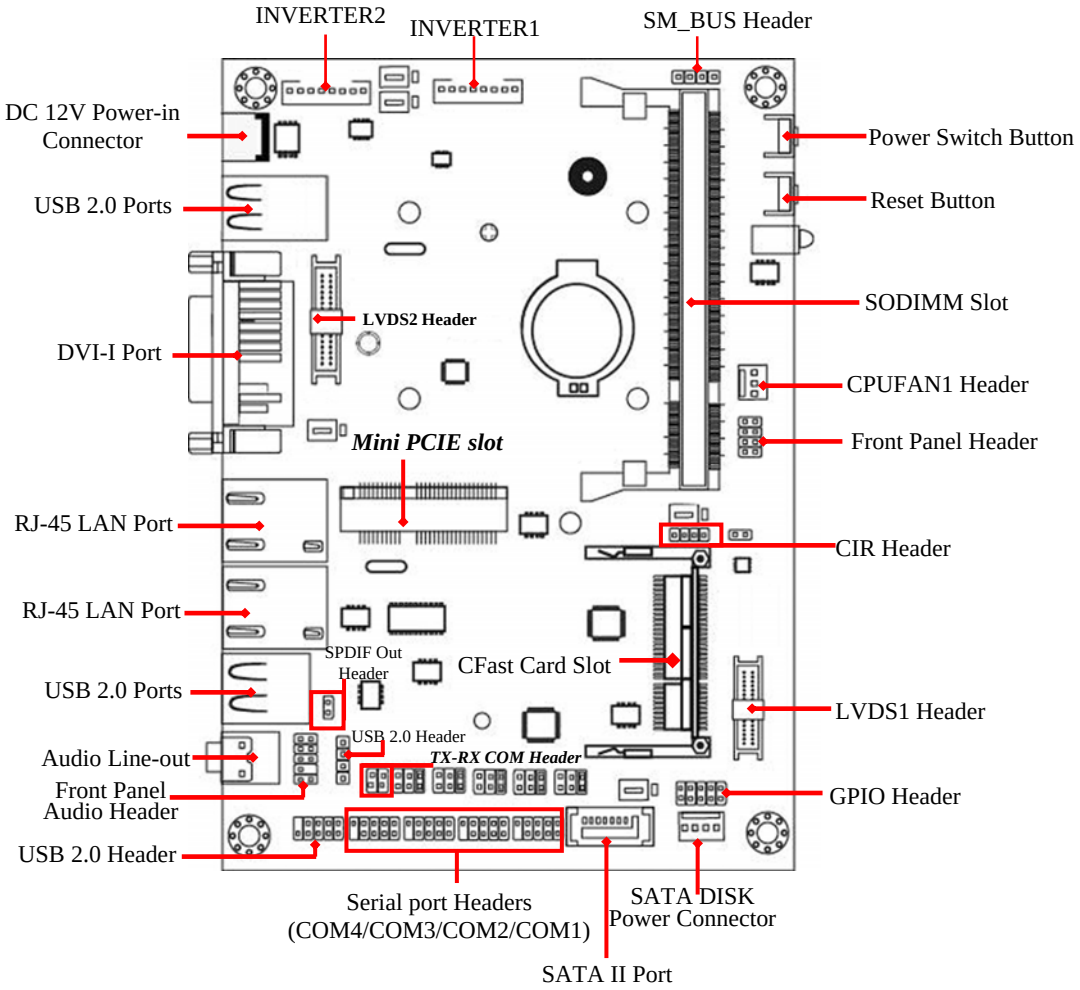
	● Audio Line out connector x1
Internal I/O	● 9-pin USB 2.0 header x1 (Expansible to 2* USB 2.0 ports) ● 4pin USB 2.0 header x1 (Expansible to 1*USB 2.0 port) ● Front panel audio header x1 ● SPDIF _out header x1 ● CIR header x1 ● SM_BUS header x1 ● Front panel header x1 ● SATAII port & SATA Power connector x1 ● Serial port header x4 & TX-RX COM header x1 ● LVDS connector x2 & LVDS inverter x2 ● GPIO header x1 ● CPU FAN header x1

1-3 Layout Diagram

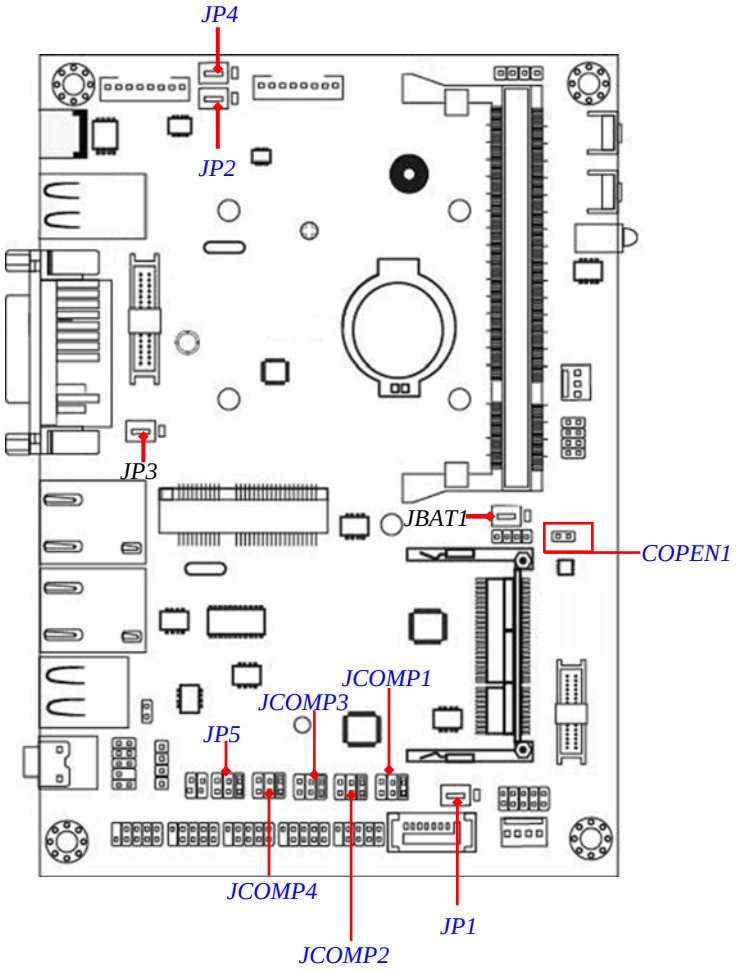
Rear IO Panel Diagram:



Internal Diagram:



Jumper Position:



Jumper

Jumper	Name	Description
JBAT1	CMOS RAM Clear Function Setting	3-Pin Block
JP1	LVDS1 VCC 5V/3.3V Select	3-Pin Block
JP2	INVERTER1 VCC 12V/5V Select	3-Pin Block
JP3	LVDS2 VCC 5V/3.3V Select	3-Pin Block
JP4	INVERTER2 VCC 12V/5V Select	3-Pin Block
JCOMP1	COM1 Header Pin9 Function Select	6-Pin Block
JCOMP2	COM2 Header Pin9 Function Select	6-Pin Block
JCOMP3	COM3 Header Pin9 Function Select	6-Pin Block
JCOMP4	COM4 Header Pin9 Function Select	6-Pin Block
JP5	COM4 RS232/485/422 Function Select	6-Pin Block
COPEN	Case Open Message Display Function	2-Pin Block

Connectors

Connector	Name	Description
J1	DC Power Connector	1-phone Jack
USB1/USB2	USB Port Connectors	4-pin Connectors
DVI1	DVI Port Connector	24-pin Connector
LAN1/LAN2	RJ-45 LAN Connector	8-pin Connector
FLINE_OUT1	Line Out Connector	1-phone Jack
SATA1	SATAII Connector	7-pin Connector
PWOUT1	SATA Power Out Connector	4-pin Connector

