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You can read the recommendations in the user guide, the technical guide or the installation guide for ASROCK P75 PRO3. You'll find the answers to all your questions on the ASROCK P75 PRO3 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual ASROCK P75 PRO3
User guide ASROCK P75 PRO3
Operating instructions ASROCK P75 PRO3
Instructions for use ASROCK P75 PRO3
Instruction manual ASROCK P75 PRO3

ASRock

P75 Pro3

User Manual

Version 1.0
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1



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<http://yourpdfguides.com/dref/5200688>

.....
.....
.....
.....

..... 27 . 2.

10 Onboard Headers and Connectors.

.....
.....

.. 28 . 2.11 *Serial ATA (SATA) / Serial ATA2 (SATA2) / Serial ATA3 (SATA3) Hard Disks Installation.*

.....
.....

.....
.....
.....

. 33 . 2.12 *Hot Plug for SATA / SATA2 / SATA3 HDDs.*

.....
... 33 . 2.

13 SATA / SATA2 / SATA3 HDD Hot Plug Feature and Operation Guide.....

.....
.....
.....
.....
.....

.....
.....

. 34 2.14 *Driver Installation Guide...*

.....
.....
.....
.....

..... 36 2.15 *Installing Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit / XP / XP 64-bit Without RAID Functions ...*

.....
.....

..... 36 2.15.1 *Installing Windows® XP / XP 64-bit Without RAID Functions.*

.....
.....
.....
.....

.....
.....
.....

..... 36 2.

15.2 Installing Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit Without RAID Functions.

.....
.....

. 37 . 3 3 *UEFI SETUP UTILITY. ..*

.....
.....
.....
.....

..... 38 . 3.

1 Introduction.....

.....

.....
.....

.....
.....
.....

..... 38 3.

1.1 UEFI Menu Bar...

.....
.....

.....
.....
.....

.... 3.1.2 Navigation Keys...

.....
.....
.....

.....
.....
.....

..... Main Screen..

.....
.....
.....

.....
.....
.....

..... . OC Tweaker Screen...

.....
.....
.....

.....
.....
.....

. Advanced Screen.....

.....
.....
.....

.....
.....
.....

. 3.4.1 CPU Configuration.....

.....
.....
.....

.....
.....
.....

. 3.4.2 North Bridge Configuration.....

.....
.....
.....
..... 3.4.

3 South Bridge Configuration.....

.....
.....
.....

..... 3.4.4 Storage Configuration...

.....
.....
.....

.....
.....
.....

3.4.5 Intel(R) Rapid Start Technology.....

.....
.....
.....

3.4.6 Intel(R) Smart Connect Technology.....

.....
..... 3.

4.7 Super IO Configuration...

.....

.....
.....
.....

..... 3.4.8 ACPI Configuration.

.....
.....
.....
.....

.....
.....

. 3.4.9 USB Configuration..

.....

.....
.....
.....
.....

..... Tool....

.....
.....
.....

.....
.....
.....
.....

.....
.....
.....

..... Hardware Health Event Monitoring Screen...

.....

.....
.. *Boot Screen...*

.....

.....

.....

.....

.....

.....

.....

.....

..... *Security Screen.....*

.....

.....

.....

.....

.....

.....

.....

..... *Exit Screen...*

.....

.....

.....

.....

.....

.....

.....

.....

..... 38 39 40 41 45 46 48 49 50 51 52 53 54 55 56 58 59 60 61 62 62 62 62 62 62 3.2 3.3 3.4 3.5 3.6 3.7 3.8 3.9 4 *Software Support.*

.....

.....

.....

.....

.....

.....

. 62 4.1 *Install Operating System.....*

.....

.....

.....

.....

.....

.....

. 4.2 *Support CD Information.....*

.....

.....

.....

.....

.. 4.2.1 *Running Support CD.*

.....

.....

.....

.....

.....

0 headers (support 4 USB 2.0 ports) - 1 x USB 3.

0 header (supports 2 USB 3.0 ports) - 64Mb AMI UEFI Legal BIOS with GUI support - Supports "Plug and Play" - ACPI 1.1 Compliance Wake Up Events - Supports jumperfree - SMBIOS 2.3.1 Support - CPU Core, DRAM, I.

8V PLL, VTT, VCCSA Voltage Multi-adjustment - Drivers, Utilities, AntiVirus Software (Trial Version), CyberLink MediaEspresso 6.5 Trial, ASRock MAGIX Multimedia Suite - OEM - CPU Temperature Sensing - Chassis Temperature Sensing - CPU/Chassis/Power Fan Tachometer - CPU/Chassis Quiet Fan (Allows Chassis Fan Speed AutoAdjust by CPU Temperature) BIOS Feature Support CD Hardware Monitor 7 OS Certifications - CPU/Chassis Fan Multi-Speed Control - CASE OPEN detection - Voltage Monitoring: +12V, +5V, +3.3V, CPU Vcore - Microsoft® Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit / XP / XP 64-bit compliant (see CAUTION 3) - 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> 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. Intel® Small Business Advantage is a customizable platform integrated with IT tools, which helps maximize employee productivity, PC performance, and data security.

There are applications including Software Monitor, PC Health Center, Data Backup & Restore, Energy Saver and USB Blocker. 2. Due to the operating system limitation, the actual memory size may be less than 4GB for the reservation for system usage under Windows® 7 / Vista™ / XP. For Windows® OS with 64-bit CPU, there is no such limitation. You can use ASRock XFast RAM to utilize the memory that Windows® cannot use. 3. ASRock XFast RAM is not su previously visited websites, making web surfing faster than ever. And it also boosts the speed of Adobe Photoshop 5 times faster. Another advantage of ASRock XFast RAM is that it reduces the frequency of accessing your SSDs or HDDs in order to extend their lifespan. 10 ASRock Crashless BIOS ASRock Crashless BIOS allows users to update their BIOS without fear of failing.

If power loss occurs during the BIOS update process, ASRock Crashless BIOS will automatically finish the BIOS update procedure after regaining power. Please note that BIOS files need to be placed in the root directory of your USB disk. Only USB2.0 ports support this feature. ASRock On/Off Play Technology ASRock On/Off Play Technology allows users to enjoy the great audio experience from the portable audio devices, such like MP3 player or mobile phone to your PC, even when the PC is turned off (or in ACPI S5 mode)! This motherboard also provides a free 3.

5mm audio cable (optional) that ensures users the most convenient computing environment. ASRock OMG (Online Management Guard) Administrators are able to establish an internet curfew or restrict internet access at specified times via OMG. You may schedule the starting and ending hours of internet access granted to other users. In order to prevent users from bypassing OMG, guest accounts without permission to modify the system time are required. ASRock Internet Flash ASRock Internet Flash searches for available UEFI firmware updates from our servers.

