IMB-A182

User Manual

Version 1.0
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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"

ASRock Website: http://www.asrock.com

Contents

1. Introduction

Thank you for purchasing ASRock ***IMB-A182*** 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 UEFI setup and information of the Support CD.

Because the motherboard specifications and the UEFI 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-A182*** Motherboard

(Mini-ITX Form Factor: 6.7-in x 6.7-in, 17.0 cm x 17.0 cm)

ASRock ***IMB-A182*** Quick Installation Guide

ASRock ***IMB-A182*** Support CD

1 x I/O Panel Shield

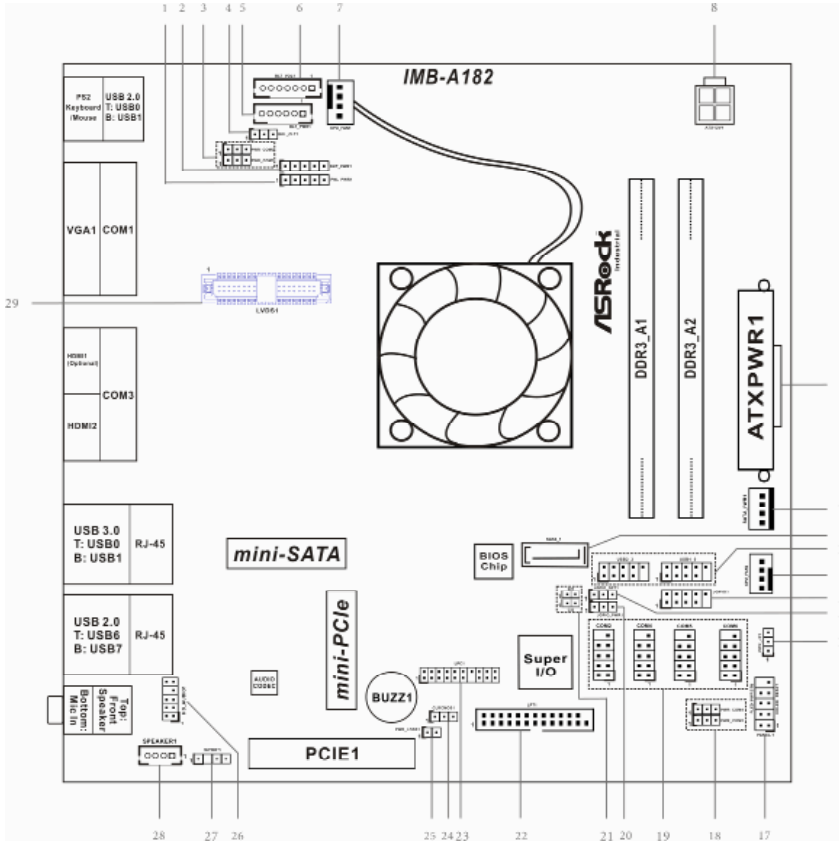
1.2 Specifications

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 Steppe Eagle SOC
System Memory	- 2 x 204pin SO-DIMM - One Channel - Up to DDR3 1600 MHz
Display (IMB-A182)	- 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, HDMI)
Display (IMB-A182-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 - 2 x Realtek RTL8111G
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-A182)	- LVDS (2-ch/24bits) + Inverter connector - 1 x rear HDMI
Display (IMB-A182-H)	- 2 x rear HDMI
Storage	- 1 x SATA3 port - 1 x mSATA
USB	- 4 x USB2.0 ports (by two 2x5 K9 2.54mm Headers)
Audio	- Front Audio Header - 1x4 Spdif Header - Buzzer
Serial Port	- 4 x RS232 (COM B,D,E,F) - 4 x (1x3) Header to offer PWR select for 2 rear and 2 internal - All use +5V Tranceiver
Parallel Port	- 1 x LPT Header (2x13, K26, 2.0mm)
Digital I/O	- 8-bits
Battery	- Vertical socket or by Header
FAN	- 1 x 3-pin FAN (with speed control) - 1 x 4-pin FAN Connector
Power In	- 20-pin ATX PWR connector - 4-pin ATX PWR con for +12V~24V input
Front Panel	- One 2x5 K10 pin Header to offer: PWR Button / Reset Button / PWR/Suspend LED / HDD LED
TPM	- Modified TPM Header to support 80-Port debug use and reserve to "LPC to COM232" module use
Others	- 1 x 7-pin pitch 2.0 wafer connector for LVDS brightness control and audio volume control (IMB-A182)
