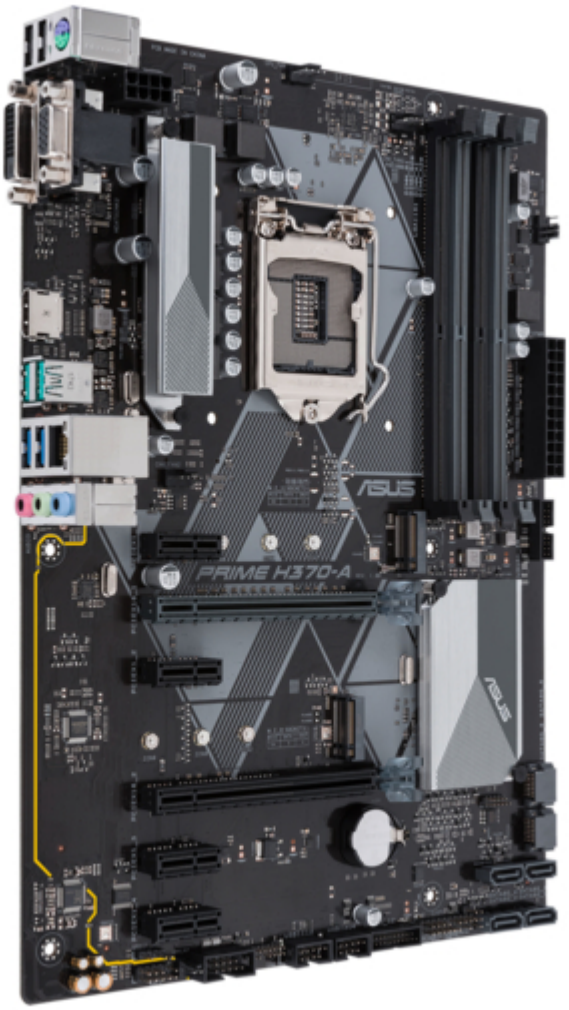
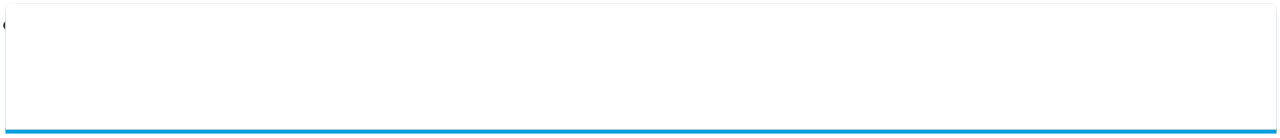

PRIME H370-A

Asus PRIME H370-A Manual

1
2
Table Of Contents
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17

18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36



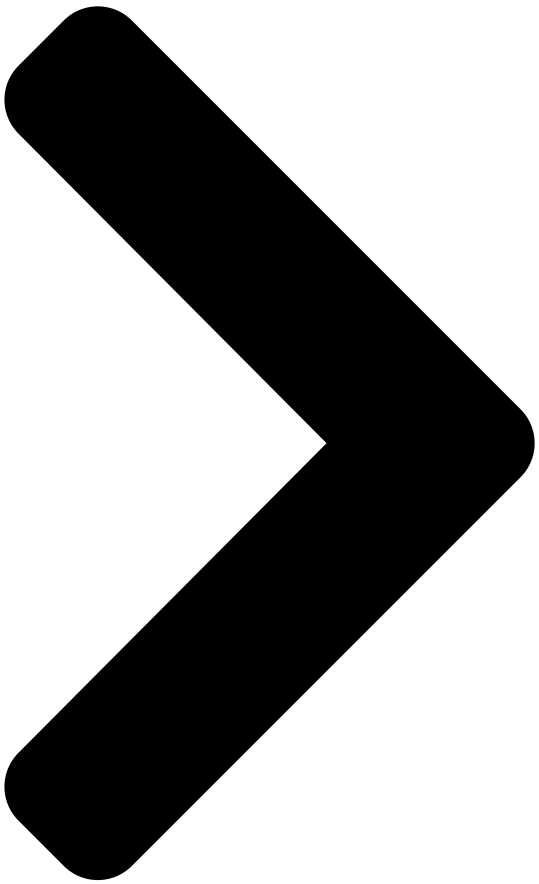
-

Table of Contents

Bookmarks

Quick Links

Download this manual



PRIME H370-A

Table of Contents

Next Page

1
2
3
4
5

Related Manuals for Asus PRIME H370-A

Motherboard Asus PRIME H370-A Quick Start Manual

(2 pages)

