

Version 1.0

Published July 2015

Copyright©2015 ASRock INC. All rights reserved.



Copyright Notice:

No part of this documentation may be reproduced, transcribed, transmitted, or translated in any language, in any form or by any means, except duplication of documentation by the purchaser for backup purpose, without written consent of ASRock Inc.

Products and corporate names appearing in this documentation may or may not be registered trademarks or copyrights of their respective companies, and are used only for identification or explanation and to the owners' benefit, without intent to infringe.

Disclaimer:

Specifications and information contained in this documentation are furnished for informational use only and subject to change without notice, and should not be construed as a commitment by ASRock. ASRock assumes no responsibility for any errors or omissions that may appear in this documentation.

With respect to the contents of this documentation, ASRock does not provide warranty of any kind, either expressed or implied, including but not limited to the implied warranties or conditions of merchantability or fitness for a particular purpose.

In no event shall ASRock, its directors, officers, employees, or agents be liable for any indirect, special, incidental, or consequential damages (including damages for loss of profits, loss of business, loss of data, interruption of business and the like), even if ASRock has been advised of the possibility of such damages arising from any defect or error in the documentation or product.



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.

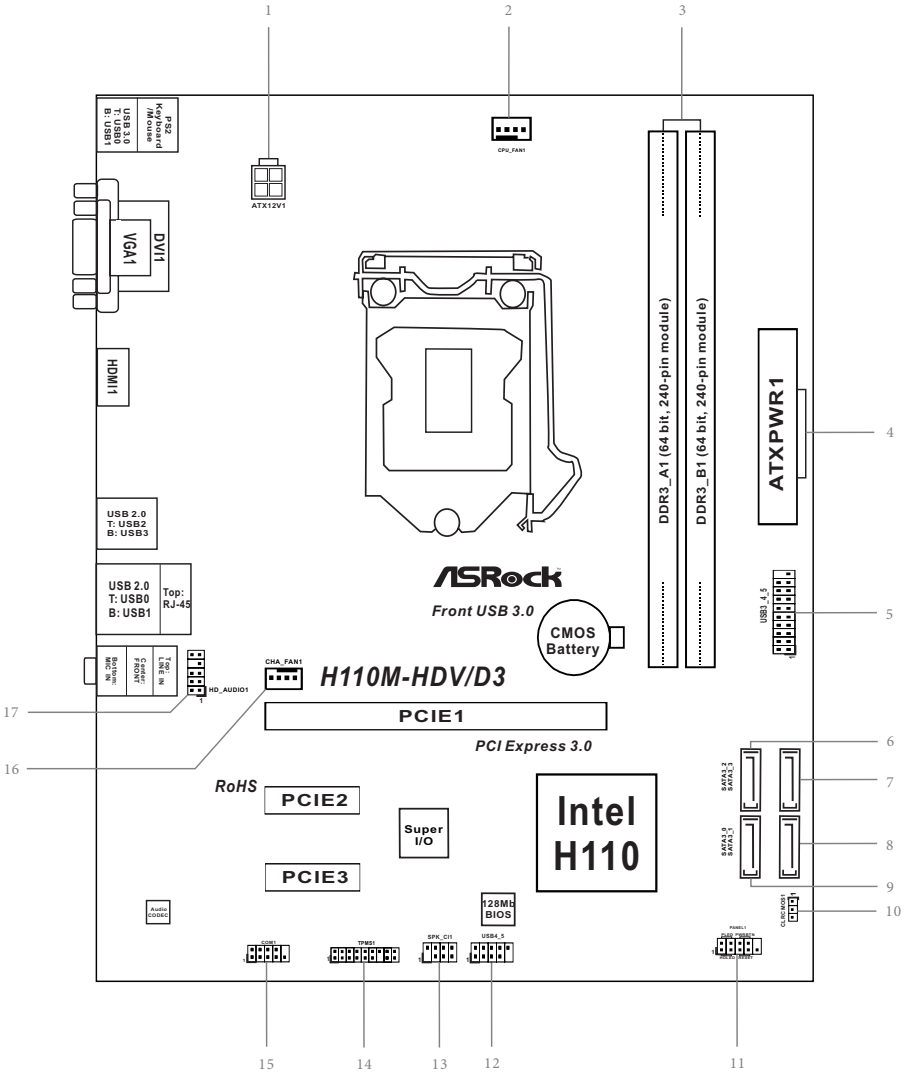
"Perchlorate Material-special handling may apply, see www.dtsc.ca.gov/hazardouswaste/perchlorate"

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

The terms HDMI™ and HDMI High-Definition Multimedia Interface, and the HDMI logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.



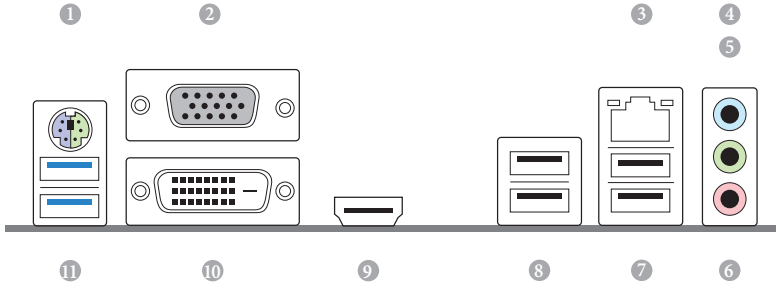
Motherboard Layout



English

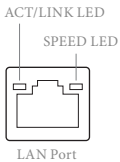
No.	Description
1	ATX 12V Power Connector (ATX12V1)
2	CPU Fan Connector (CPU_FAN1)
3	2 x 240-pin DDR3/DDR3L DIMM Slots (DDR3_A1, DDR3_B1)
4	ATX Power Connector (ATXPWR1)
5	USB 3.0 Header (USB3_4_5)
6	SATA3 Connector (SATA3_2)
7	SATA3 Connector (SATA3_3)
8	SATA3 Connector (SATA3_1)
9	SATA3 Connector (SATA3_0)
10	Clear CMOS Jumper (CLRMOS1)
11	System Panel Header (PANEL1)
12	USB 2.0 Header (USB4_5)
13	Chassis Intrusion and Speaker Header (SPK_CI1)
14	TPM Header (TPMS1)
15	COM Port Header (COM1)
16	Chassis Fan Connector (CHA_FAN1)
17	Front Panel Audio Header (HD_AUDIO1)

I/O Panel



No.	Description	No.	Description
1	PS/2 Mouse/Keyboard Port	7	USB 2.0 Ports (USB01)
2	D-Sub Port	8	USB 2.0 Ports (USB23)
3	LAN RJ-45 Port*	9	HDMI Port
4	Line In (Light Blue)**	10	DVI-D Port
5	Front Speaker (Lime)**	11	USB 3.0 Ports (USB3_01)
6	Microphone (Pink)**		

* There are two LEDs on each 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 configure 7.1 CH HD Audio, it is required to use an HD front panel audio module and enable the multi-channel audio feature through the audio driver.

Please set Speaker Configuration to "7.1 Speaker" in the Realtek HD Audio Manager.



Function of the Audio Ports in 7.1-channel Configuration:

Port	Function
Light Blue (Rear panel)	Rear Speaker Out
Lime (Rear panel)	Front Speaker Out
Pink (Rear panel)	Central /Subwoofer Speaker Out
Lime (Front panel)	Side Speaker Out

1 Introduction

Thank you for purchasing ASRock H110M-HDV/D3 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.



Because the motherboard specifications and the BIOS software might be updated, the content of this documentation will be subject to change without notice. In case any modifications of this documentation occur, the updated version will be available on ASRock's website without further notice. If you require technical support related to this motherboard, please visit our website for specific information about the model you are using. You may find the latest VGA cards and CPU support list on ASRock's website as well. ASRock website <http://www.asrock.com>.

1.1 Package Contents

- ASRock H110M-HDV/D3 Motherboard (Micro ATX Form Factor)
- ASRock H110M-HDV/D3 Quick Installation Guide
- ASRock H110M-HDV/D3 Support CD
- 2 x Serial ATA (SATA) Data Cables (Optional)
- 1 x I/O Panel Shield

1.2 Specifications

- Platform**
- Micro ATX Form Factor
 - Solid Capacitor design
 - High Density Glass Fabric PCB

- CPU**
- Supports 6th Generation Intel® Core™ i7/i5/i3/Pentium®/Celeron® Processors (Socket 1151)
 - Supports Intel® Turbo Boost 2.0 Technology

- Chipset**
- Intel® H110

- Memory**
- Dual Channel DDR3/DDR3L Memory Technology
 - 2 x DDR3/DDR3L DIMM Slots
 - Supports DDR3/DDR3L 1600/1333/1066 non-ECC, unbuffered memory
 - Max. capacity of system memory: 32GB
 - Supports Intel® Extreme Memory Profile (XMP) 1.3 / 1.2

- Expansion Slot**
- 1 x PCI Express 3.0 x16 Slot (PCIe1: x16 mode)
 - 2 x PCI Express 2.0 x1 Slots

- Graphics**
- * 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 with AVC, MVC (S3D) and MPEG-2 Full HW Encode1, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® Insider™, Intel® HD Graphics 510/530
 - Pixel Shader 5.0, DirectX 12
 - Max. shared memory 1792MB
 - Three graphics output options: D-Sub, DVI-D and HDMI
 - Supports HDMI with max. resolution up to 4K x 2K (4096x2304) @ 24Hz
 - Supports DVI-D with max. resolution up to 1920x1200 @ 60Hz
 - Supports D-Sub with max. resolution up to 1920x1200 @ 60Hz

- Supports Auto Lip Sync, Deep Color (12bpc), xvYCC and HBR (High Bit Rate Audio) with HDMI Port (Compliant HDMI monitor is required)
- Supports Accelerated Media Codecs: HEVC, VP8, VP9
- Supports HDCP with DVI-D and HDMI Ports
- Supports Full HD 1080p Blu-ray (BD) playback with DVI-D and HDMI Ports

Audio

- 7.1 CH HD Audio (Realtek ALC887 Audio Codec)
- * To configure 7.1 CH HD Audio, it is required to use an HD front panel audio module and enable the multi-channel audio feature through the audio driver.
 - Supports Surge Protection (ASRock Full Spike Protection)
 - ELNA Audio Caps

LAN

- PCIE x1 Gigabit LAN 10/100/1000 Mb/s
- Realtek RTL8111E
- Supports Wake-On-LAN
- Supports Lightning/ESD Protection (ASRock Full Spike Protection)
- Supports LAN Cable Detection
- Supports Energy Efficient Ethernet 802.3az
- Supports PXE

Rear Panel I/O

- 1 x PS/2 Mouse/Keyboard Port
- 1 x D-Sub Port
- 1 x DVI-D Port
- 1 x HDMI Port
- 4 x USB 2.0 Ports (Supports ESD Protection (ASRock Full Spike Protection))
- 2 x USB 3.0 Ports (Supports ESD Protection (ASRock Full Spike Protection))
- 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 SATA3 6.0 Gb/s Connectors, support NCQ, AHCI and Hot Plug

- Connector**
- 1 x COM Port Header
 - 1 x TPM Header
 - 1 x Chassis Intrusion and Speaker Header
 - 1 x CPU Fan Connector (4-pin) (Smart Fan Speed Control)
 - 1 x Chassis Fan Connector (4-pin) (Smart Fan Speed Control)
 - 1 x 24 pin ATX Power Connector
 - 1 x 4 pin 12V Power Connector
 - 1 x Front Panel Audio Connector
 - 1 x USB 2.0 Header (Supports 2 USB 2.0 ports) (Supports ESD Protection (ASRock Full Spike Protection))
 - 1 x USB 3.0 Header (Supports 2 USB 3.0 ports) (Supports ESD Protection (ASRock Full Spike Protection))

- BIOS Feature**
- 128Mb AMI UEFI Legal BIOS with multilingual GUI support
 - ACPI 1.1 Compliant wake up events
 - SMBIOS 2.3.1 Support
 - CPU, GT_CPU, DRAM, PCH 1.0V, VCCIO, VCCSA Voltage Multi-adjustment

- Hardware Monitor**
- CPU/Chassis temperature sensing
 - CPU/Chassis Fan Tachometer
 - CPU/Chassis 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, CPU Vcore, CPU

- OS**
- Microsoft® Windows® 10 64-bit / 8.1 64-bit / 7 32-bit / 7 64-bit
- * To install Windows® 7 OS, a modified installation disk with xHCI drivers packed into the ISO file is required. Please refer to page 62 for more detailed instructions.
- * For the updated Windows® 10 driver, please visit ASRock's website for details: <http://www.asrock.com>

**Certifica-
tions**

- FCC, CE, WHQL
- ErP/EuP ready (ErP/EuP ready power supply is required)

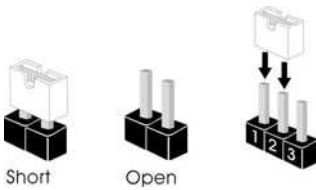
* For detailed product information, please visit our website: <http://www.asrock.com>



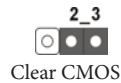
Please realize that there is a certain risk involved with overclocking, including adjusting the setting in the BIOS, applying Untied Overclocking Technology, or using third-party overclocking tools. Overclocking may affect your system's stability, or even cause damage to the components and devices of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

1.3 Jumpers Setup

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



Clear CMOS Jumper
(CLRMO51)
(see p.1, No. 10)



CLRMO51 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 CLRMO51 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.



