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You can read the recommendations in the user guide, the technical guide or the installation guide for ASUS P5VD2-MX. You'll find the answers to all your questions on the ASUS P5VD2-MX in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual ASUS P5VD2-MX  
User guide ASUS P5VD2-MX  
Operating instructions ASUS P5VD2-MX  
Instructions for use ASUS P5VD2-MX  
Instruction manual ASUS P5VD2-MX

**P5VD2-MX/  
P5V-VM DH**

**ASUS**

**Motherboard**



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.....  
.....  
.....  
*1-17 Installing a DIMM .....*  
.....

.....  
.....  
.....  
.....  
.....  
*..... 1-19 Removing a DIMM ....*  
.....  
.....  
.....

.....  
.....  
.....  
*..... 1-19 Installing an expansion card .....*  
.....  
.....  
.....

.....  
.....  
.....  
*..... 1-21 Configuring an expansion card .*  
.....  
.....  
.....

.....  
.....  
.....  
*..... 1-21 Interrupt assignments .*  
.....  
.....  
.....

.....  
.....  
.....  
*. 1-21 PCI slots ....*  
.....  
.....  
.....

.....  
.....  
.....  
*1-22 PCI Express x1 slot .....*  
.....  
.....  
.....

.....  
.....  
.....  
*.. 1-22 PCI Express x16 slot .....*  
.....  
.....  
.....

.....  
.....  
.....  
*.. 1-23 1.6 Central Processing Unit (CPU) ..*  
.....

.....  
.....  
.....  
.....  
.. 1-10 1.6.1 1.6.2 1.6.3 1.7 System memory .

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

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

.....  
.... 1-17 1.  
7.1 1.7.2 1.7.  
3 1.7.4 1.8 Expansion slots .....

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

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

1-21 1.8.1 1.8.2 1.8.3 1.8.4 1.8.  
5 1.8.6 1.9 Jumpers @@1-23 iii Contents 1.10 Connectors .

.....  
.....

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

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

..... 1-26 1.10.1 Rear panel connectors .

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

.....  
.. 1-26 1.10.2 Internal connectors ..

.....  
.....

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

1-28 Chapter 2: BIOS setup 2.1 Managing and updating your BIOS .....

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

.....  
.. 2-2 2.1.1 2.1.



.....  
.. 2-13 Menu items ...

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

.....  
. 2-13 Sub-menu items ....

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

.. 2-13 Configuration fields .....

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

... 2-13 Pop-up window ..

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

.....  
. 2-14 General help ....

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

..... 2-14 System Time .

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

..... 2-15 System Date ....

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

... 2-15 Legacy Diskette A .....





..... 2-20 2.

4.1 2.4.2 2.4.3 2.4.4 2.4.5 2.

5 2.5.1 2.5.2 2.

5.3 2.5.4 2.6 2.

6.1 2.6.2 2.6.3 2.6.4 2.6.5 2.

7 CPU Configuration .....

.....

.....

.....

.....

.....

.... 2-20 Chipset .

.....

.....

.....

.....

.....

.....

.....

.....

.... 2-21 PCI/PnP .....

.....

.....

.....

.....

.....

.....

.....

.....

. 2-23 Onboard Devices Configuration .....

.....

.....

..... 2-24 USB Configuration .

.....

.....

.....

.....

.....

.....

... 2-27 ACPI Suspend Type ..

.....

.....

.....

.....

.....

..... 2-28 ACPI APIC Supp .....

.....

.....

.....

.....

.....

.....

..... 2-28 APM Configuration ..

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

*. 2-28 Hardware Monitor ....*

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

*..... 2-31 Boot Device Priority .....*

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

*2-33 Removable Drives .....*

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

*..... 2-33 Hard Disk Drives .*

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

*2-34 Boot Settings Configuration .....*

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

*... 2-34 Security .....*

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

*..... 2-36 Power menu ...*

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

.... 2-28 *Boot menu* .

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

... 2-33 *Exit menu* .....

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

... 2-38 *Chapter 3: Software support* 3.1 3.  
2 *Installing an operating system* .....

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

..... 3-2 *Support CD information* .....

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

. 3-2 3.2.1 3.2.2 3.2.3 3.2.4 3.  
2.5 3.2.6 3.3 3.

3.1 3.3.2 3.4 *Running the support CD* .

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

3-2 *Drivers menu* .....

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

..... 3-3 *Utilities menu* ..

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



communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: · Reorient or relocate the receiving antenna. · Increase the separation between the equipment and receiver.

· Connect the equipment to an outlet on a circuit different from that to which the receiver is connected. · Consult the dealer or an experienced radio/TV technician for help. The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations.

