

Version 1.0

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This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

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

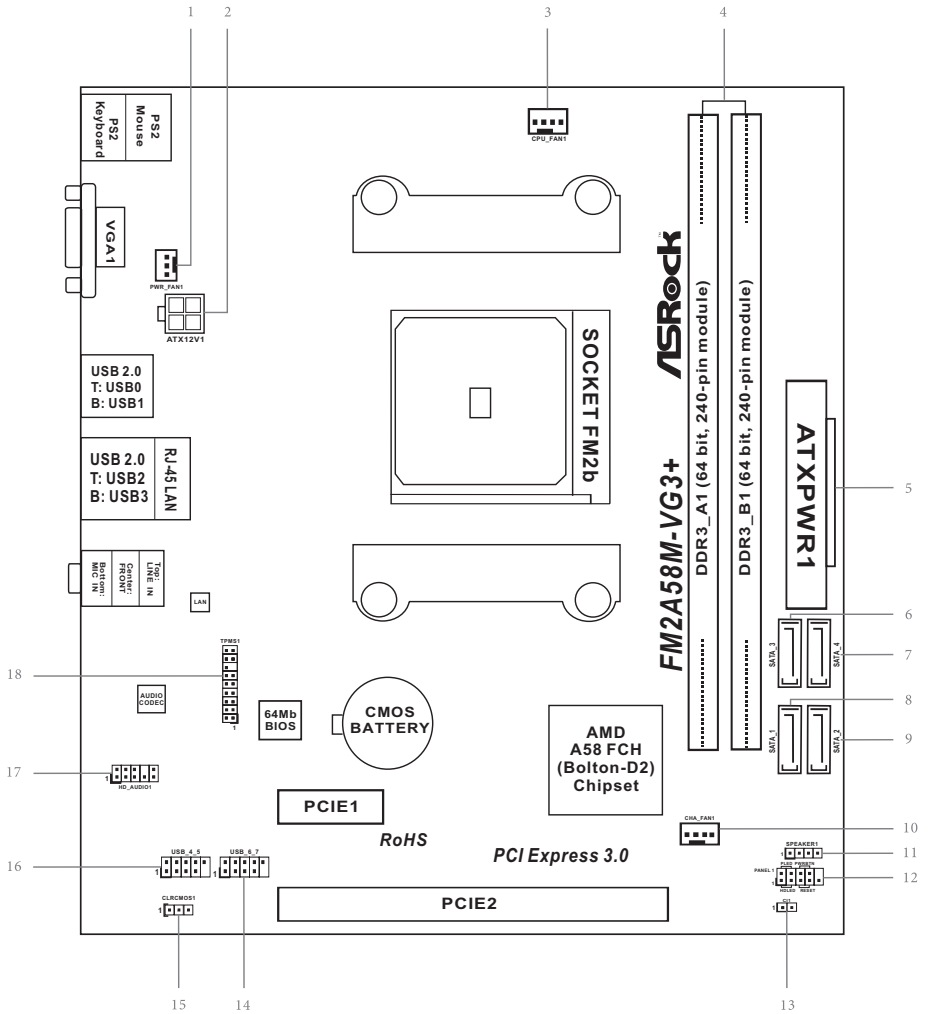
### CALIFORNIA, USA ONLY

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](http://www.dtsc.ca.gov/hazardouswaste/perchlorate)”

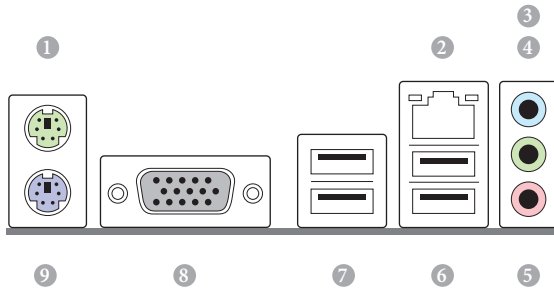
**ASRock Website:** <http://www.asrock.com>

# Motherboard Layout



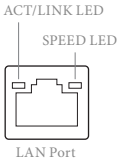
| No. | Description                                    |
|-----|--|
| 1   | Power Fan Connector (PWR_FAN1)                 |
| 2   | ATX 12V Power Connector (ATX12V1)              |
| 3   | CPU Fan Connector (CPU_FAN1)                   |
| 4   | 2 x 240-pin DDR3 DIMM Slots (DDR3_A1, DDR3_B1) |
| 5   | ATX Power Connector (ATXPWR1)                  |
| 6   | SATA2 Connector (SATA_3)                       |
| 7   | SATA2 Connector (SATA_4)                       |
| 8   | SATA2 Connector (SATA_1)                       |
| 9   | SATA2 Connector (SATA_2)                       |
| 10  | Chassis Fan Connector (CHA_FAN1)               |
| 11  | Chassis Speaker Header (SPEAKER1)              |
| 12  | System Panel Header (PANEL1)                   |
| 13  | Chassis Intrusion Header (CI1)                 |
| 14  | USB 2.0 Header (USB_6_7)                       |
| 15  | Clear CMOS Jumper (CLRCMOS1)                   |
| 16  | USB 2.0 Header (USB_4_5)                       |
| 17  | Front Panel Audio Header (HD_AUDIO1)           |
| 18  | TPM Header (TPMS1)                             |

## I/O Panel



| No. | Description            | No. | Description             |
|-----|------------------------|-----|-------------------------|
| 1   | PS/2 Mouse Port        | 6   | USB 2.0 Ports (USB_2_3) |
| 2   | LAN RJ-45 Port*        | 7   | USB 2.0 Ports (USB_0_1) |
| 3   | Line In (Light Blue)   | 8   | D-Sub Port              |
| 4   | Front Speaker (Lime)** | 9   | PS/2 Keyboard Port      |
| 5   | Microphone (Pink)      |     |                         |

\* There are two LEDs on the LAN port. Please refer to the table below for the 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                  | Link          | 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. 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 **FM2A58M-VG3+ R2.0** 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](http://www.asrock.com/support/index.asp)

## 1.1 Package Contents

ASRock **FM2A58M-VG3+ R2.0** Motherboard (Micro ATX Form Factor)

ASRock **FM2A58M-VG3+ R2.0** Quick Installation Guide

ASRock **FM2A58M-VG3+ R2.0** Support CD

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

1 x I/O Panel Shield

## 1.2 Specifications

|                       |  |
|-----------------------|--|
| <b>Platform</b>       | <ul style="list-style-type: none"> <li>- Micro ATX Form Factor</li> <li>- All Solid Capacitor design</li> <li>- High Density Glass Fabric PCB</li> </ul>   |
| <b>CPU</b>            | <ul style="list-style-type: none"> <li>- Supports Socket FM2+ 95W / FM2 100W processors</li> </ul>   |
| <b>Chipset</b>        | <ul style="list-style-type: none"> <li>- AMD A58 FCH (Bolton-D2)</li> </ul>  |
| <b>Memory</b>         | <ul style="list-style-type: none"> <li>- Dual Channel DDR3 Memory Technology</li> <li>- 2 x DDR3 DIMM Slots</li> <li>- Supports DDR3 2400+(OC)/2133/1866/1600/1333/1066 non-ECC, un-buffered memory (see <b>CAUTION 1</b>)</li> <li>- Max. capacity of system memory: 32GB (see <b>CAUTION 2</b>)</li> <li>- Supports Intel® Extreme Memory Profile (XMP) 1.3 / 1.2</li> <li>- Supports AMD Memory Profile Technology (AMP) up to AMP 2400</li> </ul>            |
| <b>Expansion Slot</b> | <ul style="list-style-type: none"> <li>- 1 x PCI Express 3.0 x16 Slot (PCIe2 @ x16 mode)</li> <li>* PCIe 3.0 is only supported with FM2+ CPU. With FM2 CPU, it only supports PCIe 2.0.</li> <li>- 1 x PCI Express 2.0 x1 Slot</li> <li>- Supports AMD Dual Graphics</li> </ul>   |
| <b>Graphics</b>       | <ul style="list-style-type: none"> <li>- Integrated AMD Radeon™ R7/R5 Series Graphics in A-series APU</li> <li>- DirectX 11.1, Pixel Shader 5.0 with FM2+ CPU. DirectX 11, Pixel Shader 5.0 with FM2 CPU.</li> <li>- Max. shared memory 2GB</li> <li>- Supports D-Sub with max. resolution up to 1920x1200 @ 60Hz</li> <li>- Supports AMD Steady Video™ 2.0: New video post processing capability for automatic jitter reduction on home/online video</li> </ul> |
| <b>Audio</b>          | <ul style="list-style-type: none"> <li>- 5.1 CH HD Audio (Realtek ALC662 Audio Codec)</li> <li>- Supports Surge Protection (ASRock Full Spike Protection)</li> </ul>   |
| <b>LAN</b>            | <ul style="list-style-type: none"> <li>- PCIe x1 Gigabit LAN 10/100/1000 Mb/s</li> <li>- Realtek RTL8111GR</li> <li>- Supports Wake-On-WAN</li> <li>- Supports Wake-On-LAN</li> <li>- Supports Lightning/ESD Protection (ASRock Full Spike Protection)</li> <li>- Supports LAN Cable Detection</li> <li>- Supports Energy Efficient Ethernet 802.3az</li> </ul>  |

|                         |   |
|-------------------------|---|
|                         | - Supports PXE  |
| <b>Rear Panel I/O</b>   | <ul style="list-style-type: none"> <li>- 1 x PS/2 Mouse Port</li> <li>- 1 x PS/2 Keyboard Port</li> <li>- 1 x D-Sub Port</li> <li>- 4 x USB 2.0 Ports (Supports ESD Protection (ASRock Full Spike Protection))</li> <li>- 1 x RJ-45 LAN Port with LED (ACT/LINK LED and SPEED LED)</li> <li>- HD Audio Jacks: Line in / Front Speaker / Microphone</li> </ul>   |
| <b>Storage</b>          | - 4 x SATA2 3.0 Gb/s Connectors, support RAID (RAID 0, RAID 1 and RAID 10), NCQ, AHCI and Hot Plug  |
| <b>Connector</b>        | <ul style="list-style-type: none"> <li>- 1 x Chassis Intrusion Header</li> <li>- 1 x TPM Header</li> <li>- 1 x CPU Fan Connector (4-pin)</li> <li>- 1 x Chassis Fan Connector (4-pin)</li> <li>- 1 x Power Fan Connector (3-pin)</li> <li>- 1 x 24 pin ATX Power Connector</li> <li>- 1 x 4 pin 12V Power Connector</li> <li>- 1 x Front Panel Audio Connector</li> <li>- 2 x USB 2.0 Headers (Support 4 USB 2.0 ports) (Supports ESD Protection (ASRock Full Spike Protection))</li> </ul> |
| <b>BIOS Feature</b>     | <ul style="list-style-type: none"> <li>- 64Mb AMI UEFI Legal BIOS with GUI support</li> <li>- Supports "Plug and Play"</li> <li>- ACPI 1.1 compliance wake up events</li> <li>- Supports jumperfree</li> <li>- SMBIOS 2.3.1 support</li> <li>- DRAM, CPU Voltage multi-adjustment</li> </ul>  |
| <b>Hardware Monitor</b> | <ul style="list-style-type: none"> <li>- CPU temperature sensing</li> <li>- Chassis temperature sensing</li> <li>- CPU Fan Tachometer</li> <li>- Chassis Fan Tachometer</li> <li>- CPU/Chassis Quiet Fan</li> <li>- CPU/Chassis Fan multi-speed control</li> <li>- CASE OPEN detection</li> <li>- Voltage monitoring: +12V, +5V, +3.3V, Vcore</li> </ul>  |
| <b>OS</b>               | <ul style="list-style-type: none"> <li>- Microsoft® Windows® 10 32-bit / 10 64-bit / 8.1 32-bit / 8.1 64-bit / 8 32-bit / 8 64-bit / 7 32-bit / 7 64-bit</li> <li>* For the updated Windows® 10 driver, please visit ASRock's website for details: <a href="http://www.asrock.com">http://www.asrock.com</a></li> <li>* Carrizo FM2r2 processor supports Windows® 10 64-bit / 8.1 64-bit / 7 32-bit / 7 64-bit only.</li> </ul>   |



|                       |   |
|-----------------------|---|
| <b>Certifications</b> | - FCC, CE, WHQL<br>- ErP/EuP ready (ErP/EuP ready power supply is required) |
|-----------------------|---|