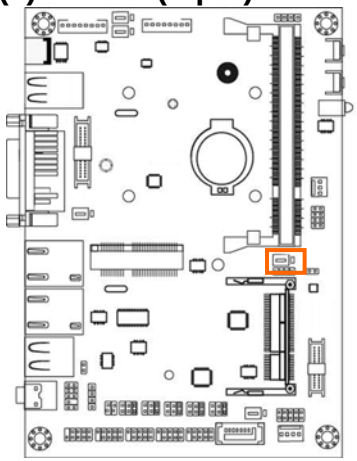
Headers

Header	Name	Description
AUDIO1	Front panel audio header	9-pin block
SPDIF	SPDIF out header	2-pin block
USB3	USB header	9-pin block
USB4	USB header	4-pin block
COM1/COM2/ COM3/COM4	Serial port headers	9-pin block
TX-RXCOM1	RS422/485 header	4-pin block
GPIO1	GPIO header	10-pin block
JW_FP1	Front Panel header (PWR LED/ HD LED/ /Power Button /Reset)	8-pin Block
CPUFAN1	CPU FAN header	3-pin Block
CIR	CIR header	4-pin block
SM_BUS	SM_BUS header	4-pin block
INVERTER1 /INVERTER2	LVDS Inverter header	8-pin Block
LVDS1	24-bit LVDS header	30-pin Block
LVDS2	18-bit /24-bit LVDS header	30-pin Block

Chapter 2
Hardware Installation

2-1 Jumper Setting

(1) JBAT1 (3-pin): Clear CMOS

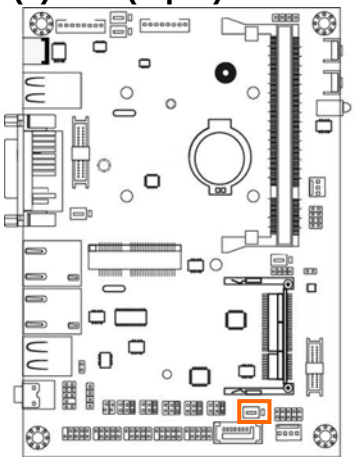


JBAT1

1-2 closed: Normal;

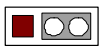
2-3 closed : Clear CMOS

(2) JP1 (3-pin): LVDS1 VCC 5V/3.3V Function Setting



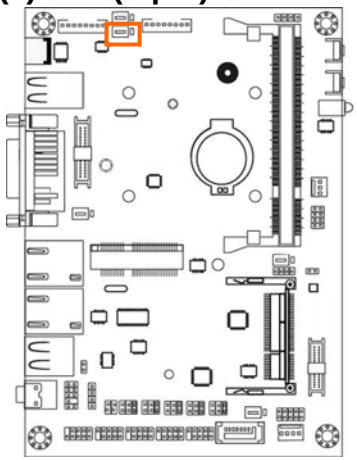
JP1

1-2 closed: LVDS1 VCC 5V(default);



2-3 closed : LVDS1 VCC 3.3V

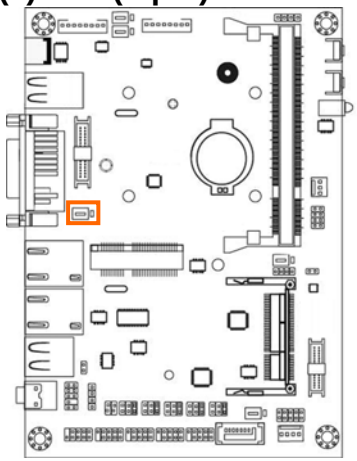
(3) JP2 (3-pin): INVERTER1 VCC 12V/5V Select



JP2

1-2 closed：Inverter1 VCC=12V (default);　　2-3 closed：Inverter1 VCC=5V

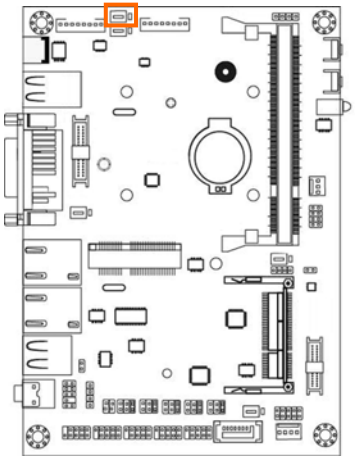
(4) JP3 (3-pin): LVDS2 VCC 5V/3.3V Function Setting



JP3

1-2 closed: LVDS2 VCC 5V(default);　　2-3 closed : LVDS2 VCC 3.3V

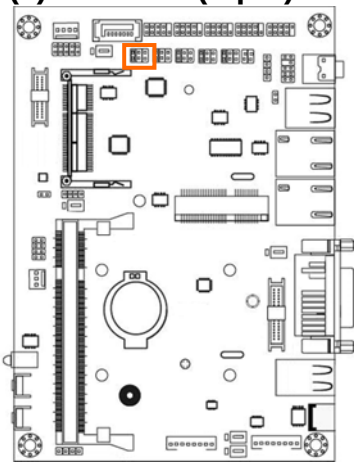
(5) JP4 (3-pin): INVERTER2 VCC 12V/5V Select