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. Canadian Department of Communications Statement This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

This class B digital apparatus complies with Canadian ICES-003. vi 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. · Before connecting or removing signal cables from the motherboard, ensure that all power cables are unplugged. · Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit. · Make sure that your power supply is set to the correct voltage in your area. If you are not sure about the voltage of the electrical outlet you are using, contact your local power company. · If the power supply is broken, do not try to fix it by yourself.

Contact a qualified service technician or your retailer. Operation safety · Before installing the motherboard and adding devices on it, carefully read all the manuals that came with the package. · Before using the product, make sure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately. · To avoid short circuits, keep paper clips, screws, and Internal Serial ATA 3 Gb/s - 1 x External Serial ATA 3 Gb/s (SATA On-the-Go) - RAID 0, RAID 1, and JBOD configuration · High definition audio, ADI® AD1986A SoundMax 5.1 channel CODEC · Supports Jack-sensing function Realtek® RTL8201CL 10/100 Mbps LAN Controller Supports up to 8 USB 2.



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0 ports ASUS Q-Fan ASUS EZ Flash ASUS CrashFree BIOS 2 MyLogo™ (continued on the next page) Chipset Front Side Bus Memory Expansion slots VGA Storage Audio LAN USB Special features x P5VD2-MX/P5V-VM DH specifications summary Overclocking Features ASUS C.P.R. (CPU Parameter Recall) SFS (Stepless Frequency Selection) from 133MHz up to 300MHz at 1MHz increment Adjustable FSB/DDR ratio.

Fixed PCI-E/SATA frequencies. 1 x Parallel port 1 x External SATA 1 x LAN (RJ-45) port 4 x USB 2.0/1.1 ports 1 x VGA port 1 x PS/2 keyboard port 1 x PS/2 mouse port 6-Channel Audio I/O ports 4 Mb Flash ROM, Award BIOS, PnP, WfM2.0, ACPI2.

0a, SM BIrchitecture technology and 1066/800 MHz FSB, Intel® Core™2 processor is one of the most powerful and enrgy-efficient CPUs in the world. PCI Express™ interface The motherboard fully supports PCI Express, the latest I/O interconnect technology that speeds up the PCI bus. PCI Express features point-to-point serial interconnections between devices and allows higher clockspeeds by carrying data in packets. This high speed interface is software compatible with existing PCI specifications. Serial ATA 3Gb/s technology The motherboard built with JMicron JMB363 SATA controller supports the next-generation hard drives based on the Serial ATA (SATA) 3Gb/s storage specification, delivering enhanced scalability and doubling the bus bandwidth for high-speed data retrieval and saves.

The external SATA port located at the back I/O provides smart setup and hot-plug functions. Easily backup photos, videos and other entertainment contents on external devices. See pages 1-27 and 1-30 for details. Dual RAID solution The onboard VIA VT8237A chipset allows RAID 0, RAID 1, and JBOD configuration for two SATA connectors, and JMicron JMB363 SATA controller also supports RAID 0, RAID 1, and JBOD. ASUS P5VD2-MX/P5V-VM DH 1-3 USB 2.0 technology The motherboard implements the Universal Serial Bus (USB) 2.0 specification, dramatically increasing the connection speed from the 12 Mbps bandwidth on USB 1.1 to a fast 480 Mbps on USB 2.0. USB 2.

0 is backward compatible with USB 1.1. See pages 1-25 and 1-33 for details. S/PDIF digital sound ready The motherboard supports the S/PDIF Out function through the S/PDIF interface at midboard. The S/PDIF technology turns your computer into a high-end entertainment system with digital connectivity to powerful audio and speaker systems. See page 1-31 for details. 6-channel high definition audio Onboard is the ADI AD1986A High Definition Audio 6-channel audio CODEC. This CODEC is fully-compliant with Intel® High Definition Audio standard (192 KHz, 24-bit audio). With the CODEC, 6-channel audio ports, and S/PDIF interfaces, you can connect your computer to home theater decoders to produce crystal-clear digital audio. 10/100 Mbps LAN Supports The motherboard supports the Realtek® RTL8201CL 10/100 Mbps LAN controller, providing easy connectivity to your network or broadband connection with the onboard LAN port.

1.3.2 Innovative ASUS features CrashFree BIOS 2 This feature allows you to restore the original BIOS data from the support CD in case when the BIOS codes and data are corrupted. This protection eliminates the need to buy a replacement ROM chip. See details on page 2-9.

1-4 Chapter 1: Product introduction ASUS EZ Flash BIOS With the ASUS EZ Flash, you can easily update the system BIOS even before loading the operating system. No need to use a DOS-based utility or boot from a floppy disk. See page 2-6 for details. ASUS Q-Fan technology The ASUS Q-Fan technology smartly adjusts the CPU fan speed according to the system loading to ensure quiet, cool, and efficient operation. C.

P.R. (CPU Parameter Recall) The C.P.R. feature of the motherboard BIOS allows automatic re-setting to the BIOS default settings in case the system hangs due to overclocking. When the system hangs due to overclocking, C.P.R. eliminates the need to open the system chassis and clear the RTC data.

