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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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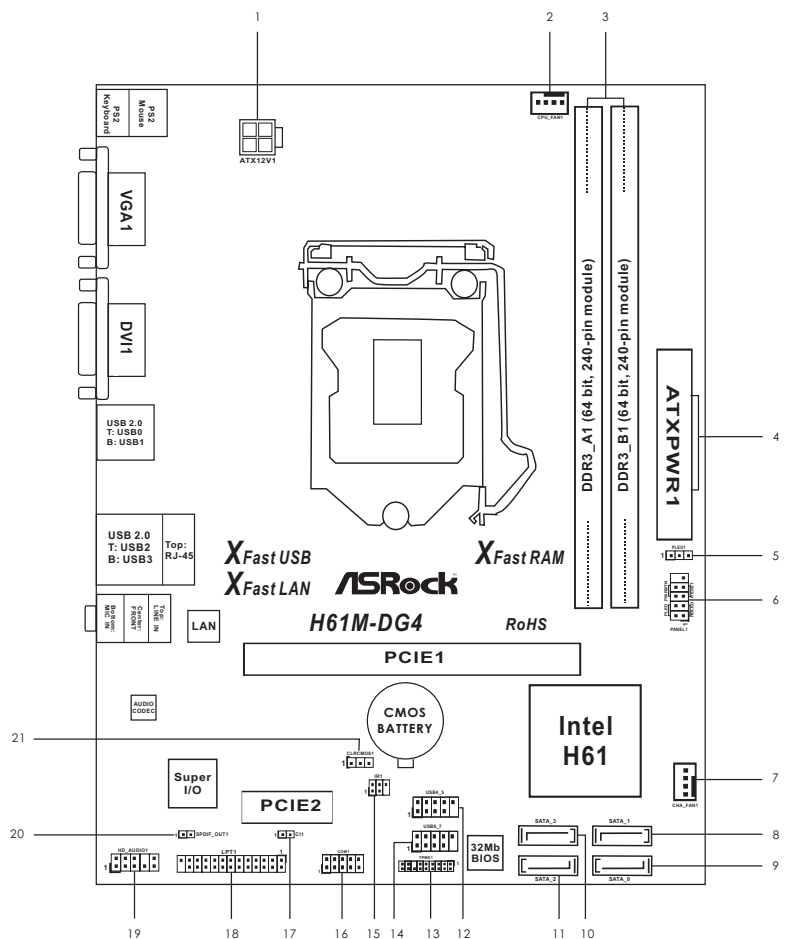
The Lithium battery adopted on this motherboard contains Perchlorate, a toxic substance controlled in Perchlorate Best Management Practices (BMP) regulations passed by the California Legislature. When you discard the Lithium battery in California, USA, please follow the related regulations in advance.

"Perchlorate Material-special handling may apply, see www.dtsc.ca.gov/hazardouswaste/perchlorate"

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

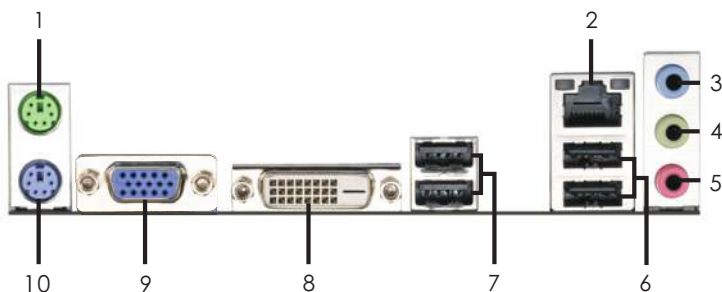


Motherboard Layout



- | | | | |
|----|---|----|--------------------------------------|
| 1 | ATX 12V Power Connector (ATX12V1) | 11 | SATA2 Connector (SATA_2) |
| 2 | CPU Fan Connector (CPU_FAN1) | 12 | USB 2.0 Header (USB_5) |
| 3 | 2 x 240-pin DDR3 DIMM Slots
(Dual Channel: DDR3_A1, DDR3_B1) | 13 | TPM Header (TPMS1) |
| 4 | ATX Power Connector (ATXPWR1) | 14 | USB 2.0 Header (USB_7) |
| 5 | Power LED Header (PLED1) | 15 | Infrared Module Header (IR1) |
| 6 | System Panel Header (PANEL1) | 16 | COM Port Header (COM1) |
| 7 | Chassis Fan Connector (CHA_FAN1) | 17 | Chassis Intrusion Header (CI1) |
| 8 | SATA2 Connector (SATA_1) | 18 | Print Port Header (LPT1) |
| 9 | SATA2 Connector (SATA_0) | 19 | Front Panel Audio Header (HD_AUDIO1) |
| 10 | SATA2 Connector (SATA_3) | 20 | SPDIF Out Connector (SPDIF_OUT1) |
| | | 21 | Clear CMOS Jumper (CLR_CMOS1) |

I/O Panel



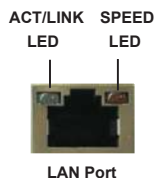
- | | |
|---------------------------|--------------------------------|
| 1 PS/2 Mouse Port (Green) | 6 USB 2.0 Ports (USB23) |
| 2 LAN RJ-45 Port* | 7 USB 2.0 Ports (USB01) |
| 3 Line In (Light Blue) | 8 DVI-D Port (DVI1) |
| 4 Front Speaker (Lime) | 9 D-Sub Port (VGA1) |
| 5 Microphone (Pink) | 10 PS/2 Keyboard Port (Purple) |

* There are two LED next to the LAN port. Please refer to the table below for the LAN port LED indications.

LAN Port LED Indications


Activity/Link LED	
Status	Description
Off	No Link
Blinking	Data Activity
On	Link

SPEED LED	
Status	Description
Off	10Mbps connection
Orange	100Mbps connection
Green	1Gbps connection



To enable Multi-Streaming function, you need to connect a front panel audio cable to the front panel audio header. Please refer to below steps for the software setting of Multi-Streaming.

For Windows® XP:

After restarting your computer, you will find "Mixer" tool on your system. Please select "Mixer Toolbox" , click "Enable playback multi-streaming", and click "ok". Choose "2CH" or

"4CH" and then you are allowed to select "Realtek HDA Primary output" to use Rear Speaker and Front Speaker, or select "Realtek HDA Audio 2nd output" to use front panel audio. Then reboot your system.

For Windows® 8 / 7 / Vista™:

After restarting your computer, please double-click "Realtek HD Audio Manager" on the system tray. Set "Speaker Configuration" to "Quadraphonic" or "Stereo". Click "Device advanced settings", choose "Make front and rear output devices playbacks two different audio streams simultaneously", and click "ok". Then reboot your system.

1. Introduction

Thank you for purchasing ASRock **H61M-DG4** 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.

This Quick Installation Guide contains introduction of the motherboard and step-by-step installation guide. More detailed information of the motherboard can be found in the user manual presented in 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 website without further notice. You may find the latest VGA cards and CPU support lists on ASRock 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 **H61M-DG4** Motherboard (Micro ATX Form Factor)

ASRock **H61M-DG4** Quick Installation Guide

ASRock **H61M-DG4** Support CD

2 x Serial ATA (SATA) Data Cables (Optional)

1 x I/O Panel Shield



ASRock Reminds You...

To get better performance in Windows® 8 / 8 64-bit / 7 / 7 64-bit / Vista™ / Vista™ 64-bit, it is recommended to set the BIOS option in Storage Configuration to AHCI mode. For the BIOS setup, please refer to the "User Manual" in our support CD for details.

1.2 Specifications

Platform	<ul style="list-style-type: none"> - Micro ATX Form Factor - All Solid Capacitor design
CPU	<ul style="list-style-type: none"> - Supports 3rd and 2nd Generation Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® in LGA1155 package - Supports Intel® Turbo Boost 2.0 Technology - Supports K-Series unlocked CPU
Chipset	<ul style="list-style-type: none"> - Intel® H61 - Supports Intel® Rapid Start Technology and Smart Connect Technology
Memory	<ul style="list-style-type: none"> - Dual Channel DDR3 Memory Technology - 2 x DDR3 DIMM Slots - Supports DDR3 1600/1333/1066 non-ECC, un-buffered memory (DDR3 1600 with Intel® Ivy Bridge CPU, DDR3 1333 with Intel® Sandy Bridge CPU) - Max. capacity of system memory: 16GB (see CAUTION 1) - Supports Intel® Extreme Memory Profile (XMP) 1.3 / 1.2 with Intel® Ivy Bridge CPU
Expansion Slot	<ul style="list-style-type: none"> - 1 x PCI Express 3.0 x16 Slot (Blue @ x16 mode) * PCIe 3.0 is only supported with Intel® Ivy Bridge CPU. With Intel® Sandy Bridge CPU, it only supports PCIe 2.0. - 1 x PCI Express 2.0 x1 Slot
Graphics	<ul style="list-style-type: none"> * Intel® HD Graphics Built-in Visuals and the VGA outputs can be supported only with processors which are GPU integrated. - Supports Intel® HD Graphics Built-in Visuals: Intel® Quick Sync Video 2.0, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® Insider™, Intel® HD Graphics 2500/4000 with Intel® Ivy Bridge CPU - Supports Intel® HD Graphics Built-in Visuals: Intel® Quick Sync Video, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® HD Graphics 2000/3000, Intel® Advanced Vector Extensions (AVX) with Intel® Sandy Bridge CPU - Pixel Shader 5.0, DirectX 11 with Intel® Ivy Bridge CPU. Pixel Shader 4.1, DirectX 10.1 with Intel® Sandy Bridge CPU. - Max. shared memory 1760MB with Intel® Ivy Bridge CPU. Max. shared memory 1759MB with Intel® Sandy Bridge CPU.

	<ul style="list-style-type: none"> - Dual VGA output: support DVI-D and D-Sub ports by independent display controllers - Supports DVI-D with max. resolution up to 1920x1200 @ 60Hz - Supports D-Sub with max. resolution up to 2048x1536 @ 75Hz - Supports HDCP with DVI-D Port - Supports Full HD 1080p Blu-ray (BD) playback with DVI-D Port
Audio	- 5.1 CH HD Audio (Realtek ALC662 Audio Codec)
LAN	<ul style="list-style-type: none"> - PCIE x1 Gigabit LAN 10/100/1000 Mb/s - Realtek RTL8111C - Supports Wake-On-LAN - Supports LAN Cable Detection - Supports PXE
Rear Panel I/O	<ul style="list-style-type: none"> - 1 x PS/2 Mouse Port - 1 x PS/2 Keyboard Port - 1 x D-Sub Port - 1 x DVI-D Port - 4 x USB 2.0 Ports - 1 x RJ-45 LAN Port with LED (ACT/LINK LED and SPEED LED) - HD Audio Jacks: Line in/Front Speaker/Microphone
Storage	- 4 x SATA2 3.0 Gb/s Connectors, support NCQ, AHCI and Hot Plug
Connector	<ul style="list-style-type: none"> - 1 x IR Header - 1 x Print Port Header - 1 x COM Port Header - 1 x Power LED Header - 1 x Chassis Intrusion Header - 1 x TPM Header - 1 x CPU Fan Connector (4-pin) - 1 x Chassis Fan Connector (4-pin) - 1 x 24 pin ATX Power Connector - 1 x 4 pin 12V Power Connector - 1 x Front Panel Audio Connector - 1 x SPDIF Out Connector - 2 x USB 2.0 Headers (Support 4 USB 2.0 ports)

BIOS Feature	<ul style="list-style-type: none"> - 32Mb AMI UEFI Legal BIOS with GUI support - Supports "Plug and Play" - ACPI 1.1 Compliant wake up events - Supports jumperfree - SMBIOS 2.3.1 support
Support CD	- Drivers, Utilities, AntiVirus Software (Trial Version), Google Chrome Browser and Toolbar, Start8 (30 days trial)
Hardware Monitor	<ul style="list-style-type: none"> - CPU/Chassis temperature sensing - CPU/Chassis Fan Tachometer - CPU Quiet Fan (Auto adjust chassis fan speed by CPU temperature) - CPU/Chassis Fan multi-speed control - CASE OPEN detection - Voltage monitoring: +12V, +5V, +3.3V, Vcore
OS	- Microsoft® Windows® 8 / 8 64-bit / 7 / 7 64-bit / Vista™ / Vista™ 64-bit / XP / XP 64-bit compliant
Certifications	- FCC, CE, WHQL

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

WARNING

Please realize that there is a certain risk involved with overclocking, including adjusting the setting in the BIOS, applying Untied Overclocking Technology, or using third-party overclocking tools. Overclocking may affect your system's stability, or even cause damage to the components and devices of your system. It should be done at your own risk and expense. We are not responsible for possible damage caused by overclocking.