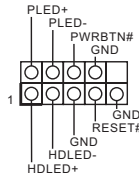
If you clear the CMOS, the case open may be detected. Please adjust the BIOS option “Clear Status” to clear the record of previous chassis intrusion status.

1.4 Onboard Headers and Connectors



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

System Panel Header
(9-pin PANEL1)
(see p.1, No. 11)



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):

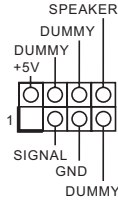
Connect to the power status indicator on the chassis front panel. The LED is on when the system is operating. The LED keeps blinking when the system is in S1/S3 sleep state. The LED is off when the system is in S4 sleep state or powered off (S5).

HDLED (Hard Drive Activity LED):

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

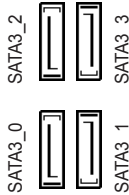
The front panel design may differ by chassis. A front panel module mainly consists of power switch, reset switch, power LED, hard drive activity LED, speaker and etc. When connecting your chassis front panel module to this header, make sure the wire assignments and the pin assignments are matched correctly.

Chassis Intrusion and Speaker Header
(7-pin SPK_CI1)
(see p.1, No. 13)



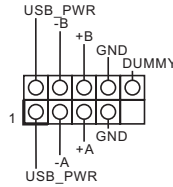
Please connect the chassis intrusion and the chassis speaker to this header.

Serial ATA3 Connectors
(SATA3_0)
(see p.1, No. 9)
(SATA3_1)
(see p.1, No. 8)
(SATA3_2)
(see p.1, No. 6)
(SATA3_3)
(see p.1, No. 7)



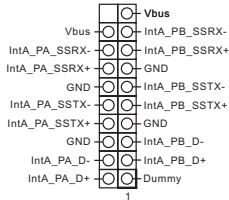
These four SATA3 connectors support SATA data cables for internal storage devices with up to 6.0 Gb/s data transfer rate.

USB 2.0 Header
(9-pin USB4_5)
(see p.1, No. 12)



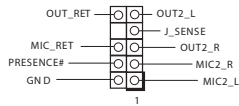
There is one header on this motherboard. Each USB 2.0 header can support two ports.

USB 3.0 Header
(19-pin USB3_4_5)
(see p.1, No. 5)



Besides two USB 3.0 ports on the I/O panel, there is one header on this motherboard. Each USB 3.0 header can support two ports.

Front Panel Audio Header
(9-pin HD_AUDIO1)
(see p.1, No. 17)

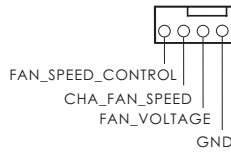


This header is for connecting audio devices to the front audio panel.



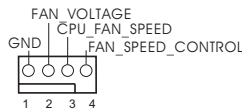
- High Definition Audio supports Jack Sensing, but the panel wire on the chassis must support HDA to function correctly. Please follow the instructions in our manual and chassis manual to install your system.
- If you use an AC'97 audio panel, please install it to the front panel audio header by the steps below:
 - Connect Mic_IN (MIC) to MIC2_L.
 - Connect Audio_R (RIN) to OUT2_R and Audio_L (LIN) to OUT2_L.
 - Connect Ground (GND) to Ground (GND).
 - MIC_RET and OUT_RET are for the HD audio panel only. You don't need to connect them for the AC'97 audio panel.
 - To activate the front mic, go to the "FrontMic" Tab in the Realtek Control panel and adjust "Recording Volume".

Chassis Fan Connector
(4-pin CHA_FAN1)
(see p.1, No. 16)



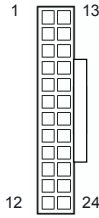
Please connect fan cables to the fan connector and match the black wire to the ground pin.

CPU Fan Connector
(4-pin CPU_FAN1)
(see p.1, No. 2)



This motherboard provides a 4-Pin CPU fan (Quiet Fan) connector. If you plan to connect a 3-Pin CPU fan, please connect it to Pin 1-3.

ATX Power Connector
(24-pin ATXPWR1)
(see p.1, No. 4)



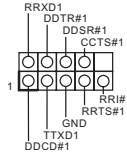
This motherboard provides a 24-pin ATX power connector. To use a 20-pin ATX power supply, please plug it along Pin 1 and Pin 13.

ATX 12V Power Connector
(4-pin ATX12V1)
(see p.1, No. 1)



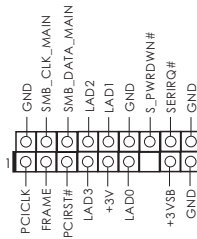
This motherboard provides a 4-pin ATX 12V power connector.

Serial Port Header
(9-pin COM1)
(see p.1, No. 15)



This COM1 header supports a serial port module.

TPM Header
(17-pin TPMS1)
(see p.1, No. 14)



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.

Technische Daten

- Plattform**
- Micro-ATX-Formfaktor
 - Feststoffkondensator-Design
 - Leiterplatte mit hochdichtem Glasgewebe

- Prozessor**
- Unterstützt die Prozessoren Intel® Core™ i7/i5/i3/Pentium®/Celeron® der 6. Generation (Sockel 1151)
 - Unterstützt Intel® Turbo Boost 2.0-Technologie

- Chipsatz**
- Intel® H110

- Speicher**
- Dualkanal-DDR3/DDR3L-Speichertechnologie
 - 2 x DDR3/DDR3L-DIMM-Steckplätze
 - Unterstützt DDR3/DDR3L 1600/1333/1066 non-ECC, ungepufferter Speicher
 - Systemspeicher, max. Kapazität: 32GB
 - Unterstützt Intel® Extreme Memory Profile (XMP)1.3/1.2

- Erweiterungssteckplatz**
- 1 x PCI-Express 3.0-x16-Steckplatz (PCIe1:x16-Modus)
 - 2 x PCI-Express 2.0-x1-Steckplätze

- Grafikkarte**
- * Integrierte Intel® HD Graphics-Visualisierung und VGA-Ausgänge können nur mit Prozessoren unterstützt werden, die GPU-integriert sind.
- Unterstützt integrierte Intel® HD Graphics-Visualisierung: Intel® Quick Sync Video mit AVC, MVC (S3D) und MPEG-2 Full HW Encode1, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® Insider™, Intel® HD Graphics 510/530
 - Pixel Shader 5.0, DirectX 12
 - Max. geteilter Speicher: 1792 MB
 - Drei VGA-Ausgangsoptionen: D-Sub, DVI-D und HDMI
 - Unterstützt HDMI mit maximaler Auflösung von 4K x 2K (4096 x 2304) bei 24 Hz
 - Unterstützt DVI-D mit maximaler Auflösung von 1920 x 1200 bei 60 Hz
 - Unterstützt D-Sub mit maximaler Auflösung von 1920 x 1200 bei 60 Hz

- Unterstützt Auto-Lippensynchronizität, hohe Farbtiefe (12 bpc), xvYCC und HBR (Audio mit hoher Bitrate) mit HDMI-Port (konformer HDMI-Monitor erforderlich)
- Unterstützt beschleunigte Mediacodecs: HEVC, VP8, VP9
- Unterstützt HDCP mit DVI-D- und HDMI-Ports
- Unterstützt Blu-ray- (BD) Wiedergabe (Full HD/1080p) mit DVI-D- und HDMI-Ports

Audio

- 7.1-Kanal-HD-Audio (Realtek ALC887-Audiocodec)
- *Zur Konfiguration von 7.1-Kanal-HD-Audio müssen Sie ein HD-Frontblenden-Audiomodul nutzen und den Mehrkanalton über den Audiotreiber aktivieren.
- Unterstützt Überspannungsschutz (ASRock Full Spike Protection)
 - ELNA-Audiokondensatoren

LAN

- PCIE x1 Gigabit LAN 10/100/1000 Mb/s
- Realtek RTL8111E
- Unterstützt Wake-On-LAN
- Unterstützt Blitzschutz/Schutz gegen elektrostatische Entladung (ASRock Full Spike Protection)
- Unterstützt LAN-Kabelerkennung
- Unterstützt energieeffizientes Ethernet 802.3az
- Unterstützt PXE

Rückblende, E/A

- 1 x PS/2-Maus-/Tastaturanschluss
- 1 x D-Sub-Port
- 1 x DVI-D-Port
- 1 x HDMI-Port
- 4 x USB 2.0-Ports (unterstützt Schutz gegen elektrostatische Entladung (ASRock Full Spike Protection))
- 2 x USB 3.0-Ports (unterstützt Schutz gegen elektrostatische Entladung (ASRock Full Spike Protection))
- 1 x RJ-45-LAN-Port mit LED (Aktivität/Verbindung-LED und Geschwindigkeit-LED)
- HD-Audioanschlüsse: Line-in / Vorderer Lautsprecher / Mikrofon

Speicher

- 4 x SATA-III-6,0-Gb/s-Anschlüsse, unterstützt NCQ, AHCI und Hot-Plugging

Anschluss

- 1 x COM-Anschluss-Stiftleiste
- 1 x TPM-Stiftleiste
- 1 x Gehäuseeingriff- und Lautsprecher-Stiftleiste
- 1 x CPU-Lüfteranschluss (4-polig)
(intelligente Lüftergeschwindigkeitssteuerung)
- 1 x Gehäuselüfteranschluss (4-polig)
(intelligente Lüftergeschwindigkeitssteuerung)
- 1 x 24-poliger ATX-Netzanschluss
- 1 x 4-poliger 12-V-Netzanschluss
- 1 x Audioanschluss an Frontblende
- 1 x USB 2.0-Stiftleiste (unterstützt 2 USB 2.0-Ports) (unterstützt Schutz gegen elektrostatische Entladung (ASRock Full Spike Protection))
- 1 x USB 3.0-Stiftleiste (unterstützt 2 USB 3.0-Ports) (unterstützt Schutz gegen elektrostatische Entladung (ASRock Full Spike Protection))

BIOS-Funktion

- 128-Mb-AMI-UEFI-Legal-BIOS mit Unterstützung mehrsprachiger grafischer Benutzerschnittstellen
- ACPI 1.1-konforme Aufweckereignisse
- SMBIOS 2.3.1-Unterstützung
- CPU, GT_CPU, DRAM, PCH 1,0V, VCCIO, VCCSA Mehrfachspannungsanpassung

Hardwareüberwachung

- CPU-/Gehäusetemperaturerkennung
- CPU-/Gehäuselüftertachometer
- Lautloser CPU-/Gehäuselüfter (automatische Anpassung der Gehäuselüftergeschwindigkeit durch CPU-Temperatur)
- CPU-/Gehäuselüfter-Mehrfachgeschwindigkeitssteuerung
- Gehäuse-offen-Erkennung
- Spannungsüberwachung: +12 V, +5 V, +3,3 V, CPU Vcore, CPU

Betriebssystem

- Microsoft® Windows® 10, 64 Bit / 8.1, 64 Bit / 7, 32 Bit / 7, 64 Bit

* Zur Installation des Windows® 7-Betriebssystems wird ein modifiziertes Installationslaufwerk mit xHCI-Treibern in der ISO-Datei benötigt. Detaillierte Anweisungen finden Sie auf Seite 62.

