IMB-A180-H
IMB-A180

User Manual

Version 1.0
Published April 2013

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

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The Lithium battery adopted on this motherboard contains Perchlorate, a toxic substance controlled in Perchlorate Best Management Practices (BMP) regulations passed by the California Legislature. When you discard the Lithium battery in California, USA, please follow the related regulations in advance.
"Perchlorate Material-special handling may apply, see
www.dtsc.ca.gov/hazardouswaste/perchlorate"

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HIGH-DEFINITION MULTIMEDIA INTERFACE

Contents

1. Introduction 5

1.1 Package Contents 5

1.2 Specifications 6

1.3 Motherboard Layout 8

1.4 I/O Panel 10

2. Installation 11

2.1 Installing Memory Modules (DIMM) 12

2.2 Expansion Slots (PCI Express Slots) 13

2.3 Jumpers Setup 14

2.4 Onboard Headers and Connectors 16

3. UEFI SETUP UTILITY 22

3.1 Introduction 22

3.1.1 UEFI Menu Bar 22

3.1.2 Navigation Keys 23

3.2 Main Screen 24

3.3 Advanced Screen 25

3.3.1 CPU Configuration 26

3.3.2 Chipset Configuration 27

3.3.3 Storage Configuration 29

3.3.4 Super IO Configuration 30

3.3.5 ACPI Configuration 31

3.3.6 USB Configuration 32

3.3.7 Trusted Computing 33

3.4 Tool 34

3.5 Hardware Health Event Monitoring Screen 35

3.6 Boot Screen 36

3.7 Security Screen 37

3.8 Exit Screen 38

1. Introduction

Thank you for purchasing ASRock ***IMB-A180-H / IMB-A180*** motherboard, a reliable motherboard produced under ASRock's consistently stringent quality control. It delivers excellent performance with robust design conforming to ASRock's commitment to quality and endurance.

In this manual, chapter 1 and 2 contains the introduction of the motherboard and step-by-step hardware installation guide. Chapter 3 and 4 contains the configuration guide of BIOS setup and information of the Support CD.

Because the motherboard specifications and the BIOS software might be updated, the content of this manual will be subject to change without notice. In case any modifications of this manual occur, the updated version will be available on ASRock's website without further notice. You may find the latest VGA cards and CPU support list on ASRock's website as well. ASRock website http://www.asrock.com

If you require technical support related to this motherboard, please visit our website for specific information about the model you are using.

www.asrock.com/support/index.asp

1.1 Package Contents

ASRock ***IMB-A180-H / IMB-A180*** Motherboard
(Mini-ITX Form Factor: 6.7-in x 6.7-in, 17.0 cm x 17.0 cm)
ASRock ***IMB-A180-H / IMB-A180*** Quick Installation Guide
ASRock ***IMB-A180-H / IMB-A180*** Support CD
1 x I/O Panel Shield

1.2 Specifications

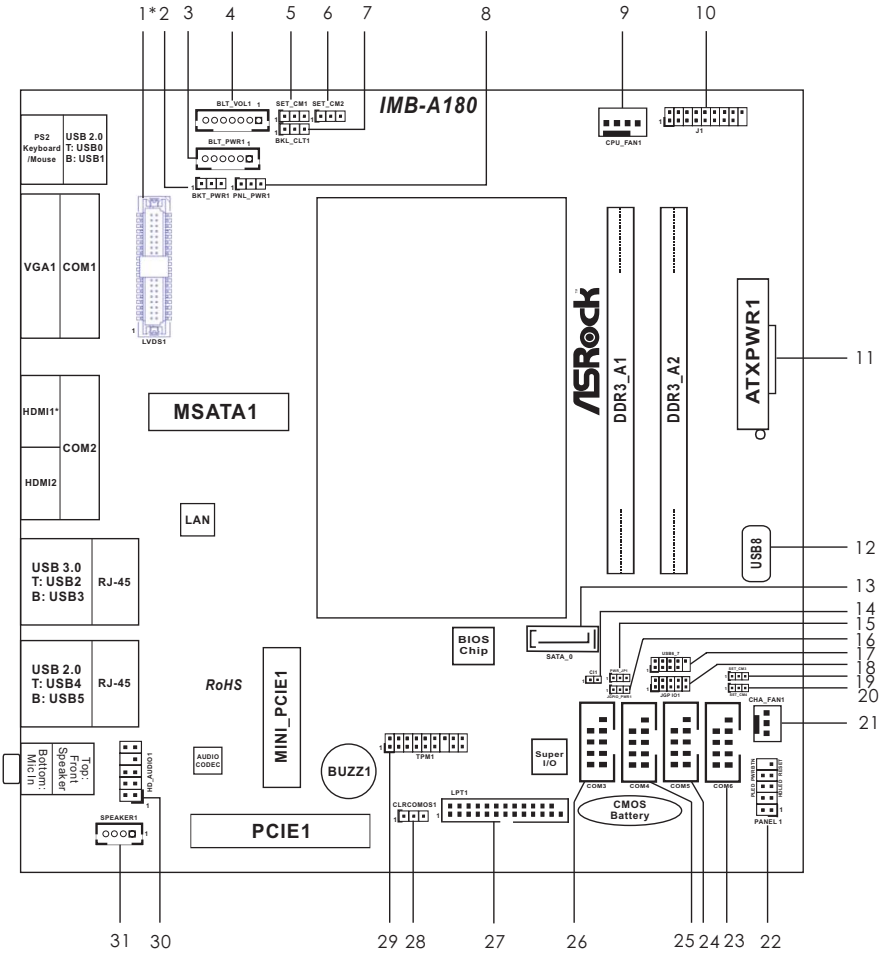
Platform	
MB Dimension	- Mini-ITX Form Factor: 6.7-in x 6.7-in, 17.0 cm x 17.0 cm
CAP	- All Solid CAP
Fanless	- Fan or Fanless (Depend on GPU used)
System	
CPU	- AMD eKabini SOC: GX-420CA: 4Core, 25W (2.0GHz) GX-415GA: 4Core, 15W (1.5GHz) GX-217GA: 2Core, 15W (1.6GHz) GX-210HA: 2Core, 9W (1.0GHz)
System Memory	- 2 x 204pin SO-DIMM - One Channel - Up to DDR3 1600 MHz
Display **(IMB-A180)**	- Embedded ATI Radeon - DirectX® 11.1 graphics support - VGA - LVDS up to 2-ch/24-bits 1920x1200 resolution - HDMI 1.4a - Support Dual Display (any two display devices of VGA, LVDS, HDMIs)
Display **(IMB-A180-H)**	- Embedded ATI Radeon - DirectX® 11.1 graphics support - VGA - 2 x HDMI 1.4a - Support Dual Display (any two display devices of VGA, HDMI) * when using the two HDMI displays together, one will be true HDMI and one will be in DVI mode and does not support audio.
Ethernet	- Dual G-LAN - 1 x Realtek RTL8111E - 1 x Realtek RTL8111DP to support Dash Function
Audio	- ALC662 - Two Jacks on Rear I/O - 3W audio amplifier (Realtek ALC109) supported (with I2C interface to control volume)
Super I/O	- NUVOTON NCT6627UD (6 COM ports)
Expansion **Interface**	- 1 x Mini- PCIe (half size) - 1x (PCIex4)
Watch Dog Timer	- System reset, 0~255 interval setting in BIOS