CAUTION!

1. Due to the operating system limitation, the actual memory size may be less than 4GB for the reservation for system usage under Windows® 8 / 7 / Vista™ / XP. For Windows® OS with 64-bit CPU, there is no such limitation. You can use ASRock XFast RAM to utilize the memory that Windows® cannot use.

1.3 Unique Features

ASRock Extreme Tuning Utility (AXTU)

ASRock Extreme Tuning Utility (AXTU) is an all-in-one tool to re-tune different system functions in a user-friendly interface, which includes Hardware Monitor, Fan Control and XFast RAM. In Hardware Monitor, it shows the major readings of your system. In Fan Control, it shows the fan speed and temperature for you to adjust. In XFast RAM, it fully utilizes the memory space that cannot be used under Windows® OS 32-bit CPU.

ASRock Instant Boot

ASRock Instant Boot allows you to turn on your PC in just a few seconds, provides a much more efficient way to save energy, time, money, and improves system running speed for your system. It leverages the S3 and S4 ACPI features which normally enable the Sleep/Standby and Hibernation modes in Windows® to shorten boot up time. By calling S3 and S4 at specific timing during the shutdown and startup process, Instant Boot allows you to enter your Windows® desktop in a few seconds.

ASRock Instant Flash

ASRock Instant Flash is a BIOS flash utility embedded in Flash ROM. This convenient BIOS update tool allows you to update system BIOS without entering operating systems first like MS-DOS or Windows®. With this utility, you can press the <F6> key during the POST or the <F2> key to enter into the BIOS setup menu to access ASRock Instant Flash. Just launch this tool and save the new BIOS file to your USB flash drive, floppy disk or hard drive, then you can update your BIOS 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.

ASRock APP Charger

If you desire a faster, less restricted way of charging your Apple devices, such as iPhone/iPad/iPod Touch, ASRock has prepared a wonderful solution for you - ASRock APP Charger. Simply install the APP Charger driver, it makes your iPhone charge much quickly from your computer and up to 40% faster than before. ASRock APP Charger allows you to quickly charge many Apple devices simultaneously and even supports continuous charging when your PC enters into Suspend to RAM (S3), hibernation mode (S4) or power off (S5). With APP Charger driver installed, you can easily enjoy the marvelous charging experience.

ASRock XFast USB

ASRock XFast USB can boost USB storage device performance. The performance may depend on the properties of the device.

ASRock XFast LAN

ASRock XFast LAN provides a faster internet access, which includes the benefits listed below. LAN Application Prioritization: You can configure your application's priority ideally and/or add new programs. Lower Latency in Game: After setting online game's priority higher, it can lower the latency in games. Traffic Shaping: You can watch Youtube HD videos and download simultaneously. Real-Time Analysis of Your Data: With the status window, you can easily recognize which data streams you are transferring currently.

ASRock XFast RAM

ASRock XFast RAM is a new function that is included into ASRock Extreme Tuning Utility (AXTU). It fully utilizes the memory space that cannot be used under Windows® OS 32-bit CPU. ASRock XFast RAM shortens the loading time of previously visited websites, making web surfing faster than ever. And it also boosts the speed of Adobe Photoshop 5 times faster. Another advantage of ASRock XFast RAM is that it reduces the frequency of accessing your SSDs or HDDs in order to extend their lifespan.

ASRock Crashless BIOS

ASRock Crashless BIOS allows users to update their BIOS without fear of failing. If power loss occurs during the BIOS update process, ASRock Crashless BIOS will automatically finish the BIOS update procedure after regaining power. Please note that BIOS files need to be placed in the root directory of your USB disk. Only USB2.0 ports support this feature.

ASRock OMG (Online Management Guard)

Administrators are able to establish an internet curfew or restrict internet access at specified times via OMG. You may schedule the starting and ending hours of internet access granted to other users. In order to prevent users from bypassing OMG, guest accounts without permission to modify the system time are required.

ASRock Internet Flash

ASRock Internet Flash searches for available UEFI firmware updates from our servers. In other words, the system can auto-detect the latest UEFI from our servers and flash them without entering Windows® OS. Please note that you must be running on a DHCP configured computer in order to enable this function.

ASRock Dehumidifier Function

Users may prevent motherboard damages due to dampness by enabling "Dehumidifier Function". When enabling Dehumidifier Function, the computer will power on automatically to dehumidify the system after entering S4/S5 state.

ASRock Fast Boot

With ASRock's exclusive Fast Boot technology, it takes less than 1.5 seconds to logon to Windows® 8 from a cold boot. No more waiting! The speedy boot will completely change your user experience and behavior.

ASRock Restart to UEFI

Windows® 8 brings the ultimate boot up experience. The lightning boot up speed makes it hard to access the UEFI setup. ASRock Restart to UEFI technology is designed for those requiring frequent UEFI access. It allows users to easily enter the UEFI automatically when turning on the PC next time. Just simply enable this function; the PC will be assured to access the UEFI directly in the very beginning.

ASRock Combo Cooler Option (C.C.O.)

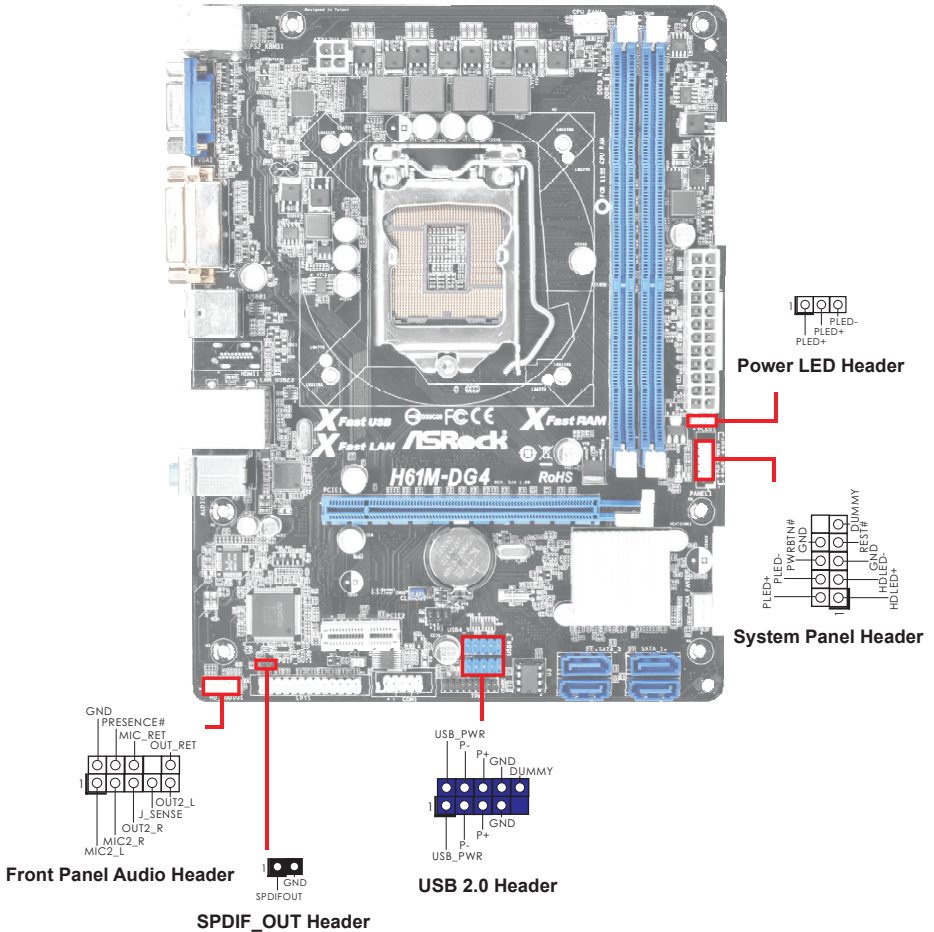
Combo Cooler Option (C.C.O.) provides the flexible option to adopt three different CPU cooler types, Socket LGA 775, LGA 1155 and LGA 1156. Please be noticed that not all the 775 and 1156 CPU Fan can be used.

ASRock Good Night LED

ASRock Good Night LED technology can offer you a better environment by extinguishing the unessential LED. By enabling Good Night LED in BIOS, the Power / HDD / LAN LED will be switched off when system is on. Not only this, Good night LED will automatically switch off Power and Keyboard LED when the system enters into Standby / Hibernation mode as well.

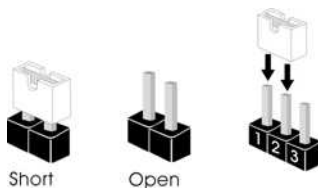
1.4 Pin Header Easy Installation Guide



ASRock motherboard is equipped with pin headers with obvious colors which indicate you to recognize the crucial headers more easily. Please refer to below illustrations for the pin definition of onboard headers. If you want to have more information about the usage of these headers, please refer to “Jumpers Setup” and “Onboard Headers and Connectors” for details.



1.5 Jumpers Setup

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



Jumper	Setting	Description
Clear CMOS Jumper (CLR CMOS1) (see p.2, No. 21)	 1_2 Default	 2_3 Clear CMOS

Note: CLR CMOS1 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 CLR CMOS1 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 and user default profile will be cleared only if the CMOS battery is removed.



If you clear the CMOS, the case open may be detected. Please adjust the BIOS option “Clear Status” to clear the record of previous chassis intrusion status.

1.6 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 of the motherboard!

Serial ATA2 Connectors

(SATA_0: see p.2, No. 9)

(SATA_1: see p.2, No. 8)

(SATA_2: see p.2, No. 11)

(SATA_3: see p.2, No. 10)



These four Serial ATA2 (SATA2) connectors support SATA data cables for internal storage devices. The current SATA2 interface allows up to 3.0 Gb/s data transfer rate.

Serial ATA (SATA) Data Cable (Optional)

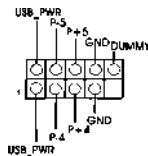


Either end of the SATA data cable can be connected to the SATA / SATA2 hard disk or the SATA2 connector on this motherboard.

USB 2.0 Headers

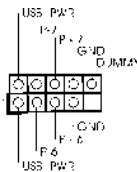
(9-pin USB4_5)

(see p.2 No. 12)



(9-pin USB6_7)

(see p.2 No. 14)

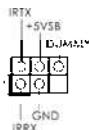


Besides four default USB 2.0 ports on the I/O panel, there are two USB 2.0 headers on this motherboard. Each USB 2.0 header can support two USB 2.0 ports.

Infrared Module Header

(5-pin IR1)

(see p.2 No. 15)

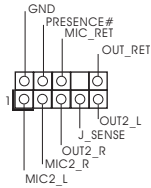


This header supports an optional wireless transmitting and receiving infrared module.

Front Panel Audio Header

(9-pin HD_AUDIO1)

(see p.2 No. 19)



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

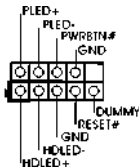


1. High Definition Audio supports Jack Sensing, but the panel wire on the chassis must support HDA to function correctly. Please follow the instruction in our manual and chassis manual to install your system.
2. If you use AC'97 audio panel, please install it to the front panel audio header as below:
 - 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.2 No. 6)



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 system is in 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 assignments are matched correctly.

Power LED Header

(3-pin PLED1)

(see p.2 No. 5)

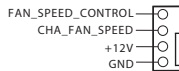


Please connect the chassis power LED to this header to indicate system power status. The LED is on when the system is operating. The LED keeps blinking in S3 state. The LED is off in S4 state or S5 state (power off).

Chassis Fan Connector

(4-pin CHA_FAN1)

(see p.2 No. 7)

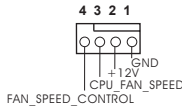


Please connect the fan cables to the fan connectors and match the black wire to the ground pin.

CPU Fan Connectors

(4-pin CPU_FAN1)

(see p.2 No. 2)



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



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

Pin 1-3 Connected ←

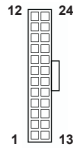
3-Pin Fan Installation



ATX Power Connector

(24-pin ATXPWR1)

(see p.2 No. 4)



Please connect an ATX power supply to this connector.