Motherboard Asus Rog Strix H370-I Gaming Manual

(89 pages)

Motherboard Asus ROG STRIX H370-F GAMING User Manual

(96 pages)

Motherboard Asus PRIME H370-PLUS Manual

(36 pages)

Motherboard Asus PRIME H370-PLUS Quick Start Manual

(2 pages)

Motherboard Asus PRIME B360-PLUS Manual

(28 pages)

Motherboard Asus TUF H370-PRO GAMING Manual

(40 pages)

Motherboard Asus H370 MINING MASTER Manual

(25 pages)

Motherboard Asus PRIME H370M-PLUS Manual

(40 pages)

Motherboard Asus PRIME H370M-PLUS User Manual

(40 pages)

Motherboard Asus PRIME H310M-A R1.0 Instruction Manual

(29 pages)

Motherboard Asus PRIME H310I-PLUS R2.0 User Manual

(26 pages)

Motherboard Asus PRIME H310M-C R2.0 Manual

(28 pages)

Motherboard Asus TUF H310M-PLUS GAMING R2.0 Manual

(27 pages)

Motherboard Asus PRIME H310M-E R2.0 Manual

(28 pages)

Motherboard Asus PRIME H310M-AT R2.0 Manual

(29 pages)

Summary of Contents for Asus PRIME H370-A

Page 1 PRIME H370-A...

Page 2 Product warranty or service will not be extended if: (1) the product is repaired, modified or altered, unless such repair, modification of alteration is authorized in writing by ASUS; or (2) the serial number of the product is defaced or missing.

Page 3: Table Of Contents

Contents Safety information ..... iv About this guide .....iv Package contents ..... vi PRIME H370-A specifications summary .....vi Chapter 1: Product introduction Before you proceed .....1-1 Motherboard overview ..... 1-1 Central

Processing Unit (CPU) .....1-10 System memory .....1-11...

Page 4: Safety Information

Safety information Electrical safety • To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system. • When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.

Page 5 Refer to the following sources for additional information and for product and software updates. ASUS websites The ASUS website provides updated information on ASUS hardware and software products. Refer to the ASUS contact information. Optional documentation Your product package may include optional documentation, such as warranty flyers, that may have been added by your dealer.

Page 6: Package Contents

8th Generation 4-core ® processors. *** Refer to www.asus.com for the latest Memory QVL (Qualified Vendors List). Expansion slots 1 x PCI Express 3.0/2.0 x16 slot (at x 16 mode) 1 x PCI Express 3.0/2.0 x16 slot (max. at x4 mode, compatible with PCIe x1, x2 and x4 devices) 4 x PCI Express 3.0/2.0 x1 slots...

Page 7 ASUS 5X PROTECTION III ASUS unique features - ASUS SafeSlot Core: Fortified PCIe Slot prevents damage - ASUS LANGuard: Protects against LAN surges, lightning strikes and static-electricity discharges! - ASUS Overvoltage Protection: World-class circuit-protecting power design - ASUS Stainless-Steel Back I/O: 3X corrosion-resistance for greater...

Page 8 PRIME H370-A specifications summary Gaming Scenario ASUS unique features Audio Features - Audio that roars on the battlefield ASUS Exclusive Features - ASUS Ai Charger - ASUS AI Suite 3 - ASUS File Transfer - ASUS PC Cleaner EZ DIY...

Page 9 BIOS features 128 Mb Flash ROM, UEFI AMI BIOS, PnP, SM BIOS 3.1, ACPI 6.1, Multi-language BIOS, ASUS EZ Flash 3, CrashFree BIOS 3, F11 EZ Tuning Wizard, F6 Qfan Control, F3 My Favorites, Last Modified log, F12 PrintScreen, and ASUS DRAM SPD (Serial Presence Detect) memory...

Page 10: Before You Proceed

Super 2280 2260 2242 M.2_2(SOCKET3) PCIE SATA IRST PCIEX16_2 1083 BATTERY PCIEX1_3 128Mb BIOS 887-VD2 PCIEX1_4 SATA6G_4 SATA6G_3 SPDIF_OUT CLRTC SATA6G_2 SATA6G_1 USB1112 USB1314 U31G1_12 MONO_OUT AAFP PANEL Unplug the power cord before installing or removing the motherboard. Failure to do so can cause you physical injury and damage motherboard components. ASUS PRIME H370-A...

