TECHNICAL MANUAL

Of

Intel Q67 Express Chipset

Based Mini-ITX M/B

NO. G03-NF9A-F

Revision: 2.0

Release date: August, 2011

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.

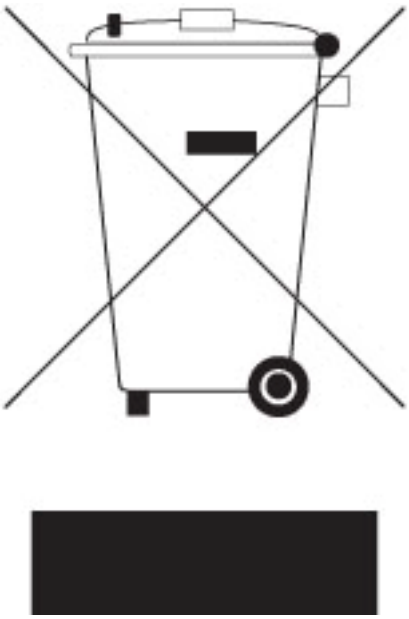


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Environmental Safety Instruction

- 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

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Manual Revision Information

Reversion	Revision History	Date
2.0	Second Edition	August, 2011

Item Checklist

- ☑ Motherboard
- ☑ DVD for motherboard utilities
- ☑ User's Manual
- ☑ Cable(s)
- ☑ I/O Back panel shield

Chapter 1
Introduction of the Motherboard

1-1 Feature of motherboard

- Intel Q67 express chipset
- Support LGA 1155 CPU socket Intel® Core™ i7 processors / Intel® Core™ i5 processors / Intel® Core™ i3 processors in the LGA 1155 Socket
- Support DDRIII DIMM 1066-1333 up to 16GB and dual channel function
- Integrated with Intel 82574L and Intel 82579LM Gigabit Ethernet LAN chip
- Integrated VIA VT1705 6-channel HD Audio Codec
- Support USB 2.0 data transport demands.
- Support PCIE 2.0 x16 by 16 Lane slot
- Support CPU Smart FAN
- Supports ACPI S3 Function
- Compliance with EuP Standard
- Support Watchdog Timer Technology

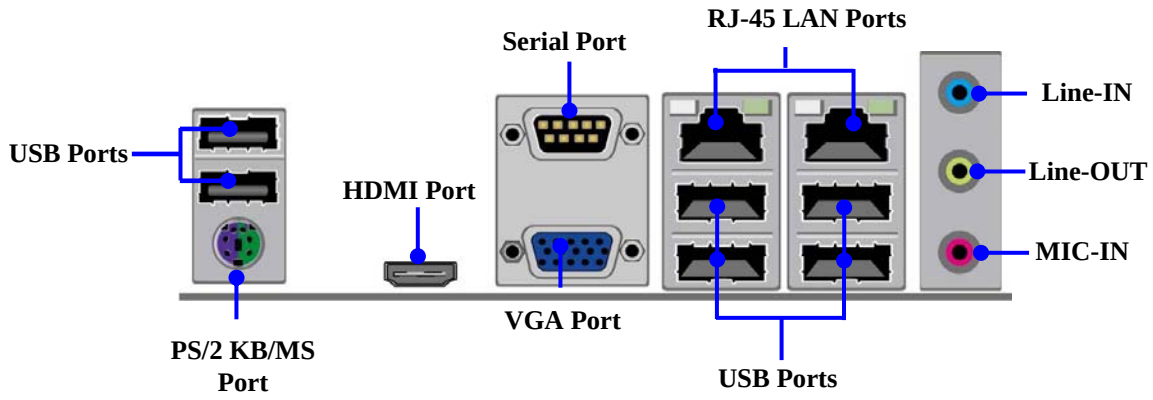
1-2 Specification

Spec	Description
Design	● Mini-ITX form factor 6 layers ; PCB size: 17.0x17.0cm
Chipset	● Intel Q67 Express Chipset
CPU Socket	● Support Intel® Core™ i7 Processor, Intel® Core™ i5 Processor, Intel® Core™ i3 Processor in the LGA 1155 Socket ** for detailed CPU support information please visit our website*
Memory Slot	● 240-pin DDRIII DIMM slot x2 ● Support DDRIII 1066/1333 MHz DDRIII memory modules expandable to 16GB ● Support dual channel function
Expansion Slot	● PCIE 2.0 x16 by 16 lane slot x1
Dual LAN Chip	● Integrated Intel 82574L and 82579LM Gigabit Ethernet LAN chip that supports Fast Ethernet LAN function of providing 10Mb/100Mb/1000Mb Ethernet data transfer rate
Audio Chip	● VIA VT1705 6-channel HD Audio Codec integrated ● Audio driver and utility included
BIOS	● 64M SMT Flash ROM
Multi I/O	● PS/2 keyboard/Mouse connector x1 ● HDMI port connector x1 ● VGA port connector x1 ● COM port connector x 1 ● USB port connector x6 and USB header x2 ● RJ-45 LAN connector x2 ● Audio connector x1 (Line-in, Line-out, MIC) ● SATAII Connector x4 ● SATAIII Connector x2 ● Front panel audio header x1 ● LVDS header x1 ● LVDS Inverter header x1

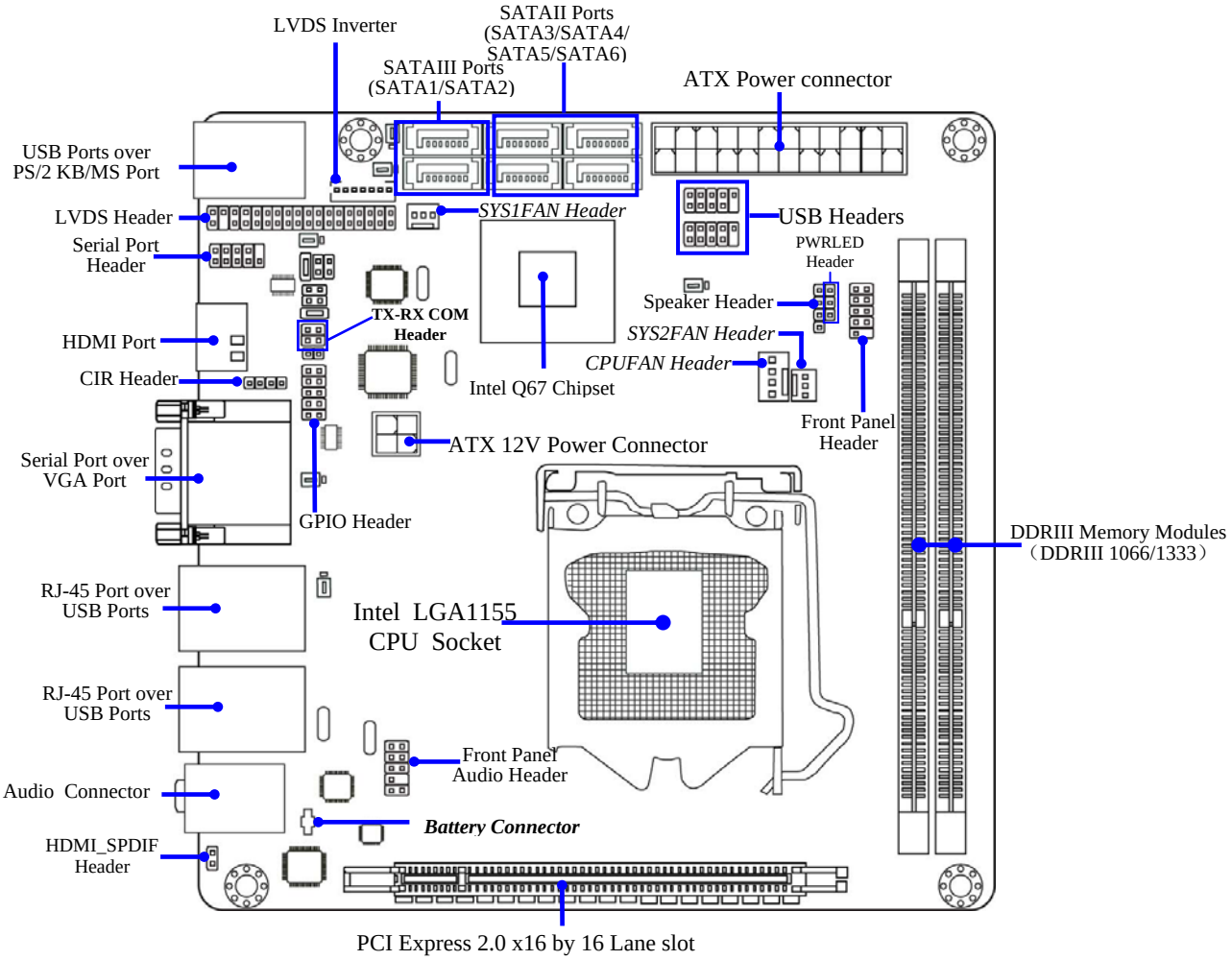
	● Serial port header x1 ● RS422/RS485 header x1 ● CIR header x1 ● GPIO header x1 ● Speaker header x1 ● PWRLED header x1 ● Front panel header x1