Though this motherboard provides 24-pin ATX power connector, it can still work if you adopt a traditional 20-pin ATX power supply. To use the 20-pin ATX power supply, please plug your power supply along with Pin 1 and Pin 13.



20-Pin ATX Power Supply Installation

ATX 12V Power Connector

(4-pin ATX12V1)

(see p.2 No. 1)



Please connect an ATX 12V power supply to this connector.

Chassis Intrusion Header

(2-pin CI1)

(see p.2, No. 17)



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.

SPDIF Out Connector

(2-pin SPDIF_OUT1)

(see p.2, No. 20)

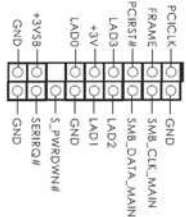


Please connect the SPDIF_OUT connector of a HDMI VGA card to this header with a cable.

TPM Header

(17-pin TPMS1)

(see p.2, No. 13)

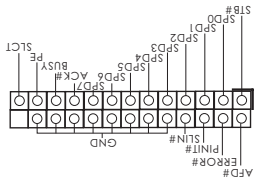


This connector supports Trusted Platform Module (TPM) system, which can securely store keys, digital certificates, passwords, and data. A TPM system also helps enhance network security, protects digital identities, and ensures platform integrity.

Print Port Header

(25-pin LPT1)

(see p.2 No. 18)

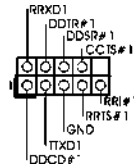


This is an interface for print port cable that allows convenient connection of printer devices.

Serial port Header

(9-pin COM1)

(see p.2 No. 16)



This COM1 header supports a serial port module.

2. BIOS Information

The Flash Memory on the motherboard stores BIOS Setup Utility. When you start up the computer, please press <F2> or during the Power-On-Self-Test (POST) to enter BIOS Setup utility; otherwise, POST continues with its test routines. If you wish to enter BIOS Setup after POST, please restart the system by pressing <Ctl> + <Alt> + <Delete>, or pressing the reset button on the system chassis. The BIOS Setup program is designed to be user-friendly. It is a menu-driven program, which allows you to scroll through its various sub-menus and to select among the pre-determined choices. For the detailed information about BIOS Setup, please refer to the User Manual (PDF file) contained in the Support CD.

3. Software Support CD information

This motherboard supports various Microsoft® Windows® operating systems: 8 / 8 64-bit / 7 / 7 64-bit / Vista™ / Vista™ 64-bit / XP / XP 64-bit. The Support CD that came with the motherboard contains necessary drivers and useful utilities that will enhance motherboard features. To begin using the Support CD, insert the CD into your CD-ROM drive. It will display the Main Menu automatically if "AUTORUN" is enabled in your computer. If the Main Menu does not appear automatically, locate and double-click on the file "ASSETUP.EXE" from the BIN folder in the Support CD to display the menus.

Spezifikationen

Plattform	<ul style="list-style-type: none"> - Micro ATX-Formfaktor - Alle Feste Kondensatordesign
CPU	<ul style="list-style-type: none"> - Unterstützt Intel® Core™ i7- / i5- / i3- / Xeon®- / Pentium®- / Celeron®-Prozessoren der 3ten und 2ten Generation im LGA1155-Package - Unterstützt Intel® Turbo Boost 2.0-Technologie - Unterstützt freigegebene CPU der K-Serie
Chipsatz	<ul style="list-style-type: none"> - Intel® H61 - Unterstützt Intel® Rapid Start Technology und Smart Connect Technology
Speicher	<ul style="list-style-type: none"> - Unterstützung von Dual-Kanal-Speichertechnologie - 2 x Steckplätze für DDR3 - Unterstützt DDR3 1600/1333/1066 non-ECC, ungepufferter Speicher (DDR3 1600 mit Intel® Ivy Bridge-Prozessor, DDR3 1333 mit Intel® Sandy Bridge-Prozessor) - Max. Kapazität des Systemspeichers: 16GB - Unterstützt Intel® Extreme Memory Profile (XMP)1.3/1.2 mit Intel® Ivy Bridge-Prozessor
Erweiterungssteckplätze	<ul style="list-style-type: none"> - 1 x PCI Express 3.0 x16-Steckplatz (blau für x16-Modus) * PCIE 3.0 wird nur mit Intel® Ivy Bridge-Prozessor unterstützt. Mit Intel® Sandy Bridge-Prozessor wird nur PCIE 2.0 unterstützt. - 1 x PCI Express 2.0 x1-Steckplätze
Onboard-VGA	<ul style="list-style-type: none"> * Integrierte Intel® HD-Grafikdarstellungen und die VGA-Ausgänge können nur durch GPU-integrierte Prozessoren unterstützt werden. - Unterstützt hochauflösende integrierte Intel®-Grafiklösungen: Intel® Quick-Sync-Video 2.0, Intel® InTru™ 3D, Intel® Clear-Video-Technik (HD), Intel® Insider™, Intel® HD Graphics 2500/4000 mit Intel® Ivy Bridge-Prozessor - Unterstützt hochauflösende integrierte Intel®-Grafiklösungen: Intel® Quick-Sync-Video, Intel® InTru™ 3D, Intel® Clear-Video-Technik (HD), Intel® HD Graphics 2000/3000, Intel® Advanced Vector Extensions (AVX) mit Intel® Sandy Bridge-Prozessor - Pixel Shader 5.0, DirectX 11 mit Intel® Ivy Bridge-Prozessor, Pixel Shader 4.1, DirectX 10.1 mit Intel® Sandy Bridge-Prozessor

	<ul style="list-style-type: none"> - Maximal gemeinsam genutzter Speicher 1760MB mit Intel® Ivy Bridge-Prozessor. Maximal gemeinsam genutzter Speicher 1759MB mit Intel® Sandy Bridge-Prozessor. - Doppel-VGA Ausgabe: unterstützt DVI-D und D-Sub Ports durch unabhängige Bildschirmanzeige Kontrolleure - Unterstützt DVI-D mit einer maximalen Auflösung von 1920 x 1200 bei 60 Hz - Unterstützt D-Sub mit einer maximalen Auflösung von 2048 x 1536 bei 75 Hz - Unterstützt HDCP-Funktion mit DVI-D-Port - Unterstützt 1080p Blu-ray (BD)-Wiedergabe mit DVI-D-Port
Audio	- 5.1 CH HD Audio (Realtek ALC662 Audio Codec)
LAN	<ul style="list-style-type: none"> - PCIE x1 Gigabit LAN 10/100/1000 Mb/s - Realtek RTL8111C - Unterstützt Wake-On-LAN - Unterstützt LAN-Kabelerkennung - Unterstützt PXE
E/A-Anschlüsse an der Rückseite	<ul style="list-style-type: none"> - 1 x PS/2-Mausanschluss - 1 x PS/2-Tastaturanschluss - 1 x D-Sub port - 1 x DVI-D port - 4 x Standard-USB 2.0-Anschlüsse - 1 x RJ-45 LAN Port mit LED (ACT/LINK LED und SPEED LED) - HD Audiobuchse: Audioeingang / Lautsprecher vorne / Mikrofon
Speichergerät	- 4 x SATA2 3,0 GB/s-Anschlüsse, unterstützen NCQ-, AHCI- und „Hot Plug“ (Hot-Plugging)- Funktionen
Anschlüsse	<ul style="list-style-type: none"> - 1 x Infrarot-Modul-Header - 1 x Druckerport-Anschlussleiste - 1 x COM-Anschluss-Header - 1 x Betriebs-LED-Header - 1 x Verteiler für Gehäuseeindringversuche - 1 x TPM-Header - 1 x CPUlüfter-Anschluss (4-pin) - 1 x Gehäuselüfter-Anschluss (4-pin) - 1 x 24-pin ATX-Netz-Header - 1 x 4-pin anschluss für 12V-ATX-Netzteil - 1 x Anschluss für Audio auf der Gehäusevorderseite - 1 x SPDIF Out-Anschluss - 2 x USB 2.0-Anschlüsse (Unterstützung 4 zusätzlicher USB 2.0-Anschlüsse)

BIOS	<ul style="list-style-type: none"> - 32Mb AMIs Legal BIOS UEFI mit GUI-Unterstützung - Unterstützung für "Plug and Play" - ACPI 1.1-Weckfunktionen - JumperFree-Übertaktungstechnologie - SMBIOS 2.3.1
CD d'assistance	<ul style="list-style-type: none"> - Pilotes, utilitaires, logiciel anti-virus (version d'évaluation), Google Chrome Browser und Toolbar, Start8 (30-Tage-Testversion)
Hardware Monitor	<ul style="list-style-type: none"> - Überwachung der CPU/Gehäuse-Temperatur - Drehzahlmessung für CPU Lüfter/Gehäuse - Geräuscharmer CPU Lüfter (ermöglicht die automatische Anpassung der Gehäuselüftergeschwindigkeit durch CPU-Temperatur) - Mehrstufige Geschwindigkeitsteuerung für CPU/Gehäuselüfter - GEHÄUSE OFFEN-Erkennung - Spannungsüberwachung: +12V, +5V, +3.3V, Vcore
Betriebssysteme	<ul style="list-style-type: none"> - Unterstützt Microsoft® Windows® 8 / 8 64-Bit / 7 / 7 64-Bit / Vista™ / Vista™ 64-Bit / XP / XP 64-Bit
Zertifizierungen	<ul style="list-style-type: none"> - FCC, CE, WHQL

* Für die ausführliche Produktinformation, besuchen Sie bitte unsere Website:

<http://www.asrock.com>

Spécifications

Format	<ul style="list-style-type: none"> - Facteur de forme Micro ATX - Accessoires de Carte mère
CPU	<ul style="list-style-type: none"> - Prend en charge les processeurs Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® 2ème et 3ème génération sur socket LGA1155 - Prend en charge la technologie Intel® Turbo Boost 2.0 - Prise en charge des unités centrales non verrouillées de série K
Chipsets	<ul style="list-style-type: none"> - Intel® H61 - Prend en charge les technologies Intel® Rapid Start et Smart Connect
Mémoire	<ul style="list-style-type: none"> - Compatible avec la Technologie de Mémoire à Canal Double - 2 x slots DIMM DDR3 - Supporter DDR3 1600/1333/1066 non-ECC, sans amortissement mémoire (DDR3 1600 avec CPU Intel® Ivy Bridge, DDR3 1333 avec CPU Intel® Sandy Bridge) - Capacité maxi de mémoire système: 16GB - Prend en charge le profil de mémoire extrême Intel® (XMP) 1.3/1.2 avec processeur Intel® Ivy Bridge CPU
Slot d'extension	<ul style="list-style-type: none"> - 1 x slot PCI Express 3.0 x16 (bleu @ mode x16) * PCIE 3.0 n'est pris en charge qu'avec le processeur Intel® Ivy Bridge. Avec le processeur Intel® Sandy Bridge, seul PCIE 2.0 est pris en charge. - 1 x slot PCI Express 2.0 x1
VGA sur carte	<ul style="list-style-type: none"> * Intel® HD Graphics avec visuels intégrés (Built-in Visuals) et les sorties VGA sont uniquement pris en charge par les processeurs à GPU intégré. - Supporte Intel® HD Graphics Built-in Visuals: Intel® Quick Sync Video 2.0, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® Insider™, Intel® HD Graphics 2500/4000 avec processeur Intel® Ivy Bridge CPU - Supporte Intel® HD Graphics Built-in Visuals: Intel® Quick Sync Video, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® HD Graphics 2000/3000, Intel® Advanced Vector Extensions (AVX) avec processeur Intel® Sandy Bridge CPU - Pixel Shader 5.0, DirectX 11 avec CPU Intel® Ivy Bridge, Pixel Shader 4.1, DirectX 10.1 avec CPU Intel® Sandy