* Einzelheiten zum aktualisierten Windows® 10-Treiber entnehmen Sie bitte der ASRock-Webseite:
<http://www.asrock.com>

Zertifizierungen

- FCC, CE, WHQL
- ErP/EuP ready (ErP/EuP ready-Netzteil erforderlich)

* Detaillierte Produktinformationen finden Sie auf unserer Webseite: <http://www.asrock.com>



Bitte beachten Sie, dass mit einer Übertaktung, zu der die Anpassung von BIOS-Einstellungen, die Anwendung der Untied Overclocking Technology oder die Nutzung von Übertaktungswerkzeugen von Drittanbietern zählen, bestimmte Risiken verbunden sind. Eine Übertaktung kann sich auf die Stabilität Ihres Systems auswirken und sogar Komponenten und Geräte Ihres Systems beschädigen. Sie sollte auf eigene Gefahr und eigene Kosten durchgeführt werden. Wir übernehmen keine Verantwortung für mögliche Schäden, die durch eine Übertaktung verursacht wurden.

Spécifications

- Plateforme**
- Facteur de forme Micro ATX
 - Conception à condensateurs solides
 - PCB en tissu de verre haute densité

- Processeur**
- Prend en charge les processeurs 6^e génération Intel® Core™ i7/i5/i3/Pentium®/Celeron® (Socket 1151)
 - Prend en charge la technologie Intel® Turbo Boost 2.0

- Chipset**
- Intel® H110

- Mémoire**
- Technologie mémoire double canal DDR3/DDR3L
 - 2 x fentes DIMM DDR3/DDR3L
 - Prend en charge les mémoires sans tampon non ECC DDR3/DDR3L 1600/1333/1066
 - Capacité max. de la mémoire système : 32Go
 - Prend en charge Intel® Extreme Memory Profile (XMP)1.3/1.2

- Fente d'expansion**
- 1 x fente PCI Express 3.0 x 16 (PCIE1 :mode x16)
 - 2 x fentes PCI Express 2.0 x1

- Graphiques**
- * La technologie Intel® HD Graphics Built-in Visuals et les sorties VGA sont uniquement prises en charge par les processeurs intégrant un contrôleur graphique.
- Prend en charge la technologie Intel® HD Graphics Built-in Visuals : Intel® Quick Sync Video avec AVC, MVC (S3D) et MPEG-2 Full HW Encode1, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® Insider™, Intel® HD Graphics 510/530
 - Pixel Shader 5.0, DirectX 12
 - Mémoire partagée max. 1792Mo
 - Trois options de sortie VGA : D-Sub, DVI-D et HDMI
 - Prend en charge la technologie HDMI avec résolution maximale de 4K x 2K (4096x2304) @ 24 Hz
 - Prend en charge le mode DVI-D avec une résolution maximale de 1920x1200 @ 60Hz
 - Prend en charge le mode D-Sub avec une résolution maximale de 1920x1200 @ 60Hz

- Prend en charge les technologies Auto Lip Sync, Deep Color (12bpc), xvYCC et HBR (High Bit Rate Audio) avec port HDMI (un écran compatible HDMI est requis)
- Prend en charge les codecs multimédias accélérés : HEVC, VP8, VP9
- Prend en charge HDCP via ports DVI-D et HDMI
- Prend en charge la lecture Blu-ray (BD) Full HD 1080p via ports DVI-D et HDMI

Audio

- Audio 7.1 CH HD (Codec audio Realtek ALC887)
- *Pour configurer l'audio 7.1 CH HD, il est nécessaire d'utiliser un module audio HD pour panneau frontal et d'activer la fonction audio multicanal via le pilote audio.
- Protection contre les surtensions (Protection complète contre les pics ASRock)
 - Capuchons ELNA Audio

Réseau

- PCIE x1 Gigabit LAN 10/100/1000 Mo/s
- Realtek RTL8111E
- Prend en charge la fonction Wake-On-LAN
- Protection contre les orages/décharges électrostatiques (Protection complète contre les pics ASRock)
- Prend en charge la détection de câble LAN
- Prend en charge la fonction d'économie d'énergie Ethernet 802.3az
- Prend en charge PXE

Connectique du panneau arrière

- 1 x port souris/clavier PS/2
- 1 x port D-Sub
- 1 x port DVI-D
- 1 x port HDMI
- 4 x ports USB 2.0 (Protection contre les décharges électrostatiques (Protection complète contre les pics ASRock))
- 2 x ports USB 3.0 (Protection contre les décharges électrostatiques (Protection complète contre les pics ASRock))
- 1 x port RJ-45 LAN avec LED (LED ACT/LIEN et LED VITESSE)
- Connecteurs jack audio HD : Entrée ligne / haut-parleur avant / microphone

Stockage

- 4 x connecteurs SATA3 6,0 Gb/s, compatibles avec les fonctions NCQ, AHCI et « Hot Plug »

Connecteur

- 1 x embase pour port COM
- 1 x embase TPM
- 1 x prise DEL d'alimentation et emplacement sur châssis
- 1 x connecteur pour ventilateur de processeur (4 broches) (contrôle de vitesse de ventilateur intelligent)
- 1 x connecteur pour ventilateur de châssis (4 broches) (contrôle de vitesse de ventilateur intelligent)
- 1 x connecteur d'alimentation ATX 24 broches
- 1 x connecteur d'alimentation 12 V 4 broches
- 1 x connecteur audio panneau frontal
- 1 x embase USB 2.0 (2 ports USB 2.0 pris en charge) (Protection contre les décharges électrostatiques (Protection complète contre les pics ASRock))
- 1 x embase USB 3.0 (2 ports USB 3.0 pris en charge) (Protection contre les décharges électrostatiques (Protection complète contre les pics ASRock))

Caractéristiques du BIOS

- BIOS UEFI AMI 128 Mo avec prise en charge d'interface graphique multilingue
- Compatible ACPI 1.1 Wake Up Events
- Prend en charge SMBIOS 2.3.1
- Réglage de la tension CPU, GT_CPU, DRAM, PCH 1,0V, VC-CIO, VCCSA

Surveillance du matériel

- Détection de la température du processeur/châssis
- Tachéomètre ventilateur processeur/châssis
- Ventilateur silencieux processeur/châssis (réglage automatique de la vitesse du ventilateur du châssis d'après la température du processeur)
- Contrôle simultané des vitesses des ventilateurs processeur/châssis
- Détection CHASSIS OUVERT
- Surveillance de la tension d'alimentation : +12V, +5V, +3,3V, CPU Vcore, CPU

Système d'exploitation

- Microsoft® Windows® 10 64 bits / 8.1 64 bits / 7 32 bits / 7 64 bits

* Pour installer Windows® 7, un disque d'installation modifié avec les pilotes xHCI intégrés au fichier ISO est requis. Reportez-vous à la page 62 pour des instructions plus détaillées.

* Pour le pilote mis à jour pour Windows® 10, veuillez visiter le site Web d'ASRock pour plus de détails :<http://www.asrock.com>

Certifications

- FCC, CE, WHQL
- ErP/EuP Ready (alimentation ErP/EuP ready require)

* pour des informations détaillées de nos produits, veuillez visiter notre site : <http://www.asrock.com>



Il est important de signaler que l'overclocking présente certains risques, incluant des modifications du BIOS, l'application d'une technologie d'overclocking déliée et l'utilisation d'outils d'overclocking développés par des tiers. La stabilité de votre système peut être affectée par ces pratiques, voire provoquer des dommages aux composants et aux périphériques du système. L'overclocking se fait à vos risques et périls. Nous ne pourrions en aucun cas être tenus pour responsables des dommages éventuels provoqués par l'overclocking.

Specifiche

Piattaforma

- Fattore di forma Micro ATX
- Design condensatore solido
- PBC di fibra di vetro ad alta densità

CPU

- Supporta processori 6th Generation Intel® Core™ i7/i5/i3/ Pentium®/Celeron® (Socket 1151)
- Supporta la tecnologia Intel® Turbo Boost 2.0

Chipset

- Intel® H110

Memoria

- Tecnologia con memoria DDR3/DDR3L a doppio canale
- 2 alloggi DIMM DDR3/DDR3L
- Supporta la memoria DDR3/DDR3L 1600/1333/1066 non ECC, senza buffer
- Capacità max. della memoria di sistema: 32 GB
- Supporta Intel® Extreme Memory Profile (XMP)1.3/1.2

Alloggio d'espansione

- 1 alloggiamento PCI Express 3.0 x16 (PCI-E1:modalità x16)
- 2 alloggiamenti PCI Express 2.0 x1

Grafica

* Le uscite Intel® HD Graphics Built-in Visuals e VGA possono essere supportate solo con processori dotati di GPU integrata.

- Supporta la videografica integrata della scheda video HD Intel®: Intel® Quick Sync Video con AVC, MVC (S3D) e MPEG-2 Full HW Encode1, Intel® InTru™ 3D, tecnologia Intel® Clear Video HD, Intel® Insider™, Intel® HD Graphics 510/530
- Pixel Shader 5.0, DirectX 12
- Memoria condivisa max. 1792 MB
- Tre opzioni uscita VGA: D-Sub, DVI-D e HDMI
- Supporta HDMI con risoluzione massima fino a 4K x 2K (4096 x 2304) a 24Hz
- Supporta DVI-D con una risoluzione max. fino a 1920 x 1200 a 60 Hz
- Supporta D-Sub con una risoluzione max. fino a 1920 x 1200 a 60 Hz

- Supporto delle funzioni Auto Lip Sync, Deep Color (12bpc), xvYCC e HBR (High Bit Rate Audio) con porta HDMI (è necessario un monitor compatibile HDMI)
- Supporto accelerazione codec multimediale: HEVC, VP8, VP9
- Supporto di HDCP con le porte DVI-D e HDMI
- Supporto di riproduzione Full HD 1080p Blu-ray (BD) con le porte DVI-D e HDMI

Audio

- Audio HD 7.1 CH (codec audio Realtek ALC887)
- * Per configurare l'audio HD 7.1 canali, è necessario utilizzare un modulo pannello frontale audio HD ed attivare la funzione audio multicanale tramite il driver audio.
- Supporto protezione da sovrattensione (protezione completa ASRock dai picchi di corrente)
 - Cappucci audio ELNA

LAN

- PCIE x 1 LAN Gigabit 10/100/1000 Mb/s
- Realtek RTL8111E
- Supporta Wake-On-LAN
- Supporto la protezione da fulmini/scariche elettrostatiche (ESD) (protezione completa ASRock dai picchi di corrente)
- Supporta il rilevamento cavo LAN
- Supporta Energy Efficient Ethernet 802.3az
- Supporta PXE

I/O pannello posteriore

- 1 x porta mouse/tastiera PS/2
- 1 x porta D-Sub
- 1 x porta DVI-D
- 1 x porta HDMI
- 4 x Porte USB 2.0 (supporto protezione da scariche elettrostatiche (ESD) (protezione completa ASRock dai picchi di corrente))
- 2 x Porte USB 3.0 (supporto protezione da scariche elettrostatiche (ESD) (protezione completa ASRock dai picchi di corrente))
- 1 x porta LAN RJ-45 con LED (ACT/LINK LED e SPEED LED)
- Connettori audio HD: Ingresso linea / altoparlante frontale / microfono

**Archiviazi-
one**

- 4 x connettori SATA3 6.0 Gb/s supportano NCQ, AHCI e Hot Plug

Connettore

- 1 x collettore porta COM
- 1 x Collettore TMP
- 1 x collegamento altoparlante e intrusione telaio
- 1 x Connettore ventola CPU (4 pin) (Smart Fan Speed Control)
- 1 x connettore ventola telaio (4 pin) (Smart Fan Speed Control)
- 1 x connettore alimentazione ATX 24 pin
- 1 x Connettore alimentazione 12V 4-pin
- 1 x connettore audio pannello frontale
- 1 x Collettore USB 2.0 (supporta 2 porte USB 2.0) (supporto protezione da scariche elettrostatiche (ESD) (protezione completa ASRock dai picchi di corrente))
- 1 x Collettore USB 3.0 (supporta 2 porte USB 3.0) (supporto protezione da scariche elettrostatiche (ESD) (protezione completa ASRock dai picchi di corrente))

**Funzionalità
BIOS**

- AMI UEFI Legal BIOS 128Mb con interfaccia di supporto multilingue
- Eventi di riattivazione conformi a ACPI 1.1
- Supporto SMBIOS 2.3.1
- Regolazione variabile tensione CPU, GT_CPU, DRAM, PCH 1,0V, VCCIO, VCCSA

**Hardware
Monitor**

- Rilevamento temperatura CPU/telaio
- Tachimetro ventola CPU/telaio
- Ventola silenziosa CPU/telaio (regolazione automatica velocità in base alla temperatura della CPU)
- Ventola CPU/telaio con controllo di varie velocità
- Rilevamento CASE OPEN
- Monitoraggio tensione: +12V, +5V, +3,3V, CPU Vcore, CPU

SO

- Microsoft® Windows® 10 64-bit / 8.1 64-bit / 7 32-bit / 7 64-bit

* Per installare Windows® 7, è necessario un disco di installazione modificato con i driver xHCI integrati nel file ISO. Fare riferimento a pagina 62 per altre istruzioni dettagliate.