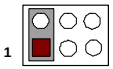
JP4

1-2 closed：Inverter2 VCC=12V (default);　　2-3 closed：Inverter2 VCC=5V

(6) JCOMP1 (6-pin): COM1 Pin9 Function Select

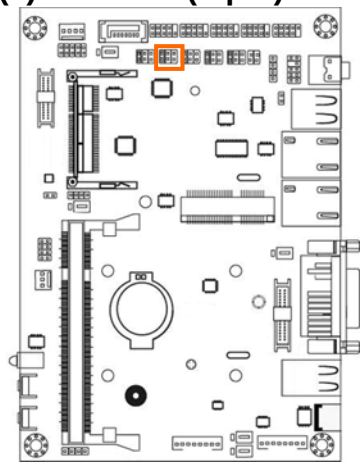


JCOMP1

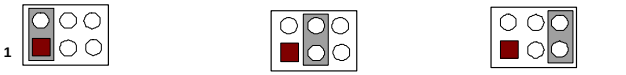


1-2 closed: RS232;　　3-4 closed : +12V;　　5-6 closed : +5V

(7) JCOMP2 (6-pin): COM2 Pin9 Function Select

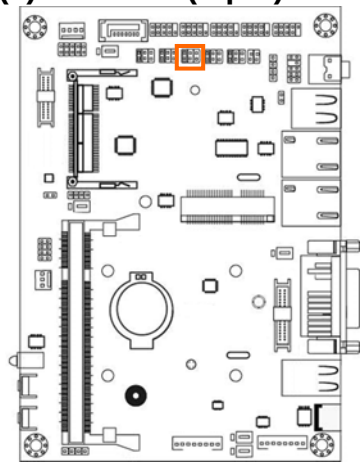


JCOMP2

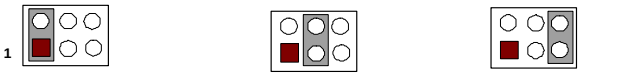


1-2 closed: RS232; 3-4 closed : +12V; 5-6 closed : +5V

(8) JCOMP3 (6-pin): COM3 Pin9 Function Select

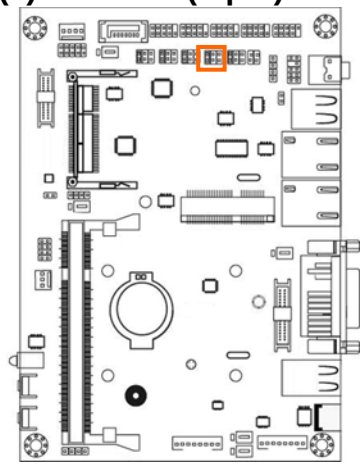


JCOMP3

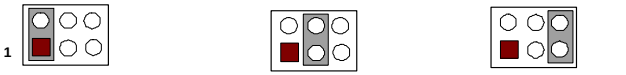


1-2 closed: RS232; 3-4 closed : +12V; 5-6 closed : +5V

(9) JCOMP4 (6-pin): COM4 Pin9 Function Select

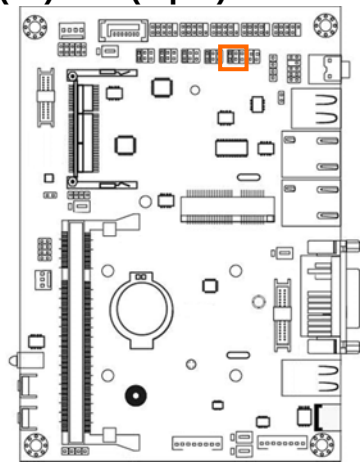


JCOMP4

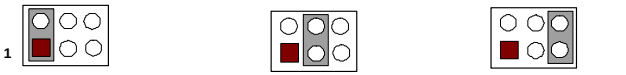


1-2 closed: RS232; 3-4 closed : +12V; 5-6 closed : +5V

(10) JP5 (6-pin): COM4 RS232/485/422 Function Select

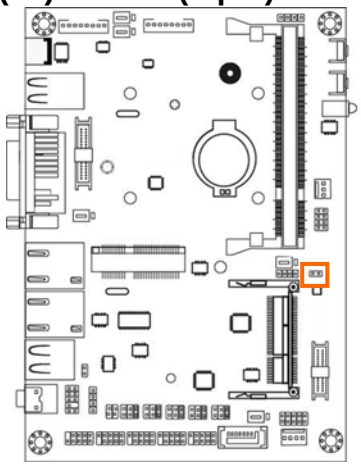


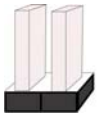
JP5



1-2 closed: RS232; 3-4 closed : RS485; 5-6 closed : RS422

(11)COPEN (2-pin): Case Open Message Display function select





1 2

Pin 1-2:open

1 2

Pin 1-2:short

COPEN

1-2 Open： Normal; 1-2 Short： Case Open

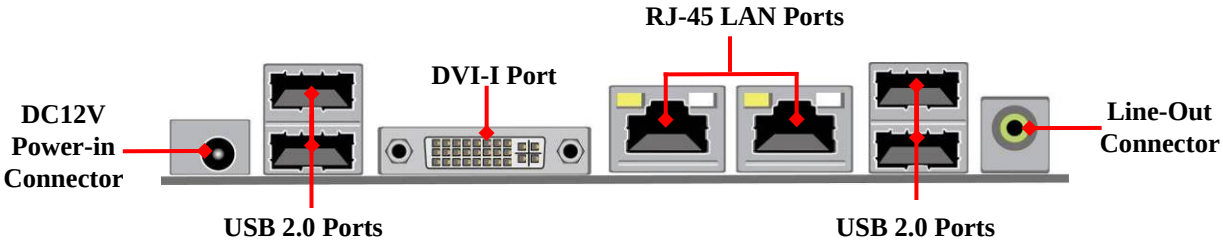
Case Open Display Function

Pin 1-2 shorted: Case open display function enabled. In this case if you case is removed, next time when you restart your computer a message will be displayed onscreen to inform you of this.

2-2 Connectors and Headers

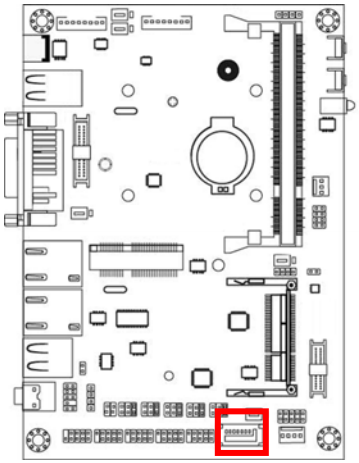
2-2-1 Connectors

(1) Rear I/O Connectors

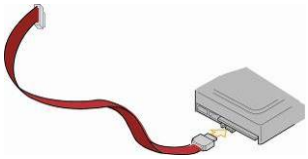


(2) SATAII Port connector: SATA1

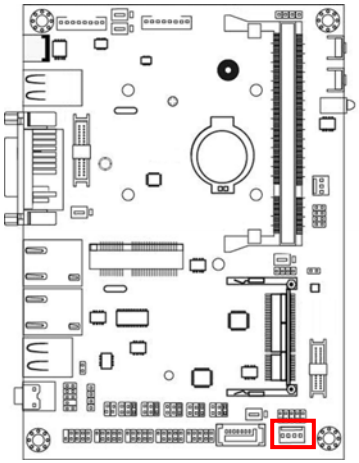
SATA1 connector is an SATAII connector that supports SATA hard disk.

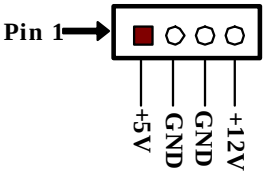


Pin No.	Definition
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND



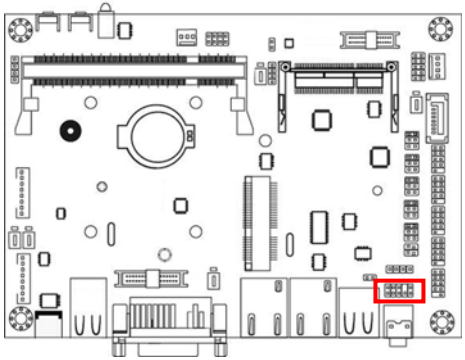
(3)SATA Power Connector (4-pin): PWOUT1



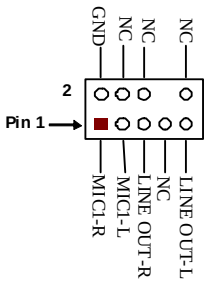


2-2-2 Headers

(1) Front panel audio (9-pin): AUDIO1

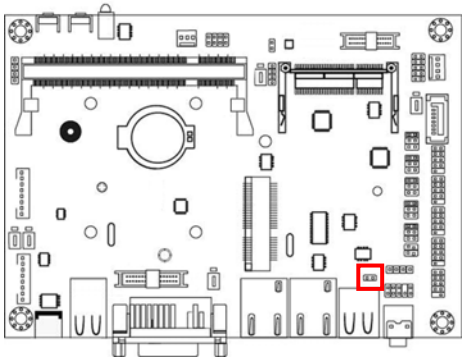


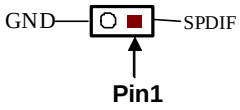
AUDIO1



Line-Out, MIC Header

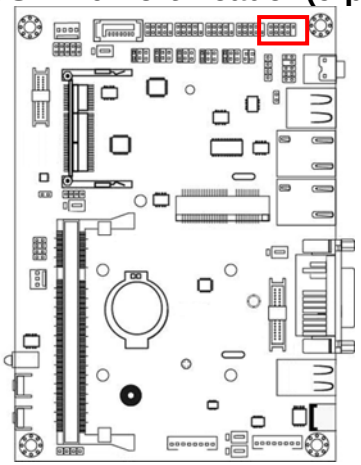
(2) HDMI-SPDIF Out header (2-pin): SPDIF