Simply shut down and reboot the system, and the BIOS automatically restores the CPU default setting for each parameter. 1.3.3 ASUS Digital Home for P5V-VM DH special features (Only for P5V-VM DH) ASUS WiFi-AP Solo The ASUS WiFi-AP Solo allows a new level of versitility for your PC, enabling it to create a complete wireless home network in either AP or wireless client mode. Users will be able to play LAN games, connecting to the Internet, access and share printers, and use Skype from anywhere within range. The ASUS WiFi-AP Solo can provide these functions even when the PC is in sleep mode, so users can use Skype as a true replacement for tradition long distance telephone service. WiFi-AP Solo is an on-board feature, which means that users will save the extra WiFi-AP cost. ASUS P5VD2-MX/P5V-VM DH 1-5 ASUS DH Remote™ (Only for P5V-VM DH) The ASUS DH Remote™ is a convenient PC remote controller that gives users unprecedented control over their PCs from the comfort of their couches. With the touch of a button, users can instantly operate the following functions: r: P o w e r Turns the computer on/off. Q u i c k P o w e r Puts the computer quickly into sleep mode.

r: f: N o i s e O f f Reduces the noise coming from the computer. E Z W i F i i: Puts the computer quickly into sleep mode but allowing WiFi-AP Solo™ to still operate. n: F u l l S c r e e n Puts the media application into full screen. h: A P L a u n c h Launches the media application. e: M e d i a C o n t r o l Z o n e Controls the media application.

ASUS MP3-In™ (Only for P5V-VM DH) A convenient interface between computers and MP3 players, the ASUS MP3-In™ feature enables MP3 players to connect to PC speakers even when the PC power is off, which means that users can enjoy the sound quality from PC speakers without additional stereo equipment cost. Please refer page 1-35 and ASUS MP3-In™ quick installation guide for details. 1-6 Chapter 1: Product introduction 1.4 Before you proceed Take note of the following precautions before you install motherboard components or change any motherboard settings. · · Unplug the power cord from the wall socket before touching any component.

Use a grounded wrist strap or touch a safely grounded object or to a metal object, such as the power supply case, before handling components to avoid damaging them due to static electricity Hold components by the edges to avoid touching the ICs on them. Whenever you uninstll any component, place it on a grounded antistatic pad or in the bag that came with the component. Before you install or remove any component, ensure that the ATX power supply is switched off or the p o w e r c o r d i s d e t a c h e d f r o m t h e p o w e r s u p p l y . Failure to do so may cause severe damage to the motherboard, peripherals, and/or components. · · · Onboard LED The motherboard comes with a standby power LED that lights up to indicate that the system is ON, in sleep mode, or in soft-off mode.



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This is a reminder that you should shut down the system and unplug the power cable before removing or plugging in any motherboard component. The illustration below shows the location of the onboard LED. ® SB\_PWR Onboard LED ON Standby Power OFF Powered Off ASUS P5VD2-MX/P5V-VM DH 1-7 1.5 Motherboard overview 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 can cause you physical injury and damage motherboard components. 1.5.1 Placement direction When installing the motherboard, make sure that you place it into the chassis in the correct orientation. The edge with external ports goes to the rear part of the chassis as indicated in the image below.

1.5.2 Screw holes Place six (6) screws into the holes indicated by circles to secure the motherboard to the chassis. Do not overtighten the screws! Doing so can damage the motherboard. Place this side towards the rear of the chassis ® 1-8 Chapter 1: Product introduction 1.

5.3 P5VD2-MX/P5V-VM DH Motherboard layout 21.8cm (8.6in) KBPWR ESATA CPU\_FAN PARALLEL PORT LGA775 USB12 USBPW34 USBPW12 ATX12V PRI\_IDE FLOPPY CHASSIS VGA DDR2 DIMM1 (64 bit,240-pin module) DDR2 DIMM2 (64 bit,240-pin module) Super I/O PS/2KBMS T: Mouse B: Keyboard Top:Line In Center:Line Out Below:Mic In VIA P4M890 SATA\_A USB9 WIFI ® EATXPWR LAN\_USB34 PCIEX16 JMicon JMB363 PCIE1 RTL8201CL CR2032 3V Lithium Cell CMOS Power CD AUX CHA\_FAN PCI1 PCI2 VIA VT8237A SATA2 SATA1 USBPW56 USB56 USBPW78 USB78 CLRTC SB\_PWR PANEL SPDIF\_OUT AAFP MP3IN COM2 · · The USB9 port, WIFI connecotr, and MP3IN connector are only for P5V-VM DH. USB1 and USB2 ports are only for P5VD2-MX.