Rear I/O	
Keyboard/Mouse (PS/2)	- 1 x PS/2 combo
Serial Port	- 2 x RS-232 (COMA,C) - Support RS232/422/485 - Pin9 can support +5V or +12V, set by Jumper
LAN	- 2 x RJ45
USB2.0	- 4 x USB2.0
USB3.0	- 2 x USB3.0
Display (IMB-A182)	- 1 x D-Sub VGA - 1 x HDMI
Display (IMB-A182-H)	- 1 x D-Sub VGA - 2 x HDMI
Audio	- 2 x Audio Jack (MIC-in, Line-Out)

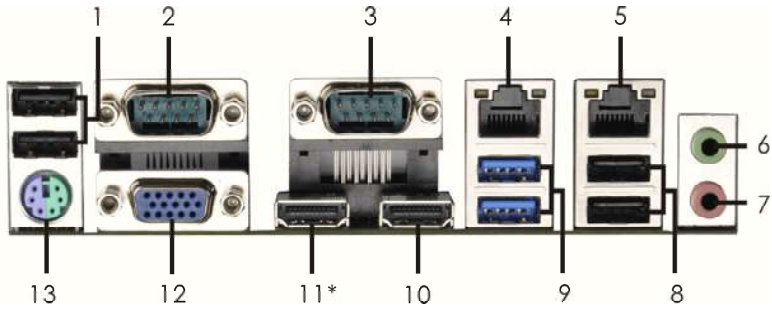
* For detailed product information, please visit our website: http://www.asrock.com

1.3 Motherboard Layout



1 : LVDS Power (VDD Power) Jumper
2 : Panel Backlight Power Jumper
3 : COM Port Pin9/Power Setting Jumpers (For COM1, COM3)
4 : Backlight Control Signal Setting Header
5 : Inverter Power/Control Header
6 : Panel Backlight & Audio AMP Volume Control Header
7 : 4-Pin CPU FAN Connector (+12V)
8 : ATX Power Connector (Input 12V)
9 : 20-pin ATX Power Input Connector
10 : SATA Power Output Connector
11 : SATA3 Connector (SATA_1)
12 : USB2.0 Connectors (USB2_3, USB4_5)
13 : 4-Pin CPU FAN Connector (+12V)
14 : Digital Input/Output Pin Header
15 : JGPIO_SET1
16 : ATX/AT Mode Jumper
17 : System Panel Header
18 : COM Port Pin9/Power Setting Jumpers (For COM2, COM4)
19 : COM Port Headers (RS232) (COM2, COM4, COM5, COM6)
20 : Digital Input/Output Power Select
21 : Chassis Intrusion Headers
22 : Printer Port Header
23 : LPC Header
24 : Clear CMOS Header
25 : Power Loss Jumper
26 : Front Panel Audio Header
27 : SPDIF Header
28 : 3W Audio AMP Output Wafer
29 : LVDS Panel Connector

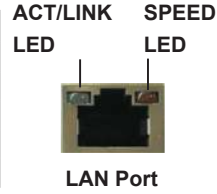
1.4 I/O Panel



1 **USB 2.0 Ports (USB01)**
2 **Serial Port (COM1)**
3 **Serial Port (COM3)**
4 **LAN RJ-45 Port (LAN1)**
5 **LAN RJ-45 Port (LAN2)**
6 **Front Speaker (Lime)**
7 **Microphone (Pink)**
8 **USB 2.0 Ports (USB6_7)**
9 **USB 3.0 Ports (USB3_0_1)**
10 **HDMI Port (HDMI2)**
11 **HDMI Port (HDMI1) (Optional)***
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/COM3 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-A182-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