	<p>Bridge</p> <ul style="list-style-type: none"> - Mémoire partagée max 1760MB avec processeur Intel® Ivy Bridge CPU. Mémoire partagée max 1759MB avec processeur Intel® Sandy Bridge CPU. - Output de VGA Dual: supporter DVI-D et D-Sub ports par les contrôleurs de display indépendants - Prend en charge le DVI-D avec une résolution maximale jusqu'à 1920x1200 @ 60Hz - Prend en charge le D-Sub avec une résolution maximale jusqu'à 2048x1536 @ 75Hz - Prise en charge de la fonction HDCP avec port DVI-D - Supporter 1080p Blu-ray(BD) avec port DVI-D
Audio	- 5,1 CH HD Audio (Realtek ALC662 Audio Codec)
LAN	<ul style="list-style-type: none"> - PCIE x1 Gigabit LAN 10/100/1000 Mb/s - Realtek RTL8111C - Supporte du Wake-On-LAN - Prise en charge de la détection de câble LAN - Supporte PXE
Panneau arrière	<ul style="list-style-type: none"> - 1 x port souris PS/2 - 1 x port clavier PS/2 - 1 x port D-Sub - 1 x port DVI-D - 4 x ports USB 2.0 par défaut - 1 x port LAN RJ-45 avec LED (ACT/LED CLIGNOTANTE et LED VITESSE) - Prise HD Audio: Entrée Ligne / Haut-parleur frontal / Microphone
Stockage	- 4 x connecteurs SATA2, prennent en charge un taux de transfert de données pouvant aller jusqu'à 3.0Go/s, supporte NCQ, AHCI et « Hot Plug » (Branche ment à chaud)
Connecteurs	<ul style="list-style-type: none"> - 1 x En-tête du module infrarouge - 1 x embase de port d'impression - 1 x En-tête de port COM - 1 x LED di accensione - 1 x Embase d'intrusion châssis - 1 x embase TPM - 1 x Connecteur pour ventilateur de CPU (br. 4) - 1 x Connecteur pour ventilateur de Châssis (br. 4) - 1 x br. 24 connecteur d'alimentation ATX - 1 x br. 4 connecteur d'alimentation 12V ATX

	<ul style="list-style-type: none"> - 1 x Connecteur audio panneau avant - 1 x Connecteur SPDIF Out - 2 x En-tête USB 2.0 (prendre en charge 4 ports USB 2.0 supplémentaires)
BIOS	<ul style="list-style-type: none"> - 32Mb AMI UEFI Legal BIOS avec support GUI - Support du "Plug and Play" - Compatible pour événements de réveil ACPI 1.1 - Gestion jumperless - Support SMBIOS 2.3.1
CD d'assistance	<ul style="list-style-type: none"> - Pilotes, utilitaires, logiciel anti-virus (version d'évaluation), Google Chrome Browser et Toolbar, Start8 (30 jours d'évaluation)
Surveillance système	<ul style="list-style-type: none"> - Contrôle de la température CPU/châssis - Tachémètre ventilateur processeur/châssis - Ventilateur silencieux pour unité centrale (permet le réglage automatique de la vitesse du ventilateur pour châssis, selon la température de l'unité centrale) - Commande de ventilateur CPU/châssis à plusieurs vitesses - Détection d'OUVERTURE DE BOÎTIER - Monitoring de la tension: +12V, +5V, +3.3V, Vcore
OS	<ul style="list-style-type: none"> - Microsoft® Windows® 8 / 8 64-bit / 7 / 7 64-bit / Vista™ / Vista™ 64-bit / XP / XP 64-bit
Certifications	<ul style="list-style-type: none"> - FCC, CE, WHQL

* Pour de plus amples informations sur les produits, s'il vous plaît visitez notre site web:

<http://www.asrock.com>

Specifiche

Piattaforma	<ul style="list-style-type: none"> - Micro ATX Form Factor - Design condensatore compatto
Processore	<ul style="list-style-type: none"> - Supporta Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® di 3a e 2a generazione in un pacchetto LGA1155 - Supporto della tecnologia Intel® Turbo Boost 2.0 - Supporta CPU unlocked serie K
Chipset	<ul style="list-style-type: none"> - Intel® H61 - Supporta tecnologia Intel® Rapid Start Technology e Smart Connect Technology
Memoria	<ul style="list-style-type: none"> - Supporto tecnologia Dual Channel Memory - 2 x slot DDR3 DIMM - Supporto DDR3 1600/1333/1066 non-ECC, memoria senza buffer (DDR3 1600 con CPU Intel® Ivy Bridge, DDR3 1333 con CPU Intel® Sandy Bridge) - Capacità massima della memoria di sistema: 16GB - Supporto di Intel® XMP (Extreme Memory Profile) 1.3/1.2 con CPU Intel® Ivy Bridge
Slot di espansione	<ul style="list-style-type: none"> - 1 x Alloggi PCI Express 3.0 x16 (blu a modalità x16) * PCIE 3.0 è supportato soltanto con la CPU Intel® Ivy Bridge. Con la CPU Intel® Sandy Bridge, supporta solamente PCIE 2.0. - 1 x Alloggi PCI Express 2.0 x1
VGA su scheda	<ul style="list-style-type: none"> * Le uscite Intel® HD Graphics Built-in Visuals e VGA possono essere supportate solo con processori dotati di GPU integrata. - Supporta Intel® HD Graphics Built-in Visuals: Intel® Quick Sync Video 2.0, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® Insider™, Intel® HD Graphics 2500/4000 con CPU Intel® Ivy Bridge - Supporta Intel® HD Graphics Built-in Visuals: Intel® Quick Sync Video, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® HD Graphics 2000/3000, Intel® Advanced Vector Extensions (AVX) con CPU Intel® Sandy Bridge - Pixel Shader 5.0, DirectX 11 con CPU Intel® Ivy Bridge, Pixel Shader 4.1, DirectX 10.1 con CPU Intel® Sandy Bridge - Memoria massima condivisa 1760MB con CPU Intel® Ivy Bridge. Memoria massima condivisa 1759MB con CPU Intel® Sandy Bridge.

	<ul style="list-style-type: none"> - Uscita VGA Doppia: supporto porte DVI-D e D-Sub tramite verificatore display indipendente - Supporta DVI-D con risoluzione massima fino a 1920x1200 @ 60Hz - Supporta D-Sub con risoluzione massima fino a 2048x1536 @ 75Hz - Supporto della funzione HDCP con le porte DVI-D - Supporto 1080p Blu-ray (BD) riproduzione con le porte DVI-D
Audio	- 5.1 CH HD Audio (Realtek ALC662 Audio Codec)
LAN	<ul style="list-style-type: none"> - PCIE x1 Gigabit LAN 10/100/1000 Mb/s - Realtek RTL8111C - Supporta Wake-On-LAN - Supporta il rilevamento cavo LAN - Supporta PXE
Pannello posteriore I/O	<ul style="list-style-type: none"> - 1 x porta PS/2 per mouse - 1 x porta PS/2 per tastiera - 1 x Porta D-Sub - 1 x Porta DVI-D - 4 x porte USB 2.0 già integrate - 1 x porte LAN RJ-45 con LED (LED azione/collegamento e LED velocità) - Connettore HD Audio: ingresso linea / cassa frontale / microfono
Interfaccia di storage	- 4 x connettori SATA2 3.0Go/s, supporta delle funzioni NCQ, AHCI e "Hot Plug"
Connettori	<ul style="list-style-type: none"> - 1 x Collettore modulo infrarossi - 1 x Collettore porta stampante - 1 x collettore porta COM - 1 x LED di accensione - 1 x header di intrusione dello chassis - 1 x header di TPM - 1 x Connettore CPU ventola (4-pin) - 1 x Connettore Chassis ventola (4-pin) - 1 x 24-pin collettore alimentazione ATX - 1 x 4-pin connettore ATX 12V - 1 x Connettore audio sul pannello frontale - 1 x Connettore SPDIF Out - 2 x Collettore USB 2.0 (supporta 4 porte USB 2.0)

BIOS	<ul style="list-style-type: none"> - 32Mb AMI UEFI Legal BIOS con interfaccia di supporto - Supporta "Plug and Play" - Compatibile con ACPI 1.1 wake up events - Supporta jumperfree - Supporta SMBIOS 2.3.1
CD di supporto	<ul style="list-style-type: none"> - Driver, Utilità, Software AntiVirus (versione di prova), Google Chrome Browser e Toolbar, Start8 (30 giorni di prova)
Monitoraggio Hardware	<ul style="list-style-type: none"> - Sensore per la temperatura del processore/Chassis - Indicatore di velocità per la ventola del CPU/Chassis - Ventola CPU silenziosa (permette la regolazione automatica della ventola dello chassis in base alla temperatura della CPU madre) - Ventola CPU/Chassis con controllo di varie velocità - Rilevamento CASE APERTO - Voltaggio: +12V, +5V, +3.3V, Vcore
Compatibilità SO	<ul style="list-style-type: none"> - Microsoft® Windows® 8 / 8 64 bit / 7 / 7 64 bit / Vista™ / Vista™ 64 bit / XP / XP 64 bit
Certificazioni	<ul style="list-style-type: none"> - FCC, CE, WHQL

* Per ulteriori informazioni, prego visitare il nostro sito internet: <http://www.asrock.com>

Especificación

Plataforma	<ul style="list-style-type: none"> - Factor forma Micro ATX - Todo diseño de Capacitor Sólido
Procesador	<ul style="list-style-type: none"> - Admite procesadores Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® de la 3ª y 2ª generación en el paquete LGA1155 - Admite la tecnología Intel® Turbo Boost 2.0 Technology - Admite procesador desbloqueado de la serie K
Chipset	<ul style="list-style-type: none"> - Intel® H61 - Admite las tecnologías Intel® Rapid Start y Smart Connect
Memoria	<ul style="list-style-type: none"> - Soporte de Tecnología de Memoria de Doble Canal - 2 x DDR3 DIMM slots - Apoya DDR3 1600/1333/1066 non-ECC, memoria de un-buffered (DDR3 1600 con CPU Intel® Ivy Bridge, DDR3 1333 con CPU Intel® Sandy Bridge) - Máxima capacidad de la memoria del sistema: 16GB - Compatible con Intel® Extreme Memory Profile (XMP)1.3/1.2 con la CPU Intel® Ivy Bridge
Ranuras de Expansión	<ul style="list-style-type: none"> - 1 x ranura PCI Express 3.0 x16 (azul @ modo x16) * PCIE 3.0 solamente se admite con una CPU Intel® Ivy Bridge. Con una CPU Intel® Sandy Bridge, solamente admite PCIE 2.0. - 1 x ranura PCI Express 2.0 x1
VGA OnBoard	<ul style="list-style-type: none"> * Los efectos visuales incorporados con gráficos de alta definición Intel® y las salidas VGA sólo se soportan con procesadores con GPU integrada. - Admite Intel® HD Graphics Built-in Visuals: Intel® Quick Sync Video 2.0, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® Insider™, Intel® HD Graphics 2500/4000 con la CPU Intel® Ivy Bridge - Admite Intel® HD Graphics Built-in Visuals: Intel® Quick Sync Video, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® HD Graphics 2000/3000 e Intel® Advanced Vector Extensions (AVX) con la CPU Intel® Sandy Bridge - Pixel Shader 5.0, DirectX 11 con CPU Intel® Ivy Bridge, Pixel Shader 4.1, DirectX 10.1 con CPU Intel® Sandy Bridge - 1760MB de Memoria máxima compartida con la CPU Intel® Ivy Bridge. 1759MB de Memoria máxima compartida con la CPU Intel® Sandy Bridge.