Power on Mode	- AT/ATX Power on mode supported (setting by jumper) AT: Directly PWR on as Power input ready ATX: Press Button to PWR on after Power input ready
RTC	- eKabini embedded
Internal I/O	
Display (IMB-A180)	- LVDS (2-ch/24bits) + Inverter connector - 1 x rear HDMI
Display (IMB-A180-H)	- 2 x rear HDMI
Storage	- 1 x SATA3 port - 1 x mSATA
USB	- 2 x USB2.0 ports (by Header) - 1 x Vertical Type A USB Connector
Audio	- Front Audio Header - Buzzer
Serial Port	- 4 x RS232 - 4 x (1x3) Header to offer PWR select for 2 rear and 2 internal
Parallel Port	- 1 x LPT Header (2x13, K26, 2.0mm)
Digital I/O	- 8-bits
Battery	- Vertical socket
FAN	- 1 x 3-pin FAN (with speed control) - 1 x 4-pin FAN Connector
Power In	- 20-pin ATX PWR connector
Front Panel	- One 2x5 K10 pin Header to offer: PWR Button / Reset Button / PWR/Suspend LED / HDD LED
TPM	- TPM Header
Others	- 1 x 7-pin pitch 2.0 wafer connector for LVDS brightness control and audio volume control (IMB-A180) - AMD Debug Header
Rear I/O	
Keyboard/Mouse (PS/2)	- 1 x PS/2 combo
Serial Port	- 2 x RS-232/422/485, pin9 with +5V/+12V support
LAN **USB2.0**	- 2 x RJ45 - 4 x USB2.0
USB3.0	- 2 x USB3.0

Display (IMB-A180)	- 1 x D-Sub VGA - 1 x HDMI
Display (IMB-A180-H)	- 1 x D-Sub VGA - 2 x HDMI
Audio	- 2 x Audio Jack (MIC-in, Line-Out)
Environment	
Operation Temperature	- 0~50
Storage Temperature	- -20~70

* For detailed product information, please visit our website: http://www.asrock.com

1.3 Motherboard Layout

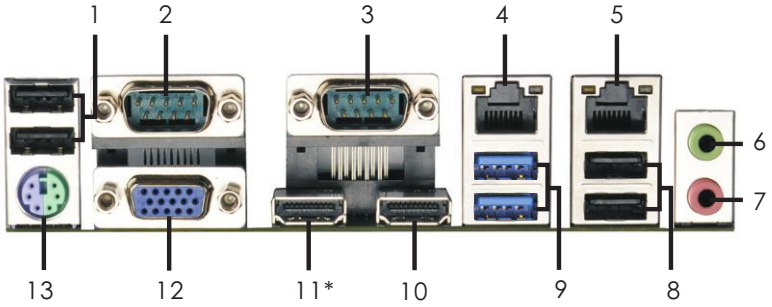


1	LVDS Panel Connector*
2	Panel Backlight Power Jumper
3	Inverter Power/Control Header
4	Panel Backlight & Audio AMP Volume Control Header
5	COM Port Pin9/Power Setting Jumper (For COM1)
6	COM Port Pin9/Power Setting Jumper (For COM2)
7	Backlight Control Signal Setting Header
8	LVDS Power (VDD Power) Jumper
9	4-Pin CPU FAN Connector
10	AMD Debug Header
11	20-pin ATX Power Input Connector
12	USB2.0 Port (USB8)
13	SATA3 Connector
14	Chassis Intrusion Header 1
15	ATX/AT Mode Jumper
16	Digital Input / Output Power select
17	USB2.0 Connector (USB67)
18	Digital Input / Output Pin Header
19	COM Port Pin9/Power Setting Jumper (For COM3)
20	COM Port Pin9/Power Setting Jumper (For COM4)
21	3-Pin Chassis FAN Connector
22	System Panel Header
23	RS-232 Port 4 Pin Header (COM6)
24	RS-232 Port 4 Pin Header (COM5)
25	RS-232 Port 4 Pin Header (COM4)
26	RS-232 Port 4 Pin Header (COM3)
27	Printer Port Header
28	Clear CMOS Header
29	TPM Header
30	Front Panel Audio Header
31	3W Audio AMP Output Wafer

* LVDS panel connector is for IMB-A180 only.