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

### **WARNING**

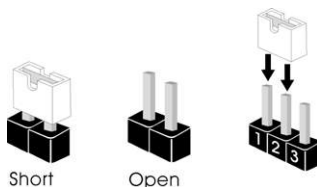
Please realize that there is a certain risk involved with overclocking, including adjusting the setting in the BIOS, applying Untied Overclocking Technology, or using third-party overclocking tools. Overclocking may affect your system's stability, or even cause damage to the components and devices of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



### **CAUTION!**

1. Whether 2400/2133/1866/1600MHz memory speed is supported depends on the CPU you adopt. If you want to adopt DDR3 2400/2133/1866/1600 memory module on this motherboard, please refer to the memory support list on our website for the compatible memory modules.  
ASRock website <http://www.asrock.com>
2. Due to the operating system limitation, the actual memory size may be less than 4GB for the reservation for system usage under Windows® 10 / 8.1 / 8 / 7. For Windows® 64-bit OS with 64-bit CPU, there is no such limitation.

### 1.3 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<br>(CLRCMOS1)<br>(see p.2, No. 15) | <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p><b>1_2</b></p>  <p>Default</p> </div> <div style="text-align: center;"> <p><b>2_3</b></p>  <p>Clear CMOS</p> </div> </div> |             |

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



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.

## 1.4 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 of the motherboard!

### Serial ATA2 Connectors

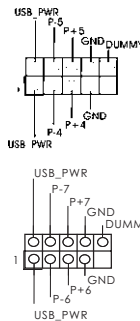
- (SATA\_1: see p.2, No. 8)
- (SATA\_2: see p.2, No. 9)
- (SATA\_3: see p.2, No. 6)
- (SATA\_4: see p.2, No. 7)



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.

### USB 2.0 Headers

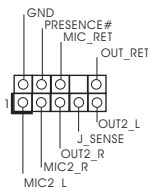
- (9-pin USB\_4\_5)  
(see p.2 No. 16)
- (9-pin USB\_6\_7)  
(see p.2 No. 14)



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.

### Front Panel Audio Header

- (9-pin HD\_AUDIO1)  
(see p.2 No. 17)



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

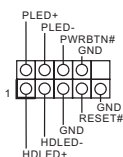


1. High Definition Audio supports Jack Sensing, but the panel wire on the chassis must support HDA to function correctly. Please follow the instruction in our manual and chassis manual to install your system.
2. If you use AC'97 audio panel, please install it to the front panel audio header as below:
  - 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® 8.1 / 8.1 64-bit / 7 / 7 64-bit 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. 12)



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):**

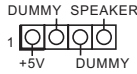
Connect to the hard drive activity LED on the chassis front panel. The LED is on when the hard drive is reading or writing data.

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.

**Chassis Speaker Header**

(4-pin SPEAKER 1)

(see p.2 No. 11)

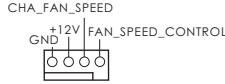


Please connect the chassis speaker to this header.

**Chassis and Power Fan Connectors**

(4-pin CHA\_FAN1)

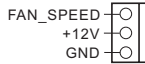
(see p.2 No. 10)



Please connect the fan cables to the fan connectors and match the black wire to the ground pin. CHA\_FAN1 fan speed can be controlled through UEFI or A-Tuning.

(3-pin PWR\_FAN1)

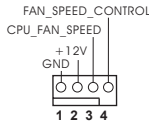
(see p.2 No. 1)



**CPU Fan Connectors**

(4-pin CPU\_FAN1)

(see p.2 No. 3)



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 ←

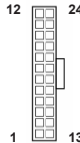


3-Pin Fan Installation

**ATX Power Connector**

(24-pin ATXPWR1)

(see p.2 No. 5)



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. 2)



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

## Chassis Intrusion Header

(2-pin CI1)

(see p.2, No. 13)

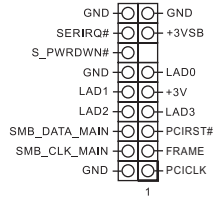


This motherboard supports CASE OPEN detection feature that detects if the chassis cover has been removed. This feature requires a chassis with chassis intrusion detection design.

## TPM Header

(17-pin TPMS1)

(see p.2, No. 18)



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.

## Spezifikationen

|                                |   |
|--------------------------------|---|
| <b>Plattform</b>               | <ul style="list-style-type: none"> <li>- Micro ATX-Formfaktor</li> <li>- Vollständig solides Kondensatordesign</li> <li>- PCB mit hochverdichtetem Glasfasergewebe</li> </ul>   |
| <b>CPU</b>                     | <ul style="list-style-type: none"> <li>- Unterstützt Prozessoren für Sockel FM2+ (95 W) / FM2 (100 W)</li> </ul>  |
| <b>Chipsatz</b>                | <ul style="list-style-type: none"> <li>- AMD A58 FCH (Bolton-D2)</li> </ul>   |
| <b>Speicher</b>                | <ul style="list-style-type: none"> <li>- Unterstützung von Dual-Kanal-Speichertechnologie</li> <li>- 2 x Steckplätze für DDR3</li> <li>- Unterstützt DDR3 2400+(OC)/2133/1866/1600/1333/1066 non-ECC, ungepufferter Speicher</li> <li>- Max. Kapazität des Systemspeichers: 32GB</li> <li>- Unterstützt Intel® Extreme Memory Profile (XMP)1.3/1.2</li> <li>- Unterstützt AMDs Memory Profile Technology (AMP) bis AMP 2400</li> </ul>  |
| <b>Erweiterungssteckplätze</b> | <ul style="list-style-type: none"> <li>- 1 x PCI Express 3.0 x16-Steckplatz (PCIe2: x6-Modus)</li> <li>* PCIe 3.0 wird nur mit FM2+-Prozessor unterstützt. FM2-Prozessor unterstützt nur PCIe 2.0.</li> <li>- 1 x PCI Express 2.0 x1-Steckplatz</li> <li>- Unterstützt AMD duale Grafikkarten</li> </ul>  |
| <b>Onboard-VGA</b>             | <ul style="list-style-type: none"> <li>- Integrierte Grafikkarte der AMD Radeon™ R7/R5-Serie in APU der A-Serie</li> <li>- DirectX 11.1, Pixel Shader 5.0 mit FM2+-Prozessor. DirectX 11, Pixel Shader 5.0 mit FM2-Prozessor.</li> <li>- Maximal gemeinsam genutzter Speicher 2GB</li> <li>- Unterstützt D-Sub mit einer maximalen Auflösung von 1920 x 1200 bei 60 Hz</li> <li>- Unterstützt AMD Steady Video™ 2.0: Neuartige Funktion der Videonachbearbeitung für automatische Reduzierung von Bildschwankungen bei Heim-/Online-Videos</li> </ul> |
| <b>Audio</b>                   | <ul style="list-style-type: none"> <li>- 5.1-Kanal-HD-Audio (Realtek ALC662-Audiocodec)</li> <li>- Unterstützt Überspannungsschutz (ASRocks Komplettschutz vor Spannungsspitzen)</li> </ul>   |
| <b>LAN</b>                     | <ul style="list-style-type: none"> <li>- PCIe x1 Gigabit LAN 10/100/1000 Mb/s</li> <li>- Realtek RTL8111GR</li> <li>- Unterstützt Wake-On-WAN</li> <li>- Unterstützt Wake-On-LAN</li> <li>- Unterstützt Schutz vor Blitzschlag/elektrostatischer Entladung (ASRocks Komplettschutz vor Spannungsspitzen)</li> </ul>   |

|  |  |
|--|--|
|  | <ul style="list-style-type: none"> <li>- Unterstützt LAN-Kabelerkennung</li> <li>- Unterstützt energieeffizientes Ethernet 802.3az</li> <li>- Unterstützt PXE</li> </ul>   |
| <b>E/A-Anschlüsse an der Rückseite</b> | <ul style="list-style-type: none"> <li>- 1 x PS/2-Mausanschluss</li> <li>- 1 x PS/2-Tastaturanschluss</li> <li>- 1 x D-Sub port</li> <li>- 4 x USB 2.0-Ports (Unterstützt Schutz vor elektrostatischer Entladung (ASRocks Komplettschutz vor Spannungsspitzen))</li> <li>- 1 x RJ-45 LAN Port mit LED (ACT/LINK LED und SPEED LED)</li> <li>- HD Audiobuchse: Audioeingang / Lautsprecher vorne / Mikrofon</li> </ul>  |
| <b>Speicher</b>                        | <ul style="list-style-type: none"> <li>- 4 x SATA 2-Anschluss mit 3,0 Gb/s, unterstützt RAID-(RAID 0, RAID 1 und RAID 10), NCQ-, AHCI- und „Hot Plugging“-Funktionen</li> </ul>  |
| <b>Anschlüsse</b>                      | <ul style="list-style-type: none"> <li>- 1 x Verteiler für Gehäuseeindringversuche</li> <li>- 1 x TPM-Stiftleiste</li> <li>- 1 x CPUlüfter-Anschluss (4-pin)</li> <li>- 1 x Gehäuselüfter-Anschluss (4-pin)</li> <li>- 1 x Stromlüfter-Anschluss (3-pin)</li> <li>- 1 x 24-pin ATX-Netz-Header</li> <li>- 1 x 4-pin anschluss für 12V-ATX-Netzteil</li> <li>- 1 x Anschluss für Audio auf der Gehäusevorderseite</li> <li>- 2 x USB 2.0-Anschlüsse (Unterstützung 4 zusätzlicher USB 2.0-Anschlüsse) (Unterstützt Schutz vor elektrostatischer Entladung (ASRocks Komplettschutz vor Spannungsspitzen))</li> </ul> |
| <b>BIOS</b>                            | <ul style="list-style-type: none"> <li>- 64Mb AMIs Legal BIOS UEFI mit GUI-Unterstützung</li> <li>- Unterstützung für "Plug and Play"</li> <li>- ACPI 1.1-Weckfunktionen</li> <li>- JumperFree-Modus</li> <li>- SMBIOS 2.3.1</li> <li>- DRAM und CPU Stromspannung Multianpassung</li> </ul>   |
| <b>Hardware Monitor</b>                | <ul style="list-style-type: none"> <li>- CPU-Temperatursensor</li> <li>- Motherboardtemperaturerkennung</li> <li>- Drehzahlmessung für CPUlüfter</li> <li>- Drehzahlmessung für Gehäuselüfter</li> <li>- Geräuscharmer CPU/Gehäuselüfter</li> <li>- Mehrstufige Geschwindigkeitsteuerung für CPU-/Gehäuselüfter</li> </ul>   |