Page 11 • We recommend that you use a PSU with higher power output when configuring a system with more power-consuming devices or when you intend to install additional devices. The system may become unstable or may not boot up if the power is inadequate. • If you are uncertain about the minimum power supply requirement for your system, refer to the Recommended Power Supply Wattage Calculator at http://support.asus.com.cn/PowerSupply.aspx?SLanguage=en for details. Chapter 1: Product introduction...

Page 12 USB 3.1 Gen 1 (up to 5Gbps) connectors (20-1 pin PIN 1 USB3+5V USB3+5V IntA_P1_SSRX- U31G1_12, U31G1_56) IntA_P2_SSRX- IntA_P1_SSRX+ IntA_P2_SSRX+ IntA_P1_SSTX- Connect a USB 3.1 Gen 1 module to any of these IntA_P2_SSTX- IntA_P1_SSTX+ IntA_P2_SSTX+ IntA_P1_D- connectors for additional USB 3.1 Gen 1 front or rear IntA_P2_D- IntA_P1_D+ IntA_P2_D+ panel ports. These connectors comply with USB 3.1 U31G1_12 Gen 1 specifications and provide faster data transfer speeds of up to 5 Gbps, faster charging time for USB- chargeable devices, optimized power efficiency, and backward compatibility with USB 2.0. PIN 1 ASUS PRIME H370-A...

Page 13 M.2 socket 3 M.2_1(SOCKET3) These sockets allow you to install M.2 (NGFF) SSD modules. 2280 2260 2242 M.2_2(SOCKET3) PRIME Z270-P 2280 2260 2242 PRIME Z270-P M.2(SOCKET3)s • Both sockets support M Key and type 2242/2260/2280 storage devices. • Both sockets can support Intel Optane™ Memory. ® • The M.2_1 socket supports data transfer speed up to 16Gb/s. • The M.2_2 socket supports data transfer speed up to 32Gb/s. • Only the M.2_1

socket can support SATA mode storage devices. When a device in SATA mode is installed on the M.2_1 socket, SATA_2 is disabled. Intel H370 Serial ATA 6.0Gb/s connectors (7-pin ®...

Page 14 This connector is for a chassis-mounted intrusion detection sensor or switch. Connect one end of the chassis intrusion sensor or switch cable to this connector. The chassis intrusion sensor or switch sends a high-level signal to this connector when a chassis component is removed or replaced. The signal is then generated as a chassis intrusion event. USB 2.0 connectors (10-1 pin USB1112, USB1314) USB1112 USB1314 Connect a USB module cable to any of these connectors, then install the module to a slot opening at the back of the system chassis. These USB connectors comply with USB 2.0 specifications and supports up to 480Mbps connection speed. PIN 1 PIN 1 ASUS PRIME H370-A...

Page 15 TPM connector (14-1 pin TPM) This connector supports a Trusted Platform Module (TPM) system, which can securely store keys, digital certificates, passwords, and data. A TPM system PIN 1 also helps enhance network security, protects digital identities, and ensures platform integrity. Serial port connector (10-1 pin COM) This connector is for a serial (COM) port. Connect the serial port module cable to this connector, then install the module to a slot opening at the back of the system chassis. PIN 1 Mono out header (2-pin MONO_OUT) MONO_OUT This internal mono out header allows connection to an PIN 1...

Page 16 PCI Express 3.0/2.0 x16 slots This motherboard supports two PCI Express 3.0/2.0 x16 graphic cards that comply with the PCI Express specifications. PCI Express operating mode VGA configuration PCIe 3.0 x16_1 (gray) PCIe 3.0 x16_2 x16 (Recommended for single Single VGA/PCIe card VGA card) Dual VGA/PCIe cards • In single VGA card mode, use the PCIe 3.0 x16_1 slot (gray) for a PCI Express x16 graphics card to get better performance. • We recommend that you provide sufficient power when running CrossFireX™ mode. • Connect a chassis fan to the motherboard connector labeled CHA_FAN1/2/3 when using multiple graphics cards for better thermal environment. ASUS PRIME H370-A...