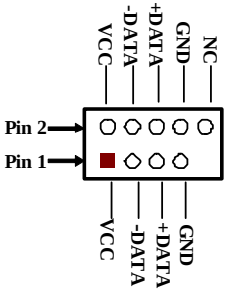




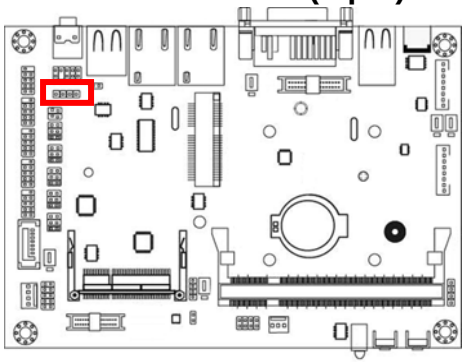
HDMI_SPDIF Header

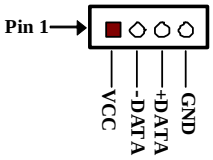
(3) USB 2.0 Port Header (9-pin): USB3



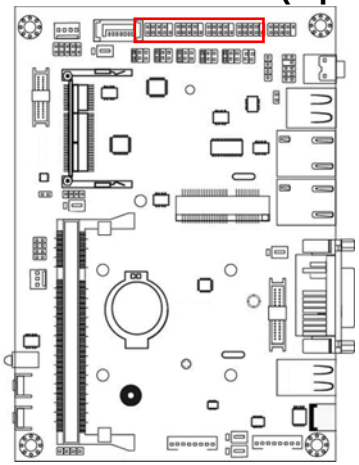


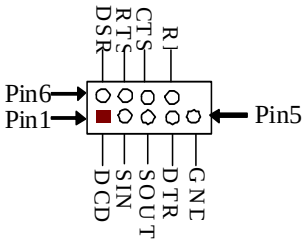
(4) USB 2.0 Port Header (4-pin): USB4





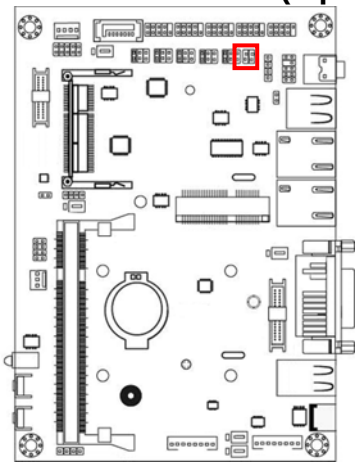
(5) Serial Port Header (9-pin): COM1,COM2, COM3, COM4

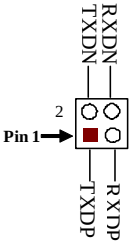




Serial Port Header 9-pin Block

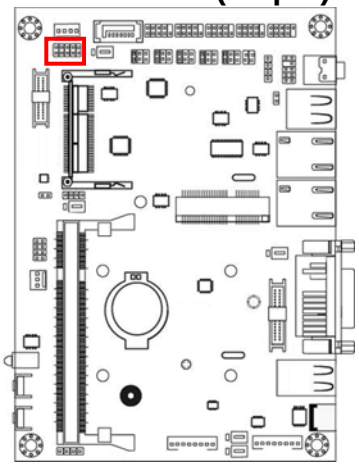
(6) RS422/485 Header (4-pin): TX_RXCOM

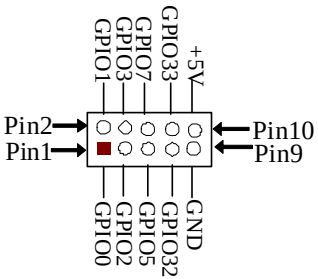




TX-RXCOM Header

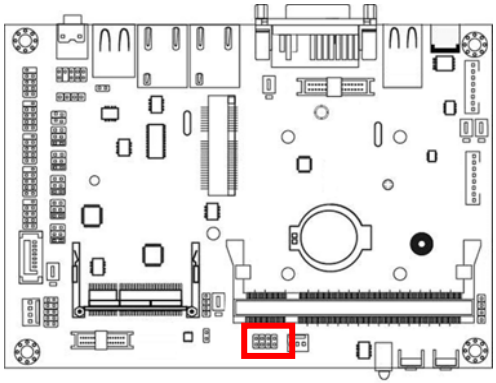
(7) GPIO Header (10-pin): GPIO1

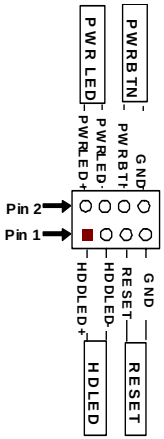




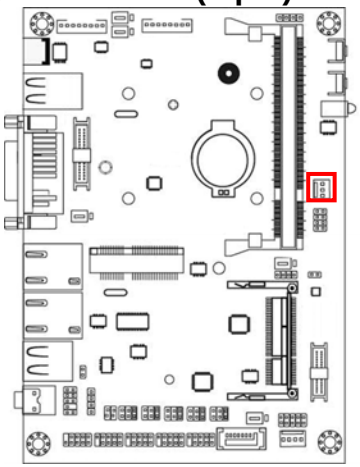
GPIO Header

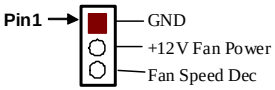
(8) Front Panel Header (9-pin): JW-FP1



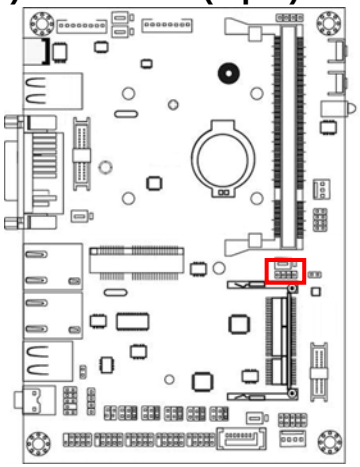


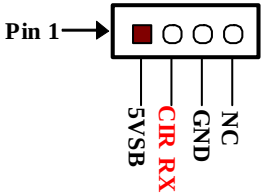
(9)FAN Header (3-pin): CPUFAN1



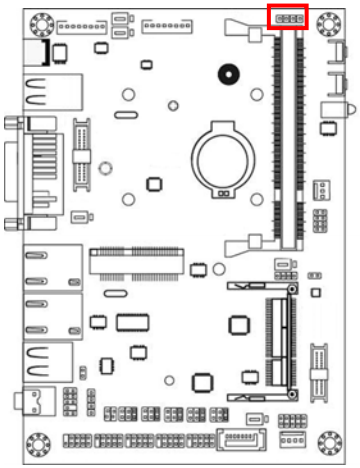


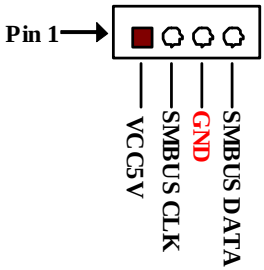
(10)CIR Header (4-pin): CIR



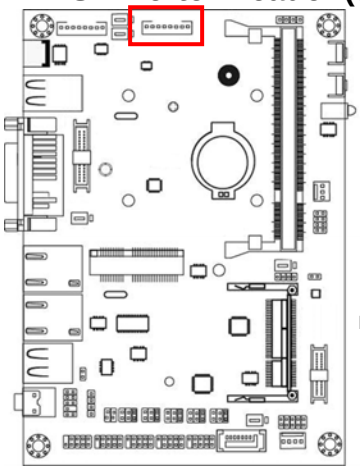


(11)SM_BUS Header (4-pin): SM_BUS





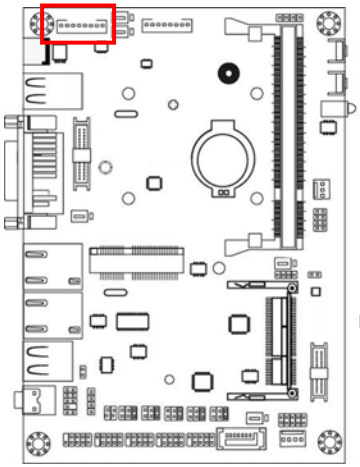
(12) LVDS Inverter Header (8-pin): INVERTER1



INVERTER1

Pin No.	Definition
1	Backlight Enable
2	Backlight Duty
3	PVCC
4	PVCC
5	GND
6	GND
7	Backlight +SW
8	Backlight -SW

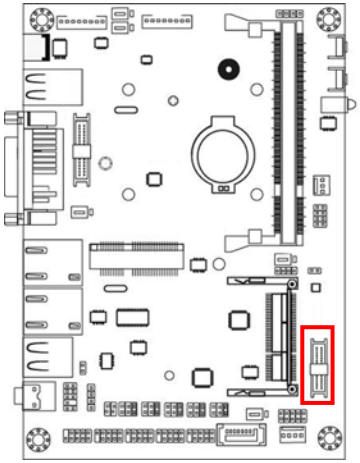
(13) LVDS Inverter Headers (8-pin):INVERTER2