* Per il driver aggiornato di Windows® 10, visitare il sito ASRock all'indirizzo: <http://www.asrock.com>

Certificazioni

- FCC, CE, WHQL
- ErP/EuP Ready (è necessaria alimentazione ErP/EuP ready)

* Per informazioni dettagliate sul prodotto, visitare il nostro sito Web: <http://www.asrock.com>



Prestare attenzione al potenziale rischio previsto nella pratica di overclocking, inclusa la regolazione delle impostazioni nel BIOS, l'applicazione di tecnologia di Untied Overclocking o l'utilizzo di strumenti di overclocking di terze parti. L'overclocking può influenzare la stabilità del sistema o perfino provocare danni ai componenti e ai dispositivi del sistema. Occorre eseguirlo a proprio rischio e spese. Non ci riterremo responsabili per possibili danni provocati da overclocking.

Especificaciones

- Plataforma**
- Factor de forma Micro ATX
 - Diseño de condensador sólido
 - PCB de fibra de vidrio de alta densidad

- CPU**
- Admite la familia de procesadores Intel® Core™ i7/i5/i3/Pentium®/Celeron® (zócalo 1151) de la 6ª generación
 - Compatible con la tecnología de Intel® Turbo Boost 2.0

- Conjunto de chips**
- Intel® H110

- Memoria**
- Tecnología de memoria de Doble Canal DDR3/DDR3L
 - 2 ranuras DDR3/DDR3L DIMM
 - Compatible con memoria no-ECC, sin búfer DDR3/DDR3L 1600/1333/1066
 - Capacidad máxima de la memoria del sistema: 32GB
 - Compatible con Extreme Memory Profile (XMP) 1.3/1.2 de Intel®

- Ranura de expansión**
- 1 ranura PCI Express 3.0 x16 (PCIE1:modo x16)
 - 2 ranuras PCI Express 2.0 x1

- Gráficos**
- * La Tecnología visual integrada de gráficos HD de Intel® y las salidas de VGA son compatibles únicamente con procesadores con GPU integrado.
- Compatible con la Tecnología visual integrada de gráficos HD de Intel®: Intel® Quick Sync Video con AVC, MVC (S3D) y MPEG-2 Full HW Encode1, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® Insider™, Intel® HD Graphics 510/530
 - Pixel Shader 5.0, DirectX 12
 - Memoria compartida máxima: 1792MB
 - Tres opciones de salida VGA: D-Sub, DVI-D y HDMI
 - Admite la tecnología HDMI con una resolución máxima de 4K x 2K (4096x2304) a 24 Hz
 - Compatible con DVI-D con máxima resolución hasta 1920x1200 @ 60Hz
 - Compatible con D-Sub con máxima resolución hasta 1920x1200 @ 60Hz

- Compatible con Auto Lip Sync, Deep Color (12bpc), xvYCC y HBR (audio de alta velocidad de bits) con HDMI (requiere un monitor compatible con HDMI)
- Admite códecs multimedia acelerados: HEVC, VP8, VP9
- Compatible con función HDCP con puertos DVI-D y HDMI
- Compatible con reproducción Blu-ray (BD) Full HD de 1080p con puertos DVI-D y HDMI

Audio

- 7.1 Audio CH HD (Códec de audio Realtek ALC887)
- *Para configurar 7.1 Audio CH HD, deberá utilizar un módulo del panel frontal de audio HD y habilitar la característica de audio multicanal a través del controlador de audio.
- Compatible con protección por sobretensión (protección ASRock Full Spike)
 - Tapas de audio ELNA

LAN

- 1 LAN Gigabit PCIE 10/100/1000 Mb/s
- Realtek RTL8111E
- Compatible con Wake-On-LAN
- Compatible con protección contra rayos y electricidad electrostática (protección ASRock Full Spike)
- Admite la detección de cable LAN
- Compatible con Ethernet de consumo eficiente de energía 802.3az
- Compatible con PXE

Panel trasero I/O

- 1 puerto de ratón/teclado PS/2
- 1 puerto D-Sub
- 1 puerto DVI-D
- 1 puerto HDMI
- 4 puertos USB 2.0 (compatible con protección contra electricidad estática (protección ASRock Full Spike))
- 2 puertos USB 3.0 (compatible con protección contra electricidad estática (protección ASRock Full Spike))
- 1 puerto LAN RJ-45 con LED (ACT/LINK LED y SPEED LED)
- Conector de audio HD: Entrada de línea / Altavoz frontal / Micrófono

- Almacenamiento**
- 4 conectores SATA3 de 6,0 Gb/s, compatibles con las funciones NCQ, AHCI y “Hot Plug”

- Conector**
- 1 Cabezal de puerto COM
 - 1 cabezal TPM
 - 1 cabezal de intrusión de chasis y de altavoces
 - 1 Conector (4 contactos) para el ventilador de la CPU (control de velocidad de ventilador inteligente)
 - 1 Conectores (4 contactos) para el ventilador del chasis (control de velocidad de ventilador inteligente)
 - 1 Conector de alimentación ATX de 24 pines
 - 1 conector de alimentación de 12V de 4 pines
 - 1 Conector de audio del panel frontal
 - 1 cabezal USB 2.0 (compatible con 2 puertos USB 2.0) (compatible con protección contra electricidad estática (protección ASRock Full Spike))
 - 1 cabezal USB 3.0 (compatible con 2 puertos USB 3.0) (compatible con protección contra electricidad estática (protección ASRock Full Spike))

- Función del BIOS**
- BIOS legal UEFI AMI de 128Mb compatible con interfaz gráfica de usuario multilingüe
 - Eventos de reactivación conformes con ACPI 1.1
 - Compatible con SMBIOS 2.3.1
 - Multi-ajuste de voltaje de CPU, GT_CPU, DRAM, PCH 1,0V, VC-CIO y VCCSA

- Monitor del hardware**
- Método de sensor de temperatura de la CPU/Chasis
 - Tacómetro del ventilador de la CPU/Chasis
 - CPU/Chasis Ventilador silencioso (Ajuste automático de velocidad del ventilador del chasis por temperatura de la CPU)
 - Control multivelocidad del ventilador de la CPU/Chasis
 - Detección de CUBIERTA ABIERTA
 - Control de voltaje: +12V, +5V, +3,3V, CPU Vcore, CPU

SO

- Microsoft® Windows® 10 64-bit / 8.1 64-bit / 7 32-bit / 7 64-bit

* Para instalar el sistema operativo Windows® 7, se necesita un disco de instalación modificado con los controladores xHCI empaquetados en el archivo ISO. Consulte la página 62 para obtener información más detallada.

* Para obtener el controlador actualizado para Windows® 10, visite el sitio Web desde ASRock para obtener detalles:

<http://www.asrock.com>

Certificaciones

- FCC, CE, WHQL
- Compatible con ErP/EuP (requiere toma de alimentación compatible con ErP/EuP)

* Para obtener más información acerca del producto, visite nuestro sitio web: <http://www.asrock.com>



Tenga en cuenta que existen ciertos riesgos relacionados con el overlocking (sobreaceleración), incluyendo el ajuste de la configuración del BIOS, aplicando la Tecnología overlocking no vinculada o utilizando las herramientas de overlocking de tercera parte. El overlocking podría afectar la estabilidad de su sistema o incluso dañar los componentes y dispositivos de su sistema. Si lo realiza, todos los riesgos y gastos derivados del overlocking serán de su entera responsabilidad. No nos hacemos responsables de posibles daños producidos por el overlocking.

Спецификация

- Платформа**
- Форм-фактор Micro ATX
 - Схема на основе твердотельных конденсаторов
 - Печатная плата высокой плотности на основе стеклоткани

- Процессор**
- Поддержка процессоров 6-го поколения Intel® Core™ i7/i5/i3/Pentium®/Celeron® (Socket 1151)
 - Поддержка технологии Intel® Turbo Boost 2.0

- Чипсет**
- Intel® H110

- Память**
- Двухканальная память DDR3/DDR3L
 - 2 x гнезда DDR3/DDR3L DIMM
 - Поддержка модулей памяти DDR3/DDR3L 1600/1333/1066 Non-ECC Unbuffered
 - Максимальный объем системной памяти: 32 Гб
 - Поддержка Intel® Extreme Memory Profile (XMP) 1.3/1.2

- Слот расширения**
- 1 x Слот PCI Express 3.0 x16 (PCIЕ1:режим x16)
 - 2 x PCI Express 2.0 x1 разъем

- Графическая система**
- *Поддержка выходных сигналов Intel® HD Graphics Built-in Visuals и VGA возможна только при использовании процессоров со встроенными графическими процессорами.
 - Поддержка встроенных технологий визуализации Intel® HD Graphics: Intel® Quick Sync Video с AVC, MVC (S3D) и MPEG-2 Full HW Encode1, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® Insider™, Intel® HD Graphics 510/530
 - Pixel Shader 5.0, DirectX 12
 - Максимальный объем совместно используемой памяти: 1792 Мб
 - Три выхода VGA: D-Sub, DVI-D и HDMI
 - Поддержка HDMI с максимальным разрешением до 4K x 2K (4096x2304) при частоте обновления 24 Гц
 - Поддержка DVI-D с максимальным разрешением до 1920x1200 при 60 Гц
 - Поддержка D-Sub с максимальным разрешением до 920x1200 при 60 Гц

- Поддержка Auto Lip Sync, Deep Color (12bpc), xvYCC и HBR (High Bit Rate Audio) через порт HDMI (требуется HDMI-совместимый монитор)
- Поддержка ускоренных медиа кодеков: HEVC, VP8, VP9
- Поддержка функции защиты HDCP через порты DVI-D и HDMI
- Поддержка воспроизведения в режиме Full HD 1080p Blu-ray (BD) через порты DVI-D и HDMI

Аудио

- 7.1-канальный звук высокой четкости (аудиокодек Realtek ALC887)

*Для настройки 7.1-канального звук высокой четкости HD Audio используйте переднюю аудиопанель HD и активируйте функцию многоканального звука в аудиодрайвере.

- Защита от перенапряжения (ASRock Full Spike Protection)
- Конденсаторы для аудиосистем ELNA

LAN

- PCIE x1 Gigabit LAN 10/100/1000 Мб/с
- Realtek RTL8111E
- Поддержка Wake-On-LAN
- Молниезащита и защита электростатического напряжения (ASRock Full Spike Protection)
- Поддержка определения кабеля ЛВС
- Поддержка Energy Efficient Ethernet 802.3az
- Поддержка PXE

Порты ввода-вывода на задней панели

- 1 x PS/2 для мыши/клавиатуры
- 1 x D-Sub
- 1 x DVI-D
- 1 x HDMI
- 4 x Порт USB 2.0 с защитой от электростатического напряжения (ASRock Full Spike Protection)
- 2 x Порт USB 3.0 с защитой от электростатического напряжения (ASRock Full Spike Protection)
- 1 x RJ-45 для ЛВС с СИД (СИД ACT/LINK и МИД SPEED)
- Разъемы HD Audio: Линейный вход / передние динамики / микрофон

Запоминающие устройства

- 4 x разъемы SATA3 6,0 Гб/с, поддержка функций NCQ, AHCI и «горячей» замены

Разъемы

- 1 x колодка COM-порта
- 1 x Колодка TPM
- 1 колодка с разъемами датчика вскрытия корпуса и динамика
- 1 x Разъем для вентилятора охлаждения процессора (4-контактный) ("Умный" регулятор скорости вентилятора)
- 1 x разъем для корпусного вентилятора (4-контактный) (смарт-регулятор скорости вращения вентилятора)
- 1 x разъем питания ATX (24-контактный)
- 1 x 4-контактный разъем питания 12 В
- 1 x аудиоразъем на передней панели
- 1 x Колодка USB 2.0 (до 2 портов USB 2.0) с защитой от электростатического напряжения (ASRock Full Spike Protection)
- 1 x Колодка USB 3.0 (до 2 портов USB 3.0) с защитой от электростатического напряжения (ASRock Full Spike Protection)

Параметры BIOS

- AMI UEFI Legal BIOS 128 МБ с поддержкой многоязычного графического интерфейса
- Совместимость с функцией энергопотребления в стандарте ACPI 1.1
- Поддержка SMBIOS 2.3.1
- Регулировка напряжений ЦП, GT_CPU, DRAM, PCH 1,0 В, VCCIO, VCCSA

Контроль оборудования

- Датчик температуры процессора/корпуса
- Тахометр вентилятора процессора/корпуса
- Бесшумный вентилятор охлаждения процессора/корпуса (с автоматической регулировкой скорости вращения в зависимости от температуры нагрева процессора)
- Управление скоростью вращения вентилятора охлаждения процессора/корпуса
- Технология определения вскрытия корпуса
- Контроль напряжения: +12 В, +5 В, +3,3 В, напряжение ядра ЦП, ЦП

ОС

- Microsoft® Windows® 10 64-bit / 8.1 64-bit / 7 32-bit / 7 64-bit

* Для установки ОС Windows® 7 потребуется измененный установочный диск с драйверами xHCI, упакованными в файл ISO. Более подробные инструкции представлены на стр. 62.