* HDMI1 port on the I/O panel is for IMB-A180-H only.

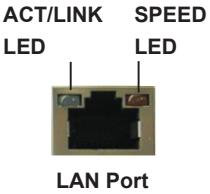
1.4 I/O Panel



1 USB 2.0 Ports (USB01)
2 Serial Port (COM1)
3 Serial Port (COM2)
4 LAN RJ-45 Port (LAN1) (DASH)
5 LAN RJ-45 Port (LAN2)
6 Front Speaker (Lime)
7 Microphone (Pink)
8 USB 2.0 Ports (USB4_5)
9 USB 3.0 Ports (USB2_3)
10 HDMI Port (HDMI2)
11 HDMI Port (HDMI1)*
12 D-Sub (VGA1)
13 PS/2 Keyboard/Mouse Port

There are two LEDs on each LAN port. Please refer to the table below for the LAN port LED indications.

LAN Port LED Indications			
Activity/Link LED		SPEED LED	
Status	Description	Status	Description
Off	No Link	Off	10Mbps connection
Blinking	Data Activity	Orange	100Mbps connection
On	100Mbps connection	Green	1Gbps connection



COM1/COM2 RS232/422/485 Pin Mapping

PIN	RS232	RS422	RS485
1	DCD, Data carrier detect	TX-	RTX-
2	RXD, Receive data	RX+	N/A
3	TXD, Transmit data	TX+	RTX+
4	DTR, Data terminal ready	RX-	N/A
5	GND	GND	GND

* HDMI1 port on the I/O panel is for IMB-A180-H only.

Chapter 2: Installation

This is a Mini-ITX form factor motherboard. Before you install the motherboard, study the configuration of your chassis to ensure that the motherboard fits into it.

Pre-installation Precautions

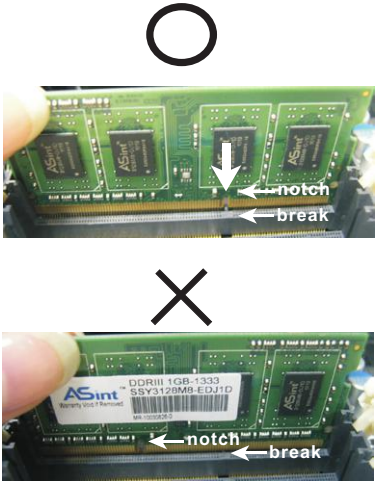
Take note of the following precautions before you install motherboard components or change any motherboard settings.

1. Make sure to unplug the power cord before installing or removing the motherboard. Failure to do so may cause physical injuries to you and damages to motherboard components.
2. In order to avoid damage from static electricity to the motherboard's components, NEVER place your motherboard directly on a carpet. Also remember to use a grounded wrist strap or touch a safety grounded object before you handle the components.
3. Hold components by the edges and do not touch the ICs.
4. Whenever you uninstall any components, place them on a grounded anti-static pad or in the bag that comes with the components.
5. When placing screws to secure the motherboard to the chassis, please do not over-tighten the screws! Doing so may damage the motherboard.

2.1 Installing Memory Modules (DIMM)

This motherboard provides two 204-pin DDR3 (Double Data Rate 3) SO-DIMM slots.

Step 1. Unlock a DIMM slot by pressing the retaining clips outward.
Step 2. Align a DIMM on the slot such that the notch on the DIMM matches the break on the slot.



1. The DIMM only fits in one correct orientation. It will cause permanent damage to the motherboard and the DIMM if you force the DIMM into the slot at incorrect orientation.
2. Please install the memory module in DDR3_A2 slot as first priority.

Step 3. Firmly insert the DIMM into the slot until the retaining clips at both ends fully snap back in place and the DIMM is properly seated.

2.2 Expansion Slots (PCI Express Slots)

There is 1 PCI Express slot and 1 mini PCI Express slot on this motherboard.

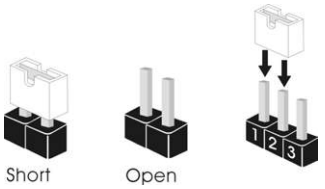
mini-PCIE Slot: MINI_PCIE1 is used for mini PCIE cards.
PCIE Slot: The x4 lane width PCIE1 (PCIE 2.0 x4 slot) is used for PCI Express expansion cards.

Installing an Expansion Card

Step 1. Before installing an expansion card, please make sure that the power supply is switched off or the power cord is unplugged. Please read the documentation of the expansion card and make necessary hardware settings for the card before you start the installation.
Step 2. Remove the bracket facing the slot that you intend to use. Keep the screws for later use.
Step 3. Align the card connector with the slot and press firmly until the card is completely seated on the slot.
Step 4. Fasten the card to the chassis with screws.

2.3 Jumpers Setup

The illustration shows how jumpers are setup. When the jumper cap is placed on the pins, the jumper is “Short”. If no jumper cap is placed on the pins, the jumper is “Open”. The illustration shows a 3-pin jumper whose pin1 and pin2 are “Short” when a jumper cap is placed on these 2 pins.



Clear CMOS Jumper
(3-pin CLRCMOS1)
(see p.8, No. 28)

Default Clear CMOS

CLRCMOS1 allows you to clear the data in CMOS. To clear and reset the system parameters to default setup, please turn off the computer and unplug the power cord from the power supply. After waiting for 15 seconds, use a jumper cap to short pin2 and pin3 on CLRCMOS1 for 5 seconds. However, please do not clear the CMOS right after you update the BIOS. If you need to clear the CMOS when you just finish updating the BIOS, you must boot up the system first, and then shut it down before you do the clear-CMOS action. Please be noted that the password, date, time, user default profile, 1394 GUID and MAC address will be cleared only if the CMOS battery is removed.