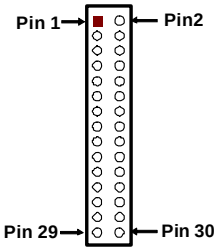


INVERTER2

Pin No.	Definition
1	Backlight Enable
2	Backlight Duty/NC
3	PVCC
4	PVCC
5	GND
6	GND
7	Backlight+ SW /NC
8	Backlight- SW/NC

(14)24-bit dual channel LVDS Header (30-pin): LVDS1

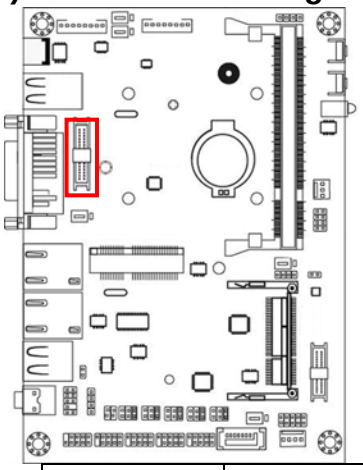


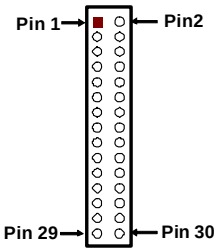


LVDS1 Header

Pin NO.	Pin Define	Pin NO.	Pin Define
Pin 1	LVDSB_DATAN3	Pin 2	LVDSB_DATAP3
Pin 3	LVDS_CLKBN	Pin 4	LVDS_CLKBP
Pin 5	LVDSB_DATAN2	Pin 6	LVDSB_DATAP2
Pin 7	LVDSB_DATAN1	Pin 8	LVDSB_DATAP1
Pin 9	LVDSB_DATAN0	Pin 10	LVDSB_DATAP0
Pin 11	NC	Pin 12	NC
Pin 13	GND	Pin 14	GND
Pin 15	GND	Pin 16	GND
Pin 17	LVDSA_DATAP3	Pin 18	LVDSA_DATAN3
Pin 19	LVDS_CLKAP	Pin 20	LVDS_CLKAN
Pin 21	LVDSA_DATAP2	Pin 22	LVDSA_DATAN2
Pin 23	LVDSA_DATAP1	Pin 24	LVDSA_DATAN1
Pin 25	LVDSA_DATAP0	Pin 26	LVDSA_DATAN0
Pin 27	PVDD	Pin 28	PVDD
Pin 29	PVDD	Pin 30	PVDD

(15) 18-bit /24-bit single channel LVDS Header (30-pin): LVDS2





LVDS1 Header

Pin NO.	Pin Define	Pin NO.	Pin Define
Pin 1	NC	Pin 2	NC
Pin 3	NC	Pin 4	NC
Pin 5	NC	Pin 6	NC
Pin 7	NC	Pin 8	NC
Pin 9	NC	Pin 10	NC
Pin 11	LVDS_DDC_DATA	Pin 12	LVDS_DDC_CLK
Pin 13	GND	Pin 14	GND
Pin 15	GND	Pin 16	GND
Pin 17	NC/ LVDSA_DATAP3	Pin 18	NC/ LVDSA_DATAN3
Pin 19	LVDS_CLKAP	Pin 20	LVDS_CLKAN
Pin 21	LVDSA_DATAP2	Pin 22	LVDSA_DATAN2
Pin 23	LVDSA_DATAP1	Pin 24	LVDSA_DATAN1
Pin 25	LVDSA_DATAP0	Pin 26	LVDSA_DATAN0
Pin 27	PVDD	Pin 28	PVDD
Pin 29	PVDD	Pin 30	PVDD

Chapter 3
Introducing BIOS

Notice!	The BIOS options in this manual are for reference only. Different configurations may lead to difference in BIOS screen and BIOS screens in manuals are usually the first BIOS version when the board is released and may be different from your purchased motherboard. Users are welcome to download the latest BIOS version form our official website.

The BIOS is a program located on a Flash Memory on the motherboard. This program is a bridge between motherboard and operating system. When you start the computer, the BIOS program will gain control. The BIOS first operates an auto-diagnostic test called POST (power on self test) for all the necessary hardware, it detects the entire hardware device and configures the parameters of the hardware synchronization. Only when these tasks are completed done it gives up control of the computer to operating system (OS). Since the BIOS is the only channel for hardware and software to communicate, it is the key factor for system stability, and in ensuring that your system performance as its best.

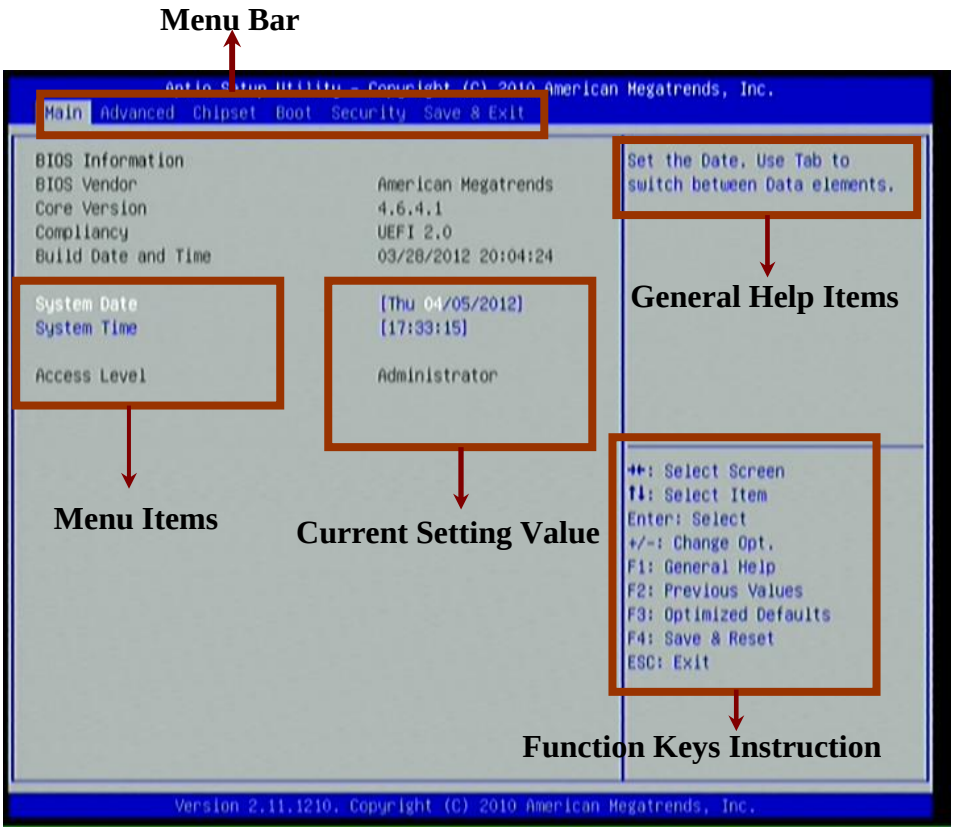
3-1 Entering Setup

Power on the computer and by pressing <Del> immediately allows you to enter Setup. If the message disappears before your respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the “RESET” button on the system case. You may also restart by simultaneously pressing <Ctrl>, <Alt> and <Delete> keys. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to

Press <Del> to enter Setup

3-2 BIOS Menu Screen

The following diagram show a general BIOS menu screen:



3-3 Function Keys

In the above BIOS Setup main menu, you can see several options. We will explain these options step by step in the following pages of this chapter, but let us first see a short description of the function keys you may use here:

- Press←→ (left, right) to select screen;
- Press ↑↓ (up, down) to choose the item you want to confirm or to modify in the main menu.
- Press <Enter> to select.
- Press <+>/<–> key when you want to modify the BIOS parameters for the active option.
- [F1]: Press to general help information.
- [F2]: Press to load previous value.
- [F3]: Press to load optimized defaults.
- [F4]: Save and Reset.
- Press <Esc> to exit from BIOS Setup.

3-4 Getting Help

Main Menu

The on-line description of the highlighted setup function is displayed at the top right corner the screen.

Status Page Setup Menu/Option Page Setup Menu

Press [F1] to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window, press <Esc>.