* Подробные сведения об обновлении драйвера Windows® 10 представлены на веб-сайте ASRock: <http://www.asrock.com>

Сертификация

- FCC, CE, WHQL
- Совместимость с ErP/EuP (необходим блок питания, соответствующий стандарту ErP/EuP)

* Для получения дополнительной информации об изделии посетите наш веб-сайт:
<http://www.asrock.com>



Следует учитывать, что разгон процессора, включая изменение настроек BIOS, применение технологии Untied Overclocking Technology и использование инструментов разгона независимых производителей, сопряжен с определенным риском. Разгон процессора может повлиять на стабильность системы или даже привести к повреждению ее компонентов и устройств. Вы выполняете разгон процессора на ваш собственный риск и за свой счет. Мы не несем ответственность за возможный ущерб, вызванный разгоном процессора.

Especificações

- Plataforma**
- Micro ATX Form Factor
 - Design de condensador sólido
 - Tecido de Vidro de Alta densidade PCB

- CPU**
- Supports Processadores Intel® 6ª Geração Core™ i7/i5/i3/Pentium®/Celeron® (Soquete 1151)
 - Suporta a tecnologia Intel® Turbo Boost 2.0

- Chipset**
- Intel® H110

- Memória**
- Tecnologia de memória DDR3/DDR3L de dois canais
 - 2 x Slots DIMM DDR3/DDR3L
 - Suporta memória DDR3/DDR3L 1600/1333/1066, não ECC, sem memória intermédia
 - Capacidade máxima da memória do sistema: 32GB
 - Suporta Extreme Memory Profile (XMP)1.3/1.2 da Intel®

- Slot de expansão**
- 1 x Slot PCI Express 3.0 x16 (PCIe1:modo x16)
 - 2 x Slots PCI Express 2.0 x1

- Gráficos**
- * Os gráficos incorporados Intel® HD e as saídas VGA só podem ser suportados com processadores com GPU integrada.
- Suporta gráficos incorporados Intel® HD: Intel® Quick Sync Video com AVC, MVC (S3D) e MPEG-2 Full HW Encode1, Intel® InTru™ 3D, Tecnologia Intel® Clear Video HD, Intel® Insider™, Gráficos Intel® HD 510/530
 - Pixel Shader 5.0, DirectX 12
 - Memória compartilhada máxima de 1792MB
 - Três opções de saída VGA: D-Sub, DVI-D e HDMI
 - Suporta HDMI com resolução máx. até 4K x 2K (4096x2304) @ 24Hz
 - Suporta DVI-D com resolução máxima de até 1920x1200 @ 60Hz
 - Suporta D-Sub com resolução máxima de até 1920x1200 @ 60Hz

- Suporta Auto sincronização labial, Deep Color (12bpc), xvYCC e HBR (High Bit Rate Audio) com porta HDMI (É necessário um monitor compatível com HDMI)
- Suporta Codecs de Mídia Acelerada: HEVC, VP8, VP9
- Suporta HDCP com Portas DVI-D e HDMI
- Suporta reprodução Full HD 1080p Blu-ray (BD) com Portas DVI-D e HDMI

Áudio

- Áudio HD de 7.1 canais com proteção de conteúdo (Codec de áudio Realtek ALC887)
- *Para configurar Áudio 7.1 CH HD, é necessário usar um módulo de áudio de painel frontal HD e habilitar o recurso de áudio multi-canal pelo driver de áudio.
- Suporta proteção contra sobretensão (Proteção Total Contra Picos ASRock)
 - Fones de Áudio ELNA

LAN

- LAN Gigabit 10/100/1000 Mb/s PCIE x1
- Realtek RTL8111E
- Suporta Wake-On-LAN
- Suporta Proteção contra Relâmpago/EDS (Proteção Total Contra Picos ASRock)
- Suporta Detecção de Cabo LAN
- Suporta Energy Efficient Ethernet 802.3az
- Suporta PXE

E/S do painel posterior

- 1 x Porta PS/2 para mouse/teclado
- 1 x Porta D-Sub
- 1 x Porta DVI-D
- 1 x porta HDMI
- 4 x Portas USB 2.0 (Suporta Proteção ESD (Proteção Total Contra Picos ASRock))
- 2 x Portas USB 3.0 (Suporta Proteção ESD (Proteção Total Contra Picos ASRock))
- 1 x Porta LAN RJ-45 com LED (LED ACT/LINK e LED DE VELOCIDADE)
- Fichas de áudio HD: Entrada de Linha / Autofalante Frontal / Microfone

Armazenamento

- 4 x Conectores SATA3 6,0 Gb/s, suporte NCQ, AHCI, Conector a Quente

Conector

- 1 x suporte porta COM
- 1 x Plataforma TPM
- 1 x Intrusão do Chassi e Cabeçote de Autofalante
- 1 x Conector de Ventoinha de CPU (4 pinos) (Controle de Velocidade de Ventoinha Inteligente)
- 1 x Conector de Ventoinha de Chassi (4 pinos) (Controle de Velocidade de Ventoinha Inteligente)
- 1 x conector alimentação ATX 24 pinos
- 1 x Conector de energia 4-pinos 12V
- 1 x conector de áudio do painel frontal
- 1 x Plataforma USB 2.0 (Suporta 2 portas USB 2.0) (Suporta Proteção ESD (Proteção Total Contra Picos ASRock))
- 1 x Plataforma USB 3.0 (Suporta 2 portas USB 3.0) (Suporta Proteção ESD (Proteção Total Contra Picos ASRock))

Funções da BIOS

- 128Mb IAM Legal UEFI BIOS com suporte multilingue GUI
- ACPI 1.1 compatível com eventos de despertar
- Suporta SMBIOS 2.3.1
- CPU, GT_CPU, DRAM, PCH 1,0V, VCCIO, VCCSA Multi ajuste de tensão

Monitor de hardware

- Sensor de temperatura da CPU/Gabinete
- Tacômetro da Ventoinha da CPU/Gabinete
- Ventoinha silenciosa da CPU/Gabinete (Auto ajusta velocidade da ventoinha do gabinete pela temperatura da CPU)
- Controle de multi velocidade da Ventoinha da CPU/Gabinete
- Detecção de ABERTURA da CAIXA
- Monitoramento da tensão: +12V, +5V, +3,3V, CPU Vcore, CPU

SO

- Microsoft® Windows® 10 64-bit / 8.1 64-bit / 7 32-bit / 7 64-bit
- *Para instalar o SO Windows 7, um disco de instalação modificado com condutores xHCI no arquivo ISO é necessário. Consulte a página 62 para a operação mais detalhada.
- * Para o driver atualizado do Windows® 10, por favor, visite o website da ASRock para mais detalhes: <http://www.asrock.com>

Certificações

- FCC, CE, WHQL
- Preparada para ErP/EuP (é necessária uma fonte de alimentação preparada para ErP/EuP)

* Para obter informações detalhadas sobre o produto, por favor, visite o nosso site: <http://www.asrock.com>



Por favor, observe que existe um certo risco envolvendo overlocking, incluindo o ajuste das definições na BIOS, a aplicação de tecnologia Untied Overclocking ou a utilização de ferramentas de overlocking de terceiros. O overlocking poderá afetar a estabilidade do sistema ou mesmo causar danos nos componentes e dispositivos do seu sistema. Ele deve ser realizado por sua conta e risco. Não nos responsabilizamos por possíveis danos causados pelo overlocking.

Özellikler

Platform

- Micro ATX Form Faktörü
- Yekpare Kapasitör tasarımı
- Yüksek Yoğunluklu Cam Elyaf PCB

CPU

- 6. Nesil Intel® Core™ i7/i5/i3/Pentium®/Celeron® İşlemcileri destekler (Yuva 1151)
- Intel® Turbo Boost 2.0 Teknolojisini destekler

Yonga kümesi

- Intel® H110

Bellek

- Çift Kanallı DDR3/DDR3L Bellek Teknolojisi
- 2 x DDR3/DDR3L DIMM Yuvası
- DDR3/DDR3L 1600/1333/1066 ECC olmayan, ara belleğe alınmamış belleği destekler
- Maksimum sistem belleği kapasitesi: 32GB
- Intel® Üstün Bellek Profili (XMP)1.3/1.2 özelliğini destekler

Genişletme Yuvası

- 1 x PCI Express 3.0 x16 Yuva (PCI E1:x16 modu)
- 2 x PCI Express 2.0 x1 Yuva

Grafikler

Intel® HD Grafik Yerleşik Görselleri ve VGA çıkışları yalnızca GPU tümleşik işlemcilerle desteklenebilir.

- Intel® HD Graphics Dahili Görsellerini destekler : AVC, MVC (S3D) ve MPEG-2 Full HW Encode1, Intel® InTru™ 3D, Intel® Net Video HD Teknolojisi, Intel® Insider™, Intel® HD Graphics 510/530 ile Intel® Quick Sync Video
- Pixel Shader 5.0, DirectX 12
- Maksimum paylaşılan bellek 1792MB
- Üç VGA Çıkışı seçeneği: D-sub, DVI-D ve HDMI
- 4K x 2K (4096x2304) @ 24Hz'e kadar maksimum çözünürlükte HDMI destekler
- 1920x1200 @ 60Hz'ye kadar DVI-D işlevini destekler
- 1920x1200 @ 60Hz'ye kadar çözünürlükte D-Sub işlevini destekler

- HDMI Bağlantı Noktasıyla Otomatik Dudak Senkronizasyonu, Derin Renk (12bpc), xvYCC ve HBR (Yüksek Bit Oranlı Ses) özelliklerini destekler (Uyumlu bir HDMI monitörü kullanılmalıdır)
- Hızlandırılmış Medya Kodlayıcıları-Kod Çözücüleri Destekler HEVC, VP8, VP9
- DVI-D ve HDMI Bağlantı Noktalarıyla HDCP destekler
- DVI-D ve HDMI Bağlantı Noktalarıyla Tam HD 1080p Blu-ray (BD) kayıttan yürütme destekler

Ses

- 7.1 Kanal HD Ses (Realtek ALC887 Ses Kodlayıcı)
- *7.1 CH HD Ses konfigürasyonu için bir HD ön panel ses modülü kullanılmalı ve çok kanallı ses özelliği ses sürücüsü ile etkinleştirilmelidir.
- Dalgalanma Koruması Destekler (ASRock Tam Ani Gerilim Koruması)
- ELNA Ses Kapakları

LAN

- PCIE x1 Gigabit LAN 10/100/1000 Mb/s
- Realtek RTL8111E
- LAN Açılışını Destekler
- Yıldırım/ESD Koruması Destekler (ASRock Tam Ani Gerilim Koruması)
- LAN Kablosu Algılama destekler
- Enerji Verimliliğine Sahip Ethernet 802.3az işlevini destekler
- PXE özelliğini destekler

Arka Panel I/O

- 1 x PS/2 Fare/Klavye Bağlantı Noktası
- 1 x D-Sub Bağlantı Noktası
- 1 x DVI-D Bağlantı Noktası
- 1 x HDMI Bağlantı Noktası
- 4 x Bağlayıcısı USB 2.0 Bağlantı Noktası (ESD Koruması Destekler (ASRock Tam Ani Gerilim Koruması))
- 2 x Bağlayıcısı USB 3.0 Bağlantı Noktası (ESD Koruması Destekler (ASRock Tam Ani Gerilim Koruması))
- LED'e sahip 1 x RJ-45 LAN Bağlantı Noktası (ACT/LINK LED ve SPEED LED)
- HD Ses Jakları: Hat Girişi / Ön Hoparlör / Mikrofon