ASUS P5VD2-MX/P5V-VM DH 4Mb BIOS SEC\_IDE 24.5cm (9.6in) 1-9 1.6 Central Processing Unit (CPU) The motherboard comes with a surface mount LGA775 socket designed for the Intel® Core™2 Duo/Pentium® D/ Pentium® 4/Celeron® processor in the 775-land package. · Your boxed Intel® Core™2 Duo/Pentium® D/Pentium® 4/Celeron® LGA775 processor package should come with installation instructions for the CPU, fan and heatsink assembly. If the instructions in this section do not match the CPU documentation, follow the latter. Upon purchase of the motherboard, make sure that the PnP cap is on the socket and the socket pins are not bent. Contact your retailer immediately if the PnP cap is missing, or if you see any damage to the PnP cap/socket pins/motherboard components. ASUS will shoulder the cost of repair only if the damage is shipment/transit-related. 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 LGA775 socket. The product warranty does not cover damage to the socket pins resulting from incorrect CPU installation/removal, or misplacement/ loss/incorrect removal of the PnP cap. · · · 1.6.1 1.

Installing the CPU To install a CPU: Locate the CPU socket on the motherboard. ® CPU Socket 775 Before installing the CPU, make sure that the socket box is facing towards you and the load lever is on your left. 1-10 Chapter 1: Product introduction 2. Press the load lever with your thumb (A) and move it to the left (B) until it is released from the retention tab. PnP Cap Retention tab A Load lever B This side of the cam box should face you. To prevent damage to the socket pins, do not remove the PnP cap unless you are installing a CPU. 3. Lift the load lever in the direction of the arrow to a 135° angle. 4. Lift the load plate with your thumb and forefinger to a 100° angle (A), then push the PnP cap from the load plate window to remove (B).

B A Load plate 5. Position the CPU over the socket, making sure that the gold triangle is on the bottom-left corner of the socket. The socket alignment key should fit into the CPU notch. Alignment key Gold triangle mark ASUS P5VD2-MX/P5V-VM DH 1-11 6. Close the load plate (A), then push the load lever (B) until it snaps into the retention tab.

B A The CPU fits in only one correct orientation. DO NOT force the CPU into the socket to prevent bending the connectors on the socket and damaging the CPU! Notes on Intel® Hyper-Threading Technology · · This motherboard supports Intel® Pentium® 4 CPUs in the 775-land package with Hyper-Threading Technology. Hyper-Threading Technology is supported under Windows® XP/2003 Server and Linux 1.7.x (kernel) and later versions only.

Under Linux, use the Hyper-Threading compiler to compile the code. If you are using any other operating systems, disable the Hyper-Threading Technology item in the BIOS to ensure system stability and performance. Installing Windows® XP Service Pack 1 or later version is recommended. Make sure to enable the Hyper-Threading Technology item in BIOS before installing a supported operating system. For more information on Hyper-Threading Technology, visit [www.intel.com/info/hyperthreading](http://www.intel.com/info/hyperthreading). · · · To use the Hyper-Threading Technology on this motherboard: 1. 2. Install an Intel® Pentium® 4 CPU in the 775-land package that supports Hyper-Threading Technology.

Power up the system and enter the BIOS Setup (see Chapter 2: BIOS setup). Under the Advanced Menu, make sure that the item Hyper-Threading Technology is set to Enabled. The item appears only if you installed a CPU that supports Hyper-Threading Technology. Reboot the computer. 3. 1-12 Chapter 1: Product introduction 1.6.2 Installlling the CPU heatsink and fan The Intel® Pentium® 4 LGA775 processor requires a specially designed heatsink and fan assembly to ensure optimum thermal condition and performance. · · Install the motherboard to the chassis before you install the CPU fan and heatsink assembly When you buy a boxed Intel® Pentium® 4 processor, the package includes the CPU fan and heatsink assembly. If you buy a CPU separately, make sure that you use only Intel®-certified multi-directional heatsink and fan.

Your Intel® Pentium® 4 heatsink and fan assembly comes in a pushpin design and requires no tool to install. · If you purchased a separate CPU heatsink and fan assembly, make sure that a Thermal Interface Material is properly applied to the CPU heatsink or CPU before you install the heatsink and fan assembly.

To install the CPU heatsink and fan: 1. Place the heatsink on top of the installed CPU, making sure that the four fasteners match the holes on the motherboard. Fastener Motherboard hole Make sure each fastener is oriented as shown, with the narrow groove directed outward.



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#### 5. Line In port (light blue).

This port connects a tape, CD, DVD player, or other audio sources. In 4-channel and 6-channel configuration, the function of this port becomes Front Speaker Out. Line Out port (lime). This port connects a headphone or a speaker. In 4-channel and 6-channel configuration, the function of this port becomes Rear Speaker Out.

Microphone port (pink). This port connects a microphone. In a 6-channel configuration, the function of this port becomes Bass/ Center Speaker. Refer to the audio configuration table for the function of the audio ports in 2, 4, or 6-channel configuration.