1-3 Layout Diagram

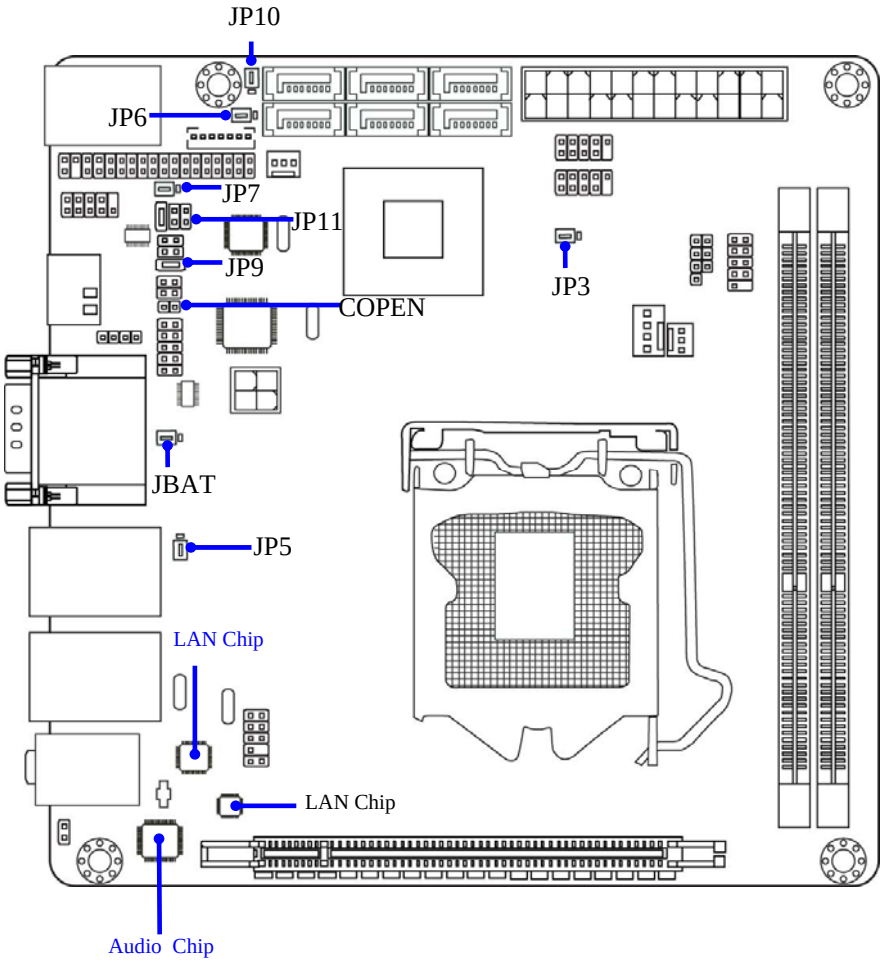
Rear IO Diagram



Motherboard Internal Diagram



Motherboard Jumper Position



Jumper

Jumper	Name	Description
JBAT	CMOS RAM Clear Function Setting	3-pin Block
JP10	KB/MS/USB Power On Function Setting	3 pin Block
JP5	USB Port Power On Function Setting	3-pin Block
JP3	USB1/2 Header Power On Function Setting	3-pin Block
JP6	Inverter12V/5V Select	3-pin Block
JP7	LVDS PVCC 5V/3.3V Select	3-pin Block
JP9	COM2 Header RS232/485/422 Function Select	6-pin Block
JP11	COM2 Pin9 Function Select	6-pin Block
COPEN	Case Open Message Display Function	2-pin Block

Connectors

Connector	Name	Description
ATXPWR	ATX Power Connector	24-pin Block
ATX12V	ATX 12V Power Connector	4-pin Connector
KB(from UK1)	PS2 Keyboard/Mouse Connector	6-pin Female
HDMI	High-Definition Multimedia Interface	19-pin Connector
VGA	Video Graphic Attach Connector	15-pin Female
COM	Serial Port Connector	9-pin Connector
USB (from UK1,UL1,UL2)	USB 2.0 Port Connectors	4-pin Connectors
RJ-45 LAN 1/2	RJ-45 LAN Connectors	8-pin Connector
SATA1/SATA2	Serial ATAIII Connectors	7-pin Connectors
SATA3/SATA4/ SATA5/SATA6	Serial ATAII Connectors	7-pin Connectors
AUDIO1	Line Out /Line In /MIC Audio Connector	3 -phone Jack

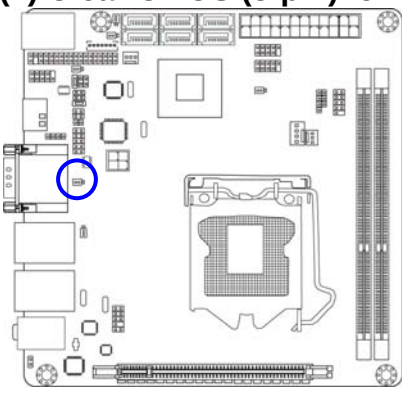
Headers

Header	Name	Description
FP_AUDIO	Front panel audio Header	9-pin block
LVDS	LVDS Header	35-pin Block
INVERTER	LVDS Inverter Connector	7-pin Block
COM2	Serial Port Header	9-pin Block
TX-RXCOM2	RS 422/485 port headers	4-pin block
CIR	CIR Header	4-pin Block
GPIO	GPIO Header	10-pin Block
USB1/USB2	USB Header	9- pin Block
SPEAK	Speaker Header	4-pin Block
PWR LED	Power LED	3-pin Block
JW_FP	Front Panel Header (PWR LED/ HD LED/ /Power Button /Reset)	9-pin Block
CPU FAN	FAN Speed Header	4-pin Block
SYSFAN1/SYSFAN2	FAN Speed Headers	3-pin Block