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|                         | - GEHÄUSE OFFEN-Erkennung<br>- Spannungsüberwachung: +12V, +5V, +3.3V, Vcore  |
| <b>Betriebssysteme</b>  | - Unterstützt Microsoft® Windows® 8.1 32-Bit / 8.1 64-Bit / 7 32-Bit / 7 64-Bit   |
| <b>Zertifizierungen</b> | - FCC, CE, WHQL<br>- Gemäß Ökodesign-Richtlinie (ErP/EuP) (Stromversorgung gemäß Ökodesign-Richtlinie (ErP/EuP) erforderlich) |

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

<http://www.asrock.com>

## Spécifications

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| <b>Format</b>           | <ul style="list-style-type: none"> <li>- Facteur de forme Micro ATX</li> <li>- Conception à condensateurs solides</li> <li>- PCB High Density Glass Fabric</li> </ul>   |
| <b>CPU</b>              | <ul style="list-style-type: none"> <li>- Prend en charge les processeurs à socket FM2+ 95W / FM2 100W</li> </ul>  |
| <b>Chipsets</b>         | <ul style="list-style-type: none"> <li>- AMD A58 FCH (Bolton-D2)</li> </ul>   |
| <b>Mémoire</b>          | <ul style="list-style-type: none"> <li>- Compatible avec la Technologie de Mémoire à Canal Double</li> <li>- 2 x slots DIMM DDR3</li> <li>- Supporter DDR3 2400+(OC)/2133/1866/1600/1333/1066 non-ECC, sans amortissement mémoire</li> <li>- Capacité maxi de mémoire système: 32GB</li> <li>- Prend en charge le profil de mémoire extrême Intel® (XMP) 1.3/1.2</li> <li>- Prend en charge la technologie AMD Memory Profile (Profil de mémoire AMD - AMP) jusqu'à AMP 2400</li> </ul>   |
| <b>Slot d'extension</b> | <ul style="list-style-type: none"> <li>- 1 x slot PCI Express 3.0 x16 (PCIE2 à mode x16)</li> <li>* PCIE 3.0 est uniquement pris en charge le processeur FM2+. Avec le processeur FM2, seul PCIE 2.0 est pris en charge.</li> <li>- 1 x slot PCI Express 2.0 x1</li> <li>- Support de AMD Dual Graphics</li> </ul>  |
| <b>VGA sur carte</b>    | <ul style="list-style-type: none"> <li>- APU AMD Radeon™ R7/R5 série graphiques A-series</li> <li>- DirectX 11.1, Pixel Shader 5.0 avec processeur FM2+.</li> <li>DirectX 11, Pixel Shader 5.0 avec processeur FM2.</li> <li>- mémoire partagée max 2GB</li> <li>- Prend en charge le D-Sub avec une résolution maximale jusqu'à 1920x1600 @ 60Hz</li> <li>- Supporte AMD Steady Video™ 2.0: Nouvelle fonctionnalité de traitement post-vidéo pour réduction automatique des tremblements dans les clips vidéo en ligne/maison</li> </ul> |
| <b>Audio</b>            | <ul style="list-style-type: none"> <li>- Audio 5.1 CH HD (codec audio Realtek ALC662)</li> <li>- Supporte la protection contre les surtensions (protection complète contre surges ASRock)</li> </ul>  |
| <b>LAN</b>              | <ul style="list-style-type: none"> <li>- PCIE x1 Gigabit LAN 10/100/1000 Mo/s</li> <li>- Realtek RTL8111GR</li> <li>- Supporte du Wake-On-WAN</li> <li>- Prend en charge la fonction Wake-On-LAN</li> </ul>   |

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|                             | <ul style="list-style-type: none"> <li>- Supporte la protection contre la foudre/ESD (protection complète contre surges ASRock)</li> <li>- Prise en charge de la détection de câble LAN</li> <li>- Prend en charge la fonction d'économie d'énergie Ethernet 802.3az</li> <li>- Prend en charge PXE</li> </ul>   |
| <b>Panneau arrière</b>      | <ul style="list-style-type: none"> <li>- 1 x port souris PS/2</li> <li>- 1 x port clavier PS/2</li> <li>- 1 x port D-Sub</li> <li>- 4 x ports USB 2.0 par défaut (Supporte la protection ESD (protection complète contre surges ASRock))</li> <li>- 1 x port LAN RJ-45 avec LED (ACT/LED CLIGNOTANTE et LED VITESSE)</li> <li>- Prise HD Audio: Entrée Ligne / Haut-parleur frontal / Microphone</li> </ul>  |
| <b>Stockage</b>             | <ul style="list-style-type: none"> <li>- 4 x connecteurs 3,0 Gb/s SATA2, prise en charge des fonctions RAID (RAID 0, RAID 1 et RAID 10), NCQ, AHCI et « Connexion à chaud »</li> </ul>   |
| <b>Connecteurs</b>          | <ul style="list-style-type: none"> <li>- 1 x Embase d'intrusion châssis</li> <li>- 1 x embase TPM</li> <li>- 1 x Connecteur pour ventilateur de CPU (br. 4)</li> <li>- 1 x Connecteur pour ventilateur de Châssis (br. 4)</li> <li>- 1 x Connecteur pour ventilateur de pouvoir (br. 3)</li> <li>- 1 x br. 24 connecteur d'alimentation ATX</li> <li>- 1 x br. 4 connecteur d'alimentation 12V ATX</li> <li>- 1 x Connecteur audio panneau avant</li> <li>- 2 x En-tête USB 2.0 (prendre en charge 4 ports USB 2.0 supplémentaires) (Supporte la protection ESD (protection complète contre surges ASRock))</li> </ul> |
| <b>BIOS</b>                 | <ul style="list-style-type: none"> <li>- 64Mb AMI UEFI Legal BIOS avec support GUI</li> <li>- Support du "Plug and Play"</li> <li>- Compatible pour événements de réveil ACPI 1.1</li> <li>- Gestion jumperless</li> <li>- Support SMBIOS 2.3.1</li> <li>- DRAM et CPU Tension Multi-ajustement</li> </ul>   |
| <b>Surveillance système</b> | <ul style="list-style-type: none"> <li>- Détection de la température du processeur</li> <li>- Détection de la température du châssis</li> <li>- Tachéomètre du ventilateur processeur</li> <li>- Tachéomètre du ventilateur châssis</li> <li>- Fonction ventilateur silencieux processeur/châssis Quiet Fan</li> </ul>   |

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|                       | <ul style="list-style-type: none"> <li>- Contrôle simultané des vitesse du ventilateur processeur/ châssis</li> <li>- Détection d'OUVERTURE DE BOÎTIER</li> <li>- Monitoring de la tension: +12V, +5V, +3.3V, Vcore</li> </ul> |
| <b>OS</b>             | - Microsoft® Windows® 8.1 32-bit / 8.1 64-bit / 7 32-bit / 7 64-bit  |
| <b>Certifications</b> | <ul style="list-style-type: none"> <li>- FCC, CE, WHQL</li> <li>- Prêt pour ErP/EuP (alimentation Prêt pour ErP/EuP requise)</li> </ul>  |

\* Pour de plus amples informations sur les produits, s'il vous plaît visitez notre site web:  
<http://www.asrock.com>

## Specifiche

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|---------------------------|---|
| <b>Piattaforma</b>        | <ul style="list-style-type: none"> <li>- Micro ATX Form Factor</li> <li>- Design di condensatore solido</li> <li>- Circuito in vetro ad alta densità</li> </ul>   |
| <b>Processore</b>         | - Supporto per processori socket FM2+ 95W / FM2 100W  |
| <b>Chipset</b>            | - AMD A58 FCH (Bolton-D2)   |
| <b>Memoria</b>            | <ul style="list-style-type: none"> <li>- Supporto tecnologia Dual Channel Memory</li> <li>- 2 x slot DDR3 DIMM</li> <li>- Supporto DDR3 2400+(OC)/2133/1866/1600/1333/1066 non-ECC, memoria senza buffer</li> <li>- Capacità massima della memoria di sistema: 32GB</li> <li>- Supporto di Intel® XMP (Extreme Memory Profile) 1.3/1.2</li> <li>- Supporta tecnologia AMD Memory Profile (AMP) fino ad AMP 2400</li> </ul>  |
| <b>Slot di espansione</b> | <ul style="list-style-type: none"> <li>- 1 x slot PCI Express 3.0 x16 (PCIE2: modalità x16)</li> <li>* PCIE 3.0 è supportato solo con CPU FM2+. Con CPU FM2, supporta solo PCIE 2.0.</li> <li>- 1 x slot PCI Express 2.0 x1</li> <li>- Supporta AMD Dual Graphics</li> </ul>  |
| <b>VGA su scheda</b>      | <ul style="list-style-type: none"> <li>- Grafica serie AMD Radeon™ R7/R5 integrata in APU serie A</li> <li>- DirectX 11.1, Pixel Shader 5.0 con CPU FM2+. DirectX 11, Pixel Shader 5.0 con CPU FM2.</li> <li>- Memoria massima condivisa 2GB</li> <li>- Supporta D-Sub con risoluzione massima fino a 1920x1200 @ 60Hz</li> <li>- Supporta AMD Steady Video™ 2.0: Nuova capacità di post-elab orazione video per la riduzione automatica delle vibrazioni nei video a casa/on-line</li> </ul> |
| <b>Audio</b>              | <ul style="list-style-type: none"> <li>- Audio HD a 5.1 canali (codec audio Realtek ALC662)</li> <li>- Supporto protezione da sovratensione (protezione completa ASRock dai picchi di corrente)</li> </ul>  |
| <b>LAN</b>                | <ul style="list-style-type: none"> <li>- PCIE x 1 LAN Gigabit 10/100/1000 Mb/s</li> <li>- Realtek RTL8111GR</li> <li>- Supporta Wake-On-WAN</li> <li>- Supporta Wake-On-LAN</li> <li>- Supporto la protezione da fulmini/scariche elettrostatiche (ESD) (protezione completa ASRock dai picchi di corrente)</li> <li>- Supporta il rilevamento cavo LAN</li> <li>- Supporta Energy Efficient Ethernet 802.3az</li> <li>- Supporta PXE</li> </ul>  |