Panel Backlight Power Jumper
(3-pin BKT_PWR1)
(see p.8, No. 2)

1-2 : +5V
2-3 : +12V

LVDS Power (VDDR Power) Jumper
(3-pin PNL_PWR1)
(see p.8, No. 8)

1-2 : +3V
2-3 : +5V

ATX/AT Mode Jumper (3-pin PWR_JP1) (see p.8, No. 15)		1-2 : AT Mode 2-3 : ATX Mode
Digital Input / Output Power select (3-pin PWR_JP1) (see p.8, No. 16)		1-2 : +12V 2-3 : +5V
Backlight Control Signal Setting Jumper (3-pin BKT_CTL1) (see p.8, No. 7)		1-2 : +3V Level 2-3 : +5V Level
COM Port Pin9/Power Setting Jumpers (3-pin SET_CM1) (see p.8, No. 5) (3-pin SET_CM2) (see p.8, No. 6) (3-pin SET_CM3) (see p.8, No. 19) (3-pin SET_CM4) (see p.8, No. 20)		1-2 : +12V 2-3 : +5V

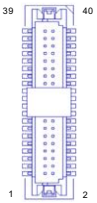
2.4 Onboard Headers and Connectors

Onboard headers and connectors are NOT jumpers. Do NOT place jumper caps over these headers and connectors. Placing jumper caps over the headers and connectors will cause permanent damage to the motherboard!

LVDS Panel Connector

(40-pin LVDS1)

(see p.8, No. 1)

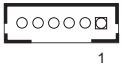


PIN	Signal Name	PIN	Signal Name
1	LVDS_PWR	2	LVDS_PWR
3	+3V	4	DDC CLK
5	DDC DATA	6	LVDS1 D0(-)
7	LVDS1 D0(+)	8	GND
9	LVDS1 D1(-)	10	LVDS1 D1(+)
11	GND	12	LVDS1 D2(-)
13	LVDS1 D2(+)	14	GND
15	LVDS1 D3(-)	16	LVDS1 D3(+)
17	GND	18	LVDS1 CLK(-)
19	LVDS1 CLK(+)	20	GND
21	LVDS2 D0(-)	22	LVDS2 D0(+)
23	GND	24	LVDS2 D1(-)
25	LVDS2 D1(+)	26	GND
27	LVDS2 D2(-)	28	LVDS2 D2(+)
29	LVDS PWR EN	30	LVDS2 D3(-)
31	LVDS2 D3(+)	32	GND
33	LVDS2 CLK(-)	34	LVDS2 CLK(+)
35	GND	36	B/L ENABLE
37	B/L ADJUST	38	BLT_PWR
39	BLT_PWR	40	BLT_PWR

Inverter Power/Control Header

(6-pin BLT_PWR1)

(see p.8, No. 3)



PIN	Signal Name
1	GND
2	GND
3	B/L ADJUST
4	B/L ENABLE
5	LCD BLT VCC
6	LCD BLT VCC

Panel Backlight & Audio AMP Volume Control Header
(7-pin BLT_VOL1)
(see p.8, No. 4)

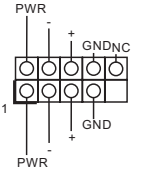
PIN	Signal Name
1	VOL_UP
2	VOL_DW
3	BKT_ON/OFF
4	BKT_UP
5	BKT_DW
6	GND
7	GND

Serial ATA3 Connector
(SATA3_1: see p.8, No. 13)

This Serial ATA3 (SATA3) connector supports SATA data cables for internal storage devices. The current SATA3 interface allows up to 6.0 Gb/s data transfer rate.

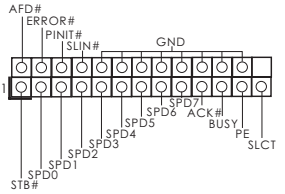
USB 2.0 Header
(9-pin USB6_7)
(see p.8, No. 17)

(USB12)
(see p.8, No. 8)



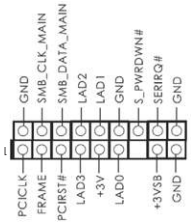
Besides four default USB 2.0 ports on the I/O panel, there is one USB 2.0 header and one USB port on this motherboard. Each USB 2.0 header can support two USB 2.0 ports.

Print Port Header
(25-pin LPT1)
(see p.8, No. 27)



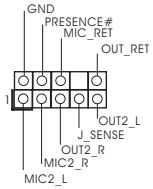
This is an interface for print port cable that allows convenient connection of printer devices.

TPM Header
(17-pin TPM1)
(see p.8, No. 29)



This connector supports Trusted Platform Module (TPM) system, which can securely store keys, digital certificates, passwords, and data. A TPM system also helps enhance network security, protects digital identities, and ensures platform integrity.

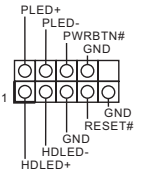
Front Panel Audio Header
(9-pin HD_AUDIO1)
(see p.8, No. 30)



This is an interface for the front panel audio cable that allows convenient connection and control of audio devices.

1. High Definition Audio supports Jack Sensing, but the panel wire on the chassis must support HDA to function correctly. Please follow the instructions in our manual and chassis manual to install your system.
2. If you use an AC'97 audio panel, please install it to the front panel audio header by the steps below:
   A. Connect Mic_IN (MIC) to MIC2_L.
   B. Connect Audio_R (RIN) to OUT2_R and Audio_L (LIN) to OUT2_L.
   C. Connect Ground (GND) to Ground (GND).
   D. MIC_RET and OUT_RET are for HD audio panel only. You don't need to connect them for AC'97 audio panel.
   E. To activate the front mic.
      For Windows® XP / XP 64-bit OS:
      Select "Mixer". Select "Recorder". Then click "FrontMic".
      For Windows® 8 / 8 64-bit / 7 / 7 64-bit / Vista™ / Vista™ 64-bit OS:
      Go to the "FrontMic" Tab in the Realtek Control panel. Adjust "Recording Volume".