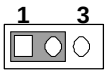
Chapter 2
Hardware Installation

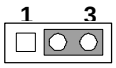
2-1 Jumper Setting

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



JBAT

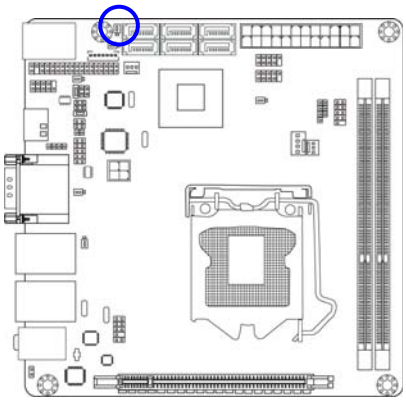




1-2 Short： Normal 2-3 Short： Clear CMOS

CMOS Clear Setting

(2) KB/MS/USB Port 1/2 Power On Function Setting (3-pin): JP10



JP10



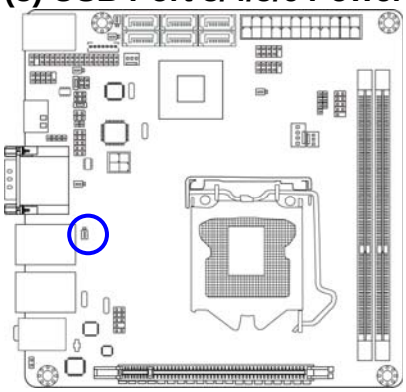
1-2 closed : KB/MS/USB Power-on Disabled (Default)

JP10



2-3 closed: KB/MS/USB Power-on Power-on Enabled

(3) USB Port 3/4/5/6 Power On Function Setting(3-pin): JP5



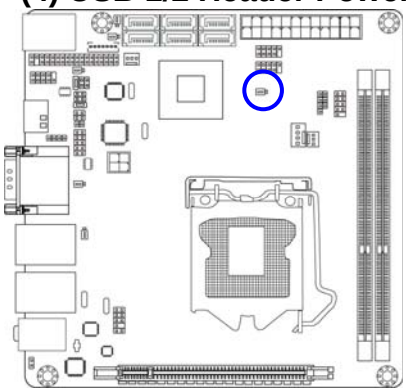
JP5 

1-2 closed : USB Port 3/4/5/6 Power-on Disabled (Default)

JP5 

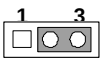
2-3 closed: USB Port 3/4/5/6 Power-on Enabled

(4) USB 1/2 Header Power On Function Setting(3-pin): JP3



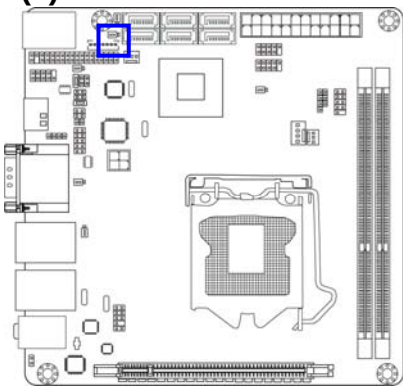
JP3 

1-2 closed : USB1/2 Header Power-on Disabled (Default)

JP3 

2-3 closed: USB1/2 Header Power-on Enabled

(5) Inverter 5V/12V Select (3-pin):JP6

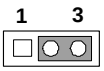


JP6



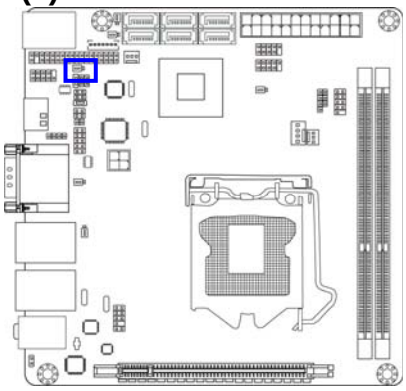
1-2 closed: Inverter 12V selected

JP6



2-3 closed: Inverter 5V select

(6) LVDS PVCC 5V / 3.3V Function Setting (3-pin): JP7



JP7



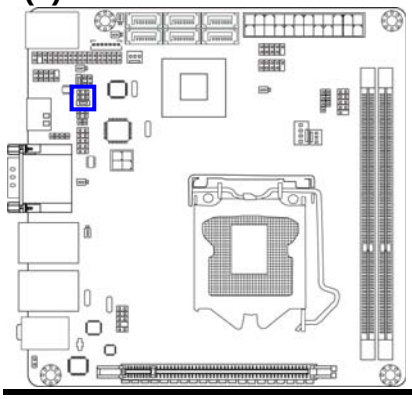
1-2 closed: LVDS PVCC 5V

JP7



2-3 closed : LVDS PVCC 3.3V

(7) COM2 Header RS232/422/485 Function Select (6-pin): JP9



JP9



1-2 closed: RS232

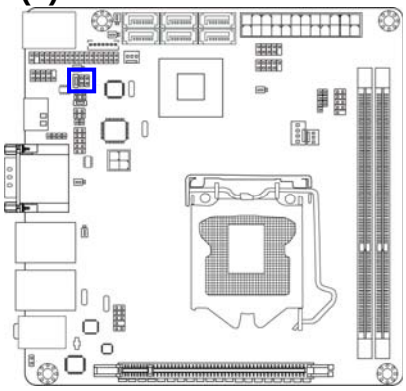


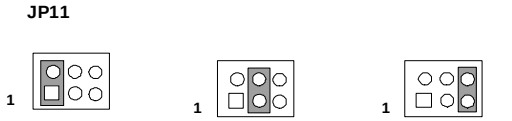
3-4 closed : RS485



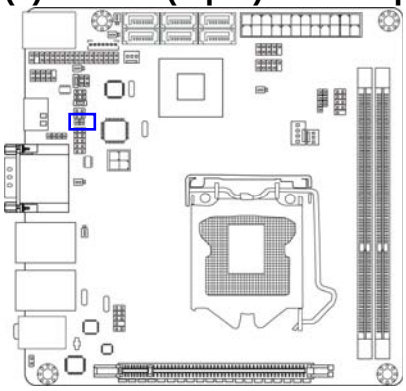
5-6 closed : RS422

(8) COM2 Pin9 Function Select (6-pin): JP11





(9)COPEN (2-pin): Case Open Message Display Function Select





COPEN

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

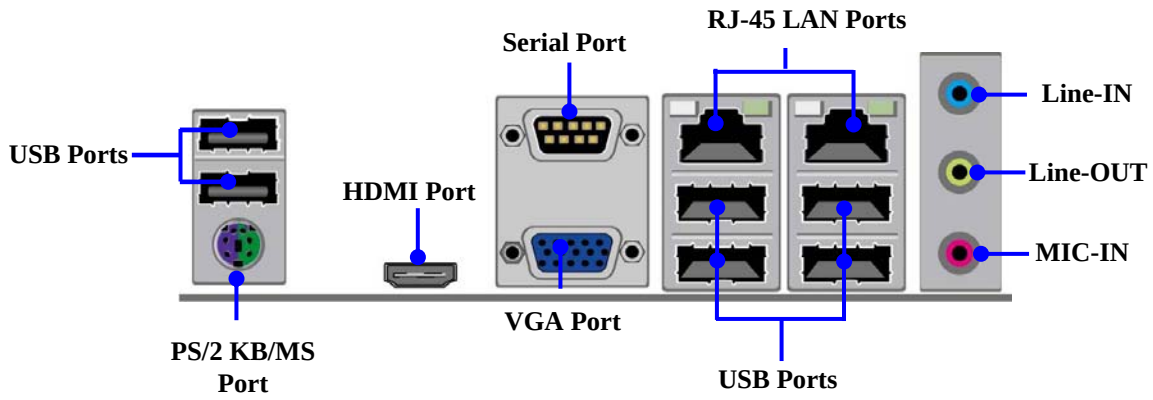
Case Open Display Function

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

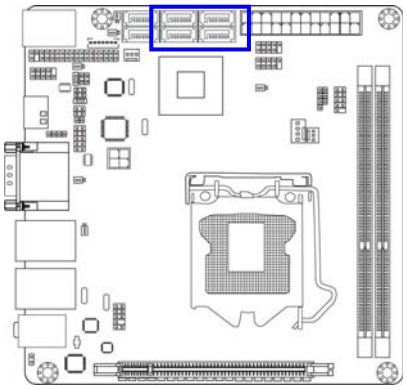
2-2-1 Connectors

(1) Rear Panel Connectors

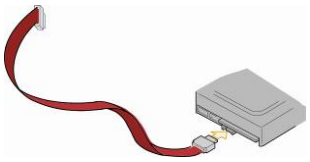


(2) Serial-ATAII Port connector: SATA3/SATA4/SATA5/SATA6

These connectors are high-speed SATAII ports that support 3 GB/s transfer rate.