	<ul style="list-style-type: none"> - Salida de VGA dual: apoya los puertos de DVI-D y de D-Sub por los reguladores independientes de la exhibición - Admite DVI-D con una resolución máxima de 1920x1200 a 60 Hz - Admite D-Sub con una resolución máxima de 2048x1536 a 75 Hz - Admite la función HDCP con puertos DVI-D - Apoya la reproducción de Blu-ray de 1080p (BD) con puertos DVI-D
Audio	- 5.1 CH HD Audio (Realtek ALC662 Audio Codec)
LAN	<ul style="list-style-type: none"> - PCIE x1 Gigabit LAN 10/100/1000 Mb/s - Realtek RTL8111C - Soporta Wake-On-LAN - Admite detección de conexión de cable LAN - Compatible con PXE
Entrada/Salida de Panel Trasero	<ul style="list-style-type: none"> - 1 x puerto de ratón PS/2 - 1 x puerto de teclado PS/2 - 1 x puerto D-Sub - 1 x puerto DVI-D - 4 x puertos USB 2.0 predeterminados - 1 x Puerto LAN RJ-45 con LED (LED de ACCIÓN/ENLACE y LED de VELOCIDAD) - Conexión de audio: Entrada de línea / Altavoz frontal / Micrófono
Interfaz de almacenamiento	- 4 x conexiones SATA2, admiten una velocidad de transferencia de datos de hasta 3,0Gb/s, soporta NCQ, AHCI y "Conexión en caliente"
Conectores	<ul style="list-style-type: none"> - 1 x Cabezal de Módulo Infrarrojos - 1 x cabecera de puerto de impresora - 1 x En-tête de port COM - 1 x cabecera de indicador LED de encendido - 1 x Conector de detección de intrusión en el chasis - 1 x cabecera de TPM - 1 x Conector de ventilador de CPU (4-pin) - 1 x Conector de ventilador de chasis (4-pin) - 1 x 24-pin cabezal de alimentación ATX - 1 x 4-pin conector de ATX 12V power - 1 x Conector de audio de panel frontal - 1 x Conector de SPDIF Out - 2 x Cabezal USB 2.0 (admite 4 puertos USB 2.0 adicionales)

BIOS	<ul style="list-style-type: none"> - 32Mb BIOS legal UEFI AMI compatible con GUI - Soporta "Plug and Play" - ACPI 1.1 compliance wake up events - Soporta "jumper free" - Soporta SMBIOS 2.3.1
CD de soport	- Controladores, utilidades, software de antivirus (versión de prueba), Google Chrome Browser y Toolbar, Start8 (Versión de prueba de 30 días)
Monitor Hardware	<ul style="list-style-type: none"> - Sensibilidad a la temperatura del procesador/chasis - Taquímetros de los ventiladores del procesador y del CPU/chasis - Ventilador silencioso del procesador (ajuste automático de la velocidad del ventilador del chasis en función de la temperatura del procesador) - Control de ajuste de la velocidad del ventilador de la CPU/chasis - Control de APERTURA DE CARCASA - Monitor de Voltaje: +12V, +5V, +3.3V, Vcore
OS	- En conformidad con Microsoft® Windows® 8 / 8 64 bits / 7 / 7 64 bits / Vista™ / Vista™ 64 bits / XP / XP 64 bits
Certificaciones	- FCC, CE, WHQL

* Para más información sobre los productos, por favor visite nuestro sitio web:

<http://www.asrock.com>

Спецификации

Платформа	<ul style="list-style-type: none"> - форм-фактор Micro ATX - Весь Твердый Конденсаторный проект
Процессор	<ul style="list-style-type: none"> - Поддержка процессора Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® 3-го и 2-го поколения с помощью разъема для процессоров LGA 1155 - Поддержка технологии Intel® Turbo Boost 2.0 - Поддержка разблокированного ЦП серии K
Набор микросхем	<ul style="list-style-type: none"> - Intel® H61 - Поддержка технологии Intel® Rapid Start Technology и Smart Connect Technology
Память	<ul style="list-style-type: none"> - Поддержка технологии Dual Channel DDR3 Memory Technology - 2 х гнезда DDR3 DIMM - Поддержите DDR3 1600/1333/1066 не- ECC, безбуферная память (DDR3 1600 с процессором Intel® Ivy Bridge, DDR3 1333 с процессором Intel® Sandy Bridge) - Максимальный объем системной памяти: 16 ГБ - поддержка профиля Intel® Extreme Memory Profile (XMP)1.3/1.2 с помощью процессора Intel® Ivy Bridge
Гнезда расширения	<ul style="list-style-type: none"> - 1 x PCI Express 3.0 x16 (Синий в режиме x16) * PCIE 3.0 поставляется только в комплекте с ЦП Intel® Ivy Bridge. В комплекте с ЦП Intel® Sandy Bridge поставляется только модель PCIE 2.0. - 1 x PCI Express 2.0 x1
Графика	<ul style="list-style-type: none"> * Встроенный видеоадаптер Intel® HD Graphics и выходы VGA поддерживаются только с процессорами, оснащенными интегрированным графическим процессором. - Поддержка функций встроенных видеоадаптеров Intel® HD: Intel® Quick Sync Video 2.0, Intel® InTru™ 3D, технологии Intel® Clear Video HD, Intel® Insider™, Intel® HD Graphics 2500/4000 с помощью процессора Intel® Ivy Bridge - Поддержка функций встроенных видеоадаптеров Intel® HD: Intel® Quick Sync Video, Intel® InTru™ 3D, технологии Intel® Clear Video HD, Intel® HD Graphics 2000/3000, Intel® Advanced Vector Extensions (AVX) с помощью процессора Intel® Sandy Bridge - Pixel Shader 5.0, DirectX 11 с процессором Intel® Ivy Bridge, Pixel Shader 4.1, DirectX 10.1 с процессором Intel® Sandy Bridge - Макс. объем разделяемой памяти 1760Мб с помощью процессора Intel® Ivy Bridge. Макс. объем разделяемой памяти 1759Мб с помощью процессора Intel® Sandy Bridge. - Двойственное VGA выходное устройство: поддерживает DVI-D и D-Sub порты через независимый контроллер дисплея - Поддержка DVI-D с максимальным разрешением до 1920x1200 @ 60 Гц - Поддержка D-Sub с максимальным разрешением до 2048x1536 @ 75 Гц

	<ul style="list-style-type: none"> - Поддержка функции HDCP через разъемы DVI-D - Поддержат Blu-луч 1080p (КОММУТАЦИОННАЯ ДОСКА) через разъемы DVI-D
Аудиосистема	- 5.1 CH HD Audio HD (Кодек-декодер Audio Realtek ALC662)
ЛВС	<ul style="list-style-type: none"> - PCIE x 1 Gigabit LAN 10/100/1000 Mb/s - Realtek RTL8111C - поддержка Wake-On-LAN - Поддержка определения кабеля ЛВС - Поддержка PXE
Разъемы ввода-вывода на задней панели	<ul style="list-style-type: none"> - 1 x порт мыши PS/2 - 1 x порт клавиатуры PS/2 - 1 x D-Sub порт - 1 x DVI-D порт - 4 x порта USB 2.0 на задней панели в стандартной конфигурации - Разъем 1 x RJ-45 LAN с светодиодным индикатором (индикатор ACT/LINK и индикатор SPEED) - Соединитель звуковой подсистемы: линейный вход / передняя колонка / микрофон
Интерфейсы накопителей	- 4 x разъемы SATA2 3,0 Гбит/с, поддержка функций NCQ, AHCI и «горячего подключения»
Колодки и плате	<ul style="list-style-type: none"> - 1 x Колодка инфракрасного модуля - 1 x Разъем порта печати - 1 x Колодка COM - 1 x разъем Power LED - 1 x разъем датчика открытой крышки - 1 x разъем TPM - 1 x соединитель CPU FAN (4-контактный) - 1 x соединитель Chassis FAN (4-контактный) - 1 x 24-контактный Колодка питания ATX - 1 x 4-контактный Разъем ATX 12 В - 1 x Аудиоразъем передней панели - 1 x соединитель SPDIF Out - 2 x Колодка USB 2.0 (одна колодка для поддержки 4 дополнительных портов USB 2.0)
BIOS	<ul style="list-style-type: none"> - 32Mb AMI UEFI Legal BIOS с поддержкой графического интерфейса поль зователя - поддержка "Plug and Play" - ACPI 1.1, включение по событиям - поддержка режима настройки без перемычек - поддержка SMBIOS 2.3.1
Компактдиск поддержки	- Драйверы, служебные программы, антивирусное программное обеспечение (пробная версия), Google Chrome Browser и Toolbar, Start8 (демоверсия на 30 дней)
Контроль оборудования	<ul style="list-style-type: none"> - Датчики температуры процессора/корпуса - Тахометры вентиляторов процессора/корпуса вентилятора - Бесшумный вентилятор ЦП блока (возможность авто матической настройки скорости вентилятора системного блока в соответствии с температурой центрального процессора)

	<ul style="list-style-type: none">- Мультиконтроль скорости вентилятора ЦП/Шасси- Определение открытой крышки- Контроль напряжения: +12V, +5V, +3.3V, Vcore
Операцион	- Совместимость с Microsoft® Windows® 8 / 8 64-bit / 7 / 7 64-bit / Vista™ / Поддержка 64-разрядной версии Vista™ / XP / XP 64-bit
ные системы Сертификаты	- FCC, CE, WHQL

* Для детальной информации продукта, пожалуйста посетите наш вебсайт:

<http://www.asrock.com>

Especificações

Plataforma	<ul style="list-style-type: none">- Formato Micro ATX- Design de condensadores banhados a ouro de alta qualidade
CPU	<ul style="list-style-type: none">- Suporta Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® de 3ª e 2ª geração no pacote LGA1155- Suporta a tecnologia Intel® Turbo Boost 2.0- Suporta K-Series desbloqueado CPU
Chipsets	<ul style="list-style-type: none">- Intel® H61- Suporta a tecnologia Rapid Start da Intel® e a tecnologia Smart Connect
Memória	<ul style="list-style-type: none">- Suporte à tecnologia de memória de duplo canal- 2 x slots de DDR3 DIMM- Suporte para memória não intermédia DDR3 1600/1333/1066, não ECC (DDR3 1600 com Intel® Ivy Bridge CPU, DDR3 1333 com processadores Intel® Sandy Bridge CPU)- Capacidade máxima de memória do sistema: 16GB- Suporta Extreme Memory Profile (XMP)1.3/1.2 da Intel® com CPU Ivy Bridge da Intel®
Slots de Expansão	<ul style="list-style-type: none">- 1 x slot de PCI Express 3.0 x16 (modo azul @ x16)* O modo PCIE 3.0 apenas é suportado com a CPU Ivy Bridge da Intel® A CPU Sandy Bridge da Intel® apenas suporta o modo PCIE 2.0.- 1 x slot de PCI Express 2.0 x1
VGA integrado	<ul style="list-style-type: none">* As saídas Intel® HD Graphics Built-in Visuals e VGA são suportadas apenas por processadores com GPU integrada.- Suporta Intel® HD Graphics Embutido Visuals: Intel® Quick Sync Video 2.0, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® Insider™, Intel® HD Graphics 2500/4000 com CPU Ivy Bridge da Intel®- Suporta Intel® HD Graphics Embutido Visuals: Intel® Quick Sync Video, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® HD Graphics 2000/3000, Intel® Advanced Vector Extensions (AVX) com CPU Sandy Bridge da Intel®- Pixel Shader 5.0, DirectX 11 com Intel® Ivy Bridge CPU, Pixel Shader 4.1, DirectX 10.1 com processadores Intel® Sandy Bridge CPU- Memória partilhada máxima 1760MB com CPU Ivy Bridge da Intel®. Memória partilhada máxima 1759MB com CPU Sandy Bridge da Intel®.

	<ul style="list-style-type: none"> - Porta de saída VGA dupla: suporta portas DVI-D e D-Sub através de controladores de visualização independentes - Suporta DVI-D Tecnologia com resolução máxima até 1920x1200 @ 60Hz - Suporta D-Sub com resolução máxima até 2048x1536 @ 75Hz - Suporta função HDCP com porta DVI-D - Suporta a norma Blu-ray de alta definição 1080p (BD) de alta definição com porta DVI-D
Áudio	<ul style="list-style-type: none"> - Áudio de alta definição de canal 5.1 (Codec de áudio Realtek ALC662)
LAN	<ul style="list-style-type: none"> - PCIE x1 Gigabit LAN 10/100/1000 Mb/s - Realtek RTL8111C - Suporta Wake-On-LAN - Suporta Detecção de cabo LAN - Suporta PXE
Entrada/Saída pelo painel traseiro	<ul style="list-style-type: none"> - 1 x porta para mouse PS/2 - 1 x porta para teclado PS/2 - 1 x porta D-Sub - 1 x porta DVI-D - 4 x portas USB 2.0 padrão - 1 x porta LAN RJ-45 com LED (LED ACT/LIG e LED VELOCIDADE) - Ficha de áudio HD: Entrada de linha / Altifalante frontal / Microfone
Interface de Armazenamento	<ul style="list-style-type: none"> - 4 x conectores SATA2, suporte a taxa de transferência de dados de até 3,0 Gb/s, suporte NCQ, AHCI e "conexão a quente"
Conectores	<ul style="list-style-type: none"> - 1 x Conector do módulo de infravermelho - 1 x Conector de Porta de Impressão - 1 x conector de porta COM - 1 x Conector para LED de alimentação - 1 x Conector de intrusão no chassis - 1 x Conector para TPM - 1 x Conector do ventilador da CPU (4 pinos) - 1 x Conector do ventilador da chassis (4 pinos) - 1 x Conector de força do ATX de 24 pinos - 1 x Conector ATX 12 V de 4 pinos - 1 x Conector Áudio do painel frontal - 1 x Conector de SPDIF Out - 2 x cabezal USB 2.0 (suporta 4 portas USB 2.0)