System Panel Header
(9-pin PANEL1)
(see p.8, No. 22)



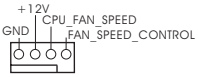
This header accommodates several system front panel functions.

Connect the power switch, reset switch and system status indicator on the chassis to this header according to the pin assignments below. Note the positive and negative pins before connecting the cables.

PWRBTN (Power Switch):
Connect to the power switch on the chassis front panel. You may configure the way to turn off your system using the power switch.
RESET (Reset Switch):
Connect to the reset switch on the chassis front panel. Press the reset switch to restart the computer if the computer freezes and fails to perform a normal restart.
PLED (System Power LED):
Connect to the power status indicator on the chassis front panel. The LED is on when the system is operating. The LED keeps blinking when the sys-tem is in S1/S3 sleep state. The LED is off when the system is in S4 sleep state or powered off (S5).
HDLED (Hard Drive Activity LED):
Connect to the hard drive activity LED on the chassis front panel. The LED is on when the hard drive is reading or writing data.

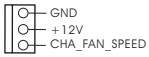
The front panel design may differ by chassis. A front panel module mainly consists of power switch, reset switch, power LED, hard drive activity LED, speaker and etc. When connecting your chassis front panel module to this header, make sure the wire assignments and the pin assign-ments are matched correctly.

CPU Fan Connector
(4-pin CPU_FAN1)
(see p.8, No. 9)



Though this motherboard provides a 4-Pin CPU fan (Quiet Fan) connector, 3-Pin CPU fans can still work successfully even without fan speed control. If you plan to connect a 3-Pin CPU fan, please connect it to Pin 1-3.

Chassis Fan Connector
(3-pin CHA_FAN1)
(see p.8, No. 21)

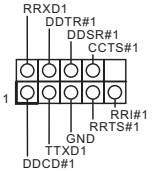


Please connect a fan cable to the fan connector and match the black wire to the ground pin.

3W Audio AMP Output Wafer
(4-pin SPEAKER1)
(see p.8, No. 31)

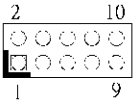
PIN	Signal Name
1	SPK L-
2	SPK L+
3	SPK R+
4	SPK R-

Serial Port Header
(9-pin COM3)
(see p.8, No. 26)
(9-pin COM4)
(see p.8, No. 25)
(9-pin COM5)
(see p.8, No. 24)
(9-pin COM6)
(see p.8, No. 23)



These COM headers support serial port modules.

Digital Input / Output Pin Header
(10-pin JGPIO1)
(see p.8, No. 18)



PIN	Signal Name	PIN	Signal Name
1	SIO_GP24	2	SIO_GP20
3	SIO_GP25	4	SIO_GP21
5	SIO_GP26	6	SIO_GP22
7	SIO_GP27	8	SIO_GP23
9	JGPIO_PWR	10	GND

Chassis Intrusion Header
(2-pin CI1: see p.8, No. 14)

This motherboard supports CASE OPEN detection feature that detects if the chassis cover has been removed. This feature requires a chassis with chassis intrusion detection design.

ATX Power Connector
(20-pin ATXPWR1)
(see p.8, No. 11)

Please connect an ATX power supply to this connector.

AMD Debug Header
(17-pin J1)
(see p.8, No. 10)

PIN	Signal Name	PIN	Signal Name
1	APU_DBRDY	2	APU_TDO
3	GND	4	APU_TDI
5	GND	6	APU_TMS
7	GND	8	APU_TCK
9	APU_DBREQ#	10	APU_BTN#
11	PWR_+1.8V	12	SYS_RST#
13	APU_LDT_RST#	14	SMB_CLK
15	GND	16	SMB_DATA
17	NC	18	X

Chapter 3: UEFI SETUP UTILITY

3.1 Introduction

This section explains how to use the UEFI SETUP UTILITY to configure your system. The UEFI chip on the motherboard stores the UEFI SETUP UTILITY. You may run the UEFI SETUP UTILITY when you start up the computer. Please press <F2> or <Del> during the Power-On-Self-Test (POST) to enter the UEFI SETUP UTILITY, otherawise, POST will continue with its test routines.

If you wish to enter the UEFI SETUP UTILITY after POST, restart the system by pressing <Ctl> + <Alt> + <Delete>, or by pressing the reset button on the system chassis. You may also restart by turning the system off and then back on.

Because the UEFI software is constantly being updated, the following UEFI setup screens and descriptions are for reference purpose only, and they may not exactly match what you see on your screen.

3.1.1 UEFI Menu Bar

The top of the screen has a menu bar with the following selections:

Main	For setting system time/date information
Advanced	For advanced system configurations
Tool	Useful tools
H/W Monitor	Displays current hardware status
Boot	For configuring boot settings and boot priority
Security	For security settings
Exit	Exit the current screen or the UEFI Setup Utility

3.1.2 Navigation Keys

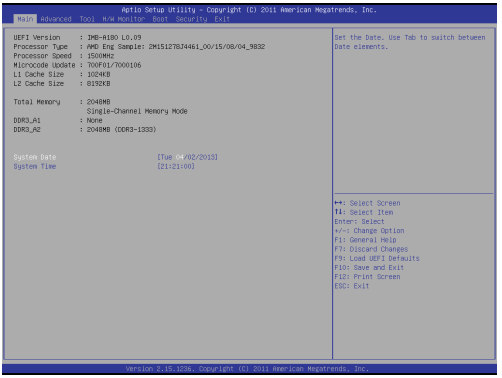
Use < ← > key or < → > key to choose among the selections on the menu bar, and use < ↑ > key or < ↓ > key to move the cursor up or down to select items, then press <Enter> to get into the sub screen. You can also use the mouse to click your required item.

Please check the following table for the descriptions of each navigation key.