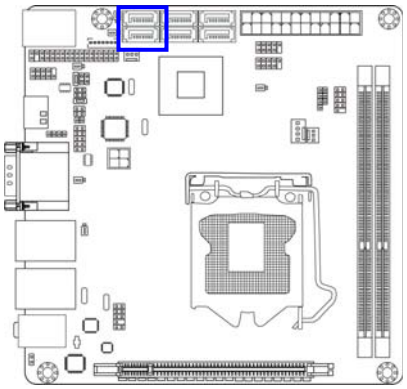


Pin No.	Defnition
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND

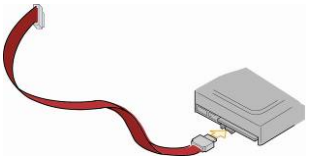


(3) Serial-ATAIII Port connector: SATA1/SATA2

These connectors are high-speed SATAIII ports that support 6 GB/s transfer rate.



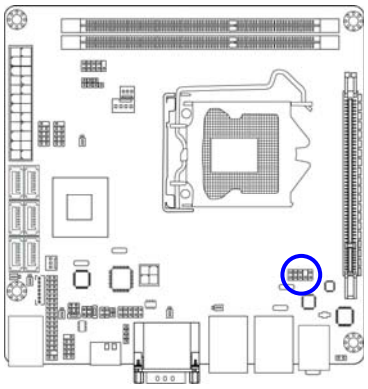
Pin No.	Defnition
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND

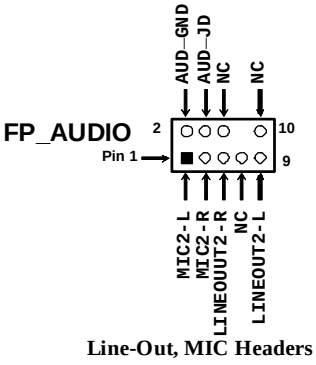


2-2-2 Headers

(1) Line-Out, MIC-In Header (9-pin): FP_AUDIO

This header connects to Front Panel Line-out, MIC-In connector with cable.

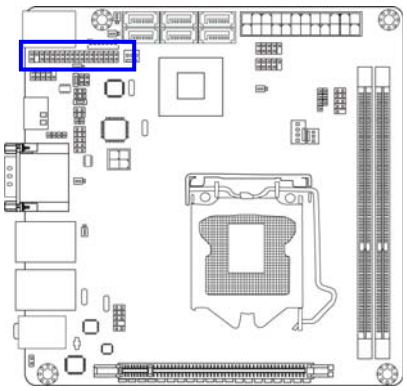


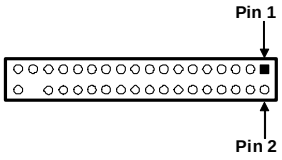


Line-Out, MIC Headers

(2)LVDS Header (36 Pin): LVDS

Pin NO.	Pin Define	Pin NO.	Pin Define
Pin 1	LVDSB_DATAN3	Pin 2	LVDSB_DATAP3
Pin 3	LVDSB_CLKBN	Pin 4	LVDSB_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	LVDS_DDC_DATA	Pin 12	LVDS_DDC_CLK
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
Pin 31	GND	Pin 32	GND
Pin 33	+5V	Pin 34	N/A
Pin 35	+12V (Reserved)	Pin 36	+3.3V





LVDS Header

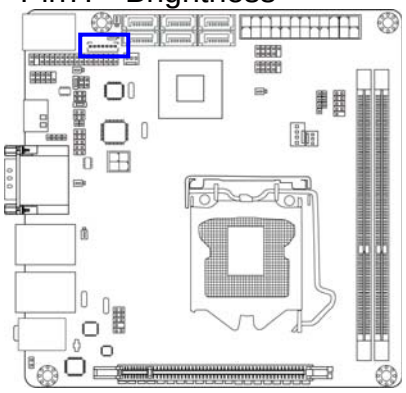
(3) LVDS Inverter Header: INVERTER

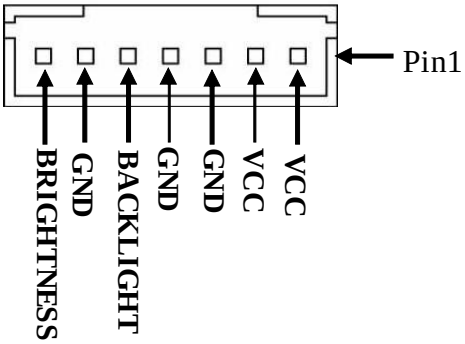
Pin 1 and pin2: VCC of inverter

Pin3, pin4 and pin6: GND

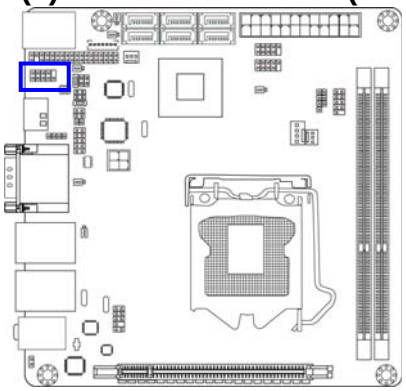
Pin5: Backlight

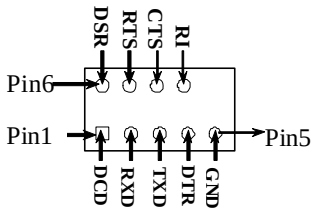
Pin7: Brightness





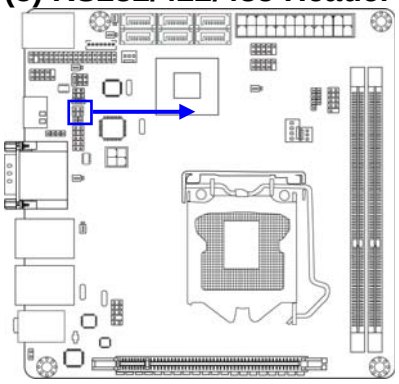
(4)Serial Port Header (9-Pin): COM2

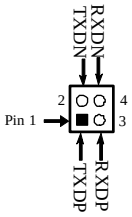




Serial COM Port 9-pin Block

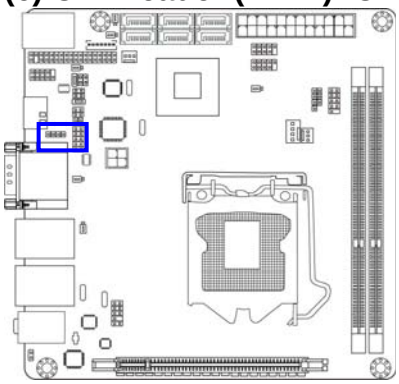
(5) RS232/422/485 Header (4-Pin): TX-RXCOM2