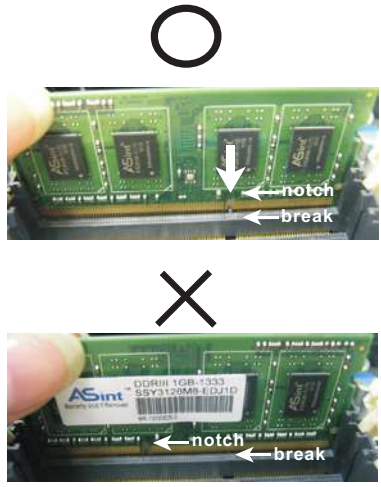
Take note of the following precautions before you install motherboard components or change any motherboard settings.

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.

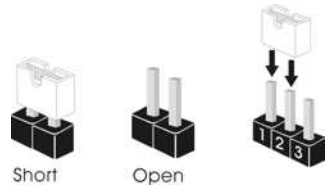
mini-PCIE Slot: MINI_PCIE1 is used for mini PCIE cards.
PCIE Slot: The x4 lane width PCIE1 (PCIE 2.0 x4 slot) is used for PCI Express expansion cards.

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. 24)

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 UEFI. If you need to clear the CMOS when you just finish updating the UEFI, 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
(5-pin BKT_PWR1)
(see p.8, No. 2)

1-2 : +5V
2-3 : +12V
4-5 : +Vin

LVDS Power (VDDR Power) Jumper
(5-pin PNL_PWR1)
(see p.8, No. 1)

1-2 : +3V
2-3 : +5V
4-5 : +12V

ATX/AT Mode Jumper (3-pin PWR_JP1) (see p.8, No. 16)		1-2 : AT Mode 2-3 : ATX Mode
Digital Input / Output Power Select (3-pin JGPIO_PWR1) (see p.8, No. 20)		1-2 : +12V 2-3 : +5V
Backlight Control Signal Setting Jumper (3-pin BKT_CTL1) (see p.8, No. 4)		1-2 : +3V Level 2-3 : +5V Level
JGPIO_SET1 (3-pin JGPIO_SET1) (see p.8, No. 15)		1-2 : +5V 2-3 : GND
Power Loss Jumper (2-pin PWR_LOSS1) (see p.8, No. 25)		Open : Power Loss Close : no Power Loss
COM Port Pin9/Power Setting Jumpers (3-pin PWR_CM1) (see p.8, No. 3) (3-pin PWR_CM2) (see p.8, No. 18) (3-pin PWR_CM3) (see p.8, No. 3) (3-pin PWR_CM4) (see p.8, No. 18)		1-2 : +12V 2-3 : +5V

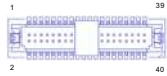
2.4 Onboard Headers and Connectors

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. 29)

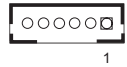


PIN	Signal Name	PIN	Signal Name
1	LVDS_PWR	2	LVDS_PWR
3	+3V	4	DDC CLK
5	DDC DATA	6	LVDS1 D0(-)
7	LVDS1 D0(+)	8	GND
9	LVDS1 D1(-)	10	LVDS1 D1(+)
11	GND	12	LVDS1 D2(-)
13	LVDS1 D2(+)	14	GND
15	LVDS1 D3(-)	16	LVDS1 D3(+)
17	GND	18	LVDS1 CLK(-)
19	LVDS1 CLK(+)	20	GND
21	LVDS2 D0(-)	22	LVDS2 D0(+)
23	GND	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. 5)



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

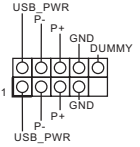
Panel Backlight & Audio AMP Volume Control Header
(7-pin BLT_VOL1)
(see p.8, No. 6)

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
(SATA_1: see p.8, No. 11)

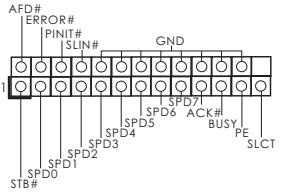
This Serial ATA3 (SATA3) connector supports SATA data cables for internal storage devices. The current SATA3 interface allows up to 6.0 Gb/s data transfer rate.