In other words, the system can autodetect the latest UEFI from our servers and flash them without entering Windows® OS. Please note that you must be running on a DHCP configured computer in order to enable this function. ASRock UEFI System Browser ASRock UEFI system browser is a useful tool included in graphical UEFI. It can detect the devices and configurations that users are currently using in their PC. With the UEFI system browser, you can easily examine the current system configuration in UEFI setup. 11 ASRock Dehumidifier Function Users may prevent motherboard damages due to dampness by enabling "Dehumidifier Function". When enabling Dehumidifier Function, the computer will power on automatically to dehumidify the system after entering S4/S5 state. ASRock Fast Boot With ASRock's exclusive Fast Boot technology, it takes less than 1.5 seconds to logon to Windows® 8 from a cold boot. No more waiting! The speedy boot will completely change your user experience and behavior.

ASRock Combo Cooler Option (C.C.O.) Combo Cooler Option (C.C.O.) provides the flexible option to adopt three different CPU cooler types, Socket LGA 775, LGA 1155 and LGA 1156. Please be noticed that not all the 775 and 1156 CPU Fan can be used. ASRock Good Night LED ASRock Good Night LED technology can offer you a better environment by extinguishing the unessential LED. By enabling Good Night LED in BIOS, the Power / HDD / LAN LED will be switched off when system is on.

Not only this, Good night LED will automatically switch off Power and Keyboard LED when the system enters into Standby / Hibernation mode as well. 12 1.3 Motherboard Layout 1 2 17.8cm (7.0 in) USB 2.

0 T: USB0 B: USB1 PS2 Mouse/ Keyboard 3 4 ATX12V1 CPU_FAN1 DDR3_A1 (64 bit, 240-pin module) DDR3_B1 (64 bit, 240-pin module) USB 3.0 T: USB0 B: USB1 ATXPWR1 30.5cm (12.0 in) 33 32 Top: LINE IN Bottom: MIC IN Center: FRONT PWR_FAN1 CHA_FAN1 LAN PHY DDR3 USB 2.0 Top: T: USB2 RJ-45 B: USB3 USB3_2_3 Front USB 3.

0 31 AUDIO CODEC PCIE1 ErP/EuP Ready 30 29 28 HDMI_SPDIF1 1 1 HD_AUDIO1 Intel B75 PCIE2 PCI Express 3.0 1 COM1 Coaxial SPDIF PARALLEL PORT 5 P75 Pro3 6 7 27 Super I/O PCIE3 PCIE4 26 CMOS Battery X Fast USB X Fast RAM X Fast LAN PCII 64Mb BIOS 8 RoHS SATA3_0 25 24 23 1 SATA2_5 CII 1 1 PLED1 PCI2 USB4_5 USB6_7 PLED PWRBTN SATA2_2 SATA2_4 9 10 11 CHA_FAN2 SPEAKER1 12 1 1 IRI PANEL1 1 1 CIRI CLRCMOS1 1 HDLED RESET 1 SATA2_1 SATA2_3 22 21 20 19 18 17 16 15 14 13 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 CPU Fan Connector (CPU_FAN1) 1155-Pin CPU Socket ATX 12V Power Connector (ATX12V1) 2 x 240-pin DDR3 DIMM Slots (DDR3_A1, DDR3_B1, Black) ATX Power Connector (ATXPWR1) USB 3.0 Header (USB3_2_3, Black) Intel B75 Chipset SPI Flash Memory (64Mb) SATA3 Connector (SATA3_0, Gray) SATA2 Connector (SATA2_5, Black) SATA2 Connector (SATA2_2, Black) SATA2 Connector (SATA2_4, Black) Chassis Fan Connector (CHA_FAN2) SATA2 Connector (SATA2_3, Black) SATA2 Connector (SATA2_1, Black) System Panel Header (PANEL1, Black) USB 2.0 Header (USB6_7, Black) 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 USB 2.0 Header (USB4_5, Black) Consumer Infrared Module Header (CIRI, Gray) Infrared Module Header (IRI, Black) Chassis Speaker Header (SPEAKER1, Black) Clear CMOS Jumper (CLRCMOS1) Chassis Intrusion Header (CII) Power LED Header (PLED1) PCI Slots (PCII-2, Black) PCI Express 2.



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0 x1 Slot (PCIe4, Black) PCI Express 2.0 x16 Slot (PCIe3, Black) PCI Express 2.0 x1 Slot (PCIe2, Black) Front Panel Audio Header (HD_AUDIO1, Black) HDMI_SPDIF Header (HDMI_SPDIF1, Black) PCI Express 3.0 x16 Slot (PCIe1, Black) Power Fan Connector (PWR_FAN1) Chassis Fan Connector (CHA_FAN1) 13 1.4 I/O Panel 1 2 3 4 5 6 11 1 2 * 3 4 ** 5 6 10 9 7 8 9 10 11 8 7 USB 2.

0 Ports (USB01) Parallel Port LAN RJ-45 Port Line In (Light Blue) Front Speaker (Lime) Microphone (Pink) USB 2.0 Ports (USB23) USB 3.0 Ports (USB3_0_1) Coaxial SPDIF Out Port COM Port PS/2 Mouse/Keyboard Port (Purple) * There is one LED next to the LAN port. Please refer to the table below for the LAN port LED indications. LAN Port LED Indications Status SPEED LED Description Activity/Link LED Status Description ACT/LINK LED SPEED LED Off No Link Blinking Data Activity On Link Off Orange Green 10Mbps connection 100Mbps connection 1Gbps connection LAN Port ** If you enable Multi-Streaming function, this motherboard can support up to 5.1 CH audio only. To enable Multi-Streaming function, you need to connect a front panel audio cable to the front panel audio header. Please refer to below steps for the software setting of Multi-Streaming. For Windows® XP: After restarting your computer, you will find "Mixer" tool on your system. Please select "Mixer ToolBox", click "Enable playback multi-streaming", and click "ok".

Choose "2CH" or "4CH" and then you are allowed to select "Realtek HDA Primary output" to use Rear Speaker and Front Speaker, or select "Realtek HDA Audio 2nd output" to use front panel audio. Then reboot your system. For Windows® 7 / Vista™: After restarting your computer, please double-click "Realtek HD Audio Manager" on the system tray. Set "Speaker Configuration" to "Quadraphonic" or "Stereo". Click "Device advanced settings", choose "Make front and rear output devices playbacks two different audio streams simultaneously", and click "ok".

Then reboot your system. Audio Output Channels Front Speaker (No. 5) 2 V 4 V 6 V 8 V Line In (No. 4) -- V V V Microphone (No. 6) -- -- V V Front Panel Headphone --V 14 Chapter 2: Installation This is an ATX form factor (12.

0" x 7.0", 30.5 x 17.8 cm) motherboard. Before you install the motherboard, study the configuration of your chassis to ensure that the motherboard fits into it.