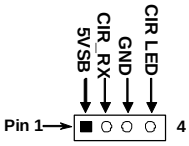




TX-RXCOM2 Header

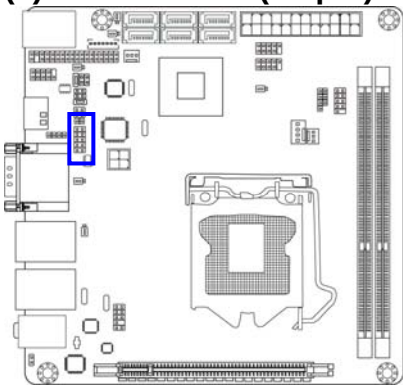
(6) CIR Header (4-Pin): CIR

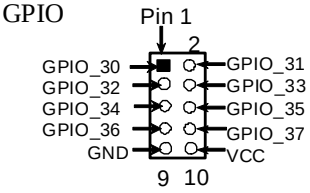




CIR Header

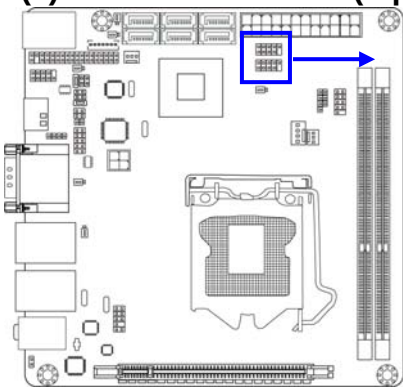
(7) GPIO Header (10-pin): GPIO

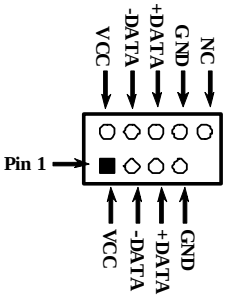




GPIO Header

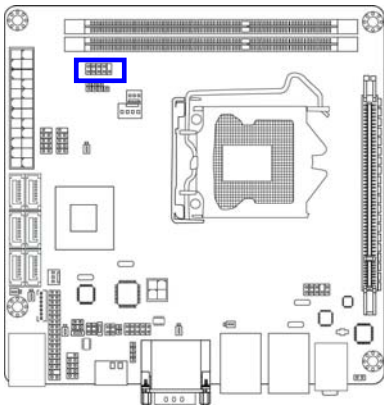
(8) USB Port Headers (9-pin): USB1/USB2

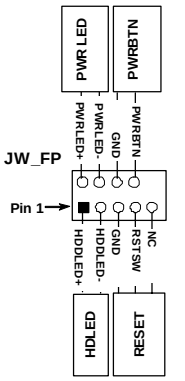




USB Port Header

(9) Front Panel Header (9-pin): JW-FP





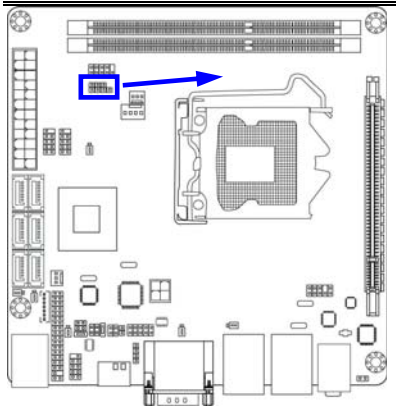
System Case Connections

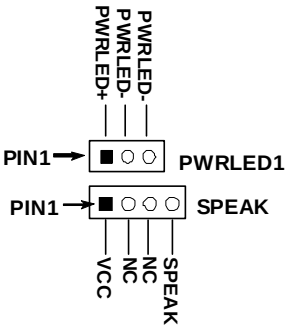
(10) Power LED:

The Power LED is light on while the system power is on. Connect the Power LED from the system case to this pin.

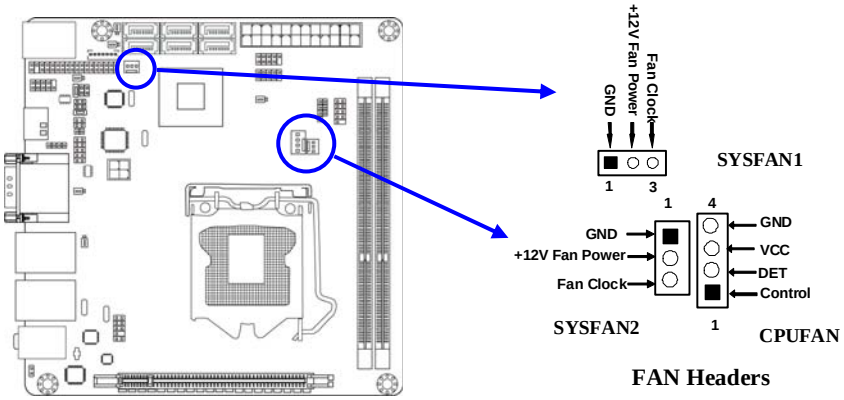
(11) Speaker Header: SPEAK

This 2-pin header connects to the case-mounted speaker. See the figure below.





(12)FAN Speed Headers (3-pin): CPUFAN1, SYSFAN1/SYSFAN2



FAN Headers

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.

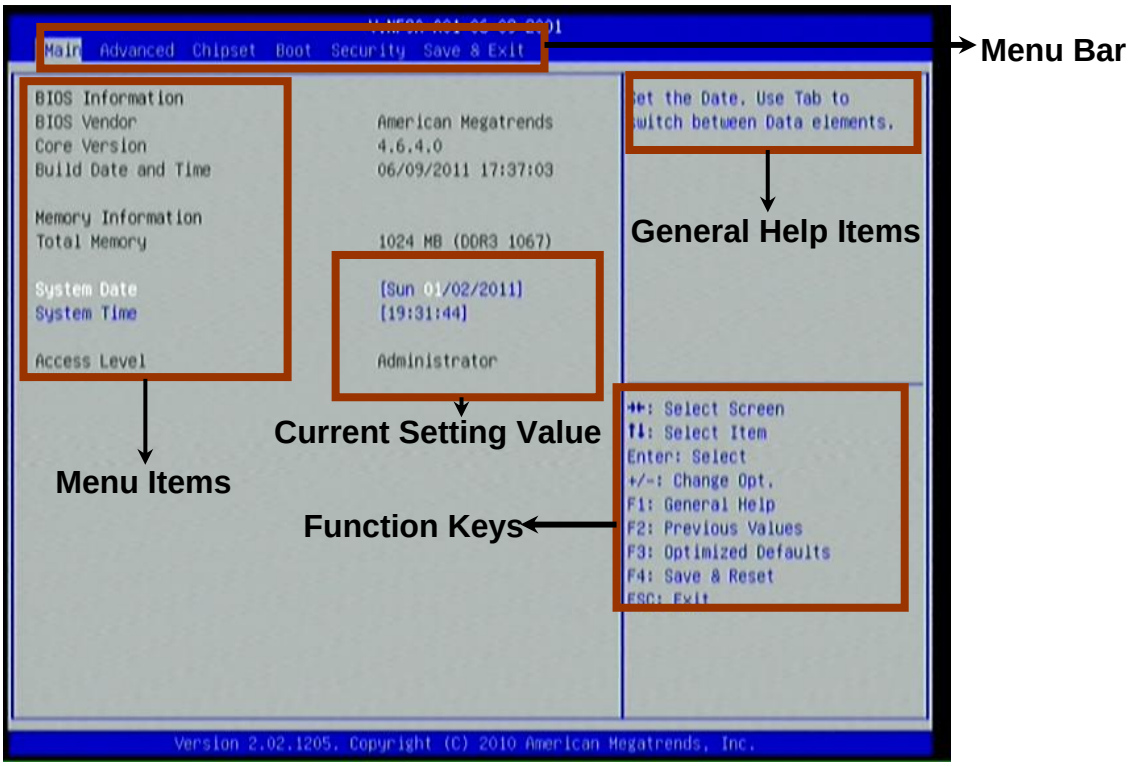
3-1 Entering Setup

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:



BIOS Menu Screen

3-3 Function Key

In the above BIOS Setup main menu of, 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, in the main menu, the option you want to confirm or to modify.