Audio 2, 4, or 6-channel configuration Port Light Blue Lime Pink Headset 2-channel Line In Line Out Mic In 4-channel Line In Front Speaker Out Rear Speaker Out 6-channel Bass/Center Front Speaker Out Rear Speaker Out 1-26 Chapter 1: Product introduction 7. 8. 9. W I F I - A P S o l o L E D i n d i c a t o r ( O n l y f o r P 5 V - V M D H ). The WiFi AP Solo comes with a green data transmission LED (AIR). Refer to the ASUS WiFi-AP Solo user guide. ) . A n t e n n a j a c k ( O n l y f o r P 5 V - V M D H ). This port is on the onboard wireless LAN module that allows you to set up a wireless network and exchange information with other wireless devices without tangling cables and wires. Connect the moveable omni-directional antenna to this jack.

10. U S B 2 . 0 p o r t 9 ( O n l y f o r P 5 V - V M D H ). This 4-pin Universal Serial Bus (USB) port is available for connecting a USB 2.0 device. ) . 10. U S B 2 . 0 p o r t s 1 a n d 2 ( O n l y f o r P 5 V D 2 - M X ). These two 4-pin Universal Serial Bus (USB) ports are available for connecting USB 2.0 devices. 11. U S B 2 . 0 p o r t s 3 a n d 4 . These two 4-pin Universal Serial Bus (USB) ports are available for connecting USB 2.0 devices. 12. V G A p o r t . This 15-pin VGA port connects to a VGA monitor. 13.

External SATA port. This port connects to an external SATA box or a Serial ATA port multiplier. The external SATA port supports external Serial ATA 1.5 and 3 Gb/s devices. Longer cables support higher power requirements to deliver signal up to two meters away, and enables improved hot-swap function. Do not insert a different connector to this port. 14. P S / 2 k e y b o a r d p o r t ( p u r p l e ). This port is for a PS/2 keyboard. ASUS P5VD2-MX/P5V-VM DH 1-27 1.

10.2 Internal connectors 1. Floppy disk drive connector (34-1 pin FLOPPY) This connector is for the provided floppy disk drive (FDD) signal cable. Insert one end of the cable to this connector, then connect the other end to the signal connector at the back of the floppy disk drive. Pin 5 on the connector is removed to prevent incorrect cable connection when using an FDD cable with a covered Pin 5. FLOPPY ® PIN 1 NOTE: Orient the red markings on the floppy ribbon cable to PIN 1. Floppy disk drive connector 1-28 Chapter 1: Product introduction 2. Primary/Secondary IDE connectors (40-1 pin PRI\_IDE [blue]; 40-1 pin SEC\_IDE [black]) The onboard IDE connectors are for Ultra DMA 133/100/66 signal cables. There are three connectors on each Ultra DMA 133/100/66 signal cable: blue, black, and gray. Connect the blue connector to the motherboard's IDE connector, then select one of the following modes to configure your device(s).

Drive jumper setting Single device Two devices Cable-Select or Master Cable-Select Master Slave Mode of device(s) Master Slave Master Slave Cable connector Black Black Gray Black or gray · Pin 20 on the IDE connector is removed to match the covered hole on the Ultra DMA cable connector. This prevents incorrect insertion when you connect the IDE cable. Use the 80-conductor IDE cable for Ultra DMA 100/66 IDE devices. · If any device jumper is set as "Cable-Select," make sure all other device jumpers have the same setting. NOTE: Orient the red markings (usually zigzag) on the IDE ribbon cable to PIN 1.

® PRI\_IDE PIN 1 IDE connectors ASUS P5VD2-MX/P5V-VM DH SEC\_IDE 1-29 3. Serial ATA connectors (7-pin SATA1, SATA2) These connectors are for the Serial ATA signal cables for Serial ATA 1.5 Gb/s hard disk drives. If you installed Serial ATA hard disk drives, you can create a RAID 0, RAID 1, and JBOD configuration through the onboard VIA VT8237A RAID controller. GND RSATA\_TXP2 RSATA\_TXN2 GND RSATA\_RXP2 RSATA\_RXN2 GND ® SATA2 GND RSATA\_TXP1 RSATA\_TXN1 GND RSATA\_RXP1 RSATA\_RXN1 GND SATA connectors SATA1 Important notes on Serial ATA · The Serial ATA RAID feature (RAID 0, RAID 1, and JBOD) is available only if you are using Windows® 2000/2003 Server/XP operation system.