USB 2.0 Connectors
(9-pin USB2_3, USB4_5)
(see p.8, No. 12)



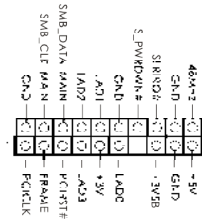
Besides four default USB 2.0 ports on the I/O panel, there are two USB 2.0 headers on this motherboard. Each USB 2.0 header can support two USB 2.0 ports.

Print Port Header
(25-pin LPT1)
(see p.8, No. 22)



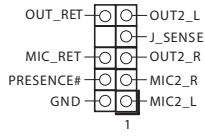
This is an interface for print port cable that allows convenient connection of printer devices.

LPC Header
(19-pin LPC1)
(see p.8, No. 23)



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.

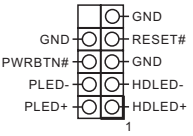
Front Panel Audio Header
(9-pin HD_AUDIO1)
(see p.8, No. 26)



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® 8.1 / 8.1 64-bit / 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. 17)



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.

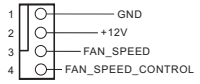
PWRBTN (Power Switch):
Connect to the power switch on the chassis front panel. You may configure the way to turn off your system using the power switch.
RESET (Reset Switch):
Connect to the reset switch on the chassis front panel. Press the reset switch to restart the computer if the computer freezes 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 Connectors

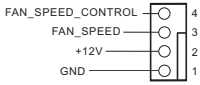
(4-pin CPU_FAN1)

(see p.8, No. 7)



(4-pin CPU_FAN2)

(see p.8, No. 13)



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.

3W Audio AMP Output Wafer

(4-pin SPEAKER1)

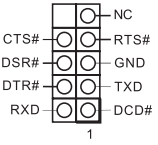
(see p.8, No. 28)

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

COM Port Headers (RS232)

(9-pin COM2, COM4, COM5, COM6)

(see p.8, No. 19)



These COM headers support serial port modules.

Chassis Intrusion Headers

(2-pin CI1, CI2: see p.8, No. 21)

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.

CI1:

Close: Active Case Open

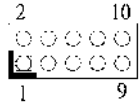
Open: Normal

CI2:

Close: Normal

Open: Active Case Open

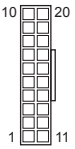
Digital Input / Output Pin Header
(10-pin JGPIO1)
(see p.8, No. 14)



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

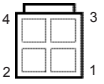
Parameter	Range
GPI/O input Low Voltage	Max. 0.8V
GPI/O input High Voltage	Min. 2.0V
GPI/O output Low Voltage	Max. 0.4V
GPI/O output High Voltage	Min. 2.4V
Note : Max. load per GPI/O pin : 12mA Current Max. 1A per power pin.	

ATX Power Connector
(20-pin ATXPWR1)
(see p.8, No. 9)



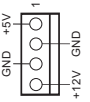
Please connect an ATX power supply to this connector.

ATX Power Connector (Input 12V~24V)
(4-pin ATX12V1)
(see p.8, No. 8)



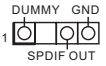
Please connect an ATX 12V ~24Vpower supply to this connector.
1-2: GND
3-4: DC Input

SATA Power Output Connector
(4-pin SATA_PWR1)
(see p.8, No. 10)



Please connect a SATA power cable to this connector.

SPDIF Header
(3-pin SPDIF1)
(see p.8, No. 27)



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 and USB Configuration.