- Press <Enter> to select.
- Press <+>/<–> keys when you want to modify the BIOS parameters for the active option.
- [F1]: General help.
- [F2]: Previous value.
- [F3]: Optimized defaults.
- [F4]: Save & Reset.
- Press <Esc> to quit the 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

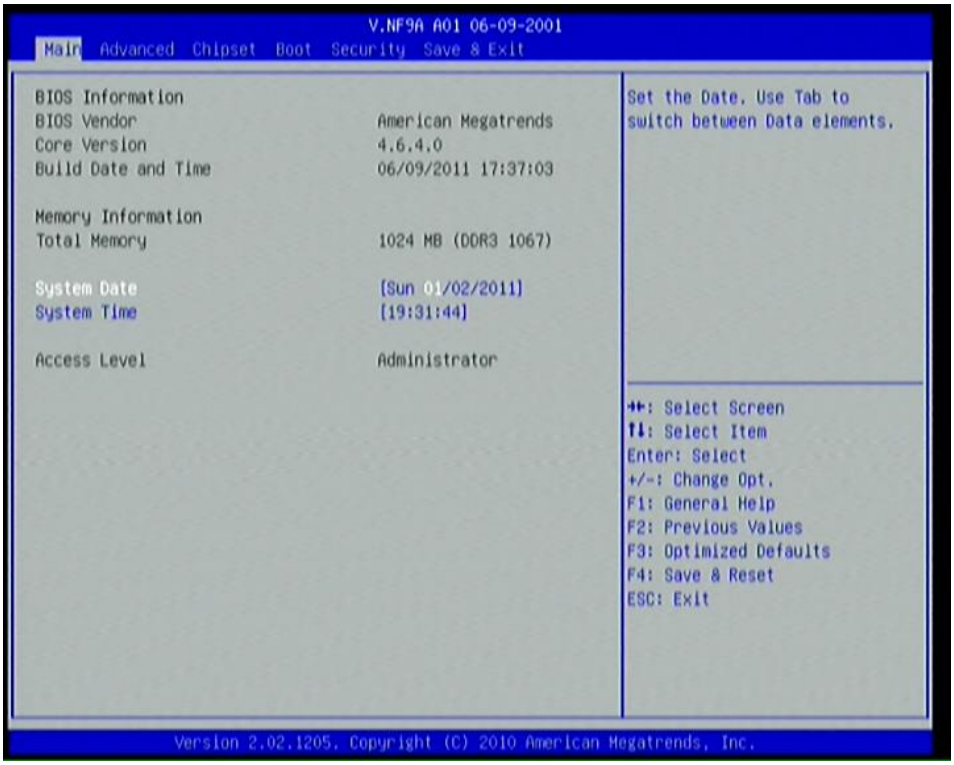
There are six menu bars on top of BIOS screen:

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 right or left 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 <+> or <-> and numerical keyboard keys to select the value you want in each item.



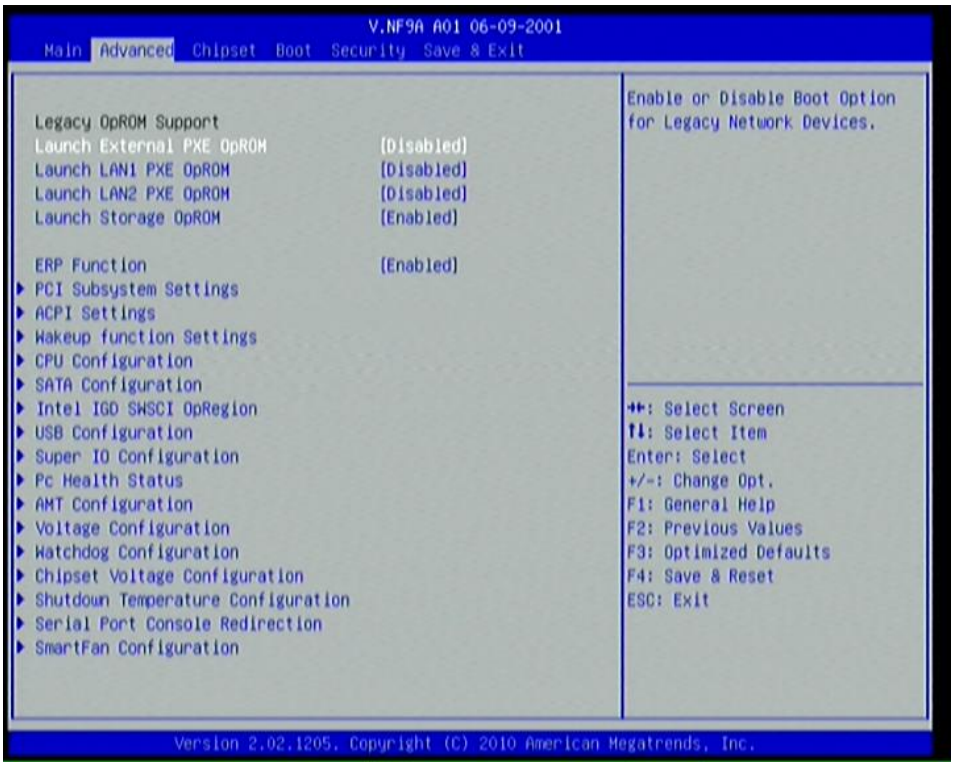
System Date

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



Launch External PxE OpROM/Launch LAN1 PXE 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.

ERP Function

Use this item to enable or disable ERP function for this board.

► **PCI Subsystem Settings**

Press [Enter] to enter and make settings for the following sub-items:

PCI ROM Priority

The optional settings: [Legacy ROM]; [EFI Compatible ROM].

Relaxed Ordering

Use this item to enable or disable PCI express device relaxed ordering.

Extended Tag

If set as [Enabled] it will allow device to use 8-bit tag field as a requester.

No Snoop

Use this item to enable or disable PCI Express device No Snoop option.

Maximum Payload

Use this item to set maximum payload of PCI Express device or allow system BIOS to select the value.

Maximum Read Request

Use this item to set maximum read request size of PCI Express device or allow system BIOS to select the value.

ASPM Support

The optional settings: [Disabled]; [Auto]; [Force L0].

Extended Synch

If set as [Enabled] it will allow generation of extended synchronization patterns.

► **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.

► **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.

Wake System with Dynamic Time

Use this item to enable or disable system wake on alarm event. When set as [Enabled], system will wake on the current plus increased minute(s).

CIR Wakeup

Use this item to enable or disable CIR wakeup.

PS2 KB/MS Wakeup

Use this item to enable or disable PS2 KB/MS wakeup function.

► **CPU Configuration**

Hyper-Threading

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

Active Processor Cores

Use this item to select number of cores to enable in each processor package.

Limit CPUID Maximum

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

Execute Disable Bit

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

Hardware Prefetcher

Use this item to turn on/off the Mid Level Cache (L2) streamer prefetcher.

Adjacent Cache Line Prefetch

Use this item to turn on/off prefetching of adjacent cache lines.