Navigation Key(s)	Description
+ / -	To change option for the selected items
<F1>	To display the General Help Screen
<F7>	Discard changes and exit the SETUP UTILITY
<F9>	Load optimal default values for all the settings
<F10>	Save changes and exit the SETUP UTILITY
<F12>	Print screen
<ESC>	Jump to the Exit Screen or exit the current screen

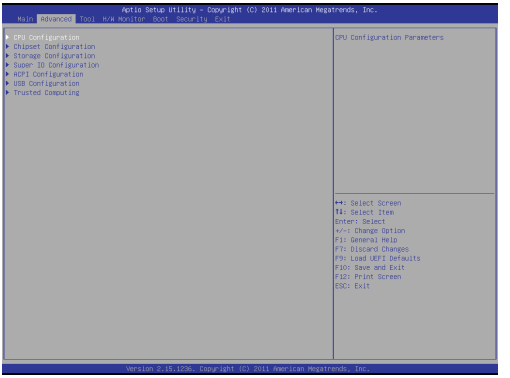
3.2 Main Screen

When you enter the UEFI SETUP UTILITY, the Main screen will appear and display the system overview.



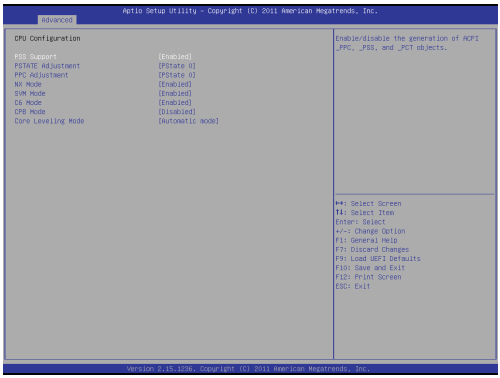
3.3 Advanced Screen

In this section, you may set the configurations for the following items: CPU Configuration, Chipset Configuration, Storage Configuration, Super IO Configuration, ACPI Configuration, USB Configuration and Trusted Computing.



Setting wrong values in this section may cause the system to malfunction.

3.3.1 CPU Configuration



PSS Support

Use this to enable or disable the generation of ACPI_PPC, _PSS, and _PCT objects.

PSTATE Adjustment

Use this to adjust PSTATE.

PPC Adjustment

Use this to adjust PPC.

NX Mode

Use this to enable or disable NX mode.

SVM Mode

When this is set to [Enabled], a VMM (Virtual Machine Architecture) can utilize the additional hardware capabilities provided by AMD-V. The default value is [Enabled]. Configuration options: [Enabled] and [Disabled].

C6 Mode

Use this to enable or disable C6 mode.

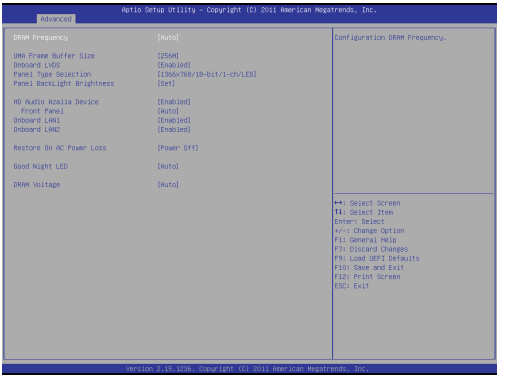
PCB Mode

Use this to enable or disable CPB mode.

Core Leveling Mode

Use this to adjust Core Leveling mode.

3.3.2 Chipset Configuration



DRAM Frequency

If [Auto] is selected, the motherboard will detect the memory module(s) inserted and assigns appropriate frequency automatically.

UMA Frame Buffer Size

Use this to adjust UMA frame buffer size.

Onboard LVDS

Use this to enable or disable onboard LVDS.

Panel Type Selection

Use this to select a panel type.

Panel BackLight Brightness

Use this to select panel backLight brightness.

HD Audio Azalia Device

Select [Enabled] or [Disabled] for the HD Audio Azalia Device.

Front Panel

Select [Auto] or [Disabled] for the onboard HD Audio Front Panel.

Onboard LAN 1

This allows you to enable or disable the Onboard LAN 1.

Onboard LAN 2

This allows you to enable or disable the Onboard LAN 2.

Restore on AC/Power Loss

This allows you to set the power state after an unexpected AC/power loss. If [Power Off] is selected, the AC/power remains off when the power recovers. If [Power On] is selected, the AC/power resumes and the system starts to boot up when the power recovers.

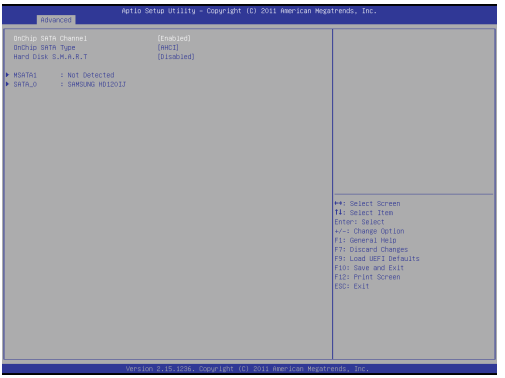
Good Night LED

Enable this option to turn off Power LED when the system is power on. The keyboard LED will also be turned off in S1, S3 and S4 state. The default value is [Auto].

DRAM Voltage

Use this to adjust DRAM voltage.

3.3.3 Storage Configuration



OnChip SATA Channel

Use this to enable or disable the onchip SATA channel.

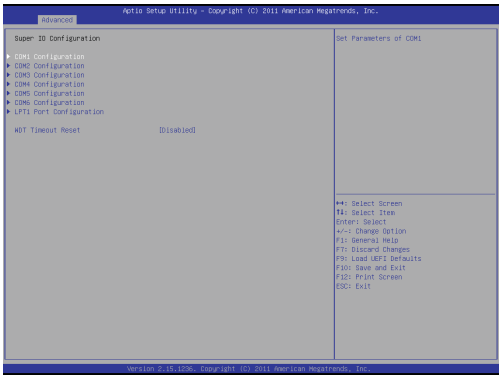
OnChip SATA Type

Use this to adjust the onchip SATA type.