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

3.3.1 CPU Configuration

Cool 'n' Quiet

Use this item to enable or disable AMD's Cool 'n' Quiet™ technology. The default value is [Enabled]. Configuration options: [Enabled] and [Disabled]. If you install Windows® 8.1 / 8 / 7 / Vista™ and want to enable this function, please set this item to [Enabled]. Please note that enabling this function may reduce CPU voltage and memory frequency, and lead to system stability or compatibility issue with some memory modules or power supplies. Please set this item to [Disable] if above issue occurs.

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.

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.

DRAM Voltage

Use this to adjust DRAM voltage.

Share Memory

Configure the size of memory that is allocated to the integrated graphics processor when the system boots up.

Onboard LVDS

Use this to enable or disable onboard LVDS.

Primary Graphics Adapter

This item will switch the PCI Bus scanning order while searching for video card. It allows you to select the type of Primary VGA in case of multiple video controllers. The default value of this feature is [PCI Express].

Onboard HDMI HD Audio

This allows you to enable or disable the Onboard HDMI HD Audio feature.

Onboard HD Audio

Select [Auto], [Enabled] or [Disabled] for the onboard HD Audio feature.

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.

3.3.3 Storage Configuration

SATA Controller

Use this item to enable or disable the SATA Controller feature.

SATA Mode Selection

Use this to select SATA mode. Configuration options: [IDE Mode], [AHCI Mode] and [Disabled]. The default value is [AHCI Mode].

AHCI (Advanced Host Controller Interface) supports NCQ and other new features that will improve SATA disk performance but IDE mode does not have these advantages.

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

Use this item to enable or disable the S.M.A.R.T. (Self-Monitoring, Analysis, and Reporting Technology) feature. Configuration options: [Disabled] and [Enabled].

3.3.4 Super IO Configuration

COM1 Configuration

Use this to set the parameters of COM1. Select COM1 port type: [RS232], [RS422] or [RS485].

COM2 Configuration

Use this to set the parameters of COM2.

COM3 Configuration

Use this to set the parameters of COM3. Select COM3 port type: [RS232], [RS422] or [RS485].

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

Select disable for ACPI suspend type S1. It is recommended to select auto for ACPI S3 power saving.

ACPI HPET Table

Enable the High Precision Event Timer for better performance.

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.

PCIE Devices Power On

Use this to enable or disable the PCIE 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.

USB Keyboard/Remote Power On

Allow the system to be waked up by an USB keyboard or remote controller.

USB Mouse Power On

Allow the system to be waked up by an USB mouse.

3.3.6 USB Configuration

USB Controller

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

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].

CPU FAN2 Setting

This allows you to set CPU FAN2's speed. The default value is [Full On].

Case Open Feature

Enable or disable Case Open Feature to detect whether the chassis cover has been removed.

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].

Boot Failure Guard

If the computer fails to boot for a number of times the system automatically restores the default settings.

Boot Failure Guard Count

Configure the number of attempts to boot until the system automatically restores the default settings.

CSM (Compatibility Support Module)

CSM

Enable to launch the Compatibility Support Module. If you are using Windows 8.1 / 8 64-bit UEFI and all of your devices support UEFI, you may also disable CSM for faster boot speed.

Launch PXE OpROM Policy

Select UEFI only to run those that support UEFI option ROM only. Select Legacy only to run those that support legacy option ROM only. Select Do not launch to not execute both legacy and UEFI option ROM.

Launch Storage OpROM Policy

Select UEFI only to run those that support UEFI option ROM only. Select Legacy only to run those that support legacy option ROM only. Select Do not launch to not execute both legacy and UEFI option ROM.

Launch Video OpROM Policy

Select UEFI only to run those that support UEFI option ROM only. Select Legacy only to run those that support legacy option ROM only. Select Do not launch to not execute both legacy and UEFI option ROM.

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

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.

Launch EFI Shell from filesystem device

Copy shellx64.efi to the root directory to launch EFI Shell.

Chapter 4: Software Support

4.1 Install Operating System

This motherboard supports various Microsoft® Windows® operating systems: 8.1 / 8.1 64-bit / 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 "ASRSETUP.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.