Intel Virtualization Technology

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

When set as [Enabled], a VHM can utilize the additional hareware capabilities provided by Vanderpool Technology.

Power Technology

Use this item to enable power management features.

The optional settings are: [Disabled]; [Energy Efficient]; [Custom].

► **SATA Configuration**

SATA Mode

The optional settings are: [Disabled]; [IDE Mode]; [AHCI Mode]; [RAID Mode].

Serial-ATA Controller 0

The optional settings are: [Disabled]; [Enhanced]; [Compatible].

Serial-ATA Controller 1

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

► **Intel IGD SWSCI OpRegion**

IGD-Boot Type

Use this item to select the video device which will be activated during POST. This has no effect if external graphics present.

The optional settings are: [VBIOS Default]; [CRT]; [LVDS]; [CRT+LVDS].

LCD Panel Type

Use this item to select the LCD panel used by internal graphics device by selecting the appropriate setup item.

► **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**
  - **COM1 Port Configuration**

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

Serial Port

Use this item to enable or disable serial port (COM1).

Change Settings

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

  - **COM2 Port Configuration**

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

Serial Port

Use this item to enable or disable serial port (COM2).

Change Settings

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

Serial Port Mode Select

Use this item to set serial port as RS232 or RS422/485.

PS2 KB/MS Connect

Use this item to set PS2 connect primary devices. The optional settings are: [Keyboard First]; [Mouse First].

CIR Controller

Use this item to enable or disable CIR controller.

Case Open Detect

Use this item to detect case has already open or not, show message in POST.

- **PC Health Status**

Press [Enter] to view hardware health status.

- **AMT Configuration**

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

AMT

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

Unconfigure AMT/ME

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

- **Voltage Configuration**

CPU Vcore 7-Shift

Use this item to adjust CPU voltage by 7 step value.

AGX Voltage

Use this item to adjust AGX voltage by 7 step value.

CPU VTT

Use this item to adjust CPU VTT by 7 step value.

- **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].

- **Chipset Voltage Configuration**

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

PCH 1.8V Voltage

Use this item to select a value for PCH 1.8V voltage.

PCH 1.08V Voltage

Use this item to select a value for PCH 1.08V voltage.

DRAM Voltage select

Use this item to select a value for DDR3 DRAM voltage.

- **Shutdown Temperature Configuration**

Use this item to select system shutdown temperature.

- **Serial Port Console Redirection**

Console Redirection

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

Console Redirection Settings

The settings specify how the host computer and the remote computer (which the user is using) will exchange data. Both computers should have the same or compatible settings.

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

Out-of-Band Mgmt Port

This Microsoft Windows Emergency Management Service (EMS) allows for a remote management of a Windows Server OS through a serial port.

Terminal Type

The optional settings: [VT100]; [VT100+]; [VT-UTF8]; [ANSI].

Bits per Second

Use this item to select serial port transmission speed. The speed must be matched on the other side. Long or noisy lines may require lower speeds.

Flow Control

The optional settings: [None]; [Hardware RTS/CTS]; [Software Xon/Xoff].

► **SmartFan Configuration**

CPUFAN / SYSFan1/ SYSFan2 Smart Mode

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

CPUFAN N / SYSFan1/ SYSFan2 Full Speed Temp

Use this item to set CPUFAN full speed temp. CPU FAN will run at full speed when above this temperature.

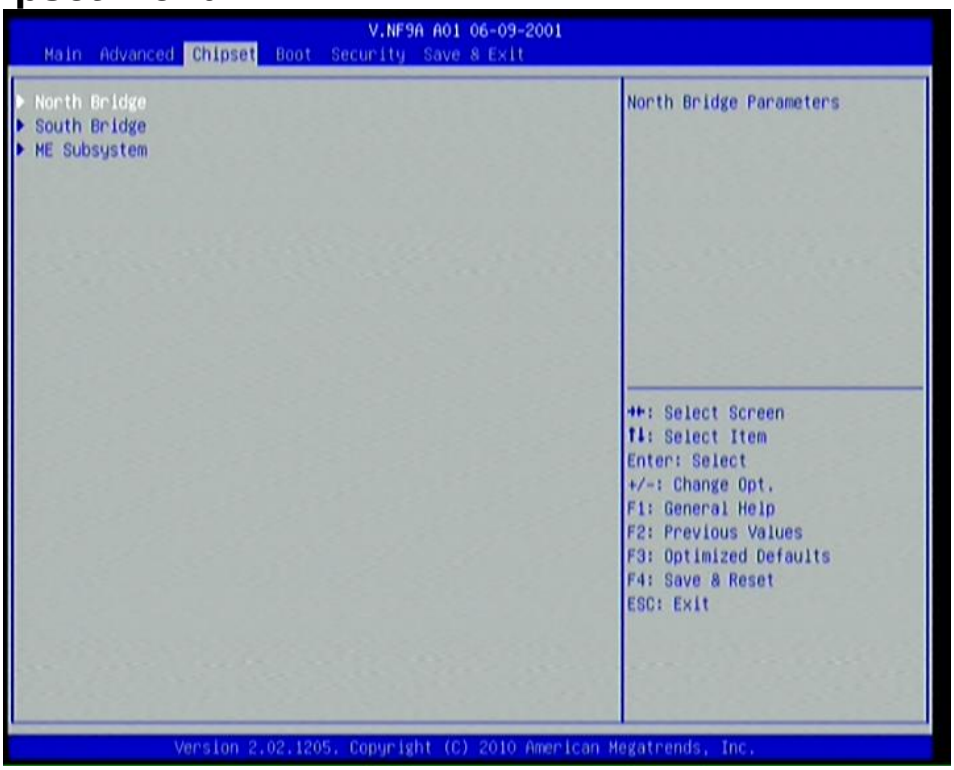
CPUFAN / SYSFan1/ SYSFan2 Idle Temp

Use this item to set CPU idle speed temperature setting. CPU FAN will run at idle speed when below this temperature.

CPUFAN / SYSFan1/ SYSFan2 Stop Temp

Use this item to set CPU stop temp. CPU FAN will stop when below this temperature.

3-8 Chipset Menu



► **North Bridge**

LOW MMIO Align

The optional settings are: [64M]; [1024M].

VT-d

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

Initiate Graphics Adapter

Select which graphics controller to use as the primary boot device. The optional settings are: IGD; PEG/IGD.

IGD Memory

Use this item to set IGD share memory size.

IGD Multi-Monitor

Use this item to enable or disable IGD multi-monitor by internal graphics device.

PCI Express Port

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

PEG Force Gen1

Use this item to enable or disable PCI Express port Force Gen1.

Detect Mon-Compliance Device

Use this item to enable or disable Non-Compliance PCI Express device in PEG.

► **South Bridge**

Wake on Lan from S5

Use this item to enable or disable GbE control PME in S5.

Onboard Lan1 Device

Use this item to enable or disable the PCI Express port in the chipset.

Restore AC Power Loss

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

SLP_S4 Assertion Stretch Enable

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

Deep Sx

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

Azalia HD Audio

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

Azalia Internal HDMI Codec

Use this item to enable or disable internal HDMI codec for Azalia.

High Precision Timer

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

► **PCI Express Ports Configuration**

Press [Enter] to further setting PCI Express ports configuration.

► **USB Configuration**

Press [Enter] to further setting USB port configuration.

► **ME subsystem**

ME Subsystem

Use this item to enable or disable ME subsystem.

ME Temporary Disable

Use this item to enable or disable ME temporary disable help.