Make sure to unplug the power cord before installing or removing the motherboard. Failure to do so may cause physical injuries to you and damages to motherboard components. 2.1 Screw Holes Place screws into the holes indicated by circles to secure the motherboard to the chassis. Do not over-tighten the screws! Doing so may damage the motherboard.

2.2 Pre-installation Precautions Take note of the following precautions before you install motherboard components or change any motherboard settings. 1. 2.

Unplug the power cord from the wall socket before touching any components. To avoid damaging the motherboard's components due to static electricity, NEVER place your motherboard directly on the carpet or the like. Also remember to use a grounded wrist strap or touch a safety grounded object before you handle the components. Hold components by the edges and do not touch the ICs. Whenever you uninstall any component, place it on a grounded antistatic pad or in the bag that comes with the component. When placing screws into the screw holes to secure the motherboard to the chassis, please do not over-tighten the screws! Doing so may damage the motherboard.

Before you install or remove any component, ensure that the power is switched off or the power cord is detached from the power supply. Failure to do so may cause severe damage to the motherboard, peripherals and/or components. 3. 4. 5.

15 2.3 CPU Installation For the installation of Intel 1155-Pin CPU, please follow the steps below. Load Plate Load Lever Contact Array Socket Body 1155-Pin Socket Overview Before you insert the 1155-Pin CPU into the socket, please check if the CPU surface is unclean or if there are any bent pins in the socket. Do not force to insert the CPU into the socket if above situation is found. Otherwise, the CPU will be seriously damaged.

Step 1. Open the socket: Step 1-1. Disengage the lever by pressing it down and sliding it out of the hook. Step 1-2. Keep the lever positioned at about 135 degrees in order to flip up the load plate. Step 2. Remove the PnP Cap (Pick and Place Cap). 1. It is recommended to use the cap tab to handle and avoid kicking off the PnP cap. 2.

This cap must be placed if returning the motherboard for after service. 16 Step 3. Insert the 1155-Pin CPU: Step 3-1. Hold the CPU by the edge which is marked with a black line. black line Step 3-2. Orient the CPU with the IHS (Integrated Heat Sink) up. Locate Pin1 and the two orientation key notches. orientation key notch Pin1 alignment key Pin1 alignment key orientation key notch 1155-Pin CPU 1155-Pin Socket For proper inserting, please ensure to match the two orientation key notches of the CPU with the two alignment keys of the socket. Step 3-3. Carefully place the CPU into the socket by using a purely vertical motion.

Step 3-4. Verify that the CPU is within the socket and properly mated to the orient keys. Step 4. Close the socket: Step 4-1. Flip the load plate onto the IHS.

Step 4-2. Press down the load lever, and secure it with the load plate tab under the retention tab. 17 2.4 Installation of CPU Fan and Heatsink This motherboard is equipped with 1155-Pin socket that supports Intel 1155-Pin CPUs. Please adopt the type of heatsink and cooling fan compliant with Intel 1155Pin CPU to dissipate heat.

Before you install the heatsink, you need to spray thermal interface material between the CPU and the heatsink to improve heat dissipation. Ensure that the CPU and the heatsink are securely fastened and in good contact with each other. Then connect the CPU fan to the CPU_FAN connector (CPU_FAN1, see page 13, No. 1). For proper installation, please kindly refer to the instruction manuals of your CPU fan and heatsink. Below is an example to illustrate the installation of the heatsink for 1155-Pin CPUs. Step 1. Apply thermal interface material onto the center of the IHS on the socket's surface. Apply Thermal Interface Material Step 2. Place the heatsink onto the socket.

Ensure that the fan cables are oriented on side closest to the CPU fan connector on the motherboard (CPU_FAN1, see page 13, No. 1). Step 3. Align fasteners with the motherboard throughholes. Step 4. Rotate the fastener clockwise, then press down on fastener caps with thumb to install and lock. Repeat with remaining fasteners. Fan cables on side closest to MB header Fastener slots pointing straight out Press Down (4 Places) If you press down the fasteners without rotating them clockwise, the heatsink cannot be secured on the motherboard.



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Step 5. Connect fan header with the CPU fan connector on the motherboard.

Step 6. Secure redundant cable with tie-wrap to ensure the cable does not interfere with fan operation or contact other components. Please be noticed that this motherboard supports Combo Cooler Option (C.C.O.)

), which provides flexible options to adopt three different CPU cooler types, Socket LGA 775, LGA 1155 and LGA 1156. The white throughholes are for Socket LGA 1155/1156 CPU fan. 18 2.5 Installation of Memory Modules (DIMM) This motherboard provides two 240-pin DDR3 (Double Data Rate 3) DIMM slots, and supports Dual Channel Memory Technology. For dual channel configuration, you always need to install two identical (the same brand, speed, size and chiptype) memory modules in the DDR3 DIMM slots to activate Dual Channel Memory Technology.

Otherwise, it will operate at single channel mode. 1. 2. 3. It is not allowed to install a DDR or DDR2 memory module into a DDR3 slot; otherwise, this motherboard and DIMM may be damaged. If you install only one memory module or two non-identical memory modules, it is unable to activate Dual Channel Memory Technology. Some DDR3 1GB double-sided DIMMs with 16 chips may not work on this motherboard. It is not recommended to install them on this motherboard. Installing a DIMM Please make sure to disconnect power supply before adding or removing DIMMs or the system components. Step 1.

Unlock a DIMM slot by pressing the retaining clips outward. Step 2. Align a DIMM on the slot such that the notch on the DIMM matches the break on the slot. notch break notch break The DIMM only fits in one correct orientation. It will cause permanent damage to the motherboard and the DIMM if you force the DIMM into the slot at incorrect orientation. Step 3. Firmly insert the DIMM into the slot until the retaining clips at both ends fully snap back in place and the DIMM is properly seated. 19 2.6 Expansion Slots (PCI and PCI Express Slots) There are 2 PCI slots and 4 PCI Express slots on this motherboard. PCI slots: PCI slots are used to install expansion cards that have the 32-bit PCI interface.

PCIe slots: PCIE1 (PCIe 3.0 x16 slot) is used for PCI Express x16 lane width graphics cards, or used to install PCI Express graphics cards to support CrossFireXTM. PCIE3 (PCIe 2.0 x16 slot) is used for PCI Express x4 lane width graphics cards, or used to install PCI Express graphics cards to support CrossFireXTM. PCIE2 / PCIE4 (PCIe 2.

0 x1 slot) is used for PCI Express cards with x1 lane width cards, such as Gigabit LAN card, SATA2 card, etc. 1. In single VGA card mode, it is recommended to install a PCI Express x16 graphics card on PCIE1 slot. 2. In CrossFireXTM mode, please install the PCI Express x16 graphics cards on PCIE1 and PCIE3 slots.