Install the Windows® 2000 Service Pack 4, the Windows® XP Service Pack1 or later version before using Serial ATA. Please refer to section "O n b o a r d D e v i c e s C o n f i g u r a t i o n i n n" O the BIOS for details on SATA RAID configuration. · 4. Jmicron Serial ATA RAID connector (7-pin SATA\_A) This connector is for a Serial ATA signal cable for a Serial ATA hard disk drive that you can combine with an external Serial ATA 3 Gb/s device to configure a RAID 0, RAID 1, and JBOD set through the onboard Jmicron SATA RAID controller. SATA\_A ® GND RSATA\_TXP2 RSATA\_TXN2 GND RSATA\_RXP2 RSATA\_RXN2 GND SATA RAID connector Do not remove/unplug external SATA devices when running under RAID mode. 1-30 Chapter 1: Product introduction 5. CPU and Chassis fan connectors (4-pin CPU\_FAN, 3-pin CHA\_FAN) The fan connectors support cooling fans of 350mA~740mA (8.88W max.) or a total of 1A~2.22A (26.

64W max.) at +12V. Connect the fan cables to the fan connectors on the motherboard, making sure that the black wire of each cable matches the ground pin of the connector. Do not forget to connect the fan cables to the fan connectors. Insufficient air flow inside the system may damage the motherboard components. These are not jumpers! DO NOT place jumper caps on the fan connectors. CPU\_FAN GND CPU FAN PWR CPU FAN IN CPU FAN PWM ® CHA\_FAN Fan connectors Rotation +12V GND 6. Digital Audio connector (4-1 pin SPDIF\_OUT) This connector is for the SPDIF audio module to allow digital sound output. Connect one end of the SPDIF audio cable to this connector and the other end to the SPDIF module. SPDIF\_OUT GND SPDIFOUT ® +5V Digital audio connector The SPDIF out module is purchased separately.

ASUS P5VD2-MX/P5V-VM DH 1-31 7. ATX power connectors (24-pin EATXPWR, 4-pin ATX12V) These connectors are for an ATX power supply. The plugs from the power supply are designed to fit these connectors in only one orientation. Find the proper orientation and push down firmly until the connectors completely fit. · Do not forget to connect the 4-pin ATX +12 V power plug; otherwise, the system will not boot up.

Use a PSU with a minimum power rating of 300 W on this motherboard.



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Use of a PSU with a higher power output is recommended when configuring a system with more power-consuming devices. The system may become unstable or may not boot up if the power is inadequate. ATX12V GND +12V DC EATXPWR GND +3 Volts +12V DC -12 Volts Ground PSON# Ground Ground Ground -5 Volts +5 Volts +5 Volts +5 Volts Ground +3 Volts Ground +5 Volts Ground +5 Volts Ground Power OK +5V Standby +12 Volts +12 Volts +3 Volts Ⓢ ATX power connectors 8. Serial port connector (10-1 pin COM2) 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. COM2 Ⓢ PIN 1 COM port connector The Serial (COM) port module is purchased separately. 1-32 Chapter 1: Product introduction 9. Internal audio connectors (4-pin CD, AUX) These connectors allow you to receive stereo audio input from sound sources such as a CD-ROM, TV tuner, MPEG card or modem. Ⓢ CD(Black) AUX(White) Right Audio Channel Ground Ground Left Audio Channel Internal audio connectors 1 0 . USB connectors (10-1 pin USB56, USB78) These connectors are for USB 2.0 ports. Connect the optional 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 specification that supports up to 480 Mbps connection speed.

USB+5V USB\_P6USB\_P6+ GND NC Ⓢ USB56 USB 2.0 connectors Never connect a 1 3 9 4 c a b l e to the USB connectors. Doing so will damage the motherboard! The USB module is purchased separately. ASUS P5VD2-MX/P5V-VM DH USB+5V USB\_P5USB\_P5+ GND USB+5V USB\_P7USB\_P7+ GND 1 USB78 1 USB+5V USB\_P8USB\_P8+ GND NC 1-33 1 1 . Front panel audio connector (10-1 pin AAFP) This connector is for a chassis-mounted front panel audio I/O module that supports either High Definition Audio or legacy AC '97 audio standard. Connect one end of the front panel audio I/O module cable to this connector. Azalia-compliant pin definition GND PRESENCE# SENSE1\_RETUR SENSE2\_RETUR Legacy AC'97-compliant pin definition AGND NC NC NC Ⓢ AAFP PORT1 L PORT1 R PORT2 R SENSE\_SEND PORT2 L MIC2 MICPWR Line out\_R NC Line out\_L Analog front panel connector . . Use a chassis that provides a high-definition audio front panel audio I/O to use the high-definition audio features. The default setting of this connector is legacy AC'97 audio, if you want to use the High-Definition (Azalia) audio features, set the F r o n t P a n e l S u p p o r t T y p e in the BIOS to Azalia. 1 2 . Chassis intrusion connector (4-1 pin CHASSIS) 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. By default, the pins labeled "Chassis Signal" and "Ground" are shorted with a jumper cap. Remove the jumper caps only when you intend to use the chassis intrusion detection feature.