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| <b>Pannello posteriore I/O</b> | <ul style="list-style-type: none"> <li>- 1 x porta PS/2 per mouse</li> <li>- 1 x porta PS/2 per tastiera</li> <li>- 1 x Porta D-Sub</li> <li>- 4 x porte USB 2.0 già integrate (Supporto della protezione da scariche elettrostatiche (ESD) (protezione completa ASRock dai picchi di corrente))</li> <li>- 1 x porte LAN RJ-45 con LED (LED azione/collegamento e LED velocità)</li> <li>- Connettore HD Audio: ingresso linea / cassa frontale / microfono</li> </ul>  |
| <b>Archiviazione</b>           | <ul style="list-style-type: none"> <li>- 4 x connettori SATA2 3,0 Gb/s, supporto di RAID (RAID 0, RAID 1 e RAID 10) e delle funzioni NCQ, AHCI e "Hot Plug"</li> </ul>   |
| <b>Connettori</b>              | <ul style="list-style-type: none"> <li>- 1 x header di intrusione dello chassis</li> <li>- 1 x header TPM</li> <li>- 1 x Connettore CPU ventola (4-pin)</li> <li>- 1 x Connettore Chassis ventola (4-pin)</li> <li>- 1 x Connettore Alimentazione ventola (3-pin)</li> <li>- 1 x 24-pin collettore alimentazione ATX</li> <li>- 1 x 4-pin connettore ATX 12V</li> <li>- 1 x Connettore audio sul pannello frontale</li> <li>- 2 x Collettore USB 2.0 (supporta 4 porte USB 2.0) (Supporto della protezione da scariche elettrostatiche (ESD) (protezione completa ASRock dai picchi di corrente))</li> </ul> |
| <b>BIOS</b>                    | <ul style="list-style-type: none"> <li>- 64Mb AMI UEFI Legal BIOS con interfaccia di supporto</li> <li>- Supporta "Plug and Play"</li> <li>- Compatibile con ACPI 1.1 wake up events</li> <li>- Supporta jumperfree</li> <li>- Supporta SMBIOS 2.3.1</li> <li>- Regolazione multi-voltaggio DRAM e CPU</li> </ul>  |
| <b>Monitoraggio Hardware</b>   | <ul style="list-style-type: none"> <li>- Sensore per la temperatura del processore</li> <li>- Sensore temperatura scheda madre</li> <li>- Indicatore di velocità per la ventola del CPU</li> <li>- Indicatore di velocità per la ventola del Chassis</li> <li>- Ventola CPU/chassis silenziosa</li> <li>- Ventola CPU/chassis con controllo di varie velocità</li> <li>- Rilevamento CASE APERTO</li> <li>- Voltaggio: +12V, +5V, +3.3V, Vcore</li> </ul>  |
| <b>Compatibilità SO</b>        | <ul style="list-style-type: none"> <li>- Microsoft® Windows® 8.1 32 bit / 8.1 64 bit / 7 32 bit / 7 64 bit</li> </ul>  |
| <b>Certificazioni</b>          | <ul style="list-style-type: none"> <li>- FCC, CE, WHQL</li> <li>- Predisposto ErP/EuP (è necessaria l'alimentazione predisposta per il sistema ErP/EuP)</li> </ul>   |

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

## Especificación

|                             |   |
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| <b>Plataforma</b>           | <ul style="list-style-type: none"> <li>- Factor forma Micro ATX</li> <li>- Diseño de los Condensadores: All Solid</li> <li>- PCB de fibra de vidrio de alta densidad</li> </ul>   |
| <b>Procesador</b>           | - Admite zócalos de procesadores FM2+ 95W / FM2 100W  |
| <b>Chipset</b>              | - AMD A58 FCH (Bolton-D2)   |
| <b>Memoria</b>              | <ul style="list-style-type: none"> <li>- Soporte de Tecnología de Memoria de Doble Canal</li> <li>- 2 x DDR3 DIMM slots</li> <li>- Apoya DDR3 2400+(OC)/2133/1866/1600/1333/1066 non-ECC, memoria de un-buffered</li> <li>- Máxima capacidad de la memoria del sistema: 32GB</li> <li>- Compatible con Intel® Extreme Memory Profile (XMP)1.3/1.2</li> <li>- Admite tecnología de perfil de memoria AMD (AMP, Memory Profile Technology) hasta AMP 2400</li> </ul>  |
| <b>Ranuras de Expansión</b> | <ul style="list-style-type: none"> <li>- 1 x ranura PCI Express 3.0 x16 (PCIE2: modo x16)</li> <li>* Solo se admite PCIE 3.0 con FM2+ CPU. Con FM2 CPU, solo se admite PCIE 2.0.</li> <li>- 1 x ranura PCI Express 2.0 x1</li> <li>- Admite tarjeta gráfica dual de AMD</li> </ul>  |
| <b>VGA OnBoard</b>          | <ul style="list-style-type: none"> <li>- Gráficos integrados de serie R7/R5, HD AMD Radeon™ con APU de serie A</li> <li>- DirectX 11.1, Sombreador de píxeles 5.0 con FM2+ CPU.</li> <li>- DirectX 11, Sombreador de píxeles 5.0 con FM2 CPU.</li> <li>- 2GB de Memoria máxima compartida</li> <li>- Admite D-Sub con una resolución máxima de 1920x1200 a 60 Hz</li> <li>- Admite AMD Steady Video™ 2.0: Nueva capacidad de pospro cesamiento de vídeo para reducción automática de oscila ciones en vídeo doméstico y en línea</li> </ul> |
| <b>Audio</b>                | <ul style="list-style-type: none"> <li>- 5.1 Audio CH HD (Realtek ALC662 Audio Codec)</li> <li>- Admite protección contra subidas de tensión (Protección Integral contra Picos de ASRock)</li> </ul>  |
| <b>LAN</b>                  | <ul style="list-style-type: none"> <li>- LAN Gigabit PCIE x1 10/100/1000 Mb/s</li> <li>- Realtek RTL8111GR</li> <li>- Soporta Wake-On-WAN</li> <li>- Compatible con Wake-On-LAN</li> <li>- Admite protección contra rayos/ESD (Protección Integral contra Picos de ASRock)</li> <li>- Admite detección de conexión de cable LAN</li> <li>- Compatible con Ethernet de consumo eficiente de energía 802.3az</li> </ul>   |

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|  | - Compatible con PXE  |
| <b>Entrada/Salida de Panel Trasero</b> | <ul style="list-style-type: none"> <li>- 1 x puerto de ratón PS/2</li> <li>- 1 x puerto de teclado PS/2</li> <li>- 1 x Puerto D-Sub</li> <li>- 4 x puertos USB 2.0 predeterminados (Admite protección ESD (Protección Integral contra Picos de ASRock))</li> <li>- 1 x Puerto LAN RJ-45 con LED (LED de ACCIÓN/ ENLACE y LED de VELOCIDAD)</li> <li>- Conexión de audio: Entrada de línea / Altavoz frontal / Micrófono</li> </ul>  |
| <b>Almacenamiento</b>                  | - 4 x conectores SATA2 de 3,0 Gb/s compatibles con funciones RAID (RAID 0, RAID 1 y RAID 10), NCQ, AHCI y de "conexión en caliente" compatibles con funciones NCQ, AHCI y de "conexión en caliente"   |
| <b>Conectores</b>                      | <ul style="list-style-type: none"> <li>- 1 x Conector de detección de intrusión en el chasis</li> <li>- 1 x cabezal TPM</li> <li>- 1 x Conector de ventilador de CPU (4-pin)</li> <li>- 1 x Conector de ventilador de chasis (4-pin)</li> <li>- 1 x Conector de ventilador de alimentación (3-pin)</li> <li>- 1 x 24-pin cabezal de alimentación ATX</li> <li>- 1 x 4-pin conector de ATX 12V power</li> <li>- 1 x Conector de audio de panel frontal</li> <li>- 2 x Cabezal USB 2.0 (admite 4 puertos USB 2.0 adicionales) (Admite protección ESD (Protección Integral contra Picos de ASRock))</li> </ul> |
| <b>BIOS</b>                            | <ul style="list-style-type: none"> <li>- 64Mb AMI BIOS legal UEFI AMI compatible con GUI</li> <li>- Soporta "Plug and Play"</li> <li>- ACPI 1.1 compliance wake up events</li> <li>- Soporta "jumper free setup"</li> <li>- Soporta SMBIOS 2.3.1</li> <li>- Múltiple ajuste de DRAM y CPU Voltage</li> </ul>  |
| <b>Monitor Hardware</b>                | <ul style="list-style-type: none"> <li>- Sensor de temperatura de la CPU</li> <li>- Sensor de temperatura de la Chasis</li> <li>- Tacómetro del ventilador de CPU</li> <li>- Tacómetro del ventilador de Chasis</li> <li>- CPU/Chasis Ventilador silencioso</li> <li>- Control multivelocidad del ventilador de CPU/Chasis</li> <li>- Control de APERTURA DE CARCASA</li> <li>- Monitor de Voltaje: +12V, +5V, +3.3V, Vcore</li> </ul>  |
| <b>OS</b>                              | - En conformidad con Microsoft® Windows® 8.1 32 bits / 8.1 64 bits / 7 32 bits / 7 64 bits  |



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| <b>Certificaciones</b> | <ul style="list-style-type: none"><li>- FCC, CE, WHQL</li><li>- Cumple con la directiva ErP/EuP (se requiere una fuente de alimentación que cumpla con la directiva ErP/EuP)</li></ul> |
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\* Para más información sobre los productos, por favor visite nuestro sitio web:

<http://www.asrock.com>

## Спецификации

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| <b>Платформа</b>                             | <ul style="list-style-type: none"> <li>- форм-фактор Micro ATX</li> <li>- Использование только твердотельных конденсаторов</li> <li>- High Density Glass Fabric PCB</li> </ul>  |
| <b>Процессор</b>                             | - Поддержка разъема FM2+ 95 Вт / процессоров FM2 100 Вт   |
| <b>Набор микросхем</b>                       | - AMD A58 FCH (Bolton-D2)   |
| <b>Память</b>                                | <ul style="list-style-type: none"> <li>- Поддержка технологии Dual Channel DDR3 Memory Technology</li> <li>- 2 x гнезда DDR3 DIMM</li> <li>- Поддержите DDR3 2400+(OC)/2133/1866/1600/1333/1066 не- ECC, безбуферная память</li> <li>- Макс. 32 Гб</li> <li>- поддержка профиля Intel® Extreme Memory Profile (XMP)1.3/1.2</li> <li>- Поддержка технологии AMD Memory Profile (AMP) до AMP 2400</li> </ul>  |
| <b>Гнезда расширения</b>                     | <ul style="list-style-type: none"> <li>- 1 x слота PCI Express 3.0 x16 (PCIЕ2: режим x16)</li> <li>* PCIЕ 3.0 поддерживается только с процессором FM2+. С процессором FM2 поддерживается только PCIЕ 2.0.</li> <li>- 1 x слота PCI Express 2.0 x1</li> <li>- Поддерживаются режимы AMD двойные видеокарты</li> </ul>  |
| <b>Графика</b>                               | <ul style="list-style-type: none"> <li>- Видеоадаптер AMD Radeon™ R7/R5</li> <li>- DirectX 11.1, Pixel Shader 5.0 с процессором FM2+. DirectX 11, Pixel Shader 5.0 с процессором FM2.</li> <li>- Макс. объем разделяемой памяти 2GB</li> <li>- Поддержка D-Sub с максимальным разрешением до 1920x1200 @ 60 Гц</li> <li>- Поддержка технологии AMD Steady Video™ 2.0: новая функция постобработки видеоизображения для автоматического устранения дрожания при просмотре домашних и онлайн-видео записей</li> </ul> |
| <b>Аудиосистема</b>                          | <ul style="list-style-type: none"> <li>- 5.1-канальный звук высокой четкости HD Audio (аудиокодек Realtek ALC662)</li> <li>- Поддержка защиты от перенапряжений (Полная защита (ASRock от выбросов напряжения))</li> </ul>  |
| <b>ЛВС</b>                                   | <ul style="list-style-type: none"> <li>- PCIЕ x1 Gigabit LAN 10/100/1000 Мб/с</li> <li>- Realtek RTL8111GR</li> <li>- Поддержка Wake-On-WAN</li> <li>- Поддержка Wake-On-LAN</li> <li>- Поддержка защиты от молнии/электростатического электричества (Полная защита (ASRock от выбросов напряжения))</li> <li>- Поддержка определения кабеля ЛВС</li> <li>- Поддержка Energy Efficient Ethernet 802.3az</li> <li>- Поддержка PXE</li> </ul>   |
| <b>Разъемы ввода-вывода на задней панели</b> | <ul style="list-style-type: none"> <li>- 1 x порт мыши PS/2</li> <li>- 1 x порт клавиатуры PS/2</li> <li>- 1 x D-Sub порт</li> <li>- 4 x порта USB 2.0 на задней панели в стандартной конфигурации (Поддержка защиты от электростатического</li> </ul>  |