Hard Disk S.M.A.R.T.

Use this to enable or disable S.M.A.R.T. (Self-Monitoring, Analysis, and Reporting Technology).

3.3.4 Super IO Configuration



COM1 Configuration

Use this to set the parameters of COM1.

COM2 Configuration

Use this to set the parameters of COM2.

COM3 Configuration

Use this to set the parameters of COM3.

COM4 Configuration

Use this to set the parameters of COM4.

COM5 Configuration

Use this to set the parameters of COM5.

COM6 Configuration

Use this to set the parameters of COM6.

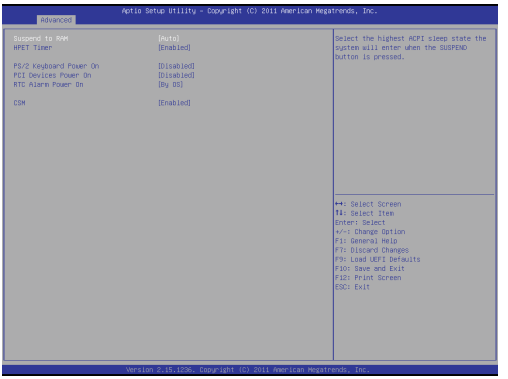
LPT1 Port Configuration

Use this to set the parameters of the onboard parallel port.

WDT Timeout Reset

This allows users to enable/disable the Watch Dog Timer timeout to reset the system. The default value is [Disabled].

3.3.5 ACPI Configuration



Suspend to RAM

Use this to select whether to auto-detect or disable Suspend-to-RAM. Select [Auto] to enable if the OS supports it.

HPET Timer

Use this to enable or disable HPET Timer.

PS/2 Keyboard Power On

Use this to enable or disable the PS/2 keyboard to turn on the system from power-soft-off mode.

PCI Devices Power On

Use this to enable or disable the PCI devices to turn on the system from power-soft-off mode.

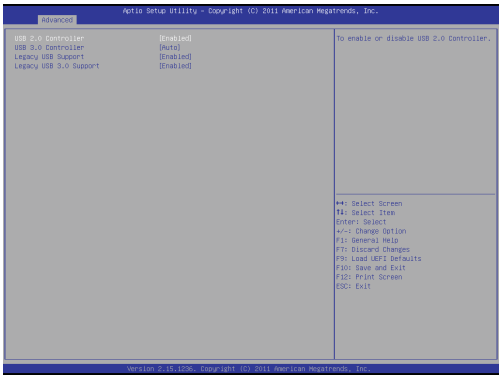
RTC Alarm Power On

Use this to enable or disable the RTC (Real Time Clock) to power on the system.

CSM

Please disable CSM when you enable Fast Boot option. The default value is [Enabled].

3.3.6 USB Configuration



USB 2.0 Controller

Use this item to enable or disable the use of USB 2.0 controller.

USB 3.0 Controller

Use this item to enable or disable the use of USB 3.0 controller.

Legacy USB Support

Use this option to select legacy support for USB devices. There are four confi guration options: [Enabled], [Auto], [Disabled] and [UEFI Setup Only]. The default value is [Enabled]. Please refer to below descriptions for the details of these four options:

[Enabled] - Enables support for legacy USB.

[Auto] - Enables legacy support if USB devices are connected.

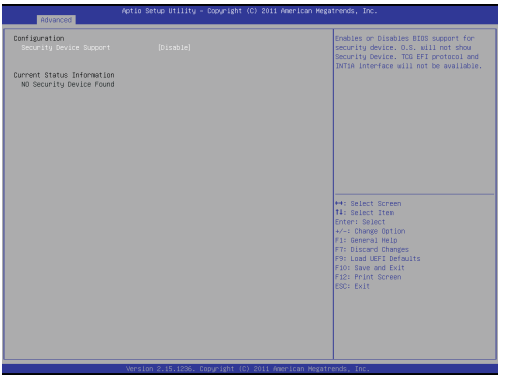
[Disabled] - USB devices are not allowed to use under legacy OS and UEFI setup when [Disabled] is selected. If you have USB compatibility issue, it is recommended to select [Disabled] to enter OS.

[UEFI Setup Only] - USB devices are allowed to use only under UEFI setup and Windows / Linux OS.

Legacy USB 3.0 Support

Use this option to enable or disable legacy support for USB 3.0 devices. The default value is [Enabled].

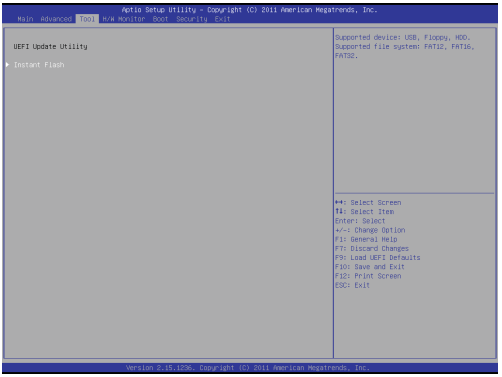
3.3.7 Trusted Computing



Security Device Support

Enable to activate Trusted Platform Module (TPM) security for your hard disk drives.