Therefore, PCIE1 will work at x16 bandwidth, while PCIE3 works at x4 bandwidth. 3. Please connect a chassis fan to the motherboard's chassis fan connector (CHA_FAN1 or CHA_FAN2) when using multiple graphics cards for better thermal environment. 4. Only PCIE1 slot supports Gen 3 speed. To run the PCI Express in Gen 3 speed, please install an Ivy Bridge CPU. If you install a Sandy Bridge CPU, the PCI Express will run only at PCI Express Gen 2 speed. Installing an expansion card Step 1. Step 2. Step 3.

Step 4. Step 5. Step 6. Before installing an expansion card, please make sure that the power supply is switched off or the power cord is unplugged. Please read the documentation of the expansion card and make necessary hardware settings for the card before you start the installation. Remove the system unit cover (if your motherboard is already installed in a chassis). Remove the bracket facing the slot that you intend to use. Keep the screws for later use. Align the card connector with the slot and press firmly until the card is completely seated on the slot. Fasten the card to the chassis with screws.

Replace the system cover 20 2.7 CrossFireXTM and Quad CrossFireXTM Operation Guide This motherboard supports CrossFireXTM and Quad CrossFireXTM. CrossFireXTM technology offers the most advantageous means available of combining multiple high performance Graphics Processing Units (GPU) in a single PC. Combining a range of different operating modes with intelligent software design and an innovative interconnect mechanism, CrossFireXTM enables the highest possible level of performance and image quality in any 3D application. Currently CrossFireXTM is supported by Windows® XP with Service Pack 2 / VistaTM / 7 OS.

Quad CrossFireXTM is supported by Windows® VistaTM / 7 OS only. Please check AMD's website for AMD CrossFireXTM driver updates. 1. If a customer incorrectly configures their system they will not see the performance benefits of CrossFireXTM. All three CrossFireXTM components, a CrossFireXTM Ready graphics card, a CrossFireXTM Ready motherboard and a CrossFireXTM Edition co-processor graphics card, must be installed correctly to benefit from the CrossFireXTM multi-GPU platform.

2. If you pair a 12-pipe CrossFireXTM Edition card with a 16-pipe card, both cards will operate as 12-pipe cards while in CrossFireXTM mode. 2.7.1 Installing Two CrossFireXTM-Ready Graphics Cards Different CrossFireXTM cards may require different methods to enable CrossFireXTM feature. For other CrossFireXTM cards that AMD has released or will release in the future, please refer to AMD graphics card manuals for detailed installation guide. Step 1. Insert one Radeon graphics card into PCIE1 slot and the other Radeon graphics card to PCIE3 slot. Make sure that the cards are properly seated on the slots. 21 Step 2.

Connect two Radeon graphics cards by installing a CrossFire Bridge on the CrossFire Bridge Interconnects on the top of the Radeon graphics cards. (The CrossFire Bridge is provided with the graphics card you purchase, not bundled with this motherboard. Please refer to your graphics card vendor for details.) CrossFire Bridge or Step 3. Connect the DVI monitor cable to the DVI connector on the Radeon graphics card on PCIE1 slot. (You may use the DVI to D-Sub adapter to convert the DVI connector to D-Sub interface, and then connect the D-Sub monitor cable to the DVI to D-Sub adapter.) 22 2.7.2 Driver Installation and Setup Step 1. Power on your computer and boot into OS.

Step 2. Remove the AMD drivers if you have any VGA drivers installed in your system. The Catalyst Uninstaller is an optional download. We recommend using this utility to uninstall any previously installed Catalyst drivers prior to installation. Please check AMD's website for AMD driver updates.

Step 3. Install the required drivers to your system. For Windows® XP OS: A. AMD recommends Windows® XP Service Pack 2 or higher to be installed (If you have Windows® XP Service Pack 2 or higher installed in your system, there is no need to download it again): <http://www.microsoft.com/windowsxpsp2/default.mspx> B.



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You must have Microsoft .NET Framework installed prior to downloading and installing the CATALYST Control Center. Please check Microsoft's website for details. For Windows® 7 / Vista™ OS: Install the CATALYST Control Center. Please check AMD's website for details. Step 4. Restart your computer. Step 5.

Install the VGA card drivers to your system, and restart your computer. You will find "AMD Catalyst Control Center" on your Windows® taskbar. AMD Catalyst Control Center Step 6. Double-click "ATI Catalyst Control Center". Click "View", select "CrossFireXTM", and then check the item "Enable CrossFireXTM". Select "2 GPUs" and click "Apply". 23 Although you have selected the option "Enable CrossFireXTM", the CrossFireXTM function may not work actually. Your computer will automatically reboot. After restarting your computer, please confirm whether the option "Enable CrossFireXTM" in "AMD Catalyst Control Center" is selected or not; if not, please select it again, and then you are able to enjoy the benefits of CrossFireXTM. Step 7.

You can freely enjoy the benefits of CrossFireXTM or Quad CrossFireXTM. * CrossFireXTM appearing here is a registered trademark of AMD Technologies Inc., and is used only for identification or explanation and to the owners' benefit, without intent to infringe. * For further information of AMD CrossFireXTM technology, please check AMD's website for updates and details. 24 2.

8 ASRock Smart Remote Installation Guide ASRock Smart Remote is only used for ASRock motherboard with CIR header. Please refer to below procedures for the quick installation and usage of ASRock Smart Remote. Step1. Find the CIR header located next to the USB 2.0 header on ASRock motherboard. USB 2.0 header (9-pin, black) CIR header (4-pin, gray) Step2. Connect the front USB cable to the USB 2.0 header (as below, pin 1-5) and the CIR header. Please make sure the wire assignments and the pin assignments are matched correctly. USB_PWR PP+ GND DUMMY 1 2 3 4 5 GND IRTX IRRX ATX+5VSB Step3. Step4. Install Multi-Angle CIR Receiver to the front USB port. Boot up your system. Press <F2> or to enter BIOS Setup Utility.

Make sure the option "CIR Controller" is setting at [Enabled]. (Advanced -> Super IO Configuration -> CIR Controller -> [Enabled]) If you cannot find this option, please shut down your system and install Multi-Angle CIR Receiver to the other front USB port then try again. Step5. Enter Windows. Execute ASRock support CD and install CIR Driver. (It is listed at the bottom of driver list.) 25 3 CIR sensors in different angles 1. 2. 3. Only one of the front USB port can support CIR function.

When the CIR function is enabled, the other port will remain USB function. Multi-Angle CIR Receiver is used for front USB only. Please do not use the rear USB bracket to connect it on the rear panel. Multi-Angle CIR Receiver can receive the multi-direction infrared signals (top, down and front), which is compatible with most of the chassis on the market. The Multi-Angle CIR Receiver does not support Hot-Plug function.

Please install it before you boot the system. * ASRock Smart Remote is only supported by some of ASRock motherboards. Please refer to ASRock website for the motherboard support list: <http://www.asrock.com> 26 2.

9 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 Clear CMOS Jumper (CLRCMOS1) (see p.13, No. 22) Setting Description Default Clear CMOS 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.