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|                                | <p>электричества (Полная защита (ASRock от выбросов напряжения))</p> <ul style="list-style-type: none"> <li>- Разъем 1 x RJ-45 LAN с светодиодным индикатором (индикатор ACT/LINK и индикатор SPEED)</li> <li>- Соединитель звуковой подсистемы: линейный вход / передняя колонка / микрофон</li> </ul>  |
| <b>Запоминающие устройства</b> | - 4 x разъема SATA2 3,0 Гбит/с, поддержка функций RAID (RAID 0, RAID 1 и RAID 10), NCQ, AHCI и «горячего подключения»  |
| <b>Колодки и плате</b>         | <ul style="list-style-type: none"> <li>- 1 x разъем датчика открытой крышки</li> <li>- 1 x колодка TPM</li> <li>- 1 x соединитель CPU FAN (4-контактный)</li> <li>- 1 x соединитель Chassis FAN (4-контактный)</li> <li>- 1 x соединитель Power FAN (3-контактный)</li> <li>- 1 x 24-контактный Колодка питания ATX</li> <li>- 1 x 4-контактный Разъем ATX 12 В</li> <li>- 1 x Аудиоразъем передней панели</li> <li>- 2 x Колодка USB 2.0 (одна колодка для поддержки 4 дополнительных портов USB 2.0 (Поддержка защиты от электростатического электричества (Полная защита (ASRock от выбросов напряжения)))</li> </ul> |
| <b>BIOS</b>                    | <ul style="list-style-type: none"> <li>- 64Мб AMI UEFI Legal BIOS с поддержкой графического интерфейса поль зователя</li> <li>- поддержка "Plug and Play"</li> <li>- ACPI 1.1, включение по событиям</li> <li>- поддержка режима настройки без перемычек</li> <li>- поддержка SMBIOS 2.3.1</li> <li>- Регулировка напряжений DRAM и CPU</li> </ul>   |
| <b>Контроль оборудования</b>   | <ul style="list-style-type: none"> <li>- Датчик температуры ЦП</li> <li>- Датчик температуры корпуса</li> <li>- Тахометр вентиляторов ЦП питания</li> <li>- Тахометр вентиляторов корпуса питания</li> <li>- Бесшумный вентилятор ЦП/корпуса</li> <li>- Управление оборотами вентилятора ЦП/корпуса</li> <li>- Определение открытой крышки</li> <li>- Контроль напряжения: +12V, +5V, +3.3V, Vcore</li> </ul>  |
| <b>Операцион</b>               | - Совместимость с Microsoft® Windows® 8.1 32-bit / 8.1 64-bit / 7 32-bit / 7 64-bit  |
| <b>ные системы Сертификаты</b> | <ul style="list-style-type: none"> <li>- FCC, CE, WHQL</li> <li>- Совместимость с ErP/EuP Ready (требуется блок питания совместимый с ErP/EuP)</li> </ul>  |

\* Для детальной информации продукта, пожалуйста посетите наш вебсайт:  
<http://www.asrock.com>

## Especificações

|                          |   |
|--------------------------|---|
| <b>Plataforma</b>        | <ul style="list-style-type: none"> <li>- Formato Micro ATX</li> <li>- Design de condensador sólido</li> <li>- PCB de Fibra de Vidro de Alta Densidade</li> </ul>  |
| <b>CPU</b>               | - Suporta processadores com Socket FM2+ a 95W / FM2 a 100W  |
| <b>Chipsets</b>          | - AMD A58 FCH (Bolton-D2)   |
| <b>Memória</b>           | <ul style="list-style-type: none"> <li>- Suporte à tecnologia de memória de duplo canal</li> <li>- 2 x slots de DDR3 DIMM</li> <li>- Suporta memória DDR3 2400+(OC)/2133/1866/1600/1333/1066, não ECC, sem tampão</li> <li>- Capacidade máxima de memória do sistema: 32GB</li> <li>- Suporta Extreme Memory Profile (XMP)1.3/1.2 da Intel®</li> <li>- Suporta Tecnologia de Perfil de Memória AMD (AMP) até AMP 2400</li> </ul>  |
| <b>Slots de Expansão</b> | <ul style="list-style-type: none"> <li>- 1 x slot de PCI Express 3.0 x16 (PCIe2: modo x16)</li> <li>* PCIe 3.0 é suportado apenas com CPU FM2+. CPU FM2 suporta apenas PCIe 2.0.</li> <li>- 1 x slot de PCI Express 2.0 x1</li> <li>- Suporta Dual Graphics da AMD</li> </ul>   |
| <b>VGA integrado</b>     | <ul style="list-style-type: none"> <li>- Placa gráfica integrada AMD Radeon™ série R7/R5 na APU série A</li> <li>- DirectX 11.1, Pixel Shader 5.0 com CPU FM2+. DirectX 11, Pixel Shader 5.0 com CPU FM2.</li> <li>- Memória partilhada máxima 2GB</li> <li>- Suporta D-Sub com resolução máxima até 1920x1200 @ 60Hz</li> <li>- Suporta AMD Steady Video™ 2.0: Nova capacidade de pós-processamento de vídeo para redução automática de vibrações em vídeo local/online</li> </ul> |
| <b>Áudio</b>             | <ul style="list-style-type: none"> <li>- Áudio HD de 5.1 canais (Codec de áudio Realtek ALC662)</li> <li>- Suporta Proteção Contra Surto (Proteção Total contra Picos ASRock)</li> </ul>  |
| <b>LAN</b>               | <ul style="list-style-type: none"> <li>- LAN Gigabit 10/100/1000 Mb/s PCIe x1</li> <li>- Realtek RTL8111GR</li> <li>- Suporta Wake-On-WAN</li> <li>- Suporta Wake-On-LAN</li> <li>- Suporta Proteção contra Relâmpago/ESD (Proteção Total contra Picos ASRock)</li> <li>- Suporta Detecção de cabo LAN</li> <li>- Suporta IEEE 802.3az</li> <li>- Suporta PXE</li> </ul>  |

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| <b>Entrada/Saída pelo painel</b> | <ul style="list-style-type: none"> <li>- 1 x porta para mouse PS/2</li> <li>- 1 x porta para teclado PS/2</li> <li>- 1 x porta D-Sub</li> <li>- 4 x portas USB 2.0 padrão (Suporta Proteção ESD (Proteção Total contra Picos ASRock))</li> <li>- 1 x porta LAN RJ-45 com LED (LED ACT/LIG e LED VELOCIDADE)</li> <li>- Ficha de áudio HD: Entrada de linha / Altifalante frontal / Microfone</li> </ul>  |
| <b>Armazenamento</b>             | - 4 x conectores SATA2 a 3,0 Gb/s, com suporte para RAID (RAID 0, RAID 1 e RAID 10), NCQ, AHCI e funções Hot Plug  |
| <b>Conectores</b>                | <ul style="list-style-type: none"> <li>- 1 x Conector de intrusão no chassis</li> <li>- 1 x Terminal TPM</li> <li>- 1 x Conector do ventilador da CPU (4 pinos)</li> <li>- 1 x Conector do ventilador da chassis (4 pinos)</li> <li>- 1 x Conector do ventilador da energia (3 pinos)</li> <li>- 1 x Conector de força do ATX de 24 pinos</li> <li>- 1 x Conector ATX 12 V de 4 pinos</li> <li>- 1 x Conector Áudio do painel frontal</li> <li>- 2 x cabezal USB 2.0 (suporta 4 portas USB 2.0) (Suporta Proteção ESD (Proteção Total contra Picos ASRock))</li> </ul> |
| <b>BIOS</b>                      | <ul style="list-style-type: none"> <li>- 64Mb BIOS UEFI oficial da AMI com suporte para GUI</li> <li>- Suporta dispositivos "Plug and Play"</li> <li>- ACPI 1.1 atendendo a eventos de "wake up"</li> <li>- Suporta dispositivos sem jumper</li> <li>- Suporte para SMBIOS 2.3.1</li> <li>- DRAM e CPU Voltage Multi-adjustment</li> </ul>   |
| <b>Monitor do HW</b>             | <ul style="list-style-type: none"> <li>- Sensores de temperatura do processador</li> <li>- Medição de temperatura da chassis</li> <li>- Tacômetros de ventilador do processador</li> <li>- Tacômetros de ventilador do chassis</li> <li>- Ventoinha silenciosa para a processador/chassis</li> <li>- Processador/chassis Fan Controle Multi-Velocidade</li> <li>- Detecção de CAIXA ABERTA</li> <li>- Monitoramento de voltagem: +12 V, +5 V, +3.3 V, Vcore</li> </ul>   |
| <b>Sistema Operacional</b>       | - Microsoft® Windows® 8.1 de 32 bits / 8.1 de 64 bits / 7 de 32 bits / 7 de 64 bits  |
| <b>Certificações</b>             | <ul style="list-style-type: none"> <li>- FCC, CE, WHQL</li> <li>- "ErP/EuP Ready" (é necessária alimentação eléctrica "ErP/EuP Ready")</li> </ul>  |

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

## Özellikler

|                          |   |
|--------------------------|---|
| <b>Platform</b>          | <ul style="list-style-type: none"><li>- Mikro ATX Form Faktörü</li><li>- Tam Katı Bağlayıcı tasarımı</li><li>- Yüksek Yoğunluklu Cam Elyafı Kumaş PCB</li></ul>   |
| <b>CPU</b>               | <ul style="list-style-type: none"><li>- Yuva FM2+ 95W / FM2 100W işlemciler için destek</li></ul>   |
| <b>Yonga seti</b>        | <ul style="list-style-type: none"><li>- AMD A58 FCH (Bolton-D2)</li></ul>   |
| <b>Bellek</b>            | <ul style="list-style-type: none"><li>- Çift Kanallı DDR3 Belleği Teknolojisi</li><li>- 2 x DDR3 DIMM yuva</li><li>- DDR3 2400+(OC)/2133/1866/1600/1333/1066 ECC olmayan, ara belleksiz bellek</li><li>- Sistem belleğinin maks. kapasitesi: 32 GB</li><li>- Intel® Extreme Bellek Profilini (XMP)1.3/1.2 destekler</li><li>- AMP 2400'e kadar AMD Bellek Profili Teknolojisini (AMP) destekler</li></ul>   |
| <b>Genişletme Yuvası</b> | <ul style="list-style-type: none"><li>- 1 x PCI Express 3.0 x16 yuva (PCIe2: x16 modu)</li><li>* PCIe 3.0 yalnızca FM2+ İşlemci ile desteklenir. FM2 İşlemciyle, yalnızca PCIe 2.0 destekler.</li><li>- 1 x PCI Express 2.0 x1 yuva</li><li>- AMD Dual Graphics'i destekler</li></ul>   |
| <b>Grafikler</b>         | <ul style="list-style-type: none"><li>- A serisi APU'da tümleşik AMD Radeon™ R7/R5 serisi grafikler</li><li>- FM2+ İşlemciyle DirectX 11.1, Pixel Shader 5.0. FM2 İşlemciyle DirectX 11, Pixel Shader 5.0.</li><li>- Maks. paylaşılan bellek 2GB</li><li>- 60Hz'de 1920x1600'ya kadar maks. çözünürlükle D-Sub'e destekler</li><li>- AMD Steady Video™ 2.0'yu destekler: Ev/çevrimiçi videoda otomatik titreşim azaltma için yeni video işleme sonrası özelliği</li></ul> |
| <b>Ses</b>               | <ul style="list-style-type: none"><li>- 5.1 CH HD Ses (Realtek ALC662 Ses Codec Bileşeni)</li><li>- Dalgalanma Korumasını destekler (ASRock Tam Ani Yükseliş Koruması)</li></ul>  |
| <b>LAN</b>               | <ul style="list-style-type: none"><li>- PCIe x1 Gigabit LAN 10/100/1000 Mb/s</li><li>- Realtek RTL8111GR</li><li>- WAN üzerinden açma destekler</li><li>- LAN Açılışını Destekler</li><li>- Yıldırım/ESD Korumasını destekler (ASRock Tam Ani Yükseliş Koruması)</li><li>- LAN Kablo Algılama'yı destekler</li><li>- Enerji Verimliliğine Sahip Ethernet 802.3az işlevini destekler</li><li>- PXE özelliğini destekler</li></ul>  |