BIOS	<ul style="list-style-type: none"> - 32Mb BIOS UEFI oficial da AMI com suporte para GUI - Suporta dispositivos "Plug and Play" - ACPI 1.1 atendendo a eventos de "wake up" - Suporta dispositivos sem jumper - Suporte para SMBIOS 2.3.1
CD de suporte	- Controladores, utilitários, software antivírus (Experimentacao Versao), Navegador Google Chrome e Barra de Ferramentas, Start8 (30 dias de avaliação)
Monitor do HW	<ul style="list-style-type: none"> - Sensores de temperature do procesador/chassis - Tacômetros de ventilador do Processador/chassis - Ventoinha silenciosa para a CPU (Permitir velocidade Chassis Auto-Ajuste de temperatura da CPU) - CPU/chassis Fan Controle Multi-Velocidade - Detecção de ABERTURA da CAIXA - Monitoramento de voltagem : +12 V, +5 V, +3.3 V, Vcore
Sistema Operacional	- Microsoft® Windows® 8 / 8 de 64 bits / 7 / 7 de 64 bits / Vista™ / Vista™ de 64 bits / XP / XP de 64 bits
Certificações	- FCC, CE, WHQL

* Para informações mais detalhadas por favor visite o nosso sítio Web:
<http://www.asrock.com>

Özellikler

Platform	<ul style="list-style-type: none">- Micro ATX Form Faktörü- Tüm Katı Kapasitör tasarımı
CPU	<ul style="list-style-type: none">- LGA1155 Paketi'deki 3. ve 2. Nesil Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron®'yi destekler- Intel® Turbo Boost 2.0 Teknolojisini destekler- K-Serisi kilidi kaldırılmış işlemciyi destekler
Yonga seti	<ul style="list-style-type: none">- Intel® H61- Intel® Rapid Start Teknolojisini ve Smart Connect Teknolojisi'ni destekler
Bellek	<ul style="list-style-type: none">- Çift Kanallı DDR3 Belleği Teknolojisi- 2 x DDR3 DIMM yuva- DDR3 1600/1333/1066 ECC olmayan, ara belleksiz bellek (Intel® Ivy Bridge işlemciye sahip DDR3 1600, Intel® Sandy Bridge işlemciye sahip DDR3 1333)- Sistem belleğinin maks. kapasitesi: 16 GB- Intel® Ivy Bridge İşlemci ile Intel® Extreme Bellek Profili (XMP)1.3/1.2 destekler
Genişletme Yuvası	<ul style="list-style-type: none">- 1 x PCI Express 3.0 x16 yuva (mavi @ x16 modu)* PCIE 3.0, sadece Intel® Ivy Köprü İşlemcisiyle desteklenir. Intel® Sandy Köprü İşlemciyle, sadece PCIE 2.0'ı destekler.- 1 x PCI Express 2.0 x1 yuva
Grafikler	<ul style="list-style-type: none">* Intel® HD Grafik Yerleşik Görselleri ve VGA çıkışları, yalnızca GPU entegre işlemciler tarafından desteklenmektedir.- Intel® Ivy Bridge İşlemci ile Intel® HD Graphics Dahili Görselleri: Intel® Hızlı Eşitleme Videosu 2.0, Intel® InTru™ 3D, Intel® Clear Video HD Teknolojisi, Intel® Insider™, Intel® HD Graphics 2500/4000- Intel® Sandy Bridge İşlemci ile Intel® HD Graphics Dahili Görselleri: Intel® Hızlı Eşitleme Videosu, Intel® InTru™ 3D, Intel® Clear Video HD Teknolojisi, Intel® HD Graphics 2000/3000, Intel® Gelişmiş Vektör Uzantıları (AVX)- Pixel Shader 5.0, Intel® Ivy Bridge işlemciye sahip DirectX 11. Pixel Shader 4.1, Intel® Sandy Bridge işlemciye sahip DirectX 10.1- Intel® Ivy Bridge İşlemci ile Maks. paylaşılan bellek 1760 MB. Intel® Sandy Bridge İşlemci ile Maks. paylaşılan bellek 1759 MB.

	<ul style="list-style-type: none"> - Çift VGA Çıkış: desteği DVI-D ve bağımsız görüntü denetleyiciler tarafından D-Sub bağlantı noktaları - 60Hz'de 1920x1200'e kadar maks. çözünürlükle DVI-D Teknolojisini destekler - 75Hz'de 2048x1536'ya kadar maks. çözünürlükle D-Sub'a destekler - DVI-D portlarıyla HDCP işlevini destekler - DVI-D portlarıyla Tam HD 1080p Blu-ray (BD) oynatma destekler
Ses	- 5,1 Kanal HD Ses (Realtek ALC662 Ses Codec'i)
LAN	<ul style="list-style-type: none"> - PCIE x1 Gigabit LAN 10/100/1000 Mb/sn - Realtek RTL8111C - LAN'da Uyan özelliğini destekler - LAN Kablo Algılama'yı destekler - PXE'yi destekler
Arka Panel G/3	<ul style="list-style-type: none"> - 1 x PS/2 Fare Portu - 1 x PS/2 Klavye Portu - 1 x D-Sub Portu - 1 x DVI-D Portu - 4 x Kullanıma Hazır USB 2.0 Portu - 1 x RJ-45 LAN Portu, LED'li (AKT/LGNK LED'i ve HIZ LED'i) - HD Ses Jakı: Hat Girişi / Ön Hoparlör / Mikrofon
Depolama Ara yüzü	- 4 x SATA2 3,0Gb/sn, donanım NCQ, AHCI ve "Sistem Açıkken Bileşen Takma" işlevlerini
Konektör	<ul style="list-style-type: none"> - 1 x KÖ fişi - 1 x Yazdırma Portu fişi - 1 x COM portu fişi - 1 x Güç LED'i fişi - 1 x Kasaya Yetkisiz Erişim fişi - 1 x TPM fişi - 1 x Conector do ventilador da CPU (4 pinos) - 1 x Conector do ventilador da chassis (4 pinos) - 1 x 24 pin ATX güç konektörü - 1 x 4 pin 12V güç konektörü - 1 x Ön panel ses konektörü - 1 x SPDIF Out konektörü - 2 x USB 2.0 fiş (4 USB 2.0 portu destekler)

BIOS Özelliđi	<ul style="list-style-type: none"> - 32 Mb GUI destekli AMI UEFI Geçerli BIOS - "Tak Çalıřtır"ı destekler - ACPI 1.1 Uyumlu Uyandırma Olayları - Jumpersız ayarlamayı destekler - AMBIOS 2.3.1 Desteđi
Destek CD'si	<ul style="list-style-type: none"> - Sürücüler, Yardımcı Programlar, AntiVirüs Yazılımı (Deneme Sürümü), Google Chrome Browser ve Toolbar, Start8 (30 günlük deneme)
Donanım Monitör	<ul style="list-style-type: none"> - CPU/Kasa Sıcaklık Duyarlılıđı - CPU/Kasa Fan Takometresi - İşlemci Sessiz Fanı (Kasa Fan Hızı'nın İşlemci sıcaklıđı ile Otomatik Ayar'ına izin verir) - CPU/Kasa Fan Çoklu-Hız Kontrolü - KASA AÇIK algılaması - Voltaj İzleme: +12V, +5V, +3,3V, CPU Vcore
İs	<ul style="list-style-type: none"> - Microsoft® Windows® 8 / 8 64-bit / 7 / 7 64-bit / Vista™ / Vista™ 64-bit / XP / XP 64-bit uyumlu
Sertifikalar	<ul style="list-style-type: none"> - FCC, CE, WHQL

* Ayrıntılı ürün bilgileri için lütfen web sitemizi ziyaret edin: <http://www.asrock.com>

설명서

플랫폼	- Micro ATX 폼 팩터 - 완전 고체 축전지 디자인
CPU	- LGA1155 패키지에서 3 세대 및 2 세대 Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® 을 지원합니다 - Intel® Turbo Boost 2.0 기술 지원 - K- 시리즈 잠금 해제 CPU 지원
칩셋	- Intel® H61 - Intel® Rapid Start 기술과 Smart Connect 기술을 지원합니다
메모리	- 듀얼 채널 메모리 기술 지원 - DDR3 DIMM 슬롯 2 개 - DDR3 1600/1333/1066 비 -ECC, 언버퍼드 메모리를 지원 (Intel® Ivy Bridge CPU 를 탑재한 DDR3 1600, Intel® Sandy Bridge CPU 를 탑재한 DDR3 1333) - 최대 시스템 메모리 용량 : 16GB - Intel® Ivy Bridge CPU 에서 Intel® 익스트림 메모리 프로파일 (XMP)1.3/1.2 지원
확장 슬롯	- PCI Express 3.0 x16 슬롯 (x16 모드 의 경우 파란색) 1 개 * PCIE 3.0 은 Intel® Ivy Bridge CPU 에서만 지원됩니다 . Intel® Sandy Bridge CPU 는 PCIE 2.0 만 지원합니다 . - PCI Express 2.0 x1 슬롯
온보드 VGA	* Intel® HD Graphics 내장 비주얼 및 VGA 출력은 GPU 통합된 프로세서의 경우에만 지원됩니다 . - Intel® Ivy Bridge CPU 에서 Intel® HD 그래픽 내장 비주얼 프로그램 : Intel® Quick Sync Video 2.0, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® Insider™, Intel® HD Graphics 2500/4000 - Intel® Sandy Bridge CPU 에서 Intel® HD 그래픽 내장 비주얼 프로그램 : Intel® Quick Sync Video, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® HD Graphics 2000/3000, Intel® Advanced Vector Extensions (AVX) - Intel® Ivy Bridge CPU 를 탑재한 DirectX 11, Pixel Shader 5.0. Intel® Sandy Bridge CPU 를 탑재한 DirectX 10.1, Pixel Shader 4.1 - Intel® Ivy Bridge CPU 에서 최대 공유 메모리 1760MB. Intel® Sandy Bridge CPU 에서 최대 공유 메모리 1759MB. - 더블 VGA 수출 : DVI-D 와 D-Sub 포트 독립 디스플레이 컨트롤러를 지원 - 최대 해상도 1920x1200 @ 60Hz 까지 DVI-D 지원 - 최대 해상도 2048x1536 @ 75Hz 까지 D-Sub 지원

	<ul style="list-style-type: none"> - DVI-D 포트를 이용한 HDCP 기능 지원 - DVI-D 포트를 이용한 1080p Blu-ray (BD) 재생을 지원
오디오	<ul style="list-style-type: none"> - 5.1 CH HD Audio (Realtek ALC662 Audio Codec)
랜	<ul style="list-style-type: none"> - PCIE x1 Gigabit LAN 10/100/1000 Mb/s - Realtek RTL8111C - 웨이크 - 온 - 랜 지원 - LAN 케이블 감지 지원 - PXE 지원
후면판 I/O	<ul style="list-style-type: none"> - 1 개 PS/2 마우스 포트 - 1 개 PS/2 키보드 포트 - 1 개의 D-Sub 포트 - 1 개의 DVI-D 포트 - 4 개더플트 USB 2.0 포트 - 1 개 LED(ACT/LINK LED 및 SPEED LED) 가 있는 RJ-45 LAN 포트 - 오디오 잭 : 라인 인 / 전방 스피커 / 마이크
스토리지 인터페이스	<ul style="list-style-type: none"> - 4 개 의 SATA2 3.0Gb/s 커넥터, NCQ, AHCI 및 “핫 플러그”
온보드 헤더 및 커넥터	<ul style="list-style-type: none"> - 적외선 모듈 헤더 1 개 - 프린트 포트 헤더 1 개 - COM 포트 헤더 1 개 - 전원 LED 헤더 1 개 - 색시 침입 헤더 1 개 - TPM 헤더 1 개 - CPU 팬 커넥터 1 개 (4 핀) - 색시 팬 커넥터 1 개 (4 핀) - 24 핀 ATX 전원 헤더 1 개 - 4 핀 ATX 12V 파워 콘넥터 1 개 - 전면부 오디오 콘넥터 1 개 - SPDIF Out 헤더 1 개 - USB 2.0 헤더 2 개 (4 개의 추가 USB 2.0 포트를 지원하는 헤더 2 개)
BIOS	<ul style="list-style-type: none"> - 32Mb GUI 지원을 제공하는 AMI UEFI 적합형 BIOS - “플러그 앤 플레이” 지원 - ACPI 1.1 웨이크 - 업 이벤트와의 호환 - 점퍼 프리 지원 - SMBIOS 2.3.1 지원
지원 CD	<ul style="list-style-type: none"> - 드라이버, 유틸리티, 백신 소프트웨어 (시험판), Google Chrome Browser 및 Toolbar, Start8 (30 일 시험판)