Depolama

- 4 x SATA3 6,0 Gb/sn Bağlayıcı, NCQ, AHCI ve Tak Çalıştır destekler

Bağlayıcı

- 1 x COM Bağlantı Noktası Bağlantısı
- 1 x TPM Bağlantısı
- 1 x Kasa Yetkisiz Erişim ve Hoparlör Bağlantısı
- 1 x İşlemci Fanı Bağlayıcısı (4 pimli) (Akıllı Fan Hızı Kontrolü)
- 1 x Kasa Fanı Bağlayıcı (4 pimli) (Akıllı Fan Hızı Kontrolü)
- 1 x 24 pim ATX Güç Bağlayıcısı
- 1 x 4 pim 12V Güç Bağlayıcısı
- 1 x Ön Panel Ses Bağlayıcısı
- 1 x USB 2.0 Bağlantısı (2 USB 2.0 bağlantı noktası destekler) (ESD Koruması Destekler (ASRock Tam Ani Gerilim Koruması))
- 1 x USB 3.0 Bağlantısı (2 USB 3.0 bağlantı noktası destekler) (ESD Koruması Destekler (ASRock Tam Ani Gerilim Koruması))

BIOS**Özellği**

- Çok dilli GUI desteği ile 128Mb AMI UEFI Legal BIOS
- ACPI 1.1 Uyumlu uyandırma olayları
- SMBIOS 2.3.1 Desteği
- CPU, GT_CPU, DRAM, PCH 1,0V, VCCIO, VCCSA Gerilimi Çoklu Ayarlama

Donanım**Monitörü**

- CPU/Kasa sıcaklığı tespiti
- CPU/Kasa Fanı Devirölçer
- CPU/Kasa Sessiz Fan (İşlemci sıcaklığıyla otomatik ayarlı kasa fanı hızı)
- CPU/Kasa Fanı çoklu hız kontrolü
- KASA AÇIK algılaması
- Voltaj izleme: +12V, +5V, +3,3V, İşlemci Vcore, İşlemci

OS

- Microsoft® Windows® 10 64-bit / 8.1 64-bit / 7 32-bit / 7 64-bit
- * Windows® 7 işletim sistemini yüklemek için, ISO dosyasında sıkıştırılmış xHCI sürücülerine sahip değiştirilmiş yükleme diski gereklidir. Daha ayrıntılı talimatlar için lütfen 62 sayfaya başvurun.
- * Güncellenmiş Windows® 10 sürücüsü konusunda ayrıntılar için lütfen ASRock web sitesini ziyaret edin: <http://www.asrock.com>

Belgeler

- FCC, CE, WHQL
- ErP/EuP için hazır (ErP/EuP için hazır güç beslemesi gereklidir)

* Detaylı ürün bilgisi için, lütfen web sitemizi ziyaret edin: <http://www.asrock.com>



Lütfen, BIOS ayarlarını düzenleme, Bağımsız Hız Aşırtma Teknolojinin uygulanması ya da üçüncü kişilerin hız aşırtma araçlarının kullanılması da dahil olmak üzere tüm hız aşırtma işlemlerinin belirli bir risk taşıdığını unutmayın. Hız aşırtma, sisteminizin dayanıklılığını etkileyebilir, hatta sisteminizde yer alan bileşen ve aygıtlara zarar verebilir. Bunu riski ve masrafları size ait olmak üzere gerçekleştirilmelidir. Hız aşırtmadan doğabilecek zararlar konusunda sorumlu olmayacağız.

규격

플랫폼

- Micro ATX 폼 팩터
- 솔리드 콘덴서 구조
- 고밀도 유리 직물 PCB

CPU

- 6 세대 Intel® Core™ i7/i5/i3/Pentium®/Celeron® 프로세서 (소켓 1151) 지원
- Intel® Turbo Boost 2.0 기술 지원

칩세트

- Intel® H110

메모리

- 듀얼 채널 DDR3/DDR3L 메모리 기술
- DDR3/DDR3L DIMM 슬롯 2 개
- DDR3/DDR3L 1600/1333/1066 비 ECC, 비버퍼링 메모리 지원
- 시스템 메모리 최대 용량 : 32GB
- Intel® Extreme Memory Profile (XMP) 1.3/1.2 지원

확장 슬롯

- PCI Express 3.0 x16 슬롯 1 개 (PCIe1:x16 모드)
- PCI Express 2.0 x1 슬롯 2 개

그래픽

* Intel® HD 그래픽스 빌트 - 인 비주얼과 VGA 출력은 GPU 통합 프로세서로만 지원할 수 있습니다.

- Intel® HD 그래픽스 빌트 - 인 비주얼 지원 : AVC, MVC (S3D) 및 MPEG-2 풀 HW Encode1 지원 Intel® Quick Sync Video, Intel® InTru™ 3D, Intel® 클리어 비디오 HD 기술, Intel® Insider™, Intel® HD 그래픽스 510/530
- Pixel Shader 5.0, DirectX 12
- 최대 공유 메모리 1792MB
- VGA 출력 옵션 세 개 : D-Sub, DVI-D 및 HDMI
- HDMI 지원 (최대 해상도 4K x 2K (4096x2304) @ 24Hz)
- DVI-D 지원 (최대 해상도 1920x1200 @ 60Hz)
- D-Sub 지원 (최대 해상도 1920x1200 @ 60Hz)

- Auto Lip Sync, Deep Color (12bpc), xvYCC 및 HBR (High Bit Rate Audio)(HDMI 포트 포함) 지원 (HDMI 호환 모니터 필요)
- 가속화된 미디어 코덱 지원 : HEVC, VP8, VP9
- DVI-D 및 HDMI 포트를 이용한 HDCP 지원
- DVI-D 및 HDMI 포트를 이용한 Full HD 1080p Blu-ray (BD) 재생 지원

오디오

- 7.1 CH HD 오디오 (Realtek ALC887 오디오 코덱)
- *7.1 CH HD 오디오를 구성하려면 HD 전면 패널 오디오 모듈을 사용하고 다채널 오디오 기능을 오디오 드라이버로 활성화해야 합니다 .
- 서지 보호 지원 (ASRock 풀 스파이크 보호)
- ELNA 오디오 캡

LAN

- PCIE 1 개 , Gigabit LAN 10/100/1000 Mb/s
- Realtek RTL8111E
- Wake-On-LAN 지원
- 번개 /ESD 보호 지원 (ASRock 풀 스파이크 보호)
- LAN 케이블 감지 지원
- 절전형 이더넷 802.3az 지원
- PXE 지원

후면 패널 I/O

- PS/2 마우스 / 키보드 포트 1 개
- D-Sub 포트 1 개
- DVI-D 포트 1 개
- HDMI 포트 1 개
- USB 2.0 포트 4 개 (ESD 보호 지원 (ASRock 풀 스파이크 보호))
- USB 3.0 포트 2 개 (ESD 보호 지원 (ASRock 풀 스파이크 보호))
- LED 장착 RJ-45 LAN 포트 1 개 (ACT/LINK LED 및 SPEED LED)
- HD 오디오 잭 : 라인 입력 / 전면 스피커 / 마이크

저장 장치

- SATA3 6 Gb/s 커넥터 4 개 , NCQ, AHCI 및 “핫 플러그” 지원

커넥터

- COM 포트 헤더 1 개
- TPM 헤더 1 개
- 새시 침입 및 스피커 헤더 1 개
- CPU 팬 커넥터 (4 핀) 1 개 (스마트 팬 속도 제어)
- 새시 팬 커넥터 (4 핀) 1 개 (스마트 팬 속도 제어)
- 24 핀 ATX 전원 커넥터 1 개
- 4 핀 12V 전원 커넥터 1 개
- 전면 패널 오디오 커넥터 1 개
- USB 2.0 헤더 1 개 (USB 2.0 포트 2 개 지원)(ESD 보호 지원 (ASRock 풀 스파이크 보호))
- USB 3.0 헤더 1 개 (USB 3.0 포트 2 개 지원)(ESD 보호 지원 (ASRock 풀 스파이크 보호))

BIOS 기능

- 다국어 GUI 지원을 제공하는 128Mb AMI UEFI 적합형 BIOS
- ACPI 1.1 준수 웨이크 업 이벤트
- SMBIOS 2.3.1 지원
- CPU, GT_CPU, DRAM, PCH 1.0V, VCCIO, VCCSA 전압 다중 조정

**하드웨어
모니터**

- CPU/ 새시 온도 감지
- CPU/ 새시 팬 타코미터
- CPU/ 새시 저소음 팬 (CPU 온도에 의한 새시 팬 속도 자동 조절)
- CPU/ 새시 팬 다중 속도 조절
- 케이스 열림 감지
- 전압 모니터링 : +12V, +5V, +3.3V, CPU Vcore, CPU

OS

- Microsoft® Windows® 10 64 비트 / 8.1 64 비트 / 7 32 비트 / 7 64 비트

* Windows® 7 OS 를 설치하려면 , xHCI 드라이버를 ISO 파일에 포함시킨 수정된 설치 디스크가 필요합니다 . 자세한 사용법은 62 페이지를 참조하십시오 .

* 업데이트된 Windows® 10 드라이브에 대한 자세한 내용은 다음의 ASRock 웹사이트를 참조하십시오 .

<http://www.asrock.com>

인증

- FCC, CE, WHQL
- ErP/EuP 사용 가능 (ErP/EuP 사용 가능 전원공급장치 필요)

* 자세한 제품 정보에 대해서는 당사 웹사이트를 참조하십시오 : <http://www.asrock.com>



BIOS 설정을 조정하거나 *Untied Overclocking Technology* 를 적용하거나 타업체의 오버클로킹 도구를 사용하는 것을 포함하는 오버클로킹에는 어느 정도의 위험이 따른다는 것을 유념하십시오. 오버클로킹은 시스템 안정성에 영향을 주거나 심지어 시스템의 구성 요소와 장치에 손상을 입힐 수도 있습니다. 오버클로킹은 사용자 스스로 위험과 비용을 감수하고 해야 합니다. 당사는 오버클로킹에 의해 발생할 수 있는 손상에 대해서 책임이 없습니다.

仕様

- プラットフォーム**
- マイクロ ATX フォームファクター
 - 固体コンデンサ設計
 - 高密度ガラス繊維 PCB

- CPU**
- 第 6 世代 Intel® Core™ i7/i5/i3/Pentium®/Celeron® プロセッサーに対応(ソケット 1151)
 - Intel® ターボブースト 2.0 テクノロジーをサポート

- チップセット**
- Intel® H110

- メモリ**
- デュアルチャンネル DDR3/DDR3L メモリテクノロジー
 - 2 x DDR3/DDR3L DIMM スロット
 - DDR3/DDR3L 1600/1333/1066 ノン ECC、アンバッファードメモリをサポート
 - システムメモリの最大容量: 32GB
 - Intel® エクストリームメモリプロファイル (XMP) 1.3/1.2 をサポート

- 拡張スロット**
- 1 x PCI Express 3.0 x16 スロット (PCIe1 : x16 モード)
 - 2 x PCI Express 2.0 x1 スロット

- グラフィックス**
- * Intel®HD グラフィックス内蔵ビジュアルおよび VGA 出力は、GPU に統合されたプロセッサーのみでサポートされません。
- Intel®HD グラフィックス内蔵ビジュアルをサポート:
AVC、MVC (S3D)、MPEG-2 フル HW エンコード 1 の Intel® Quick Sync Video、Intel® InTru™ 3D、Intel® クリアビデオ HD テクノロジー、Intel® インサイダー™、Intel® HD グラフィックス 510/530
 - Pixel Shader 5.0, DirectX 12
 - 最大共有メモリ 1792MB
 - 3 つの VGA 出力オプション: D-Sub、DVI-D、HDMI
 - HDMI に対応、最大解像度 4K x 2K (4096x2304) @ 24Hz
 - DVI-D をサポート。最大解像度 1920x1200 @60Hz
 - D-Sub をサポート。最大解像度 1920x1200 @60Hz

- HDMI ポートでオートリップシンク、ディープカラー (12bpc)、xvYCC、および、HBR (高ビットレートオーディオ) に対応 (HDMI 対応モニターが必要です)
- アクセラレイテッド・メディア・コーデックに対応 : HEVC, VP8, VP9
- DVI-D ポートと HDMI ポートで HDCP に対応
- DVI-D ポートと HDMI ポートで Full HD 1080p Blu-ray (BD) 再生に対応