3.4 Tool



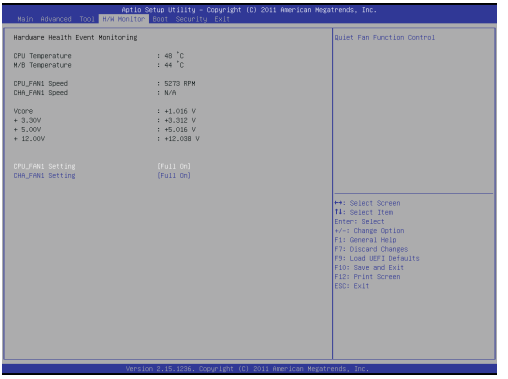
UEFI Update Utility

Instant Flash

Instant Flash is a UEFI flash utility embedded in Flash ROM. This convenient UEFI update tool allows you to update system UEFI without entering operating systems first like MS-DOS or Windows®. Just save the new UEFI file to your USB flash drive, floppy disk or hard drive and launch this tool, then you can update your UEFI only in a few clicks without preparing an additional floppy diskette or other complicated flash utility. Please be noted that the USB flash drive or hard drive must use FAT32/16/12 file system. If you execute Instant Flash utility, the utility will show the UEFI files and their respective information. Select the proper UEFI file to update your UEFI, and reboot your system after the UEFI update process is completed.

3.5 Hardware Health Event Monitoring Screen

This section allows you to monitor the status of the hardware on your system, including the parameters of the CPU temperature, motherboard temperature, fan speed and voltage.



CPU_FAN1 Setting

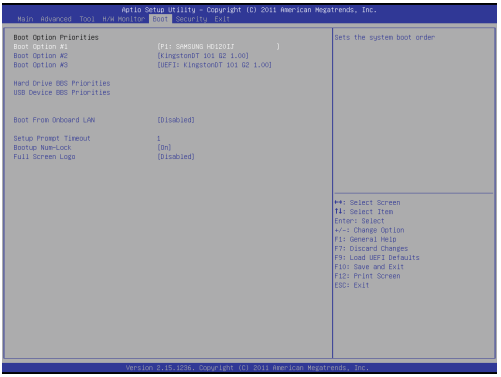
This allows you to set CPU FAN1's speed. The default value is [Full On].

CHA_FAN1 Setting

This allows you to set Chassis FAN1's speed. The default value is [Full On].

3.6 Boot Screen

This section displays the available devices on your system for you to configure the boot settings and the boot priority.



Boot From Onboard LAN

Use this to enable or disable Boot From Onboard LAN.

Setup Prompt Timeout

This shows the number of seconds to wait for the setup activation key.

Bootup Num-Lock

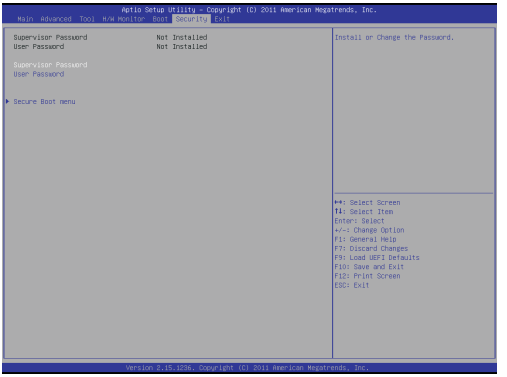
If this is set to [On], it will automatically activate the Numeric Lock after boot-up.

Full Screen Logo

Use this item to enable or disable OEM Logo. The default value is [Enabled].

3.7 Security Screen

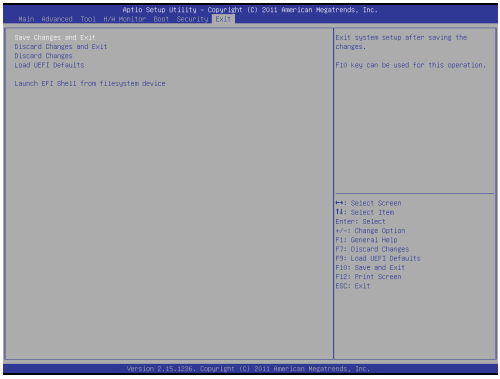
In this section you may set or change the supervisor/user password for the system. You may also clear the user password.



Secure Boot menu

Use this to enable or disable Secure Boot. The default value is [Disabled].

3.8 Exit Screen



Save Changes and Exit

When you select this option the following message, “Save configuration changes and exit setup?” will pop out. Select [OK] to save changes and exit the UEFI SETUP UTILITY.

Discard Changes and Exit

When you select this option the following message, “Discard changes and exit setup?” will pop out. Select [OK] to exit the UEFI SETUP UTILITY without saving any changes.

Discard Changes

When you select this option the following message, “Discard changes?” will pop out. Select [OK] to discard all changes.

Load UEFI Defaults

Load UEFI default values for all options. The F9 key can be used for this operation.

Chapter 4: Software Support

4.1 Install Operating System

This motherboard supports various Microsoft® Windows® operating systems: 8 / 8 64-bit / 7 / 7 64-bit / Vista™ / Vista™ 64-bit / XP / XP 64-bit. Because motherboard settings and hardware options vary, use the setup procedures in this chapter for general reference only. Refer your OS documentation for more information.

4.2 Support CD Information

The Support CD that came with the motherboard contains necessary drivers and useful utilities that enhance the motherboard's features.

4.2.1 Running The Support CD

To begin using the support CD, insert the CD into your CD-ROM drive. The CD automatically displays the Main Menu if "AUTORUN" is enabled in your computer. If the Main Menu did not appear automatically, locate and double click on the file "ASSETUP.EXE" from the BIN folder in the Support CD to display the menus.

4.2.2 Drivers Menu

The Drivers Menu shows the available device's drivers if the system detects installed devices. Please install the necessary drivers to activate the devices.

4.2.3 Utilities Menu

The Utilities Menu shows the application software that the motherboard supports. Click on a specific item then follow the installation wizard to install it.

4.2.4 Contact Information

If you need to contact ASRock or want to know more about ASRock, you're welcome to visit ASRock's website at http://www.asrock.com; or you may contact your dealer for further information.