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| <b>Arka Panel G/3</b>  | <ul style="list-style-type: none"> <li>- 1 x PS/2 Fare Portu</li> <li>- 1 x PS/2 Klavye Portu</li> <li>- 1 x D-Sub Portu</li> <li>- 4 x Kullanıma Hazır USB 2.0 Portu (ESD Korumasını destekler (ASRock Tam Ani Yükseliş Koruması))</li> <li>- 1 x RJ-45 LAN Portu, LED'li (AKT/L'ANK LED'i ve HIZ LED)</li> <li>- HD Ses Jaki: Hat Girişi / Ön Hoparlör / Mikrofon</li> </ul>   |
| <b>Depolama</b>        | - 4 x SATA2 3,0Gb/sn konektör, donanım RAID (RAID 0, RAID 1 ve RAID 10), NCQ, AHCI ve "Sistem Aızakken Bileroen Takma" işlevlerini   |
| <b>Konektör</b>        | <ul style="list-style-type: none"> <li>- 1 x Kasaya Yetkisiz Erişim fiş</li> <li>- 1 x TPM bağlantısı</li> <li>- 1 x CPU FAN konektörü (4 pin)</li> <li>- 1 x Kasa FAN konektörü (4 pin)</li> <li>- 1 x Gьз FAN konektörü (3 pin)</li> <li>- 1 x 24 pin ATX güç konektörü</li> <li>- 1 x 4 pin 12V güç konektörü</li> <li>- 1 x Ön panel ses konektörü</li> <li>- 2 x USB 2.0 fiş (4 USB 2.0 portu destekler) (ESD Korumasını destekler (ASRock Tam Ani Yükseliş Koruması))</li> </ul> |
| <b>BIOS Özelliđi</b>   | <ul style="list-style-type: none"> <li>- GUI Desteđi ile 64Mb AMI UEFI Legal BIOS</li> <li>- GUI destekli AMI UEFI Geçerli BIOS</li> <li>- "Tak alıřtır"ı destekler</li> <li>- ACPI 1.1 Uyumlu Uyandırma Olayları</li> <li>- Jumpersız ayarlamayı destekler</li> <li>- AMBIOS 2.3.1 Desteđi</li> <li>- DRAM ve CPU Voltaj oklu ayarı</li> </ul>  |
| <b>Donanım Monitör</b> | <ul style="list-style-type: none"> <li>- CPU Sıcaklık Duyarlılıđı</li> <li>- Kasa Sıcaklık Duyarlılıđı</li> <li>- CPU Fan Takometresi</li> <li>- Kasa Fan Takometresi</li> <li>- CPU/Kasa Sessiz Fanı</li> <li>- CPU/Kasa Fan oklu-Hız Kontrolü</li> <li>- KASA AIK algılaması</li> <li>- Voltaj İzleme: +12V, +5V, +3,3V, CPU Vcore</li> </ul>  |
| <b>İS</b>              | - Microsoft® Windows® 8.1 32-bit / 8.1 64-bit / 7 32-bit / 7 64-bit  |
| <b>Sertifikalar</b>    | <ul style="list-style-type: none"> <li>- FCC, CE, WHQL</li> <li>- ErP/EuP Hazır (ErP/EuP hazır güç kaynađı gerekli)</li> </ul>   |

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

## 설명서

|         |   |
|---------|---|
| 플랫폼     | - Micro ATX 폼 팩터<br>- 모든 솔리드 콘덴서 구조<br>- 고 밀도 유리 직물 PCB   |
| CPU     | - 소켓 FM2+ 95W / FM2 100W 프로세서에 대한 지원  |
| 칩셋      | - AMD A58 FCH (Bolton-D2)   |
| 메모리     | - 듀얼 채널 메모리 기술 지원<br>- DDR3 DIMM 슬롯 2 개<br>- DDR3 2400+(OC)/2133/1866/1600/1333/1066 비-ECC, 언버퍼드 메모리를 지원<br>- 최대 시스템 메모리 용량 : 32GB<br>- Intel® 익스트림 메모리 프로파일 (XMP) 1.3/1.2 지원<br>- 최대 AMP 2400 의 AMD 메모리 프로파일 기술 (AMP) 지원   |
| 확장 슬롯   | - 1 x PCI Express 3.0 x16 슬롯 (PCIe2: x16 모드)<br>* PCIe 3.0 은 FM2+ CPU 에서만 지원됩니다 . FM2 CPU 의 경우 PCIe 2.0 만 지원합니다 .<br>- 1 x PCI Express 2.0 x1 슬롯<br>- AMD 듀얼 그래픽 지원   |
| 온보드 VGA | - A 시리즈 APU 에 통합된 AMD Radeon™ R7/R5 시리즈 그래픽<br>- FM2+ CPU 의 경우 DirectX 11.1, Pixel Shader 5.0 탑재 .<br>FM2 CPU 의 경우 DirectX 11, Pixel Shader 5.0 탑재 .<br>- 최대 공유 메모리 2GB<br>- 최대 해상도 1920x1200 @ 60Hz 까지 D-Sub 지원<br>- AMD Steady Video™ 2.0 지원 : 홈 / 온라인 비디오의 자동 떨림감소를 위한 새로운 비디오 포스트 프로세싱 능력 |
| 오디오     | - 5.1 CH HD 오디오 (Realtek ALC662 오디오 코덱)<br>- 서지 보호 (ASRock 풀 스파이크 보호) 지원  |
| 랜       | - PCIE 1 개 , Gigabit LAN 10/100/1000 Mb/s<br>- Realtek RTL8111GR<br>- Wake-On-WAN 지원<br>- Wake-On-LAN 지원<br>- 조명 / ESD 보호 (ASRock 풀 스파이크 보호) 지원<br>- LAN 케이블 감지 지원<br>- 절전형 이더넷 802.3az 지원<br>- PXE 지원  |
| 후면판 I/O | - 1 개 PS/2 마우스 포트<br>- 1 개 PS/2 키보드 포트<br>- 1 개의 D-Sub 포트<br>- 4 개더플트 USB 2.0 포트 (ESD 보호 (ASRock 풀 스파이크 보호) 지원)   |



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|              | <ul style="list-style-type: none"> <li>- 1 개 LED(ACT/LINK LED 및 SPEED LED) 가 있는 RJ-45 LAN 포트</li> <li>- 오디오 잭 : 라인 인 / 전방 스피커 / 마이크</li> </ul>  |
| 저장 장치        | <ul style="list-style-type: none"> <li>- 4 개 의 SATA2 3.0Gb/s 커넥터 , RAID (RAID 0, RAID 1 및 RAID 10), NCQ, AHCI 및 “ 핫 플러그 ” 기능 지원</li> </ul>  |
| 온보드 헤더 및 커넥터 | <ul style="list-style-type: none"> <li>- 새시 침입 헤더 1 개</li> <li>- TPM 헤더 1 개</li> <li>- CPU 팬 커넥터 1 개 (4 핀 )</li> <li>- 새시 팬 커넥터 1 개 (4 핀 )</li> <li>- 전원 팬 커넥터 1 개 (3 핀 )</li> <li>- 24 핀 ATX 전원 헤더 1 개</li> <li>- 4 핀 ATX 12V 파워 콘넥터 1 개</li> <li>- 전면부 오디오 콘넥터 1 개</li> <li>- USB 2.0 헤더 2 개 (USB 2.0 포트 4 개 지원 ) (ESD 보호 (ASRock 풀 스파이크 보호 ) 지원 )</li> </ul> |
| BIOS         | <ul style="list-style-type: none"> <li>- 64Mb GUI 지원을 제공하는 AMI UEFI 적합형 BIOS</li> <li>- “플러그 앤 플레이” 지원</li> <li>- ACPI 1.1 웨이크 - 업 이벤트와의 호환</li> <li>- 점퍼 프리 지원</li> <li>- 점퍼 프리 지원 ; SMBIOS 2.3.1 지원</li> <li>- DRAM 및 CPU 전압 멀티조정</li> </ul>  |
| 하드웨어 모니터     | <ul style="list-style-type: none"> <li>- CPU 온도 감지</li> <li>- 새시 온도 감지</li> <li>- CPU 팬 회전속도계</li> <li>- 새시 팬 회전속도계</li> <li>- CPU/ 새시 저소음 팬</li> <li>- CPU/ 새시 팬 다중 속도 제어</li> <li>- 케이스 열림 감지</li> <li>- 전압 감시 기능 : +12V,+5V,+3.3V,Vcore</li> </ul>   |
| OS           | <ul style="list-style-type: none"> <li>- 마이크로 소프트 Windows® 8.1 32 비트 /8.1 64 비트 /7 32 비트 /7 64 비트</li> </ul>  |
| 인증서          | <ul style="list-style-type: none"> <li>- FCC, CE, WHQL</li> <li>- ErP/EuP 지원 (ErP/EuP 지원 전원 공급기가 요구됨 )</li> </ul>   |