3-5 Menu Bar

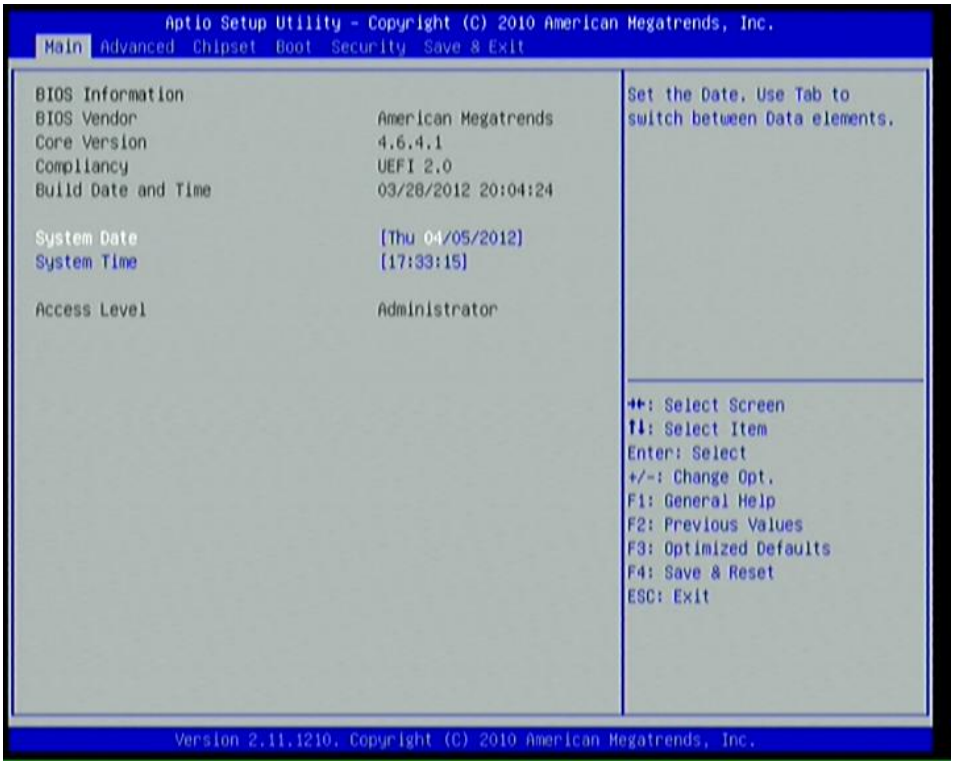
There are six menu bars on top of BIOS screen:

Main	To change system basic configuration
Advanced	To change system advanced configuration
Chipset	To change chipset configuration
Boot	To change boot settings
Security	Password settings
Save & Exit	Save setting, loading and exit options.

User can press the ←/→ (left, right) arrow key on the keyboard to switch from menu bar. The selected one is highlighted.

3-6 Main Menu

Main menu screen includes some basic system information. Highlight the item and then use the <+> / <-> key or numerical keyboard keys to select the value you want in each item.



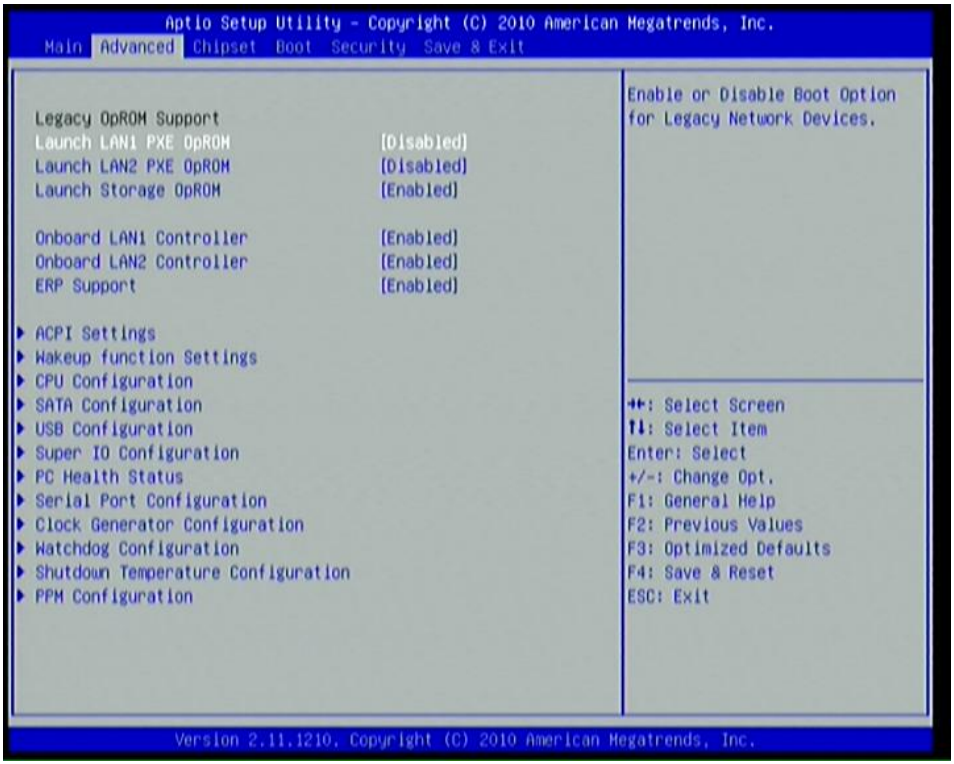
System Date

Set the date. Please use [TAB] to switch between data elements.

System Time

Set the time. Please use [TAB] to switch between time elements.

3-7 Advanced Menu



Lagacy OpROM Support

Launch LAN1 OpROM/Launch LAN2 PXE OpROM

Use this item to enable or disable boot option for legacy network devices.

Launch Storage OpROM

Use this item to enable or disable boot option for legacy mass storage devices with option ROM.

Onboard LAN 1 Controller

Use this item to enable or disable PCI Express root port 1.

Onboard LAN 2 Controller

Use this item to enable or disable Mini- PCIE control.

ERP Support

Use this item to enable or disable ERP function for this board. This item should be set as [Disabled] if you wish to have Active All Wakeup Function.

ACPI Settings

ACPI Sleep State

Use this item to select the highest ACPI sleep state the system will enter when the suspend button is pressed.

The optional settings are: [S1(CPU Stop Clock)]; [S3 (Suspend to ROM)].

Wakeup Function Settings

Wake System with Fixed Time

Use this item to enable or disable system wake on alarm event. When set as [Enabled], system will wake on the hour/min/sec specified.

CIR Wakeup

Use this item to enable or disable CIR wakeup function. This function is only supported when ERP function is set as [Disabled].

CPU Configuration

Hyper-Threading

The optional settings are: [Disabled]; [Enabled].Set as [Enabled] for Windows XP and Linux (OS optimized for Hyper-Threading Technology) and [Disabled] for other OS (OS not optimized for Hyper-Threading Technology).

Execute Disable Bit

The optional settings are: [Disabled]; [Enabled].

Limit CPUID Maximum

The optional settings are: [Disabled]; [Enabled].

This item should be set as [Disabled] for Windows XP.

SATA Configuration

SATA Controller(s)

The optional settings are: [Disabled]; [Enabled].

Configure SATA as

The optional settings are: [IDE]; [AHCI].

USB Configuration

Legacy USB Support

The optional settings are: [Auto]; [Disabled]; [Enabled].

EHCI Hand-off

The optional settings are: [Disabled]; [Enabled].

USB Transfer time-out

Use this item to set the time-out value for control, bulk, and interrupt transfers.

Device reset time-out

Use this item to set USB mass storage device start unit command time-out.

Device power-up delay

Use this item to set maximum time the device will take before it properly reports itself to the host controller. ‘Auto’ uses default value: for a root port it is 100 ms, for a hub port the delay is taken from hub descriptor. The optional settings: [Auto]; [Manual].Select [Manual] you can set value for the following sub-item:

Device Power-up delay in seconds, the delay range in from 1 to 40 seconds in one second increments.