オーディオ

- 7.1 CH HD オーディオ (Realtek ALC887 Audio Codec)
- *7.1 CH HD オーディオを設定するためには、HD フロントパネルのオーディオモジュールを使用し、オーディオドライバを通してマルチチャンネルオーディオ機能を有効にする必要があります。
- サージ保護に対応 (ASRock 完全スパイク保護)
- ELNA 製オーディオコンデンサ

LAN

- PCIE x1 ギガビット LAN 10/100/1000 Mb/s
- Realtek RTL8111E
- ウェイクオンランをサポート
- 雷 / 静電気放電 (ESD) 保護に対応 (ASRock 完全スパイク保護)
- LAN ケーブル検出に対応
- エネルギー効率のよいイーサネット 802.3az をサポート
- PXE をサポート

リアパネル I/O

- 1 x PS/2 マウス / キーボードポート
- 1 x D-Sub ポート
- 1 x DVI-D ポート
- 1 x HDMI ポート
- 4 x USB 2.0 ポート (静電気放電 (ESD) 保護に対応 (ASRock 完全スパイク保護))
- 2 x USB 3.0 ポート (静電気放電 (ESD) 保護に対応 (ASRock 完全スパイク保護))
- LED 付き 1 x RJ-45 LAN ポート (ACT/LINK LED と SPEED LED)
- HD オーディオジャック : ラインイン / フロントスピーカー / マイク

- ストレージ**
- 4 x SATA3 6.0 Gb/s コネクタ、NCQ、AHCI、および、ホットプラグ機能に対応

- コネクタ**
- 1 x COM ポートヘッダー
 - 1 x TPM ヘッダー
 - 1 x シャーシイントレージョンとスピーカーヘッダー
 - 1 x CPU ファンコネクタ(4 ピン) (スマートファン速度制御)
 - 1 x シャーシファンコネクタ(4 ピン) (スマートファン速度制御)
 - 1 x 24 ピン ATX 電源コネクタ
 - 1 x 4 ピン 12V 電源コネクタ
 - 1 x 前面パネルオーディオコネクタ
 - 1 x USB 2.0 ヘッダー(2 個の USB 2.0 ポートに対応)(静電気放電(ESD)保護に対応(ASRock 完全スパイク保護))
 - 1 x USB 3.0 ヘッダー(2 個の USB 3.0 ポートに対応)(静電気放電(ESD)保護に対応(ASRock 完全スパイク保護))

- BIOS 機能**
- 128Mb AMI UEFI Legal BIOS、多言語 GUI サポート付き
 - ACPI 1.1 準拠ウェイクアップイベント
 - SMBIOS 2.3.1 をサポート
 - CPU、GT_CPU、DRAM、PCH 1.0V、VCCIO、VCCSA 電圧マルチ調整

- ハードウェアモニター**
- CPU/シャーシ温度センシング
 - CPU / シャーシファンタコメータ
 - CPU/ シャーシクワイエットファン(CPU 温度に従ってシャーシファン速度を自動調整)
 - CPU/ シャーシファンマルチ速度制御
 - ケース開閉検知
 - 電圧監視 : +12V、+5V、+3.3V、CPU Vcore、CPU

- OS**
- Microsoft® Windows® 10 64-bit / 8.1 64-bit / 7 32-bit / 7 64-bit
 - * Windows® 7 OS をインストールするために、xHCI ドライバが ISO ファイルに含まれる変更されたインストールディスクが必要です。詳しい説明については 62 ページを参照してください。
 - * 更新された Windows® 10 ドライバについては、ASRock のウェブサイトの詳細をご確認ください : <http://www.asrock.com>

認証

- FCC、CE、WHQL
- ErP/EuP Ready (ErP/EuP 対応電源供給装置が必要です)

* 商品詳細については、当社ウェブサイトをご覧ください。<http://www.asrock.com>



BIOS 設定の調整、アンタイドオーバークロックテクノロジーの適用、サードパーティのオーバークロックツールの使用などを含む、オーバークロックには、一定のリスクを伴いますのでご注意ください。オーバークロックするとシステムが不安定になったり、システムのコンポーネントやデバイスが破損することがあります。ご自分の責任で行ってください。弊社では、オーバークロックによる破損の責任は負いかねますのでご了承ください。

规格

平台

- Micro ATX 规格尺寸
- 稳固的电容器设计
- 高密度防潮纤维电路板

CPU

- 支持第 6 代 Intel® Core™ i7/i5/i3/Pentium®/Celeron® 处理器 (Socket 1151)
- 支持 Intel® Turbo Boost 2.0 技术

芯片集

- Intel® H110

内存

- 双通道 DDR3/DDR3L 内存技术
- 2 x DDR3/DDR3L DIMM 槽
- 支持 DDR3/DDR3L 1600/1333/1066 非 ECC，非缓冲内存
- 支持系统内存最大容量：32GB
- 支持 Intel® Extreme Memory Profile (XMP) 1.3/1.2

扩充槽

- 1 x PCI Express 3.0 x16 插槽 (PCIe1：x16 模式)
- 2 x PCI Express 2.0 x1 插槽

图形

- * 只有 GPU 集成的处理器才支持 Intel® HD Graphics 内置视效和 VGA 输出。
- 支持 Intel® HD Graphics 内置视效：Intel® 快速同步视频，采用 AVC、MVC (S3D) 和 MPEG-2 Full HW Encode1、Intel® InTru™ 3D、Intel® Clear Video HD 技术、Intel® Insider™、Intel® HD Graphics 510/530
- Pixel Shader 5.0、DirectX 12
- 最大共享内存 1792MB
- 三个 VGA 输出选项：D-Sub、DVI-D 和 HDMI
- 支持 HDMI，最大分辨率可达 4K x 2K (4096x2304) @ 24Hz
- 支持 DVI-D，60Hz 时最大分辨率达 1920x1200
- 支持 D-Sub，60Hz 时最大分辨率达 1920x1200
- 通过 HDMI 端口（需要兼容的 HDMI 显示器）支持 Auto Lip Sync、Deep Color (12bpc)、xvYCC 和 HBR（高位速率音频）

- 支持“加速媒体编解码器”：HEVC, VP8, VP9
- 通过 DVI-D 和 HDMI 端口支持 HDCP
- 通过 DVI-D 和 HDMI 端口支持全高清 1080p Blu-ray (BD) 播放

音频

- 7.1 CH 高清音频 (Realtek ALC887 音频编解码器)
- * 要配置 7.1 CH 高清音频，需要使用高清前面板模块和通过音频驱动程序启用多通道音频功能。
- 支持电涌保护（华擎全防护）
- ELNA 音频电容

LAN

- PCIE x1 Gigabit LAN 10/100/1000 Mb/s
- Realtek RTL8111E
- 支持 Wake-On-LAN（网上唤醒）
- 支持雷电 /ESD 保护（华擎全防护）
- 支持 LAN 线缆检测
- 支持高性能以太网 802.3az
- 支持 PXE

后面板 I/O

- 1 x PS/2 鼠标 / 键盘端口
- 1 x D-Sub 端口
- 1 x DVI-D 端口
- 1 x HDMI 端口
- 4 x USB 2.0 端口（支持 ESD 保护，即华擎全防护）
- 2 x USB 3.0 端口（支持 ESD 保护，即华擎全防护）
- 1 x RJ-45 LAN 端口，带 LED（ACT/LINK LED 和 SPEED LED）
- 高清音频插孔：线路输入 / 前扬声器 / 麦克风

存储

- 4 x SATA3 6.0 Gb/s 接口，支持 NCQ、AHCI 和热插拔

接口

- 1 x COM 端口接头
- 1 x TPM 接脚
- 1 x 机箱侵入和扬声器接脚
- 1 x CPU 风扇接口（4 针）（智能风扇速度控制）
- 1 x 机箱风扇接口（4 针）（智能风扇速度控制）
- 1 x 24 针 ATX 电源接口
- 1 x 4 针 12V 电源接口

- 1 x 前面板音频接口
- 1 x USB 2.0 接脚（支持 2 个 USB 2.0 端口，支持 ESD 保护，即华擎全防护）
- 1 x USB 3.0 接脚（支持 2 个 USB 3.0 端口，支持 ESD 保护，即华擎全防护）

BIOS 功能特点

- 128Mb AMI UEFI Legal BIOS，支持多语言 GUI
- ACPI 1.1 兼容唤醒事件
- SMBIOS 2.3.1 支持
- CPU、GT_CPU、DRAM、PCH 1.0V、VCCIO、VCCSA 电压多次调整

硬件监控

- CPU/ 机箱温度感测
- CPU/ 机箱风扇转速计
- CPU/ 机箱静音风扇（根据 CPU 温度自动调整机箱风扇速度）
- CPU/ 机箱风扇多种速度控制
- CASE OPEN（机箱打开）检测
- 电压监控：+12V、+5V、+3.3V、CPU Vcore、CPU

操作系统

- Microsoft® Windows® 10 64-bit / 8.1 64-bit / 7 32-bit / 7 64-bit
- * 要安装 Windows® 7 OS，需要 xHCI 驱动程序已封装到 ISO 文件的经修改的安装盘。请参考第 62 页了解详情。
- * 有关已更新的 Windows® 10 驱动程序，请访问华擎网站了解详情：<http://www.asrock.com>

认证

- FCC、CE、WHQL
- ErP/EuP 支持（需要支持 ErP/EuP 的电源）

* 有关详细产品信息，请访问我们的网站：<http://www.asrock.com>



须认识到超频会有一定风险，包括调整 BIOS 设置，应用“自由超频技术”，或使用第三方超频工具。超频可能会影响到系统的稳定性，甚至对系统的组件和设备造成损坏。执行这项工作您应自担风险和自己承担费用。我们对由于超频而造成的损坏概不负责。

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。

規格

平台	<ul style="list-style-type: none"> • Micro ATX 尺寸 • 固態電容設計 • 高密度防潮纖維電路板
CPU	<ul style="list-style-type: none"> • 支援第 6 代 Intel® Core™ i7/i5/i3/Pentium®/Celeron® 處理器 (插座 1151) • 支援 Intel® Turbo Boost 2.0 技術
晶片組	<ul style="list-style-type: none"> • Intel® H110
記憶體	<ul style="list-style-type: none"> • 雙通道 DDR3/DDR3L 記憶體技術 • 2 x DDR3/DDR3L DIMM 插槽 • 支援 DDR3/DDR3L 1600/1333/1066 非 ECC、無緩衝記憶體 • 最大系統記憶體容量：32GB • 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 (PCI-E 1：x16 模式) • 2 x PCI Express 2.0 x1 插槽
顯示卡	<p>* 僅限整合 GPU 的處理器才可支援 Intel® HD Graphics Built-in Visuals 及 VGA 輸出。</p> <ul style="list-style-type: none"> • 支援 Intel® HD Graphics Built-in Visuals：轉換 AVC、MVC (S3D) 及 MPEG-2 Full HW Encode 的 Intel® 高速影像同步轉檔技術、Intel® InTru™ 3D, Intel® Clear Video HD Technology、Intel® Insider™、Intel® HD Graphics 510/530 • Pixel Shader 5.0、DirectX 12 • 最大共用記憶體 1792MB • 三個 VGA 輸出選項：D-Sub、DVI-D 及 HDMI • 支援最高可達 4K x 2K (4096x2304) @ 24Hz 解析度的 HDMI • 支援最高達 1920x1200 @ 60Hz 解析度的 DVI-D • 支援最高達 1920x1200 @ 60Hz 解析度的 D-Sub • 支援使用 HDMI 連接埠 (需相容於 HDMI 監視器) 的 Auto Lip Sync、Deep Color (12bpc)、xvYCC 及 HBR (高位元率音訊)

- 支援加速媒體轉碼器：HEVC, VP8, VP9
- 支援含 DVI-D 及 HDMI 連接埠的 HDCP
- 支援透過 DVI-D 及 HDMI 連接埠的 Full HD 1080p Blu-ray (BD) 播放

音訊

- 7.1 CH HD 音訊 (Realtek ALC887 音訊轉碼器)
- * 若要設定 7.1 CH HD 音訊，必須使用 HD 前面板音訊模組，並透過音訊驅動程式啟用多聲道音訊功能。
- 支援突波保護（華擎全防護）
- ELNA 音響級電容

LAN

- PCIE x1 Gigabit LAN 10/100/1000 Mb/s
- Realtek RTL8111E
- 支援網路喚醒
- 支援雷擊／靜電保護（華擎全防護）
- 支援 LAN 纜線偵測
- 支援 Energy Efficient Ethernet 802.3az
- 支援 PXE