27 2.10 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 (SATA2_1: see p.13, No. 15) (SATA2_2: see p.

13, No. 11) (SATA2_3: see p.13, No. 14) (SATA2_4: see p.13, No.

12) (SATA2_5: see p.13, No. 10) SATA2_5 SATA2_2 SATA2_4 These five 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.

SATA2_1 SATA2_3 Serial ATA3 Connector (SATA3_0: see p.13, No. 9) SATA3_0 This Serial ATA3 (SATA3) connector supports SATA data cables for internal storage devices. @@@@ (9-pin USB6_7) (see p.13, No. @@@@) (19) Front Panel Audio Header (9-pin HD_AUDIO1) (see p.13, No. @@@@) @@@@2. @@@@Connect Mic_IN (MIC) to MIC2_L. B.

Connect Audio_R (RIN) to OUT2_R and Audio_L (LIN) to OUT2_L. C. Connect Ground (GND) to Ground (GND). D. MIC_RET and OUT_RET are for HD audio panel only. You don't need to connect them for AC'97 audio panel. E. To activate the front mic. For Windows® XP / XP 64-bit OS: Select "Mixer". Select "Recorder".

Then click "FrontMic". @@@@Note the positive and negative pins before connecting the cables. @@@@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 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.13, No.

21) 1 SPEAKER DUMMY +5V DUMMY Please connect the chassis speaker to this header. Power LED Header (3-pin PLED1) (see p.13, No. 24) 1 PLEDPLED+ PLED+ Please connect the chassis power LED to this header to indicate system power status. The LED is on when the system is operating.



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The LED keeps blinking in S1/S3 state. The LED is off in S4 state or S5 state (power off). 30 Chassis and Power Fan Connectors (4-pin CHA_FAN1) FAN_SPEED_CONTROL (see p.13, No. 33) (3-pin CHA_FAN2) (see p.

13, No. 13) CHA_FAN_SPEED +12V GND Please connect the fan cables to the fan connectors and match the black wire to the ground pin. (3-pin PWR_FAN1) PWR_FAN_SPEED (see p.13, No. 32) +12V GND CPU Fan Connectors 4 3 2 1 (4-pin CPU_FAN1) GND (see p.13, No. 1) +12V CPU_FAN_SPEED FAN_SPEED_CONTROL 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.

13, No. 5) 12 24 Please connect an ATX power supply to this connector. 1 13 12 24 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 1 13 31 ATX 12V Power Connector (4-pin ATX12V1) (see p.

13, No. 3) Please connect an ATX 12V power supply to this connector. Chassis Intrusion Header (2-pin C11) (see p.13, No. 23) HDMI_SPDIF Header (2-pin HDMI_SPDIF1) (see p.

13, No. 30) 1 GND Signal 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. HDMI_SPDIF header, providing SPDIF audio output to HDMI VGA card, allows the system to connect HDMI Digital TV/projector/LCD devices. Please connect the HDMI_SPDIF connector of HDMI VGA card to this header. 1 GND SPDIFOUT 32 2.11 Serial ATA (SATA) / Serial ATA2 (SATA2) / Serial ATA3 (SATA3) Hard Disks Installation This motherboard adopts Intel® B75 chipset that supports Serial ATA (SATA) / Serial ATA2 (SATA2) / Serial ATA3 (SATA3) hard disks. You may install SATA / SATA2 / SATA3 hard disks on this motherboard for internal storage devices. This section will guide you to install the SATA / SATA2 / SATA3 hard disks. STEP 1: Install the SATA / SATA2 / SATA3 hard disks into the drive bays of your chassis.

STEP 2: Connect the SATA power cable to the SATA / SATA2 / SATA3 hard disk. STEP 3: Connect one end of the SATA data cable to the motherboard's SATA2 / SATA3 connector. STEP 4: Connect the other end of the SATA data cable to the SATA / SATA2 / SATA3 hard disk. 2.12 Hot Plug for SATA / SATA2 / SATA3 HDDs This motherboard supports Hot Plug for SATA / SATA2 / SATA3 in AHCI mode. Intel® B75 chipset provides hardware support for Advanced Host controller Interface (AHCI), a new programming interface for SATA host controllers developed through a joint industry effort. NOTE What is Hot Plug Function? If the SATA / SATA2 / SATA3 HDDs are NOT set for RAID configuration, it is called "Hot Plug" for the action to insert and remove the SATA / SATA2 / SATA3 HDDs while the system is still power-on and in working condition. However, please note that it cannot perform Hot Plug if the OS has been installed into the SATA / SATA2 / SATA3 HDD. 33 2.13 SATA / SATA2 / SATA3 HDD Hot Plug Feature and Operation Guide This motherboard supports Hot Plug feature for SATA / SATA2 / SATA3 HDD in AHCI mode.

Please read below operation guide of Hot Plug feature carefully. Before you process the SATA / SATA2 / SATA3 HDD Hot Plug, please check below cable accessories from the motherboard gift box pack. A. 7-pin SATA data cable B. SATA power cable with SATA 15-pin power connector interface A. SATA data cable (Red) B. SATA power cable SATA 7-pin connector The SATA 15-pin power connector (Black) connect to SATA / SATA2 / SATA3 HDD 1x4-pin conventional power connector (White) connect to power supply Caution 1. Without SATA 15-pin power connector interface, the SATA / SATA2 / SATA3 Hot Plug cannot be processed. 2. Even some SATA / SATA2 / SATA3 HDDs provide both SATA 15-pin power connector and IDE 1x4-pin conventional power connector interfaces, the IDE 1x4-pin conventional power connector interface is definitely not able to support Hot Plug and will cause the HDD damage and data loss.

Points of attention, before you process the Hot Plug: 1. Below operation procedure is designed only for our motherboard, which supports SATA / SATA2 / SATA3 HDD Hot Plug. * The SATA / SATA2 / SATA3 Hot Plug feature might not be supported by the chipset because of its limitation, the SATA / SATA2 / SATA3 Hot Plug support information of our motherboard is indicated in the product spec on our website: www.asrock.com 2. Make sure your SATA / SATA2 / SATA3 HDD can support Hot Plug function from your dealer or HDD user manual. The SATA / SATA2 / SATA3 HDD, which cannot support Hot Plug function, will be damaged under the Hot Plug operation. 3. Please make sure the SATA / SATA2 / SATA3 driver is installed into system properly. The latest SATA / SATA2 / SATA3 driver is available on our support website: www.asrock.com

4. Make sure to use the SATA power cable & data cable, which are from our motherboard package. 5. Please follow below instructions step by step to reduce the risk of HDD crash or data loss. 34 How to Hot Plug a SATA / SATA2 / SATA3 HDD: Points of attention, before you process Hot Plug: Please follow the instructions below to process Hot Plug, improper procedure will cause the SATA / SATA2 / SATA3 HDD damage and data loss. Step 1 Please connect a SATA power cable's 1x4-pin end (White) to the power supply's 1x4-pin cable. Step 2 Connect SATA data cable to the motherboard's SATA2 / SATA3 connector. SATA power cable 1x4-pin power connector (White) Step 3 Connect SATA 15-pin power cable connector (Black) end to SATA / SATA2 / SATA3 HDD. Step 4 Connect SATA data cable to the SATA / SATA2 / SATA3 HDD.