\* 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"> <li>- Micro ATX フォームファクター</li> <li>- オール固体コンデンサー設計</li> <li>- 高密度ガラス繊維 PCB</li> </ul>   |
| CPU       | <ul style="list-style-type: none"> <li>- Socket FM2+ 95W / FM2 100W プロセッサのサポート</li> </ul>  |
| チップセット    | <ul style="list-style-type: none"> <li>- AMD A58 FCH (Bolton-D2)</li> </ul>  |
| メモリー      | <ul style="list-style-type: none"> <li>- デュアルチャンネル DDR3 メモリーテクノロジー</li> <li>- DDR3 DIMM スロット x 2</li> <li>- DDR3 2400+(OC)/2133/1866/1600/1333/1066 non-ECC, un-buffered メモリーに対応</li> <li>- システムメモリの最大容量: 32GB</li> <li>- Intel® Extreme Memory Profile (XMP)1.3/1.2 をサポート</li> <li>- 最大 AMP 2400 までの AMD メモリプロファイルテクノロジー (AMP)に対応</li> </ul>                              |
| 拡張スロット    | <ul style="list-style-type: none"> <li>- 1 x PCI Express 3.0 x16 スロット (PCIe2: x16 モード)</li> <li>* PCIe 3.0 は FM2+ CPU でのみサポートされます。FM2 CPU では、PCIe 2.0 のみをサポートします。</li> <li>- 1 x PCI Express 2.0 x1 スロット</li> <li>- AMD Dual Graphics に対応</li> </ul>   |
| グラフィック    | <ul style="list-style-type: none"> <li>- A シリーズ APU に統合された AMD Radeon™ R7/R5 シリーズグラフィックス</li> <li>- FM2+ CPU を搭載した DirectX 11.1, Pixel Shader 5.0。</li> <li>- FM2 CPU を搭載した DirectX 11, Pixel Shader 5.0。</li> <li>- 最大の共有メモリ 2GB</li> <li>- 1920x1200 @ 60Hz の最大解像度で D-Sub をサポート</li> <li>- AMD Steady Video™ 2.0 のサポート: 家庭 / オンラインビデオの自動ジッター低減用の新しいビデオポスの処理機能</li> </ul> |
| オーディオ     | <ul style="list-style-type: none"> <li>- 5.1 CH HD オーディオ(Realtek ALC662 オーディオコーデック)</li> <li>- サージ保護(ASRock フルスパイク保護)をサポートします</li> </ul>   |
| LAN       | <ul style="list-style-type: none"> <li>- PCIe x1ギガビット LAN 10/100/1000 Mb/ 秒</li> <li>- Realtek RTL8111GR</li> <li>- ウェイクオン WAN をサポートします</li> <li>- ウェイクオンランをサポート</li> <li>- 雷 /ESD 保護((ASRock フルスパイク保護)をサポートします</li> <li>- LAN ケーブル検出をサポート</li> <li>- エネルギー効率のよいイーサネット 802.3az をサポート</li> <li>- PXE をサポート</li> </ul>   |
| リアパネル I/O | <ul style="list-style-type: none"> <li>- PS/2 マウスポート x 1</li> <li>- PS/2 キーボードポート x 1</li> </ul>   |

|           |  |
|-----------|--|
|           | <ul style="list-style-type: none"> <li>- D-Sub ポート x 1</li> <li>- Ready-to-Use USB 2.0 ポート x 4 (ESD 保護(ASRock フルスパイク保護)をサポートします)</li> <li>- LED(ACT/LINK LED および SPEED LED)付き</li> <li>- RJ-45 LAN ポート x 1</li> <li>- オーディオジャック: 入力、前部スピーカー、マイク入力</li> </ul>   |
| ストレージ     | <ul style="list-style-type: none"> <li>- 4 x SATA2 3.0Gb/秒コネクタが、RAID (RAID 0、RAID 1 および RAID 10)、NCQ、AHCI および “Hot Plug” (ホットプラグ) 機能をサポート</li> </ul>   |
| コネクタ      | <ul style="list-style-type: none"> <li>- シャーシ侵入ヘッダ x 1</li> <li>- TPM ヘッダ x 1</li> <li>- CPU ファンコネクタ x 1 (4ピン)</li> <li>- シャーシファンコネクタ x 1 (4ピン)</li> <li>- 電源ファンコネクタ x 1 (3ピン)</li> <li>- 24ピン ATX 電源コネクタ x 1</li> <li>- 4ピン 12V 電源コネクタ x 1</li> <li>- フロントパネルオーディオコネクタ x 1</li> <li>- USB 2.0 ヘッダ (USB 2.0 用4ポートをサポート) x 2 (ESD 保護(ASRock フルスパイク保護)をサポートします)</li> </ul> |
| BIOS 関連機能 | <ul style="list-style-type: none"> <li>- 64Mb AMI UEFI Legal BIOS(GUI サポート)</li> <li>- プラグ&amp;プレイをサポート</li> <li>- ACPI 1.1 準拠ウェイクアップイベント</li> <li>- jumperfree モードサポート</li> <li>- SMBIOS 2.3.1 サポート</li> <li>- DRAM および CPU ブリッジ電圧</li> </ul>   |
| モニター      | <ul style="list-style-type: none"> <li>- CPU 温度検知</li> <li>- マザーボード温度検知</li> <li>- CPU ファンタコメータ</li> <li>- シャーシファンタコメータ</li> <li>- CPU/シャーシ静音ファン</li> <li>- CPU/シャーシファンマルチ速度制御</li> <li>- ケースオープン検出</li> <li>- 電源モニター: +12V, +5V, +3.3V, Vcore</li> </ul>  |
| OS        | <ul style="list-style-type: none"> <li>- Microsoft® Windows® 8.1 32-bit / 8.1 64-bit / 7 32-bit / 7 64-bit</li> </ul>  |
| 認証        | <ul style="list-style-type: none"> <li>- FCC, CE, Microsoft® WHQL 認証済み</li> <li>- ErP/EuP 対応(ErP/EuP 対応の電源装置が必要です)</li> </ul>  |

\* 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"> <li>- Micro ATX 规格</li> <li>- 全固态电容器设计</li> <li>- 高密度防潮纤维电路板</li> </ul>   |
| 处理器                           | <ul style="list-style-type: none"> <li>- 支持 Socket FM2+ 95W / FM2 100W 处理器</li> </ul>  |
| 芯片组                           | <ul style="list-style-type: none"> <li>- AMD A58 FCH (Bolton-D2)</li> </ul>  |
| 系统内存                          | <ul style="list-style-type: none"> <li>- 支持双通道 DDR3 内存技术</li> <li>- 配备 2 个 DDR3 DIMM 插槽</li> <li>- 支持 DDR3 2400+(超频)/2133/1866/1600/1333/1066 non-ECC、un-buffered 内存</li> <li>- 最高支持 32GB 系统容量</li> <li>- 支持 Intel® Extreme Memory Profile(XMP)1.3/1.2</li> <li>- 支持最高 AMP 2400 的 AMD Memory Profile(AMP) 技术</li> </ul>                  |
| 扩展插槽                          | <ul style="list-style-type: none"> <li>- 1 x PCI Express 3.0 x16 插槽 (PCIe2: x16 模式)</li> <li style="padding-left: 20px;">* 仅 FM2+ CPU 支持 PCIe 3.0。对于 FM2 CPU, 只支持 PCIe 2.0。</li> <li>- 1 x PCI Express 2.0 x1 插槽</li> <li>- 支持 AMD 双显卡技术</li> </ul>  |
| 板载显卡                          | <ul style="list-style-type: none"> <li>- A 系列 APU 上集成 AMD Radeon™ R7/R5 显示核心</li> <li>- DirectX 11.1、Pixel Shader 5.0 (FM2+ CPU)。</li> <li>- DirectX 11、Pixel Shader 5.0 (FM2 CPU)。</li> <li>- 最大共享内存 2GB</li> <li>- 支持 D-Sub, 最高分辨率达 1920x1200 @ 60Hz</li> <li>- 支持 AMD Steady Video™ 2.0: 最新视频后处理能力, 可为家庭 / 在线视频提供自动降低抖动的功能</li> </ul> |
| 音效                            | <ul style="list-style-type: none"> <li>- 5.1 CH 高清音频 (Realtek ALC662 音频编解码器)</li> <li>- 支持防突波 (ASRock 全防护)</li> </ul>  |
| 板载 LAN 功能                     | <ul style="list-style-type: none"> <li>- PCIe x1 Gigabit LAN 10/100/1000 Mb/s</li> <li>- Realtek RTL8111GR</li> <li>- 支持广域网唤醒技术 (Wake-On-WAN)</li> <li>- 支持 Wake-On-LAN (网上唤醒)</li> <li>- 支持防雷击 / 防 ESD 静电 (ASRock 全防护)</li> <li>- 支持网路线侦测功能</li> <li>- 支持高效以太网 802.3az</li> <li>- 支持 PXE</li> </ul>                                     |
| Rear Panel I/O (后面板输入 / 输出接口) | <ul style="list-style-type: none"> <li>- 1 个 PS/2 鼠标接口</li> <li>- 1 个 PS/2 键盘接口</li> <li>- 1 个 D-Sub 接口</li> <li>- 4 个 USB 2.0 接口 (支持防 ESD 静电 (ASRock 全防护))</li> <li>- 1 个 RJ-45 局域网接口与 LED 指示灯 (ACT/LINK LED 和 SPEED LED)</li> </ul>  |

|       |   |
|-------|---|
|       | <ul style="list-style-type: none"> <li>- 高保真音频插孔：音频输入 / 前置喇叭 / 麦克风</li> </ul>   |
| 存储    | <ul style="list-style-type: none"> <li>- 4 x SATA2 3.0Gb/s 连接头，支持 RAID (RAID 0, RAID 1 和 RAID 10), NCQ, AHCI 和热插拔功能</li> </ul>  |
| 连接头   | <ul style="list-style-type: none"> <li>- 1 x 机箱开启警告功能接针</li> <li>- 1 x TPM 接针</li> <li>- 1 x CPU 风扇接头 (4 针)</li> <li>- 1 x 机箱风扇接头 (4 针)</li> <li>- 1 x 电源风扇接头 (3 针)</li> <li>- 1 x 24 针 ATX 电源接头</li> <li>- 1 x 4 针 12V 电源接头</li> <li>- 1 x 前置音频面板接头</li> <li>- 2 x USB 2.0 接口 (可支持 4 个额外的 USB 2.0 接口) (支持防 ESD 静电 (ASRock 全防护))</li> </ul> |
| BIOS  | <ul style="list-style-type: none"> <li>- 支持图形界面的 64Mb AMI UEFI Legal BIOS</li> <li>- 支持即插即用 (Plug and Play, PnP)</li> <li>- ACPI 1.1 电源管理唤醒功能</li> <li>- 支持 jumperfree 免跳线模式</li> <li>- SMBIOS 2.3.1 支持</li> <li>- DRAM 和 CPU 电压多功能调节器</li> </ul>   |
| 硬件监控器 | <ul style="list-style-type: none"> <li>- CPU 温度侦测</li> <li>- 机箱温度侦测</li> <li>- CPU 风扇转速计</li> <li>- 机箱风扇转速计</li> <li>- CPU/ 机箱静音风扇</li> <li>- CPU/ 机箱风扇多速控制</li> <li>- 机箱开启侦测</li> <li>- 电压范围: +12V、+5V、+3.3V、核心电压</li> </ul>   |
| 操作系统  | <ul style="list-style-type: none"> <li>- Microsoft® Windows® 8.1 32 位元 / 8.1 64 位元 / 7 32 位元 / 7 64 位元</li> </ul>   |
| 认证    | <ul style="list-style-type: none"> <li>- FCC, CE, WHQL</li> <li>- 支持 ErP/EuP (需要同时使用支持 ErP/EuP 的电源供应器)</li> </ul>   |