Page 17 1.2.2 Rear panel connectors PS/2 keyboard/mouse combo port. This port is for a PS/2 mouse or keyboard. Video Graphics Adapter (VGA) port. This 15-pin port is for a VGA monitor or other VGA-compatible devices. LAN (RJ-45) port. This port allows Gigabit connection to a Local Area Network (LAN) through a network hub. Refer to the table below for the LAN port LED indications. LAN port LED indications Speed Activity Link Activity/Link LED Speed LED Status Description Status Description No link 10Mbps connection Orange Linked ORANGE 100Mbps connection Orange (Blinking) Data activity GREEN 1Gbps connection...

Page 18 USB 3.1 Gen 2 (up to 10Gbps) ports (teal blue, Type A). These 9-pin Universal Serial Bus 3.1 (USB 3.1) ports are for USB 3.1 Gen 2 devices. • USB 3.1 Gen 2 / Gen 1 devices can only be used for data storage. • Due to the design of the Intel 300 series chipset, all USB devices connected to the ® USB 2.0 and USB 3.1 Gen 2 / Gen 1 ports are controlled by the xHCI controller. Some legacy USB devices must update their firmware for better compatibility. • We strongly recommend that you connect USB 3.1 Gen 2 devices to USB 3.1 Gen 2 ports for faster and better performance from your USB 3.1 Gen 2 devices. HDMI port. This port is for a High-Definition Multimedia Interface (HDMI) connector, and is HDCP compliant allowing playback of HD DVD, Blu-ray, and other protected content. DVI-D port. This port is for any DVI-D compatible device. DVI-D can not be converted to output from RGB Signal to CRT and is not compatible with DVI-I. USB 2.0 ports These 4-pin Universal Serial Bus (USB) ports are for USB 2.0/1.1 devices. ASUS PRIME H370-A...

Page 19: Central Processing Unit (Cpu)

Core™ i7 / Core™ i5 / Core™ i3, ® Pentium and Celeron processors. ® ® Unplug all power cables before installing the CPU. • Ensure that you install the correct CPU designed for the LGA1151 socket only. DO NOT install a CPU designed for LGA1150, LGA1155 and LGA1156 sockets on the LGA1151 socket. • Upon purchase of the motherboard, ensure that the PnP cap is on the socket and the socket contacts are not bent. Contact your retailer immediately if the PnP cap is missing, or if you see any damage to the PnP cap/socket contacts/motherboard components. • Keep the cap after installing the motherboard. ASUS will process Return Merchandise Authorization (RMA) requests only if the motherboard comes with the cap on the LGA1151 socket. • The product warranty does not cover damage to the socket contacts resulting from incorrect CPU installation/removal, or misplacement/loss/incorrect removal of the PnP cap. Installing the CPU Apply the Thermal Interface Material to the CPU heatsink and CPU before you install the heatsink and fan if necessary. Chapter 1: Product introduction 1-10...

Page 20: System Memory

• Always install DIMMs with the same CAS latency. For optimal compatibility, we recommend

that you install memory modules of the same version or date code (D/C) from the same vendor. Check with the retailer to get the correct memory modules. • DDR4 2666MHz and higher memory modules will run at max. 2666MHz on Intel 8th ® Generation 6-core or higher processors; DDR4 2400MHz and higher memory modules will run at max. 2400MHz on Intel 8th Generation 4-core processors. ® • Memory modules with memory frequency higher than 2133 MHz and its corresponding timing or the loaded X.M.P. Profile is not the JEDEC memory standard. The stability and compatibility of these memory modules depend on the CPU's capabilities and other installed devices. • The default memory operation frequency is dependent on its Serial Presence Detect (SPD), which is the standard way of accessing information from a memory module. Under the default state, some memory modules for overclocking may operate at a lower frequency than the vendor-marked value. • For system stability, use a more efficient memory cooling system to support a full memory load (4 DIMMs). • Refer to www.asus.com for the latest Memory QVL (Qualified Vendors List) Recommended memory configurations DIMM_B1 DIMM_B2* DIMM_B2* DIMM_A1 DIMM_A2* DIMM_A2* DIMM_A2* 1-11 ASUS PRIME H370-A...

Page 21 Installing a DIMM To remove a DIMM Chapter 1: Product introduction 1-12...

Page 22: Chapter 2: Bios Information

Managing and updating your BIOS Save a copy of the original motherboard BIOS file to a USB flash disk in case you need to restore the BIOS in the future. Copy the original motherboard BIOS using the ASUS Update utility.