How to Hot Unplug a SATA / SATA2 / SATA3 HDD: Points of attention, before you process the Hot Unplug: Please do follow below instruction sequence to process the Hot Unplug, improper procedure will cause the SATA / SATA2 / SATA3 HDD damage and data loss. Step 1 Unplug SATA data cable from SATA / SATA2 / SATA3 HDD side. Step 2 Unplug SATA 15-pin power cable connector (Black) from SATA / SATA2 / SATA3 HDD side. 35 2.14 Driver Installation Guide To install the drivers to your system, please insert the support CD to your optical drive first.

Then, the drivers compatible to your system can be auto-detected and listed on the support CD driver page. Please follow the order from top to bottom to install those required drivers. Therefore, the drivers you install can work properly. 2.15 Installing Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit / XP / XP 64-bit Without RAID Functions If you want to install Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit / XP / XP 64-bit OS on your SATA / SATA2 / SATA3 HDDs without RAID functions, please follow the procedures below according to the OS you install.



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2.15.1 Installing Windows® XP / XP 64-bit Without RAID Functions If you want to install Windows® XP / XP 64-bit OS on your SATA / SATA2 / SATA3 HDDs without RAID functions, please follow the steps below. AHCI mode is not supported under Windows® XP / XP 64-bit. Using SATA / SATA2 / SATA3 HDDs without NCQ function STEP 1: Set Up UEFI. A. Enter UEFI SETUP UTILITY Advanced screen Storage Configuration. B. Set the option "SATA Mode Selection" to [IDE]. STEP 2: Install Windows® XP / XP 64-bit OS on your system.

36 2.15.2 Installing Windows® 7 / 7 64-bit / VistaTM / VistaTM 64-bit Without RAID Functions If you want to install Windows® 7 / 7 64-bit / VistaTM / VistaTM 64-bit OS on your SATA / SATA2 / SATA3 HDDs without RAID functions, please follow the steps below. Using SATA / SATA2 / SATA3 HDDs with NCQ function STEP 1: Set Up UEFI. A. Enter UEFI SETUP UTILITY Advanced screen Storage Configuration. B. Set the option "SATA Mode Selection" to [AHCI]. STEP 2: Install Windows® 7 / 7 64-bit / VistaTM / VistaTM 64-bit OS on your system. Using SATA / SATA2 / SATA3 HDDs without NCQ function STEP 1: Set Up UEFI.

A. Enter UEFI SETUP UTILITY Advanced screen Storage Configuration. B. Set the option "SATA Mode Selection" to [IDE]. STEP 2: Install Windows® 7 / 7 64-bit / VistaTM / VistaTM 64-bit OS on your system.

37 Chapter 3: UEFI SETUP UTILITY 3.1 Introduction This section explains how to use the UEFI SETUP UTILITY to configure your system. The UEFI chip on the motherboard stores the UEFI SETUP UTILITY. You may run the UEFI SETUP UTILITY when you start up the computer. Please press <F2> or during the Power-On-Self-Test (POST) to enter the UEFI SETUP UTILITY, otherwise, POST will continue with its test routines.

If you wish to enter the UEFI SETUP UTILITY after POST, restart the system by pressing <Ctrl> + <Alt> + <Delete>, or by pressing the reset button on the system chassis. You may also restart by turning the system off and then back on. Because the UEFI software is constantly being updated, the following UEFI setup screens and descriptions are for reference purpose only, and they may not exactly match what you see on your screen. 3.1.1 UEFI Menu Bar The top of the screen has a menu bar with the following selections: Main To set up the system time/date information OC Tweaker To set up overclocking features Advanced To set up the advanced UEFI features Tool Useful tools H/W Monitor To display current hardware status Boot To set up the default system device to locate and load the Operating System Security To set up the security features Exit To exit the current screen or the UEFI SETUP UTILITY Use < > key or < > key to choose among the selections on the menu bar, and then press <Enter> to get into the sub screen. You can also use the mouse to click your required item. 38 3.1.2 Navigation Keys Please check the following table for the function description of each navigation key.

Navigation Key(s)	Function Description
/ / + / - <Tab> <Enter> <PGUP> <PGDN> <HOME> <END> <F1> <F7> <F9> <F10> <F12> <ESC>	Moves cursor left or right to select Screens Moves cursor up or down to select items To change option for the selected items Switch to next function To bring up the selected screen Go to the previous page Go to the next page Go to the top of the screen Go to the bottom of the screen To display the General Help Screen Discard changes and exit the UEFI SETUP UTILITY Load optimal default values for all the settings Save changes and exit the UEFI SETUP UTILITY Print screen Jump to the Exit Screen or exit the current screen
39 3.2 Main Screen	When you enter the UEFI SETUP UTILITY, the Main screen will appear and display the system overview.
40 3.3 OC Tweaker Screen	In the OC Tweaker screen, you can set up overclocking features. CPU Configuration CPU Ratio Use this item to change the ratio value of this motherboard. Intel SpeedStep Technology Intel SpeedStep technology is Intel's new power saving technology. Processors can switch between multiple frequencies and voltage points to enable power saving. The default value is [Enabled]. Configuration options: [Enabled] and [Disabled]. If you install Windows® VistaTM / 7 and want to enable this function, please set this item to [Enabled].

This item will be hidden if the current CPU does not support Intel SpeedStep technology. Please note that enabling this function may reduce CPU voltage and lead to system stability or compatibility issues with some power supplies. Please set this item to [Disabled] if above issues occur. Intel Turbo Boost Technology Use this item to enable or disable Intel Turbo Boost Mode Technology. Turbo Boost Mode allows processor cores to run faster than marked frequency in specific conditions.

The default value is [Enabled]. Long Duration Power Limit Use this item to configure long duration power limit in watts. The default value is [Auto]. Long Duration Maintained Use this item to configure time window which the long duration power is maintained. The default value is [Auto]. Short Duration Power Limit Use this item to configure short duration power limit in watts. The default 41 value is [Auto]. Primary Plane Current Limit Use this item to configure the maximum instantaneous current allowed for the primary plane. The default value is [Auto]. Secondary Plane Current Limit Use this item to configure the maximum instantaneous current allowed for the secondary plane. The default value is [Auto]. DRAM Timing Configuration Load XMP Setting Use this to load XMP setting. Configuration options: [Auto], [Default], [Profile 1] and [Profile 2]. The default value is [Auto]. DRAM Frequency If [Auto] is selected, the motherboard will detect the memory module(s) inserted and assign the appropriate frequency automatically.