後面板 I/O

- 1 x PS/2 滑鼠／鍵盤連接埠
- 1 x D-Sub 連接埠
- 1 x DVI-D 連接埠
- 1 x HDMI 連接埠
- 4 x USB 2.0 連接埠（支援靜電保護（華擎全防護））
- 2 x USB 3.0 連接埠（支援靜電保護（華擎全防護））
- 1 x RJ-45 LAN 連接埠，含 LED（ACT/LINK LED 及 SPEED LED）
- HD 音訊插孔：線路輸入／前置喇叭／麥克風

儲存裝置

- 4 x SATA3 6.0 Gb/s 接頭，支援 NCQ、AHCI 及「熱插拔」

接頭

- 1 x COM 連接埠排針
- 1 x TPM 排針
- 1 x 機殼防護排針
- 1 x CPU 風扇接頭 (4-pin)（智慧型風扇速度控制）
- 1 x 機殼風扇接頭 (4-pin)（智慧型風扇速度控制）
- 1 x 24 pin ATX 電源接頭

- 1 x 4 pin 12V 電源接頭
- 1 x 前面板音訊接頭
- 1 x USB 2.0 排針 (支援 2 個 USB 2.0 連接埠) (支援靜電保護 (華擎全防護))
- 1 x USB 3.0 排針 (支援 2 個 USB 3.0 連接埠) (支援靜電保護 (華擎全防護))

BIOS 功能

- 128Mb AMI UEFI Legal BIOS 含多語 GUI 支援
- ACPI 1.1 符合喚醒自動開機
- 支援 SMBIOS 2.3.1
- CPU、GT_CPU、DRAM、PCH 1.0V、VCCIO、VCCSA 電壓多重調整

硬體監視器

- CPU / 機殼溫度感應
- CPU / 機殼風扇轉速計
- CPU / 機殼靜音風扇 (依 CPU 溫度自動調整機殼風扇速度)
- CPU / 機殼風扇多重速度控制
- 機殼開啟偵測
- 電壓監控：+12V、+5V、+3.3V、CPU Vcore、CPU

作業系統

- Microsoft® Windows® 10 64 位元 / 8.1 64 位元 / 7 32 位元 / 7 64 位元
- * 若要安裝 Windows® 7 作業系統，需要使用修改過的安裝光碟 (已將 xHCI 驅動程式封裝至 ISO 檔案)。如需詳細說明，請查看第 62 頁。
- * 關於最新 Windows® 10 驅動程式的詳細資訊，請瀏覽華擎網站：<http://www.asrock.com>

認證

- FCC、CE、WHQL
- ErP/EuP ready (須具備 ErP/EuP ready 電源供應器)

* 如需產品詳細資訊，請上我們的網站：<http://www.asrock.com>



請務必理解，超頻可能產生某種程度的風險，其中包括調整 BIOS 中的設定、採用自由超頻技術或使用協力廠商的超頻工具。超頻可能會影響您系統的穩定性，或者甚至會對您系統的元件及裝置造成傷害。您應自行負擔超頻風險及成本。我們對於因超頻所造成的可能損害概不負責。

Spesifikasi

Platform

- Bentuk dan Ukuran Micro ATX
- Desain Kapasitor Solid
- PCB Serat Kaca dengan Kerapatan Tinggi

CPU

- Mendukung Prosesor i7/i5/i3/Pentium®/Celeron® (Soket 1151) Intel® Core™ Generasi ke-6
- Mendukung Teknologi Intel® Turbo Boost 2.0

Chipset

- Intel® H110

Memori

- Teknologi Memori DDR3/DDR3L Kanal Ganda
- 2 x Slot DDR3/DDR3L DIMM
- Mendukung DDR3/DDR3L 1600/1333/1066 non-ECC, memori tanpa buffer
- Kapasitas maksimum memori sistem: 32GB
- Mendukung Intel® Extreme Memory Profile (XMP)1.3/1.2

Slot Ekspansi

- 1 x Slot PCI Express 3.0 x16 (PCIe1:x16 mode)
- 2 x Slot PCI Express 2.0 x1

Grafis

- * Intel® HD Graphics Built-in Visuals dan output VGA hanya dapat didukung dengan prosesor yang terintegrasi GPU.
- Mendukung Intel® HD Graphics Built-in Visuals: Intel® Quick Sync Video dengan AVC, MVC (S3D), dan MPEG-2 Full HW Encode1, Intel® InTru™ 3D, Teknologi Intel® Clear Video HD, Intel® Insider™, Intel® HD Graphics 510/530
 - Pixel Shader 5.0, DirectX 12
 - Memori bersama maksimum 1792MB
 - Tiga pilihan output VGA: D-Sub, DVI-D, dan HDMI
 - Mendukung HDMI dengan resolusi maks. hingga 4K x 2K (4096x2304) @ 24Hz
 - Mendukung DVI-D dengan resolusi maksimum hingga 1920x1200 @ 60Hz
 - Mendukung D-Sub dengan resolusi maksimum hingga 1920x1200 @ 60Hz

- Mendukung Lip Sync Otomatis, Kedalaman Warna (12bpc), xvYCC, dan HBR (High Bit Rate Audio) dengan Port HDMI (memerlukan monitor HDMI yang kompatibel)
- Mendukung Codec Media Terakselerasi HEVC, VP8, VP9
- Mendukung HDCP dengan port DVI-D dan HDMI
- Mendukung pemutaran 1080p Blu-ray HD Penuh (BD) dengan Port DVI-D dan HDMI

Audio

- Audio HD 7.1 CH (Realtek ALC887 Audio Codec)
- *Untuk mengkonfigurasi Audio HD 7.1 CH, modul audio panel depan HD harus digunakan dan fitur audio multisaluran harus diaktifkan melalui driver audio.
- Mendukung Perlindungan Lonjakan Arus (ASRock Full Spike Protection)
 - ELNA Audio Caps

LAN

- PCIE x1 Gigabit LAN 10/100/1000 Mb/s
- Realtek RTL8111E
- Mendukung Wake-On-LAN
- Mendukung Perlindungan Petir/ESD (ASRock Full Spike Protection)
- Mendukung Deteksi Kabel LAN
- Mendukung Energy Efficient Ethernet 802.3az
- Mendukung PXE

Panel I/O Belakang

- 1 x Port Mouse/Keyboard PS/2
- 1 x Port D-Sub
- 1 x Port DVI-D
- 1 x Port HDMI
- 4 x Port USB 2.0 (Mendukung Perlindungan ESD (ASRock Full Spike Protection))
- 2 x Port USB 3.0 (Mendukung Perlindungan ESD (ASRock Full Spike Protection))
- 1 x Port LAN RJ-45 dengan LED (ACT/LINK LED dan SPEED LED)
- Soket Audio HD: Saluran Masuk/Speaker Depan/Mikrofon

Penyimpanan

- 4 x Konektor SATA3 6,0 Gb/s, mendukung NCQ, AHCI, dan Hot Plug

Konektor

- 1 x Header Port COM
- 1 x Header TPM
- 1 x Intrusi Chassis dan Header Speaker
- 1 x Konektor Kipas CPU (4-pin) (Kontrol Kecepatan Kipas Pintar)
- 1 x Konektor Kipas Chassis (4-pin) (Kontrol Kecepatan Kipas Pintar)
- 1 x Konektor Daya ATX 24 pin
- 1 x Konektor Daya 4 pin 12V
- 1 x Konektor Audio Panel Depan
- 1 x Header USB 2.0 (Mendukung 2 port USB 2.0) (Mendukung Perlindungan ESD (ASRock Full Spike Protection))
- 1 x Header USB 3.0 (Mendukung 2 port USB 3.0) (Mendukung Perlindungan ESD (ASRock Full Spike Protection))

Fitur BIOS

- 128Mb AMI UEFI Legal BIOS dengan dukungan GUI multi-bahasa
- ACPI 1.1 Kompatibel dengan aktivitas pengaktifan
- Dukungan SMBIOS 2.3.1
- Multipengatur Tegangan CPU, GT_CPU, DRAM, PCH 1,0V, VCCIO, dan VCCSA

Monitor Perangkat Keras

- Sensor suhu CPU/Chassis
- Takometer Kipas CPU/Chassis
- Kipas Hening CPU/Chassis (Penyesuaian otomatis kecepatan kipas berdasarkan suhu CPU)
- Kontrol multikecepatan Kipas CPU/Chassis
- Deteksi CASE OPEN
- Pemantauan tegangan: +12V, +5V, +3,3V, CPU Vcore, CPU

OS

- Microsoft® Windows® 10 64-bit / 8.1 64-bit / 7 32-bit / 7 64-bit
- * Untuk menginstal OS Windows® 7, diperlukan disk instalasi termodifikasi dengan driver xHCI dalam file ISO. Untuk petunjuk lebih rinci, lihat halaman 64.
- * Untuk driver Windows® 10 terbaru, kunjungi situs web ASRock untuk informasi lebih lanjut: <http://www.asrock.com>

Sertifikasi

- FCC, CE, WHQL
- Siap untuk ErP/EuP (memerlukan catu daya untuk ErP/EuP)

* Untuk informasi tentang produk rinci, kunjungi situs web kami: <http://www.asrock.com>



Perlu diketahui, overclocking memiliki risiko tertentu, termasuk menyesuaikan pengaturan pada BIOS, menerapkan Teknologi Untied Overclocking, atau menggunakan alat overclocking pihak ketiga. Overclocking dapat mempengaruhi stabilitas sistem, atau bahkan dapat mengakibatkan kerusakan komponen dan perangkat sistem. Risiko dan biaya apapun menjadi tanggungan Anda. Kami tidak bertanggung jawab atas kemungkinan kerusakan karena overclocking.

Enabling USB Ports for Windows® 7 Installation

Intel® Braswell and Skylake has removed their support for the Enhanced Host Controller Interface (EHCI – USB2.0) and only kept the eXtensible Host Controller Interface (XHCI – USB3.0). Due to that fact that XHCI is not included in the Windows 7 inbox drivers, users may find it difficult to install Windows 7 operating system because the USB ports on their motherboard won't work. In order for the USB ports to function properly, please create a Windows® 7 installation disk with the Intel® USB 3.0 eXtensible Host Controller (xHCI) drivers packed into the ISO file.

Requirements

- A Windows® 7 installation disk or USB drive
- USB 3.0 drivers (included in the ASRock Support CD or website)
- A Windows® PC
- Win7 USB Patcher (included in the ASRock Support CD or website)

Scenarios

You have an ODD and PS/2 ports:

If there is an optical disc drive, PS/2 ports and PS/2 Keyboard or mouse on your computer, you can skip the instructions below and go ahead to install Windows® 7 OS.

You only have an ODD (*For Intel Skylake platforms only*):

If there is an optical disc drive but no PS/2 ports on your computer, please enable the “PS/2 Simulator” option in *UEFI SETUP UTILITY > Advanced > USB Configuration*, which allows the USB port to function as a PS/2 port, and then you can install the Windows® 7 OS. Please set PS/S Simulator back to disabled after the installation.

You've got nothing:

If you do not have an optical disc drive, please find another computer and follow the instructions below to create a new ISO file with the “Win7 USB Patcher”. Then use the new patched Windows® 7 installation USB drive to install Windows® 7 OS.

Instructions

Step 1

Insert the Windows® 7 installation disk or USB drive to your system.

Step 2

Extract the tool (Win7 USB Patcher) and launch it.

Step 3

Select the “Win7 Folder” from Step1 by clicking the red circle as shown as the picture below.



Step 4

Select the “USB Driver Folder” by clicking the red circle as shown as the picture below.



If you are using ASRock’s Support CD for the USB 3.0 driver, please select your CD-ROM.

Step 5

Select where to save the ISO file by pressing the red circle as shown as the picture below.



Step 6

If you want to burn the patched image to a CD, please check “Burn Image” and select “Target Device to Burn”. If not, the patched ISO image will be exported to the destination selected in Step5. Then Press “Start” to proceed.

Step 7

Now you are able to install Windows® 7 on Braswell or Skylake with the new burned CD. Or please use the patched ISO image to make an OS USB drive to install the OS.

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>

ASRock Incorporation

2F., No.37, Sec. 2, Jhongyang S. Rd., Beitou District,

Taipei City 112, Taiwan (R.O.C.)

ASRock EUROPE B.V.

Bijsterhuizen 11-11

6546 AR Nijmegen

The Netherlands

Phone: +31-24-345-44-33

Fax: +31-24-345-44-38

ASRock America, Inc.

13848 Magnolia Ave, Chino, CA91710

U.S.A.

Phone: +1-909-590-8308

Fax: +1-909-590-1026