Super I/O Configuration

CIR Controller

The optional settings are: [Disabled]; [Enabled].

Case Open Detect

To detect if the case has bee opened or not.The optional settings are: [Enabled]; [Disabled].

PC Health Status

Press [Enter] to view hardware health status and make settings SmartFAN Configuration.

SmartFan Configuration

CPUFAN 1 SmartFan Mode

When set as [Enabled], the following sub-items shall appear:

CPUFAN1 Full Speed Temp

Use this item to set a degree for CPUFAN1 to run at full speed when above the specific temperature.

CPUFAN1 Idle Temp

Use this item to set a degree for CPUFAN1 to idle speed when below this temperature.

CPUFAN1 Stop Temp

Use this item to set a degree for CPUFAN1 to stop when below this temperature.

Serial Port Configuration

COM1 Port Configuration/COM2 Port Configuration/COM3 Port Configuration

Press [Enter] to make settings for the following items:

Serial Port

Use this item to enable or disable serial port (COM).

Change Settings

Use this item to select an optimal setting for super IO device.

COM4 Port Configuration

Press [Enter] to make settings for the following items:

Serial Port

Use this item to enable or disable serial port (COM).

Change Settings

Use this item to select an optimal setting for super IO device.

Serial Port Mode Select

The optional settings are: [RS232]; [RS422/RS485].

Clock Generator Configuration

Clockgen Spread Spectrum

Use this item to enable or disable spread spectrum function.

IO Output Voltage

Use this item to set IO output voltage.

WatchDog Configuration

WatchDog Timer Control

Use this item to enable or disable WatchDog Timer Control. When set as [Enabled], the following sub-items shall appear:

WatchDog Timer Value

User can set a value in the range of 4 to 255.

WatchDog Timer Unit

The optional settings are: [Second]; [Minute].

Shutdown Temperature Configuration

Use this item to select system shutdown temperature.

PPM Configuration

Use this item to set PPM configuration parameters. Press [Enter] to make settings for the following sub-items:

EIST

Use this item to enable or disable Intel Speed Step.

CPU C-State Report

Use this item to enable or disable CPUC-state report to OS.

Enhanced C-state

Use this item to enable or disable enhanced CPU C-state.

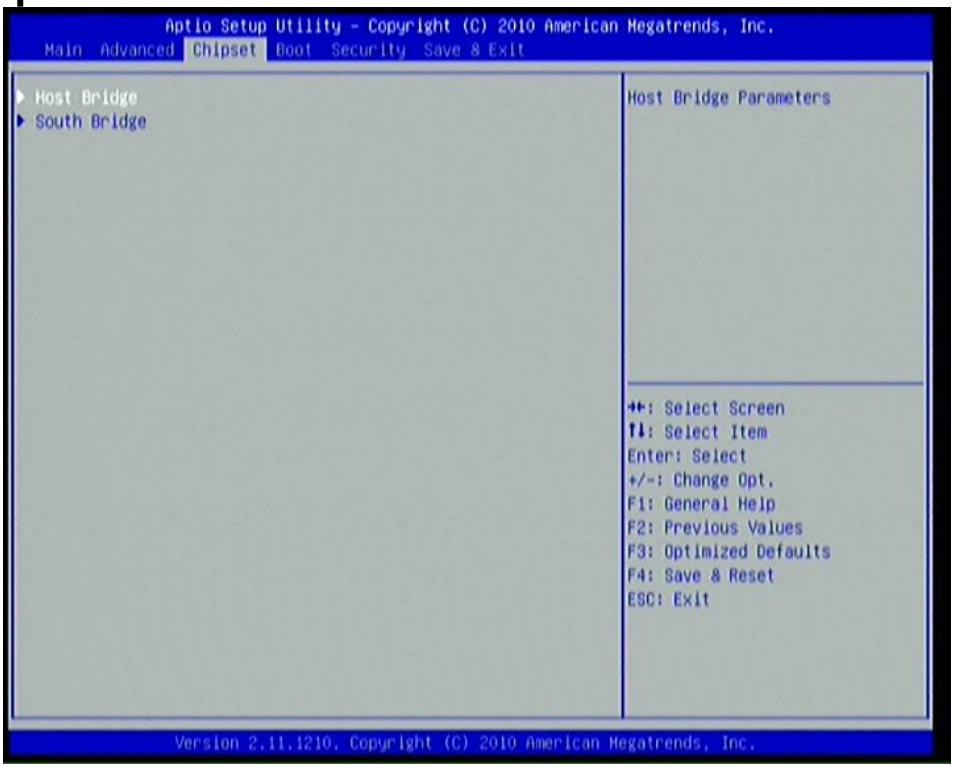
CPU Hard C4E

The optional settings are: [Disabled]; [Enabled].

CPU C6 state

The optional settings are: [Disabled]; [Enabled].

3-8 Chipset Menu



Host Bridge

Press [Enter] to make settings for Intel IGD Configuration:

Internal Graphics

Use this item to keep IGD enabled based on the setup options. The optional settings are: [Disabled]; [Auto].

IGFX-Boot Type

Use this item to set the video device which will be activated during POST. This has

no effect if external graphics presents.

The optional settings are: [VBIOS Default]; [DVI→CRT]; [DVI/HDMI]; [LVDS2]; [LVDS1]; [HDMI+LVDS1]; [CRT+LVDS2]; [CRT+LVDS1].

LCD Panel Type:

The optional settings are: [1024 x 600]; [800 x 600]; [1024 x 768 18bit]; [1366 x 768]; [1280 x 800].

***Note:** LCD Panel Type item is only available when IGFX-Boot Type is set as [LVDS2], [CRT+LVDS2].*

LVDS1 Panel Type:

The optional settings are: [640 x480 18-bit]; [800 x600 18-bit]; [1024x600 18-bit]; [1024x768 24-bit]; [1280x720 18-bit]; [800 x480 18-bit]; [1366x768 18-bit]; [1440x900 18-bit]; [1366x768 24-bit]; [1440x900 24-bit]; [1280x1024 24-bit]; [1440x1050 24-bit]; [1600x900 24-bit]; [1680x1050 24-bit]; [1600x1200 24-bit]; [1920x1080 24-bit].

***Note:** LVDS1 Panel Type item is only available when IGFX-Boot Type is set as [LVDS1], [CRT+LVDS1].*

Panel Scaling

Use this item to select the LCD panel scaling option used by the internal graphics device. The optional settings are: [Auto]; [Force Scaling]; [Off]; [Maintain Accept Ratio].

***Note:** Panel Scaling item is not available when IGFX-Boot Type is set as [DVI/HDMI].*

Backlight Control

The optional settings are: [PWM Inverted]; [PWM Normal].

Active LFP

The optional settings are: [Disable LVDS]; [Enable LVDS].

South Bridge

Azalia Controller

The optional settings are: [Enabled]; [Disabled].

UHCI #1 (Ports 0 and 1)/ UHCI #2 (Ports 2 and 3)/UHCI #3 (Ports 4 and 5)/UHCI #4 (Ports 6 and 7)

Use this item to control the USB UHCI (USB 1.1) functions. The optional settings are: [Enabled]; [Disabled].

USB 2.0 (EHCI) Support

Use this item to enable or disable USB 2.0 (EHCI) support. The optional settings are: [Enabled]; [Disabled].

High Precision Event Timer Configuration:

High Precision Timer

The optional settings are: [Enabled]; [Disabled].