DRAM Configuration DRAM tCL Use this item to change CAS# Latency (tCL) Auto/Manual setting. The default is [Auto]. DRAM tRCD Use this item to change RAS# to CAS# Delay (tRCD) Auto/Manual setting. The default is [Auto]. DRAM tRP Use this item to change Row Precharge Time (tRP) Auto/Manual setting. The default is [Auto]. 42 DRAM tRAS Use this item to change RAS# Active Time (tRAS) Auto/Manual setting. The default is [Auto]. Command Rate (CR) Use this item to change Command Rate (CR) Auto/Manual setting. The default is [Auto].

DRAM tWR Use this item to change Write Recovery Time (tWR) Auto/Manual setting. The default is [Auto]. DRAM tRFC Use this item to change Refresh Cycle Time (tRFC) Auto/Manual setting. The default is [Auto]. DRAM tRRD Use this item to change RAS to RAS Delay (tRRD) Auto/Manual setting. The default is [Auto]. DRAM tWTR Use this item to change Write to Read Delay (tWTR) Auto/Manual setting. The default is [Auto]. DRAM tRTP Use this item to change Read to Precharge (tRTP) Auto/Manual setting. The default is [Auto].

DRAM tFAW Use this item to change Four Activate Window (tFAW) Auto/Manual setting.



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The default is [Auto]. DRAM tCWL Use this item to change CAS# Write Latency (tCWL) Auto/Manual setting. The default is [Auto]. ODT WR (CHA) Use this item to change ODT WR (CHA) setting. The default is [Auto]. ODT WR (CHB) Use this item to change ODT WR (CHB) setting. The default is [Auto]. ODT NOM (CHA) Use this item to change ODT NOM (CHA) setting. The default is [Auto].

ODT NOM (CHB) Use this item to change ODT NOM (CHB) setting. The default is [Auto]. MRC Fast Boot Use this item to enable or disable MRC Fast Boot. The default is [Enabled]. 43 Voltage Configuration CPU Core Voltage Offset Use this to select CPU Core Voltage. The default value is [Auto]. DRAM Voltage Use this to select DRAM Voltage. The default value is [Auto]. VTT Voltage Use this to select VTT Voltage. The default value is [Auto]. PCH Voltage Use this to select PCH Voltage. The default value is [Auto]. CPU PLL Voltage Use this to select CPU PLL Voltage. The default value is [Auto]. VCCSA Voltage Use this to select VCCSA Voltage.

The default value is [Auto]. User Defaults In this option, you are allowed to load and save three user defaults according to your own requirements. 44 3.4 Advanced Screen In this section, you may set the configurations for the following items: CPU Configuration, North Bridge Configuration, South Bridge Configuration, Storage Configuration, Intel(R) Rapid Start Technology, Intel(R) Smart Connect Technology, Super IO Configuration, ACPI Configuration and USB Configuration. Setting wrong values in this section may cause the system to malfunction.

45 3.4.1 CPU Configuration Intel Hyper Threading Technology To enable this feature, a computer system with an Intel processor that supports Hyper-Threading technology and an operating system that includes optimization for this technology, such as Microsoft® Windows® XP / Vista™ / 7 is required. Set to [Enabled] if using Microsoft® Windows® XP, Vista™, 7, or Linux kernel version 2.4.18 or higher. This option will be hidden if the installed CPU does not support Hyper-Threading technology. Active Processor Cores Use this item to select the number of cores to enable in each processor package. The default value is [All]. Enhance Halt State (C1E) All processors support the Halt State (C1).

The C1 state is supported through the native processor instructions HLT and MWAIT and requires no hardware support from the chipset. In the C1 power state, the processor maintains the context of the system caches. CPU C3 State Support Use this to enable or disable CPU C3 (ACPI C2) report to OS. CPU C6 State Support Use this to enable or disable CPU C6 (ACPI C3) report to OS. Package C State Support Selected option will program into C State package limit register. The default value is [Auto]. CPU Thermal Throttling You may select [Enabled] to enable CPU internal thermal control mechanism to keep the CPU from overheating. No-Execute Memory Protection No-Execution (NX) Memory Protection Technology is an enhancement 46 to the IA-32 Intel Architecture. An IA-32 processor with "No Execute (NX) Memory Protection" can prevent data pages from being used by malicious software to execute codes. This option will be hidden if the current CPU does not support No-Execute Memory Protection.

Intel Virtualization Technology When this option is set to [Enabled], a VMM (Virtual Machine Architecture) can utilize the additional hardware capabilities provided by Vanderpool Technology. This option will be hidden if the installed CPU does not support Intel Virtualization Technology. Hardware Prefetcher Use this item to turn on/off the MLC streamer prefetcher. Adjacent Cache Line Prefetch Use this item to turn on/off prefetching of adjacent cache lines. 47 3.4.2 North Bridge Configuration Primary Graphics Adapter This allows you to select [PCI] or [PCI Express] as the boot graphic adapter priority. The default value is [PCI Express]. VT-d Use this item to enable/disable Intel(R) Virtualization Technology for Directed I/O. PCIE1 Link Speed This allows you to select PCIE1 Link Speed.

The default value is [Auto]. 48 3.4.3 South Bridge Configuration Onboard HD Audio Select [Auto], [Enabled] or [Disabled] for the onboard HD Audio feature. If you select [Auto], the onboard HD Audio will be disabled when PCI Sound Card is plugged. Front Panel Select [Auto] or [Disabled] for the onboard HD Audio Front Panel. On/Off Play Use this item to enable or disable On/Off Play Technology. The default value is [Enabled]. When On/Off Play is enabled, Deep Sleep will be disabled. If you want to enable Deep Sleep, please disable On/Off Play first.

Onboard LAN This allows you to enable or disable the Onboard LAN feature. Deep Sleep Mobile platforms support Deep S4/S5 in DC only and desktop platforms support Deep S4/S5 in AC only. The default value is [Enabled in S5]. Restore on AC/Power Loss This allows you to set the power state after an unexpected AC/power loss. If [Power Off] is selected, the AC/power remains off when the power recovers. If [Power On] is selected, the AC/power resumes and the system starts to boot up when the power recovers. Good Night LED Use this item to enable or disable LAN LED. 49 3.4.4 Storage Configuration SATA Controller(s) Use this item to enable or disable the SATA Controller feature.

SATA Mode Selection Use this to select SATA mode. Configuration options: [IDE Mode], [AHCI Mode] and [Disabled]. The default value is [AHCI Mode]. AHCI (Advanced Host Controller Interface) supports NCQ and other new features that will improve SATA disk performance but IDE mode does not have these advantages. SATA Aggressive Link Power Management Use this item to configure Aggressive Link Power Management.