하드웨어 모니터	<ul style="list-style-type: none"> - CPU/ 새시 온도 감지 - CPU/ 새시 팬 회전 속도계 : 샤시 (케이스) 팬 회전 속도계 - CPU 저소음 팬 (CPU 온도에 의한 새시 팬속도 자동 조정 가능) - CPU/ 새시팬 멀티스피드 컨트롤 - 케이스 열림 감지 - 전압 감시 기능 : +12V,+5V,+3.3V,Vcore
OS	- 마이크로 소프트 Windows® 8/8 64 비트 /7/7 64 비트 /Vista™/ Vista™ 64 비트 /XP/XP 64 비트 와 호환
인증서	- FCC, CE, WHQL

* 상세한 제품정보는 당사의 웹사이트를 방문할수있습니다 . <http://www.asrock.com>

仕様

プラットフォーム	<ul style="list-style-type: none"> - Micro ATX フォームファクター - 全ソリッド・キャパシター設計
CPU	<ul style="list-style-type: none"> - LGA1155 パッケージで、第三世代および第二世代 Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® をサポートします - Intel® Turbo 2.0 ブーストテクノロジーをサポート - K シリーズのアンロック CPU
チップセット	<ul style="list-style-type: none"> - Intel® H61 - Intel® Rapid Start テクノロジーおよび Smart Connect テクノロジーをサポートします
メモリー	<ul style="list-style-type: none"> - デュアルチャンネル DDR3 メモリーテクノロジー - DDR3 DIMM スロット x 2 - DDR3 1600/1333/1066 non-ECC, un-buffered メモリーに対応 (Intel® Ivy Bridge CPU を搭載した DDR3 1600、Intel® Sandy Bridge CPU を搭載した DDR3 1333) - システムメモリの最大容量: 16GB - Intel® Ivy Bridge CPU で Intel® Extreme Memory Profile (XMP)1.3/1.2 をサポート
拡張スロット	<ul style="list-style-type: none"> - 1 x PCI Express 3.0 x16 スロット (青 @ x16 モード) * PCIE 3.0 は、Intel® Ivy Bridge CPU でのみサポートされます。Intel® Sandy Bridge CPU では、PCIE 2.0 のみをサポートします。 - 1 x PCI Express 2.0 x1 スロット
グラフィック	<ul style="list-style-type: none"> * Intel® HD Graphics Built-in Visuals および VGA 出力に対応するのは、GPU が内蔵されているプロセッサを使用する場合だけです。 - Intel® Ivy Bridge CPU で Intel® HD グラフィックス内蔵ビジュアルのサポート: Intel® Quick Sync Video 2.0、Intel® InTru™ 3D、Intel® Clear Video HD Technology、Intel® Insider™、Intel® HD Graphics 2500/4000 - Intel® Sandy Bridge CPU で Intel® HD グラフィックス内蔵ビジュアルのサポート: Intel® Quick Sync Video、Intel® InTru™ 3D、Intel® Clear Video HD Technology、Intel® HD Graphics 2000/3000、Intel® Advanced Vector Extensions (AVX) - Intel® Ivy Bridge CPU を搭載した DirectX 11、Pixel Shader 5.0。Intel® Sandy Bridge CPU を搭載した DirectX 10.1、Pixel Shader 4.1。

	<ul style="list-style-type: none"> - Intel® Ivy Bridge CPU で 最大の共有メモリ1760MB。 Intel® Sandy Bridge CPU で 最大の共有メモリ1759MB。 - デュアル VGA 出力: 独立型ディスプレイコントローラによる DVI-D および D-Sub ポートサポート - 1920x1200 @ 60Hz の最大解像度で DVI-D をサポート - 2048x1536 @ 75Hz の最大解像度で D-Sub をサポート - HDCP 機能、DVI-D ポートをサポート - 1080p Blu-ray (BD) 再生サポート、DVI-D ポートをサポート
オーディオ	- 5.1 CH HD オーディオ (Realtek ALC662 オーディオ Codec)
LAN	<ul style="list-style-type: none"> - PCIE x1 Gigabit LAN 10/100/1000 Mb/s - Realtek RTL8111C - Wake-On-LAN をサポート - LAN ケーブル検出をサポート - PXE をサポート
リアパネル I/O	<ul style="list-style-type: none"> - PS/2 マウスポート x 1 - PS/2 キーボードポート x 1 - D-Sub ポート x 1 - DVI-D ポート x 1 - Ready-to-Use USB 2.0 ポート x 4 - LED(ACT/LINK LED および SPEED LED)付き RJ-45 LAN ポート x 1 - オーディオジャック: 入力、前部スピーカー、マイク入力
ストレージインターフェース	- 4 x SATA2 3.0Gb/秒コネクタが、NCQ、AHCI および “Hot Plug” (ホットプラグ) 機能
コネクタ	<ul style="list-style-type: none"> - IR ヘッダー x 1 - プリントポートヘッダ x 1 - COM ポートヘッダ x 1 - 電源 LED ヘッダー x 1 - シャーシ侵入ヘッダ x 1 - TPM ヘッダー x 1 - CPU ファンコネクタ x 1 (4ピン) - シャーシファンコネクタ x 1 (4ピン) - 24ピン ATX 電源コネクタ x 1 - 4ピン 12V 電源コネクタ x 1 - フロントパネルオーディオコネクタ x 1 - SPDIF Out ヘッダー x 1 - USB 2.0 ヘッダー (USB 2.0 用 4 ポートをサポート) x 2

BIOS 関連機能	<ul style="list-style-type: none"> - 32Mb AMI UEFI Legal BIOS(GUI サポート) - プラグ&プレイをサポート - ACPI 1.1 準拠ウェイクアップイベント - jumperfree モードサポート - SMBIOS 2.3.1 サポート
サポート CD	- ドライバ、ユーティリティ、AntiVirus ソフトウェア (試用バージョン)、Google Chrome Browser および Toolbar、Start8(30 日トライアル版)
モニター	<ul style="list-style-type: none"> - CPU/ シャーシ温度検知 - CPU/ シャーシファンタコメータ - CPU 静音ファン(CPU 温度によりシャーシファン速度の自動調整が可能) - CPU/ シャーシファンマルチ速度制御 - ケースオープン検出 - 電源モニター: +12V, +5V, +3.3V, Vcore
OS	- Microsoft® Windows® 8/8 64-bit/7/7 64-bit/Vista™/ Vista™ 64-bit/XP/XP 64-bit compliant
認証	- FCC, CE, Microsoft® WHQL 認証済み

* 製品の詳細については、<http://www.asrock.com> を御覧ください。

主板规格

架构	<ul style="list-style-type: none"> - Micro ATX 规格 - 全固态电容设计
处理器	<ul style="list-style-type: none"> - 支持第三代和二代 Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® 处理器 (LGA1155 针脚) - 支持 Intel® Turbo Boost 2.0 技术 - 支持 K- 系列解锁的 CPU
芯片组	<ul style="list-style-type: none"> - Intel® H61 - 支持 Intel® 快速启动技术和 Intel® 智能连接技术
系统内存	<ul style="list-style-type: none"> - 支持双通道 DDR3 内存技术) - 配备 2 个 DDR3 DIMM 插槽 - 支持 DDR3 1600/1333/1066 non-ECC、un-buffered 内存 (Intel® Ivy Bridge CPU 支持 DDR3 1600, Intel® Sandy Bridge CPU 支持 DDR3 1333) - 最高支持 16GB 系统容量 - 通过 Intel® Ivy Bridge CPU 支持 Intel® Extreme Memory Profile(XMP)1.3/1.2
扩展插槽	<ul style="list-style-type: none"> - 1 x PCI Express 3.0 x16 插槽 (蓝色 @ x16 模式) * 使用 Intel® Ivy Bridge CPU 方可支持 PCIE 3.0。若使用 Intel® Sandy Bridge CPU, 仅支持 PCIE 2.0。 - 1 x PCI Express 2.0 x1 插槽
板载显卡	<ul style="list-style-type: none"> * 仅内置 GPU 的处理器可支持 Intel® HD Graphics 内置视觉特性与 VGA 输出。 - 通过 Intel® Ivy Bridge CPU 支持 Intel® HD Graphics 内置视觉特性: Intel® Quick Sync Video 2.0、Intel® InTru™ 3D、Intel® Clear Video HD 技术、Intel® Insider™、Intel® HD Graphics 2500/4000 - 通过 Intel® Sandy Bridge CPU 支持 Intel® HD Graphics 内置视觉特性: Intel® Quick Sync Video、Intel® InTru™ 3D、Intel® Clear Video HD 技术、Intel® HD Graphics 2000/3000、Intel® Advanced Vector Extensions(AVX) - Intel® Ivy Bridge CPU 支持 Pixel Shader 5.0、DirectX 11 技术。Intel® Sandy Bridge CPU 支持 Pixel Shader 4.1、DirectX 10.1 技术。 - 通过 Intel® Ivy Bridge CPU 支持最大共享内存 1760MB。通过 Intel® Sandy Bridge CPU 支持最大共享内存 1759MB。 - 双 VGA 输出: 通过独立显示控制器提供 DVI-D 和 D-Sub 接口 - 支持 DVI-D, 最高分辨率达 1920x1200 @ 60Hz - 支持 DVI-D, 最高分辨率达 2048x1536 @ 75Hz - 通过 DVI-D 接口支持 HDCP 功能

	- 通过 DVI-D 接口可播放 10800 线蓝光光盘 (BD)
音效	- 5.1 声道高保真音频 (Realtek ALC662 音频编解码器)
板载 LAN 功能	- PCIE x1 Gigabit LAN 10/100/1000 Mb/s - Realtek RTL8111C - 支持网路唤醒 (Wake-On-LAN) - 支持网路线侦测功能 - 支持 PXE
Rear Panel I/O (后面板输入/输出接口)	- 1 个 PS/2 鼠标接口 - 1 个 PS/2 键盘接口 - 1 个 D-Sub 接口 - 1 个 DVI-D 接口 - 4 个可直接使用的 USB 2.0 接口 - 1 个 RJ-45 局域网接口与 LED 指示灯 (ACT/LINK LED 和 SPEED LED) - 高保真音频插孔: 音频输入 / 前置喇叭 / 麦克风
储存装置接口	- 4 x SATA2 3.0Gb/s 连接头, 支持 NCQ, AHCI 和热插拔功能
连接头	- 1 x 红外线模块接头 - 1 x 打印机端口接针 - 1 x 串行接口 - 1 x 电源指示灯连接排针 - 1 x 机箱开启警告功能接针 - 1 x TPM 接头 - 1 x CPU 风扇接头 (4 针) - 1 x 机箱风扇接头 (4 针) - 1 x 24 针 ATX 电源接头 - 1 x 4 针 12V 电源接头 - 1 x 前置音频面板接头 - 1 x SPDIF 输出接头 - 2 x USB 2.0 接口 (可支持 4 个额外的 USB 2.0 接口)
BIOS	- 32Mb AMI UEFI Legal BIOS, 支持 GUI - 支持即插即用 (Plug and Play, PnP) - ACPI 1.1 电源管理 - 支持唤醒功能 - 支持 jumperfree 免跳线模式
支持光盘	- 驱动程序、工具软件、杀毒软件 (试用版)、Chrome 谷歌浏览器和工具栏、Start8 (30 天试用版)
硬件监控器	- CPU/ 机箱温度侦测 - CPU/ 机箱风扇转速计 - CPU 静音风扇 (允许根据 CPU 温度自动调整机箱风扇速度) - CPU/ 机箱风扇多速控制 - 机箱开启侦测

	- 电压范围: +12V, +5V, +3.3V, 核心电压
操作系统	- Microsoft® Windows® 8/8 64 位元 /7/7 64 位元 /Vista™ / Vista™ 64 位元 /XP/XP 64 位元适用于此主板
认证	- FCC, CE, WHQL