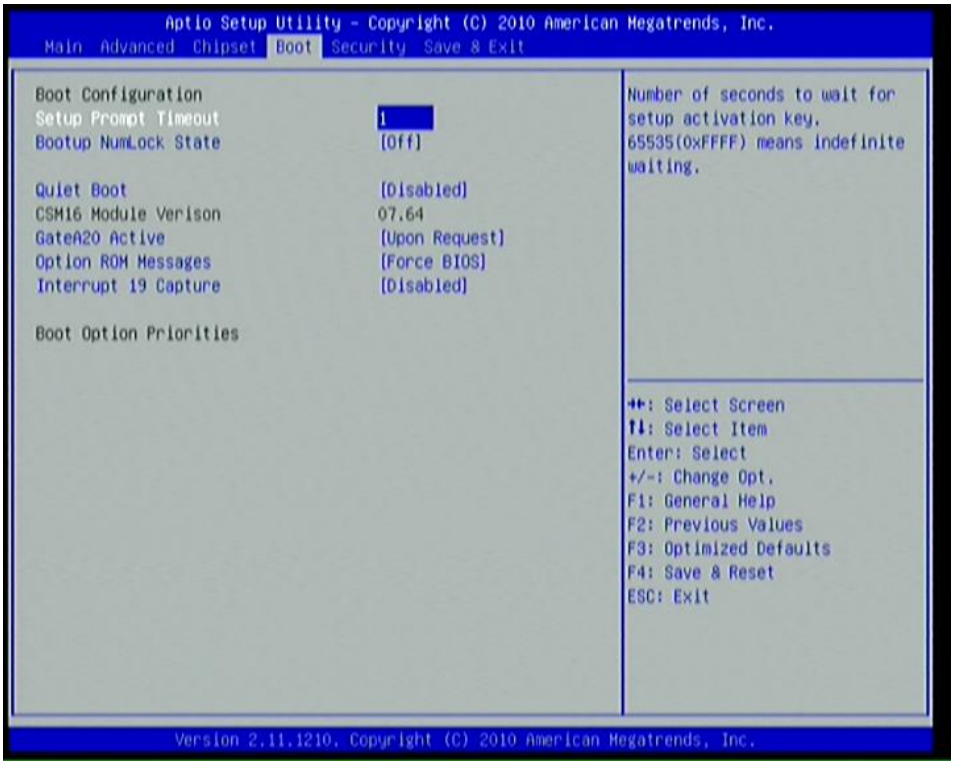
SLP_S4 Assertion Width

Use this item to select a minimum assertion width of the SLP_S4# signal.

Restore AC Power Loss

Use this item to select AC power state when power is re-applied after a power failure (G3 State). The optional settings are: [Power Off]; [Power On]; [Last State].

3-9 Boot Menu



Setup Prompt Timeout

Use this item to set number of seconds to wait for setup activation key.

Bootup Numlock State

Use this item to select keyboard numlock state. The optional settings are: [On]; [Off].

Quiet Boot

The optional settings are: [Enabled]; [Disabled].

Gate A20 Active

The optional settings are: [Upon Request]; [Always].

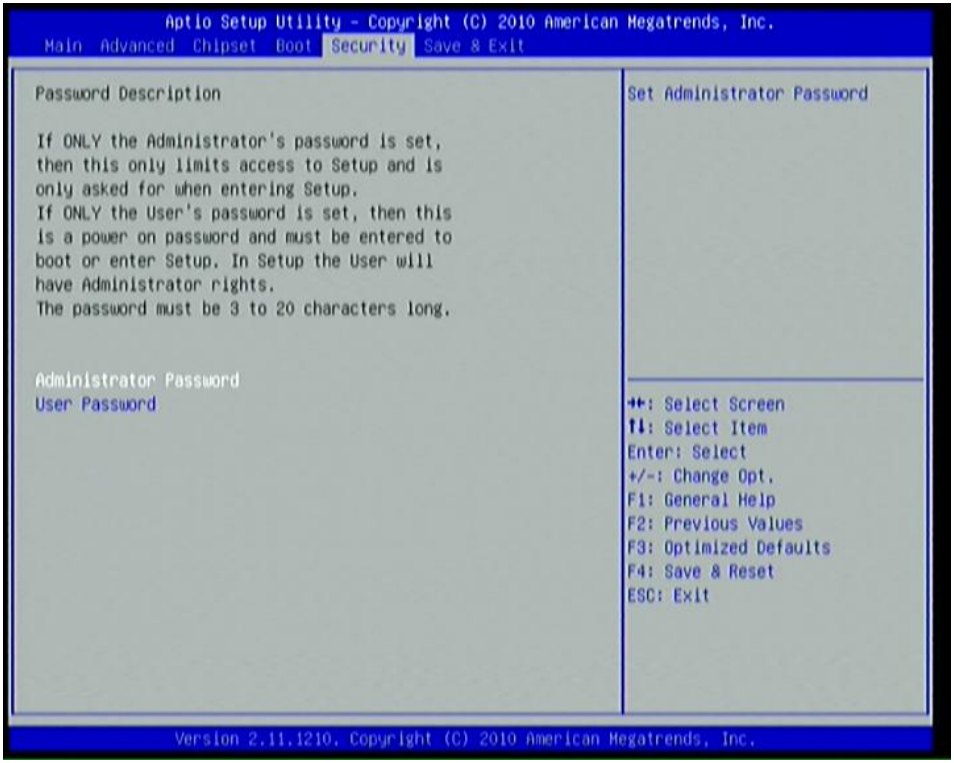
Option ROM Message

Use this item to set display mode for option ROM. The optional settings are: [Force BIOS]; [Keep Current].

Interrupt 19 Capture

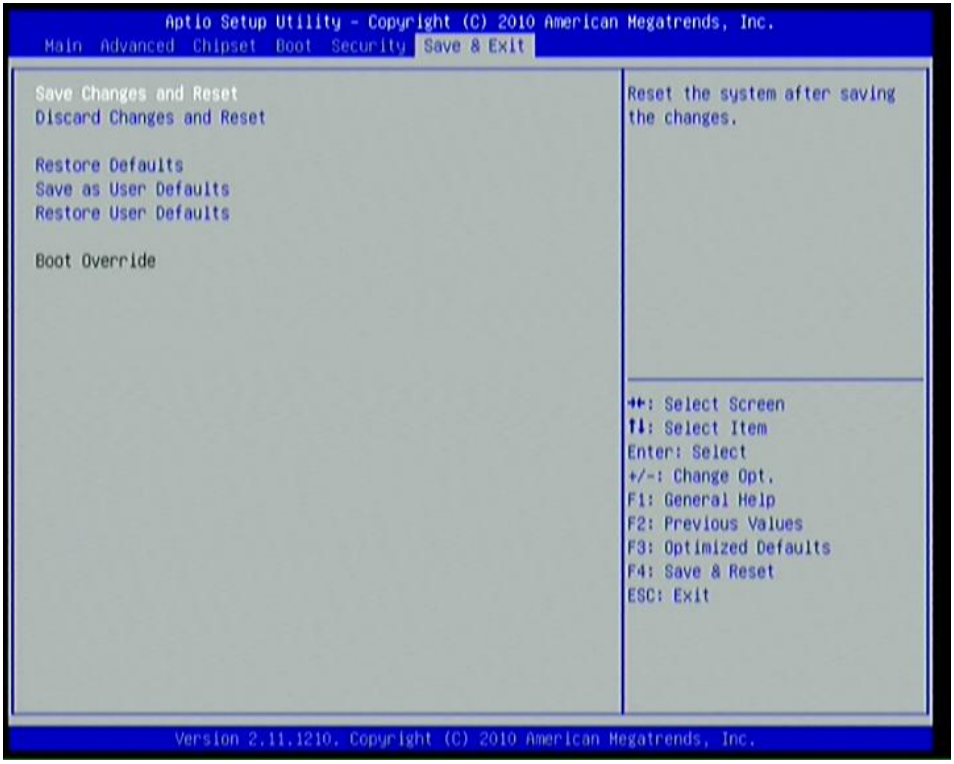
The optional settings are: [Enabled]; [Disabled].

3-10 Security Menu



Security menu allow users to change administrator password and user password settings.

3-11 Save & Exit Menu



Save Changes and Reset

This item allows user to reset the system after saving the changes.

Discard changes and Reset

This item allows user to reset the system without saving any changes.

Restore Defaults

Use this item to restore /Load default values for all the setup options.

Save as User Defaults

Use this item to save the changes done so far as user defaults.

Restore User Defaults

Use this item to restore defaults to all the setup options.