Page 23 2.1.2 ASUS EZ Flash 3 The ASUS EZ Flash 3 feature allows you to update the BIOS without using an OS-based utility. • Ensure that you load the BIOS default settings to ensure system compatibility and stability. Select the Load Optimized Defaults item under the Exit menu. See section 2.3 Exit Menu for details.

Page 24 2.1.3 ASUS CrashFree BIOS 3 utility The ASUS CrashFree BIOS 3 is an auto recovery tool that allows you to restore the BIOS file when it fails or gets corrupted during the updating process. You can restore a corrupted BIOS file using the motherboard support DVD or a USB flash drive that contains the updated BIOS file.

Page 25 On the BIOS Updater screen, press <Tab> to switch from Files panel to Drives panel then select D:. ASUSTeK BIOS Updater for DOS V1.31 [2014/01/01] Current ROM Update ROM BOARD: PRIME H370-A BOARD: Unknown VER: 0035 (H :00 B :00)

Page 26: Bios Setup Program

The BIOS setup screens shown in this section are for reference purposes only, and may not exactly match what you see on your screen. Visit the ASUS website at www.asus.com to download the latest BIOS file for this • motherboard.

Page 27 2.2.1 EZ Mode By default, the EZ Mode screen appears when you enter the BIOS setup program. The EZ Mode provides you an overview of the basic system information, and allows you to select the display language, system performance mode and boot device priority. To access the Advanced Mode, click Advanced Mode or press <F7>...

Page 28 Search Menu bar Scroll bar Sub-menu item Search on FAQs Configuration General help Last modified fields settings Hot Keys Menu items Goes back to EZ Mode Pop-up window Displays the CPU temperature, CPU and memory voltage output ASUS PRIME H370-A...

Page 29 Menu bar The menu bar on top of the screen has the following main items: My Favorites For saving the frequently-used system settings and configuration Main For changing the basic system configuration Ai Tweaker For changing the overclocking settings Advanced For changing the advanced system settings For displaying the system temperature, power status, and changing the Monitor...

Page 30 Search on FAQ Move your mouse over this button to show a QR code. Scan this QR code with your mobile device to connect to the ASUS BIOS FAQ web page. You can also scan the QR code below. Scroll bar A scroll bar appears on the right side of a menu screen when there are items that do not fit on the screen.

Page 31: Exit Menu

Exit menu The Exit menu items allow you to load the optimal default values for the BIOS items, and save or discard your changes to the BIOS items. You can access the EZ Mode from the Exit menu. Load Optimized Defaults This option allows you to load the default values for each of the parameters on the Setup menus.

Page 32: Appendix

: (1) l’appareil ne doit pas produire de brouillage, et (2) l’utilisateur de l’appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d’en compromettre le fonctionnement. CAN ICES-3(B)/NMB-3(B) ASUS PRIME H370-A...

Page 33 ASUS Recycling/Takeback Services ASUS recycling and takeback programs come from our commitment to the highest standards for protecting our environment. We believe in providing solutions for you to be able to responsibly recycle our products, batteries, other components as well as the packaging materials.

Page 34 Slovensky Spoločnosť ASUSTeK Computer Inc. týmto vyhlasuje, že toto Cijeli tekst EU izjave o sukladnosti dostupan je na: www.asus.com/support zariadenie vyhovuje základným požiadavkám a ostatým príslušným ustanoveniam príslušných smerníc. Celý text vyhlásenia o zhode pre štáty EÚ...

Page 35: Asus Contact Information

+1-510-739-3777 +1-510-608-4555 Web site http://www.asus.com/us/ Technical Support Support fax +1-812-284-0883 Telephone +1-812-282-2787 Online support http://qr.asus.com/techserv ASUS COMPUTER GmbH (Germany and Austria) Address Harkort Str. 21-23, 40880 Ratingen, Germany +49-2102-959931 Web site http://www.asus.com/de Online contact http://eu-rma.asus.com/sales Technical Support Telephone +49-2102-5789555 Support Fax...

Page 36 CA 94539. Phone/Fax No: (510)739-3777/(510)608-4555 hereby declares that the product Product Name : Motherboard Model Number :PRIME H370-A, Conforms to the following specifications: FCC Part 15, Subpart B, Unintentional Radiators Supplementary Information: This device complies with part 15 of the FCC Rules. Operation is subject to the...