* 请参阅华擎网站了解详细的产品信息：<http://www.asrock.com>

电子信息产品污染控制标示

依据中国发布的「电子信息产品污染控制管理办法」及 SJ/T 11364-2006「电子信息产品污染控制标示要求」，电子信息产品应进行标示，藉以向消费者揭露产品中含有的有毒有害物质或元素不致发生外泄或突变从而对环境造成污染或对人身、财产造成严重损害的期限。依上述规定，您可于本产品之印刷电路板上看见图一之标示。图一中之数字为产品之环保使用期限。由此可知此主板之环保使用期限为 10 年。



图一

有毒有害物质或元素的名称及含量说明

若您欲了解此产品的有毒有害物质或元素的名称及含量说明，请参照以下表格及说明。

部件名称	有害物质或元素					
	铅 (Pb)	镉 (Cd)	汞 (Hg)	六价铬 (Cr (VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板及电子组件	X	O	O	O	O	O
外部信号连接头及线材	X	O	O	O	O	O

O: 表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T 11363-2006 标准规定的限量要求以下。

X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T 11363-2006 标准规定的限量要求，然该部件仍符合欧盟指令 2002/95/EC 的规范。

备注：此产品所标示之环保使用年限，系指在一般正常使用状况下。

主機板規格

架構	<ul style="list-style-type: none"> - Micro ATX 規格 - 全固態電容設計
處理器	<ul style="list-style-type: none"> - 支援第三代和二代 Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® 處理器 (LGA1155 腳位) - 支援 Intel® Turbo Boost 2.0 技術 - 支援 K 系列解除鎖定 CPU
晶片組	<ul style="list-style-type: none"> - Intel® H61 - 支援 Intel® 快速啟動技術和智能連接技術
系統記憶體	<ul style="list-style-type: none"> - 支援雙通道 DDR3 記憶體技術 - 2 個 DDR3 DIMM 插槽 - 支援 DDR3 1600/1333/1066 non-ECC、un-buffered 記憶體 (Intel® Ivy Bridge CPU 支援 DDR3 1600，Intel® Sandy Bridge CPU 支援 DDR3 1333) - 最高支援 16GB 系統容量 - 透過 Intel® Ivy Bridge CPU 支援 Intel® Extreme Memory Profile(XMP)1.3/1.2
擴充插槽	<ul style="list-style-type: none"> - 1 x PCI Express 3.0 x16 插槽 (藍色 @ x16 模式) * PCIe 3.0 僅適用 Intel® Ivy Bridge CPU。Intel® Sandy Bridge CPU 僅支援 PCIe 2.0。 - 1 x PCI Express 2.0 x1 插槽
內建顯示	<ul style="list-style-type: none"> * 只有整合 GPU 的處理器才支援 Intel® HD Graphics 內建視覺技術 (Built-in Visuals) 與 VGA 輸出。 - 透過 Intel® Ivy Bridge CPU 支援 Intel® HD Graphics 內建視覺技術 (Built-in Visuals): Intel® Quick Sync Video 2.0、Intel® InTru™ 3D、Intel® Clear Video HD Technology、Intel® Insider™、Intel® HD Graphics 2500/4000 - 透過 Intel® Sandy Bridge CPU 支援 Intel® HD Graphics 內建視覺技術 (Built-in Visuals): Intel® Quick Sync Video、Intel® InTru™ 3D、Intel® Clear Video HD Technology、Intel® HD Graphics 2000/3000、Intel® Advanced Vector Extensions (AVX) - Intel® Ivy Bridge CPU 支援 Pixel Shader 5.0、DirectX 11 技術。Intel® Sandy Bridge CPU 支援 Pixel Shader 4.1、DirectX 10.1 技術。 - 透過 Intel® Ivy Bridge CPU 支援最大共享記憶體 1760MB。 透過 Intel® Sandy Bridge CPU 支援最大共享記憶體 1759MB。 - 雙 VGA 輸出: 透過獨立顯示控制器提供 DVI-D 和 D-Sub 接口

	<ul style="list-style-type: none"> - 支援 DVI-D, 最高解析度達 1920x1200 @ 60Hz - 支援 D-Sub, 最高解析度達 2048x1536 @ 75Hz - DVI-D 接口支援 HDCP 功能 - DVI-D 接口可播放 1080p 藍光光碟 (BD)
音效	- 5.1 聲道高清晰音效 (Realtek ALC662 音效編解碼器)
網路功能	<ul style="list-style-type: none"> - PCIE x1 Gigabit LAN 10/100/1000 Mb/s - Realtek RTL8111C - 支援網路喚醒 (Wake-On-LAN) - 支援網路線偵測功能 - 支援 PXE
Rear Panel I/O (後背板輸入/輸出接口)	<ul style="list-style-type: none"> - 1 個 PS/2 滑鼠接口 - 1 個 PS/2 鍵盤接口 - 1 個 D-Sub 接口 - 1 個 DVI-D 接口 - 4 個可直接使用的 USB 2.0 接口 - 1 個 RJ-45 區域網接口與 LED 指示燈 (ACT/LINK LED 和 SPEED LED) - 高清晰音效插孔: 音效輸入 / 前置喇叭 / 麥克風
儲存裝置介面	- 4 x SATA2 3.0Gb/s 接頭, 支援 NCQ, AHCI 和熱插拔功能
接頭	<ul style="list-style-type: none"> - 1 x 紅外線模組接頭 - 1 x 印表機接針 - 1 x 序列埠 - 1 x 電源指示燈接頭 - 1 x 機殼開啟警告功能接頭 - 1 x TPM 接頭 - 1 x CPU 風扇接頭 (4 針) - 1 x 機箱風扇接頭 (4 針) - 1 x 24 針 ATX 電源接頭 - 1 x 4 針 12V 電源接頭 - 1 x 前置音效接頭 - 1 x SPDIF 輸出接頭 - 2 x USB 2.0 接頭 (可支援 4 個額外的 USB 2.0 接口)
BIOS	<ul style="list-style-type: none"> - 32Mb AMI UEFI Legal BIOS (支援 GUI) - 支援即插即用 (Plug and Play, PnP) - ACPI 1.1 電源管理 - 支援喚醒功能 - 支援 jumperfree 免跳線模式
支援光碟	- 驅動程式、工具軟體、防毒軟體 (試用版本)、Google Chrome Browser 和 Toolbar、Start8 (30 天試用)

硬體監控	<ul style="list-style-type: none"> - CPU/ 機箱溫度偵測 - CPU/ 機箱風扇轉速計 - CPU 靜音風扇 (可透過 CPU 溫度自動調節機箱的風扇速度) - CPU/ 機箱風扇多速控制 - 機殼開啟偵測 - 電壓範圍：+12V, +5V, +3.3V, 核心電壓
操作系統	- Microsoft® Windows® 8/8 64 位元 /7/7 64 位元 /Vista™/ Vista™ 64 位元 /XP/XP 64 位元
認證	- FCC, CE, WHQL

* 請參閱華擎網站了解詳細的產品訊息：<http://www.asrock.com>

Spesifikasi

Podium	<ul style="list-style-type: none"> - Faktor Form Mikro ATX - Desain All Solid Capacitor
CPU	<ul style="list-style-type: none"> - Mendukung Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® Generasi ke-2 dalam paket LGA1155 - Menggunakan Teknologi Intel® Turbo Boost 2.0 - Mendukung CPU K-Series jenis “unlocked”
Grup Chip	<ul style="list-style-type: none"> - Intel® H61 - Mendukung Intel® Rapid Start Technology dan Smart Connect Technology
Ingatan	<ul style="list-style-type: none"> - Teknologi ingatan DDR3 dwisalurkan - 2 x Alur DDR3 DIMM - Mendukung memori DDR3 1600/1333/1066 non-ECC yang tidak di-buffer (DDR3 1600 dengan Intel® Ivy Bridge CPU, DDR3 1333 dengan Intel® Sandy Bridge CPU) - Kapasitas paling banyak: 16GB - Mendukung Intel® Extreme Memory Profile (XMP) dengan Intel® Ivy Bridge CPU
Alur Ekspansi	<ul style="list-style-type: none"> - 1 x slot PCI Express 3.0 x16 (biru @ x16 mode) * PCIE 3.0 hanya didukung dengan Intel® Ivy Bridge CPU. Dengan Intel® Sandy Bridge CPU, hanya PCIE 2.0 yang didukung. - 1 x PCI Express 2.0 x1 slot
Diagram	<ul style="list-style-type: none"> * Intel® HD Graphics Built-in Visual dan output VGA hanya dapat didukung dengan prosesor yang mengintegrasikan GPU. - Mendukung Intel® HD Graphics Built-in Visuals: Intel® Quick Sync Video 2.0, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® Insider™, Intel® HD Graphics 2500/4000 dengan Intel® Ivy Bridge CPU - Mendukung Intel® HD Graphics Built-in Visuals: Intel® Quick Sync Video, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® HD Graphics 2000/3000, Intel® Advanced Vector Extensions (AVX) dengan Intel® Sandy Bridge CPU - Pixel Shader 5.0, DirectX 11 dengan Intel® Ivy Bridge CPU, Pixel Shader 4.1, DirectX 10.1 dengan Intel® Sandy Bridge CPU - Ingatan sama Max. 1760MB dengan Intel® Ivy Bridge CPU. Ingatan sama Max. 1759MB dengan Intel® Sandy Bridge CPU.

	<ul style="list-style-type: none"> - Output VGA Ganda: mendukung port DVI-D dan D-Sub melalui pengontrol tampilan independen - Mendukung DVI-D Technology dengan resolusi maksimal hingga 1920x1200 @ 60Hz - Mendukung D-Sub dengan resolusi maksimal hingga 2048x1536 @ 75Hz - Mendukung fungsi HDCP dengan port DVI-D - Mendukung pemutaran 1080p Blu-ray (BD) dengan port DVI-D
Audio	- 5.1 CH HD Audio (Realtek ALC662 Audio Codec)
LAN	<ul style="list-style-type: none"> - PCIE x1 Gigabit LAN 10/100/1000 Mb/s - Realtek RTL8111C - Menggunakan Wake-On-LAN - Mendukung Deteksi Kabel LAN - Mendukung PXE
Papan Belakang I/O	<ul style="list-style-type: none"> - 1 x Port Mouse PS/2 - 1 x Port Keyboard PS/2 - 1 x Port D-Sub - 1 x Port DVI-D - 4 x Port USB 2.0 siap-dipakai - 1 x RJ-45 LAN Port LED (ACT/LINK LED dan SPEED LED) - HD Audio Jack: Line in/Penyuara Depan/mikropon
Antarmuka Penyimpanan	- 4 x penghubung SATA2 3.0Gb/s, dapat menggunakan NCQ, AHCI dan fungsi "Hot Plug"
Penghubung	<ul style="list-style-type: none"> - 1 x header IR - 1 x port header Print - 1 x port header COM - 1 x header power LED - 1 x Chassis Intrusion header - 1 x header TPM - 1 x Penghubung KIPAS CPU (4 pin) - 1 x Penghubung KIPAS casing (4 pin) - 1 x Penghubung power 24 pin ATX - 1 x Penghubung power 4 pin 12V - 1 x Penghubung audio panel depan - 1 x Penghubung SPDIF Out - 2 x USB 2.0 header (menggunakan 4 port USB 2.0)
Ciri-ciri BIOS	<ul style="list-style-type: none"> - 32Mb AMI UEFI Legal BIOS dengan dukungan GUI - Menggunakan "Plug and Play" - ACPI 1.1 Compliance Wake Up Events - Menggunakan jumperfree - Penyokong AMBIOS 2.3.1

Sokongan CD	- Driver, Utilitas, Perangkat Lunak Antivirus (Versi Percobaan), Google Chrome Browser dan Toolbar, Start8 (uji coba 30 hari)
Penjaga Hardware	- Perasa Suhu CPU/Casis - Pengukur Kipas CPU/Casis - Kipas CPU Senyap (Kecepatan Kipas Sasis Otomatis Disesuaikan Berdasarkan Temperatur CPU) - Kontrol Multi-Kecepatan Kipas CPU/Casis - Deteksi CASING TERBUKA - Penjagaan voltasi: +12V, +5V, +3.3V, Vcore
OS	- dapat digunakan Microsoft® Windows® 8 / 8 64-bit / 7 / 7 64-bit / Vista™ / Vista™ 64-bit / XP / XP 64-bit
Sertifikasi	- FCC, CE, WHQL

* Untuk informasi rinci, silakan kunjungi website kami: <http://www.asrock.com>

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. For technical questions, please submit a support request form at <http://www.asrock.com/support/tsd.asp>

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