End of Post Message

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

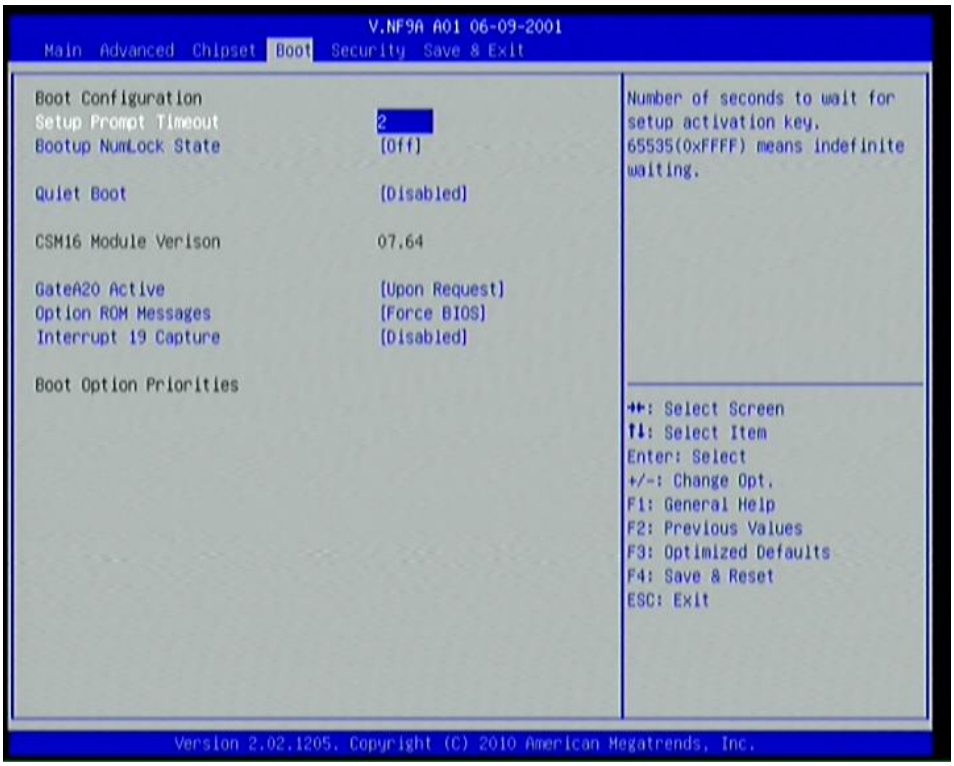
Execute MEBx

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

MEBx Mode

The optional settings are: [Normal]; [Hidden Ctrl+P]; [Enter MEBx Setup].

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].

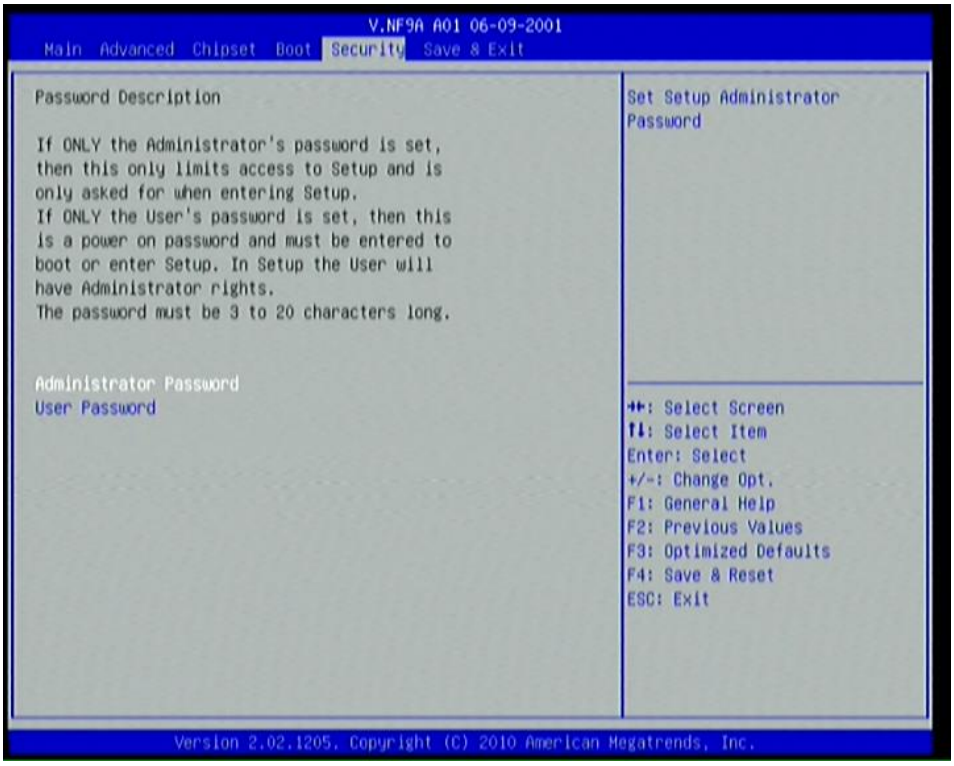
Option ROM Message

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

Interrupt 19 Capture

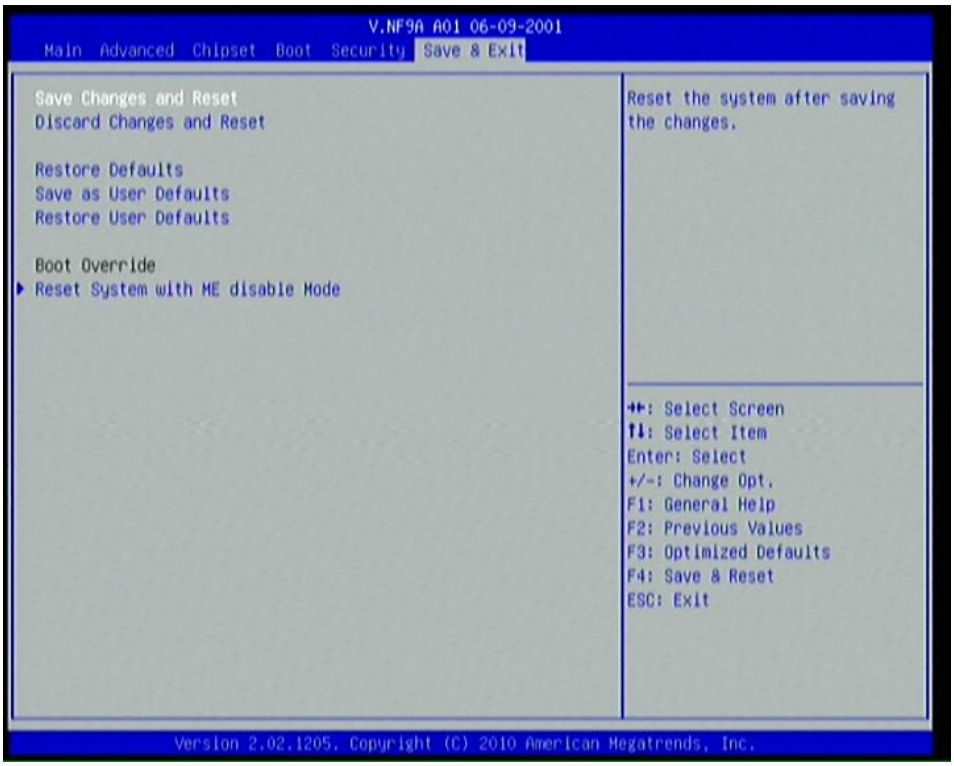
The optional settings are: [Enabled]; [Disabled].

3-10 Security Menu



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

3-11 Save & Exit Menu



Save & Exit menu allows user to load optimal defaults, save or discard your changes to BIOS items.