\* 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"> <li>- Micro ATX 規格</li> <li>- 全固態電容設計</li> <li>- 高密度防潮纖維電路板</li> </ul>   |
| 處理器                              | <ul style="list-style-type: none"> <li>- 支援插座 FM2+ 95W / FM2 100W 處理器</li> </ul>  |
| 晶片組                              | <ul style="list-style-type: none"> <li>- AMD A58 FCH (Bolton-D2)</li> </ul>   |
| 系統記憶體                            | <ul style="list-style-type: none"> <li>- 支援雙通道 DDR3 記憶體技術</li> <li>- 2 個 DDR3 DIMM 插槽</li> <li>- 支援 DDR3 2400+(超頻)/2133/1866/1600/1333/1066 non-ECC、un-buffered 記憶體</li> <li>- 最高支援 32GB 系統容量</li> <li>- 支援 Intel® Extreme Memory Profile(XMP)1.3/1.2</li> <li>- 支持最高 AMP 2400 的 AMD Memory Profile(AMP) 技術</li> </ul>        |
| 擴充插槽                             | <ul style="list-style-type: none"> <li>- 1 x PCI Express 3.0 x16 插槽 (PCIe2: x16 模式)<br/>* PCIe 3.0 僅支援 FM2+ CPU。使用 FM2 CPU 時，僅支援 PCIe 2.0。</li> <li>- 1 x PCI Express 2.0 x1 插槽</li> <li>- 支援 AMD 雙顯卡技術</li> </ul>  |
| 內建顯示                             | <ul style="list-style-type: none"> <li>- A 系列 APU 整合 AMD Radeon™ R7/R5 系列顯示晶片</li> <li>- FM2+ CPU 採用 DirectX 11.1、Pixel Shader 5.0。FM2 CPU 採用 DirectX 11、Pixel Shader 5.0。</li> <li>- 最大共享記憶體 2GB</li> <li>- 支援 D-Sub，最高解析度達 1920x1200 @ 60Hz</li> <li>- 支援 AMD Steady Video™ 2.0：最新影像後處理能力，可為家庭 / 線上影像提供自動降低手震的功能</li> </ul> |
| 音效                               | <ul style="list-style-type: none"> <li>- 5.1 CH HD 音訊 (Realtek ALC662 音訊轉碼器) 功能</li> <li>- 支援防突波 (ASRock 全防護)</li> </ul>  |
| 網路功能                             | <ul style="list-style-type: none"> <li>- PCIe x1 Gigabit LAN 10/100/1000 Mb/s</li> <li>- Realtek RTL8111GR</li> <li>- 支援遠端開機 (Wake-On-WAN)</li> <li>- 支援網路喚醒 (Wake-On-LAN)</li> <li>- 支援防雷擊 / 防 ESD 靜電 (ASRock 全防護)</li> <li>- 支援網路線偵測功能</li> <li>- 支援 Energy Efficient Ethernet 802.3az</li> <li>- 支援 PXE</li> </ul>         |
| Rear Panel I/O<br>(後背板輸入 / 輸出接口) | <ul style="list-style-type: none"> <li>- 1 個 PS/2 滑鼠接口</li> <li>- 1 個 PS/2 鍵盤接口</li> <li>- 1 個 D-Sub 接口</li> <li>- 4 個 USB 2.0 接口 (支援防 ESD 靜電 (ASRock 全防護))</li> </ul>  |

|      |   |
|------|---|
|      | <ul style="list-style-type: none"> <li>- 1 個 RJ-45 區域網接口與 LED 指示燈 (ACT/LINK LED 和 SPEED LED)</li> <li>- 高清晰音效插孔：音效輸入 / 前置喇叭 / 麥克風</li> </ul>  |
| 儲存裝置 | <ul style="list-style-type: none"> <li>- 4 x SATA2 3.0Gb/s 接頭，支援 RAID (RAID 0, RAID 1 和 RAID 10), NCQ, AHCI 和熱插拔功能</li> </ul>   |
| 接頭   | <ul style="list-style-type: none"> <li>- 1 x 機殼開啟警告功能接頭</li> <li>- 1 x TPM 接頭</li> <li>- 1 x CPU 風扇接頭 (4 針)</li> <li>- 1 x 機箱風扇接頭 (4 針)</li> <li>- 1 x 電源風扇接頭 (3 針)</li> <li>- 1 x 24 針 ATX 電源接頭</li> <li>- 1 x 4 針 12V 電源接頭</li> <li>- 1 x 前置音效接頭</li> <li>- 2 x USB 2.0 接頭 (可支援 4 個額外的 USB 2.0 接口) (支援防 ESD 靜電 (ASRock 全防護))</li> </ul> |
| BIOS | <ul style="list-style-type: none"> <li>- 64Mb AMI UEFI Legal BIOS (支援 GUI)</li> <li>- 支援即插即用 (Plug and Play, PnP)</li> <li>- ACPI 1.1 電源管理喚醒功能</li> <li>- 支援 jumperfree 免跳線模式</li> <li>- 支援 SMBIOS 2.3.1</li> <li>- DRAM、CPU 電壓多功能調節</li> </ul>   |
| 硬體監控 | <ul style="list-style-type: none"> <li>- CPU 溫度偵測</li> <li>- 機箱溫度偵測</li> <li>- CPU 風扇轉速計</li> <li>- 機箱風扇轉速計</li> <li>- CPU/ 機箱靜音風扇</li> <li>- CPU/ 機箱風扇多速控制</li> <li>- 機殼開啟偵測</li> <li>- 電壓範圍：+12V, +5V, +3.3V, 核心電壓</li> </ul>   |
| 操作系統 | <ul style="list-style-type: none"> <li>- Microsoft® Windows® 8.1 32 位元 / 8.1 64 位元 / 7 32 位元 / 7 64 位元</li> </ul>   |
| 認證   | <ul style="list-style-type: none"> <li>- FCC, CE, WHQL</li> <li>- 支援 ErP/EuP (需要同時使用支援 ErP/EuP 的電源供應器)</li> </ul>   |

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



## Spesifikasi

|                      |  |
|----------------------|--|
| <b>Podium</b>        | <ul style="list-style-type: none"> <li>- Faktor Form Mikro ATX</li> <li>- Desain Kapasitor Solid</li> <li>- PCB Struktur Kaca Kepadatan Tinggi</li> </ul>  |
| <b>CPU</b>           | - Didukung untuk prosesor Socket FM2+ 95W/FM2 100W   |
| <b>Grup Chip</b>     | - AMD A58 FCH (Bolton-D2)  |
| <b>Ingatan</b>       | <ul style="list-style-type: none"> <li>- Teknologi ingatan DDR3 dwisaluran</li> <li>- 2 x Alur DDR3 DIMM</li> <li>- Menggunakan DDR3 2400+(OC)/2133/1866/1600/1333/1066</li> <li>- Kapasitas paling banyak: 32GB</li> <li>- Mendukung Intel® Extreme Memory Profile (XMP)1.3/1.2</li> <li>- Mendukung Teknologi AMD Memory Profile (AMP)hingga AMP 2400</li> </ul>   |
| <b>Alur Ekspansi</b> | <ul style="list-style-type: none"> <li>- 1 x PCI Express 3.0 x16 slot (PCIE2: x16 mode)</li> <li>* PCIE 3.0 hanya didukung dengan FM2+ CPU. Dengan FM2 CPU, hanya mendukung PCIE 2.0.</li> <li>- 1 x PCI Express 2.0 x1 slot</li> <li>- Mendukung AMD Dual Graphics</li> </ul>   |
| <b>Diagram</b>       | <ul style="list-style-type: none"> <li>- Grafis seri AMD Radeon™ R7/R5 terintegrasi di APU seri A</li> <li>- DirectX 11.1, Pixel Shader 5.0 dengan FM2+ CPU.</li> <li>DirectX 11, Pixel Shader 5.0 dengan FM2 CPU.</li> <li>- Ingatan sama Max. 2GB</li> <li>- Mendukung D-Sub dengan resolusi maksimal hingga 1920x1200 @ 60Hz</li> <li>- Mendukung AMD Video™ 2.0 Tenang: Baru video pasca kemampuan pengolahan untuk pengurangan jutter otomatis pada rumah / online video</li> </ul> |
| <b>Audio</b>         | <ul style="list-style-type: none"> <li>- Audio HD 5.1 CH (Realtek ALC662 Audio Codec)</li> <li>- Mendukung Perlindungan Lonjakan Tegangan (Perlindungan Penuh Lonjakan Tegangan ASRock)</li> </ul>   |
| <b>LAN</b>           | <ul style="list-style-type: none"> <li>- PCIE x1 Gigabit LAN 10/100/1000 Mb/s</li> <li>- Realtek RTL8111GR</li> <li>- Mendukung Wake-On-WAN</li> <li>- Mendukung Wake-On-LAN</li> <li>- Mendukung Perlindungan Petir/ESD (Perlindungan Penuh Lonjakan Tegangan ASRock)</li> <li>- Mendukung Deteksi Kabel LAN</li> <li>- Mendukung Energy Efficient Ethernet 802.3az</li> <li>- Mendukung PXE</li> </ul>   |

|                           |  |
|---------------------------|--|
| <b>Papan Belakang I/O</b> | <ul style="list-style-type: none"> <li>- 1 x Port Mouse PS/2</li> <li>- 1 x Port Keyboard PS/2</li> <li>- 1 x Port D-Sub</li> <li>- 4 x Port USB 2.0 siap-dipakai (Mendukung Perlindungan ESD (Perlindungan Penuh Lonjakan Tegangan ASRock))</li> <li>- 1 x RJ-45 LAN Port LED (ACT/LINK LED dan SPEED LED)</li> <li>- HD Audio Jack: Line in / Penyuar Depan / mikropon</li> </ul>  |
| <b>Penyimpanan</b>        | <ul style="list-style-type: none"> <li>- 4 x penghubung SATA2 3.0Gb/s, dapat digunakan RAID (RAID 0, RAID 1 dan RAID 10), NCQ, AHCI dan fungsi fungsi "Hot Plug"</li> </ul>  |
| <b>Penghubung</b>         | <ul style="list-style-type: none"> <li>- 1 x Chassis Intrusion header</li> <li>- 1 x header TPM</li> <li>- 1 x Penghubung KIPAS CPU (4 pin)</li> <li>- 1 x Penghubung KIPAS casing (4 pin)</li> <li>- 1 x Penghubung KIPAS Power (3 pin)</li> <li>- 1 x Penghubung power 24 pin ATX</li> <li>- 1 x Penghubung power 4 pin 12V</li> <li>- 1 x Penghubung audio panel depan</li> <li>- 2 x USB 2.0 header (menggunakan 4 port USB 2.0) (Mendukung Perlindungan ESD (Perlindungan Penuh Lonjakan Tegangan ASRock))</li> </ul> |
| <b>Ciri-ciri BIOS</b>     | <ul style="list-style-type: none"> <li>- 64Mb AMI UEFI Legal BIOS dengan dukungan GUI</li> <li>- Menggunakan "Plug and Play"</li> <li>- ACPI 1.1 Compliance Wake Up Events</li> <li>- Menggunakan jumperfree</li> <li>- Penyokong AMBIOS 2.3.1</li> <li>- Penyesuaian berbagai tegangan DRAM dan CPU</li> </ul>  |
| <b>Penjaga Hardware</b>   | <ul style="list-style-type: none"> <li>- Perasa Suhu CPU</li> <li>- Perasa Suhu Casing</li> <li>- Pengukur Kipas CPU</li> <li>- Pengukur Kipas Casing</li> <li>- Kipas diam CPU/Casing</li> <li>- Kontrol Multi-Kecepatan Kipas CPU/Casing</li> <li>- Deteksi CASING TERBUKA</li> <li>- Penjagaan voltasi: +12V, +5V, +3.3V, Vcore</li> </ul>  |
| <b>OS</b>                 | <ul style="list-style-type: none"> <li>- dapat digunakan Microsoft® Windows® 8.1 32-bit / 8.1 64-bit / 7 32-bit / 7 64-bit</li> </ul>  |
| <b>Sertifikasi</b>        | <ul style="list-style-type: none"> <li>- FCC, CE, WHQL</li> <li>- ErP/EuP Ready (memerlukan catu daya ErP/EuP ready)</li> </ul>  |

\* 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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