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

Use this item to enable or disable the S.M.A.R.T. (Self-Monitoring, Analysis, and Reporting Technology) feature. Configuration options: [Disabled] and [Enabled]. 50 3.4.5 Intel(R) Rapid Start Technology Intel(R) Rapid Start Technology Use this item to enable or disable Intel(R) Rapid Start Technology.

Intel(R) Rapid Start Technology is a new zero power hibernation mode which allows users to resume in just 5-6 seconds. The default is [Enabled]. Entry After Select a time to enable RTC wake timer at S3 entry. The default is [10 minutes]. Active Page Threshold Support This allows you to enable or disable Active Page Threshold Support. The default is [Disabled]. 51 3.4.6 Intel(R) Smart Connect Technology Intel(R) Smart Connect Technology Use this item to enable or disable Intel(R) Smart Connect Technology. Intel(R) Smart Connect Technology keeps your e-mail and social networks, such as Twitter, Facebook, etc. updated automatically while the computer is in sleep mode. The default is [Enabled]. 52 3.4.7 Super IO Configuration Serial Port Use this item to enable or disable the onboard serial port.

Serial Port Address Use this item to set the address for the onboard serial port. Configuration options: [3F8h / IRQ4] and [3E8h / IRQ4].



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Infrared Port Use this item to enable or disable the onboard infrared port. Parallel Port Use this item to enable or disable the onboard parallel port. Change Settings Use this item to select an optional setting for Super IO device.

Device Mode Use this item to change the Printer Port mode. 53 3.4.8 ACPI Configuration Suspend to RAM Use this item to select whether to auto-detect or disable the Suspend-to-RAM feature. Selecting [Auto] will enable this feature if the OS supports it. Check Ready Bit Use this item to enable or disable the feature Check Ready Bit. ACPI HPET Table Use this item to enable or disable ACPI HPET Table. The default value is [Enabled]. Please set this option to [Enabled] if you plan to use this motherboard to submit Windows® Vista™ certification. PS/2 Keyboard Power On Use this item to enable or disable PS/2 keyboard to turn on the system from the power-soft-off mode.

PCI Devices Power On Use this item to enable or disable PCI devices to turn on the system from the power-soft-off mode. Ring-In Power On Use this item to enable or disable Ring-In signals to turn on the system from the power-soft-off mode. RTC Alarm Power On Use this item to enable or disable RTC (Real Time Clock) to power on the system. USB Keyboard/Remote Power On Use this item to enable or disable USB Keyboard/Remote to turn on the system from the power-soft-off mode. USB Mouse Power On Use this item to enable or disable USB Mouse to turn on the system from the power-soft-off mode. 54 CSM Please disable CSM when you enable Fast Boot option. The default value is [Enabled]. 3.4.9 USB Configuration USB 2.

0 Controller Use this item to enable or disable the use of USB 2.0 controller. USB 3.0 Controller Use this item to enable or disable the use of USB 3.0 controller.

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

[Disabled] - USB devices are not allowed to use under legacy OS and UEFI setup when [Disabled] is selected. If you have USB compatibility issues, it is recommended to select [Disabled] to enter OS. [UEFI Setup Only] - USB devices are allowed to use only under UEFI setup and Windows / Linux OS. Legacy USB 3.0 Support Use this option to enable or disable legacy support for USB 3.0 devices. The default value is [Enabled]. 55 3.5 Tool System Browser System Browser can let you easily check your current system configuration in UEFI setup. OMG(Online Management Guard) Administrators are able to establish an internet curfew or restrict internet access at specified times via OMG.

You may schedule the starting and ending hours of internet access granted to other users. In order to prevent users from bypassing OMG, guest accounts without permission to modify the system time are required. UEFI Update Utility Instant Flash Instant Flash is a UEFI flash utility embedded in Flash ROM. This convenient UEFI update tool allows you to update system UEFI without entering operating systems first like MS-DOS or Windows®. Just save the new UEFI file to your USB flash drive, floppy disk or hard drive and launch this tool, then you can update your UEFI only in a few clicks without preparing an additional floppy diskette or other complicated flash utility. Please be noted that the USB flash drive or hard drive must use FAT32/16/12 file system. If you execute Instant Flash utility, the utility will show the UEFI files and their respective information. Select the proper UEFI file to update your UEFI, and reboot your system after the UEFI update process is completed. 56 Internet Flash Internet Flash searches for available UEFI firmware updates from our servers. In other words, the system can auto-detect the latest UEFI from our servers and flash them without entering Windows OS.

Please note that you must be running on a DHCP configured computer in order to enable this function. Network Configuration Internet Setting Use this item to set up the internet connection mode. Configuration options: [DHCP (Auto IP)] and [PPPOE]. UEFI Download Server Use this item to select UEFI firmware download server for Internet Flash. Configuration options: [Asia], [Europe], [USA] and [China].

Dehumidifier Function Users may prevent motherboard damages due to dampness by enabling "Dehumidifier Function". When enabling Dehumidifier Function, the computer will power on automatically to dehumidify the system after entering S4/S5 state. Dehumidifier Period This allows users to configure the period of time until the computer powers on and enables "Dehumidifier" after entering S4/S5 state. Dehumidifier Duration This allows users to configure the duration of the dehumidifying process before it returns to S4/S5 state. Dehumidifier CPU Fan Setting Use this setting to configure CPU fan speed while "Dehumidifier" is enabled.

57 3.6 Hardware Health Event Monitoring Screen In this section, it allows you to monitor the status of the hardware on your system, including the parameters of the CPU temperature, motherboard temperature, CPU fan speed, chassis fan speed, and the critical voltage. CPU Fan 1 Setting This allows you to set CPU fan 1's speed. Configuration options: [Full On] and [Automatic Mode]. The default value is [Full On]. Chassis Fan 1 Setting This allows you to set chassis fan 1's speed. Configuration options: [Full On], [Automatic Mode] and [Manual]. The default value is [Full On]. Over Temperature Protection Use this to enable or disable Over Temperature Protection. The default value is [Enabled].

Case Open Feature This allows you to enable or disable case open detection feature. The default is value [Disabled]. Clear Status This option appears only when the case open has been detected. Use this option to keep or clear the record of previous chassis intrusion status. 58 3.7 Boot Screen In this section, it will display the available devices on your system for you to configure the boot settings and the boot priority. Fast Boot Fast Boot minimizes your computer's boot time. There are three configuration options: [Disabled], [Fast] and [Ultra Fast]. The default value is [Disabled]. Please refer to below descriptions for the details of these three options: [Disabled] - Disable Fast Boot.

[Fast] - The only restriction is you may not boot by using an USB flash drive. [Ultra Fast] - There are a few restrictions. 1. Only supports Windows® 8 UEFI operating system. 2.

You will not be able to enter BIOS Setup (Clear CMOS or run XXX utility in Widows® to enter BIOS Setup). 3. If you are using an external graphics card, the VBIOS must support UEFI GOP in order to boot. Boot From Onboard LAN Use this item to enable or disable the Boot From Onboard LAN feature.



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