CHASSIS Chassis Signal GND (Default) Ⓢ Chassis intrusion connector 1-34 +5VSB\_MB Chapter 1: Product introduction 1 3 . MP3-In connector (4-pin MP3IN [red]) (Only for P5V-VM DH) This connector is for the MP3-In module that allows you to connect your MP3 player to the speakers of the computer. @@@@ Connect the chassis power LED cable to this connector. @@@@ Connect the HDD Activity LED cable to this connector. @@@@ The speaker allows you to hear system beeps and warnings.

@@@ Pressing the power switch for more than four seconds while the system is ON turns the system OFF. Reset button (Blue 2-pin RESET) This 2-pin connector is for the chassis-mounted reset button for system reboot without turning off the system power. . . . 1-36 Chapter 1: Product introduction Reset Ground This chapter tells how to change the system settings through the BIOS Setup menu. Detailed descriptions of the BIOS parameters are also provided.

BIOS setup 2 2-1 ASUS P5VD2-MX/P5V-VM DH 2.1 Managing and updating your BIOS The following utilities allow you to manage and update the motherboard Basic Input/Output System (BIOS) setup. 1. 2. 3. 4.

A S U S U p d a t e (Updates the BIOS in Windows® environment.) A S U S E Z F l a s h (Updates the BIOS using a floppy disk during POST.) A w a r d B I O S F l a s h U t i l i t y (Updates the BIOS in DOS mode using a bootable floppy disk.) A S U S C r a s h F r e e B I O S 2 (Updates the BIOS using a bootable floppy disk or the motherboard support CD when the BIOS file fails or gets corrupted.) Refer to the corresponding sections for details on these utilities. Save a copy of the original motherboard BIOS file to a bootable floppy disk in case you need to restore the BIOS in the future. Copy the original motherboard BIOS using the ASUS Update or Award BIOS Flash utilities. 2.1.1 ASUS Update utility The ASUS Update is a utility that allows you to manage, save, and update the motherboard BIOS in Windows® environment.

@@@ 2. 3. Place the support CD in the optical drive. The D r i v e r s menu appears. @@ V X .

X X . X X See page 3-4 for the U t i l i t y s screen menu. @@@@ Click Next. @@@@ A S U S U p d a t e The ASUS Update main window appears. @@ 4.

Locate the BIOS file from the e. @@ Insert a 1.44MB floppy disk into the drive. b. @@ Insert a 1.44 MB floppy disk to the floppy disk drive. b. @@ c. Select the 3 1/2 Floppy Drive icon. d.

@@ F l o p p y D i s k window appears. e. @@ Insert a formatted, high density 1.44 MB floppy disk into the drive. b. Insert the Windows® 2000 CD to the optical drive. c. Click S t a r t then select R u n t, n. d. @@ e.

Press <Enter>, then follow screen instructions to continue. 2. @@@@ 2. 3. @@ Save the BIOS file to a floppy disk, then restart the system.

@@ The following screen appears. AwardBIOS Flash Utility for ASUS V1.14 (C) Phoenix Technologies Ltd. All Rights Reserved For NF-CK804-P5VD2-MX-00 DATE: 04/13/2006 Flash Type - PMC Pm49FL004T LPC/FWH File Name to Program: Message: Please wait..

. 5. When the correct BIOS file is found, EZ Flash performs the BIOS update process and automatically reboots the system when done. Do not shut down or reset the system while updating the BIOS to prevent system boot failure! 2-6 Chapter 2: BIOS setup 2.1.4 Updating the BIOS The Basic Input/Output System (BIOS) can be updated using the AwardBIOS Flash Utility. Follow these instructions to update the BIOS using this utility. 1. Download the latest BIOS file from the ASUS web site. Rename the file to P 5 V D 2 - M X .

B I N and save it to a floppy disk. Save only the updated BIOS file in the floppy disk to avoid loading the wrong BIOS file. 2.



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The BIOS setup screens shown in this chapter are for reference purposes only, and may not exactly match what you see on your screen. Visit the ASUS website ([www.asus.com](http://www.asus.com)) to download the latest BIOS information. - 2-12 Chapter 2: BIOS setup 2.2.

3 Legend bar At the bottom of the Setup screen is a legend bar. The keys in the legend bar allow you to navigate through the various setup menus. The following table lists the keys found in the legend bar with their corresponding functions. Navigation Key <F1> <F5> <Esc> Left or Right arrow Up or Down arrow Page Up or + (plus) <Enter> <F10> Function Displays the General Help screen Loads setup default values Exits the BIOS setup or returns to the main menu from a sub-menu Selects the menu item to the left or right Moves the highlight up or down between fields Scrolls forward through the values for the highlighted field Brings up a selection menu for the highlighted field Saves changes and exit P a g e D o w n o r ( m i n u s ) Scrolls backward through the values for the highlighted field 2.2.4 Menu items The highlighted item on the menu bar displays the specific items for that menu. For example, selecting M a i n shows the Main menu items. The other items (Advanced, Power, Boot, and Exit) on the menu bar have their respective menu items. 2.2.

5 Sub-menu items A solid triangle before each item on any menu screen means that the item has a sub-menu. To display the sub-menu, select the item and press <Enter>. 2.2.6 Configuration fields These fields show the values for the menu items.

If an item is user-configurable, you can change the value of the field opposite the item. You cannot select an item that is not user-configurable. A configurable field is enclosed in brackets, and is highlighted when selected. To change the value of a field, select it then press <Enter> to display a list of options. Refer to "2.

2.7 Pop-up window." ASUS P5VD2-MX/P5V-VM DH 2-13 2.2.7 Pop-up window Select a menu item then press <Enter> to display a pop-up window with the configuration options for that item. Main Advanced Phoenix-Award BIOS CMOS Setup Utility Power Boot Exit 15 : 30 : 36 Mon, Mar 03 2006 [1.44M, 3.5 in. Specifies the capacity and physical size of diskette drive A. Select Menu Item Specific Help Legacy Diskette A: Legacy Diskette A: Primary IDE Master [ST321122A] Primary IDE Slave [ASUS CDS520/A] Disabled [None].

.... [ ] Secondary IDE Master 720K , 3.5 [None] .....  
[ ] in. Secondary IDE Slave 1.44M, 3.5 [None] ..

... [ ] in. SATA 1 SATA 2 [None] HDD SMART Monitoring [Disabled] Installed Memory :Move 256MB ENTER:Accept ESC:Abort System Time System Date F1:Help ESC: Exit : Select Item Select Menu : -/+ : Change Value F5: Setup Defaults Enter: Select SubMenu F10: Save and Exit Pop-up menu 2.

2.8 General help At the top right corner of the menu screen is a brief description of the selected item. 2-14 Chapter 2: BIOS setup 2.3 Main menu When you enter the BIOS Setup program, the Main menu screen appears, giving you an overview of the basic system information. Refer to section "2.2.1 BIOS menu screen" for information on the menu screen items and how to navigate through them. Phoenix-Award BIOS CMOS Setup Utility Power Boot Exit 15 : 30 : 36 Mon, Mar 03 2005 [1.44M, 3.5 in.

[ ] [ST321122A] [ASUS CDS520/A] [None] [None] [None] [None] [Disabled] 512MB 512MB Change the day, month, year and century. Select Menu Item Specific Help Legacy Diskette A: Primary IDE Master Primary IDE Slave Secondary IDE Master Secondary IDE Slave SATA 1 SATA 2 HDD SMART Monitoring Installed Memory Usable Memory Main Advanced System Time System Date F1:Help ESC: Exit : Select Item : Select Menu -/+ : Change Value Enter: Select SubMenu F5: Setup Defaults F10: Save and Exit 2.3.1 2.3.2 2.3.3 System Time [xx:xx:xx] System Date [Day xx/xx/xxxx] Legacy Diskette A [1.44M, 3.5 in.

] Allows you to set the system time. Allows you to set the system date. Sets the type of floppy drive installed. Configuration options: [Disabled] [720K , 3.5 in. ] [1.44M, 3.5 in.] ASUS P5VD2-MX/P5V-VM DH 2-15 2.3.

4 Primary and Secondary IDE Master/Slave While entering Setup, the BIOS automatically detects the presence of IDE devices. There is a separate sub-menu for each IDE device. Select a device item then press <Enter> to display the IDE device information. Phoenix-Award BIOS CMOS Setup Utility Main Primary IDE Master Primary IDE Master Access Mode Capacity Cylinder Head Sector PIO Mode UDMA Mode Transfer Mode [Auto] [Auto] 82 GB 39420 16 255 [Auto] [Auto] UDMA 6 Select Menu Item Specific Help Press [Enter] to select F1:Help ESC: Exit : Select Item : Select Menu -/+ : Change Value Enter: Select SubMenu F5: Setup Defaults F10: Save and Exit The BIOS automatically detects the values opposite the dimmed items (Capacity, Cylinder, Head, Sector and Transfer Mode). These values are not user-configurable. These items show N/A if no IDE device is installed in the system. Primary IDE Master/Slave [Auto] Secondary IDE Master/Slave [Auto] Select [Auto] to automatically detect an IDE hard disk drive. If automatic detection is successful, the BIOS automatically fills in the correct values for the remaining fields on this sub-menu. If the hard disk was already formatted on a previous system, the setup BIOS may detect incorrect parameters. Select [Manual] to manually enter the IDE hard disk drive parameters.

If no drive is installed select [None]. Configuration options: [None] [Auto] [Manual] Access Mode [Auto] The default [Auto] allows automatic detection of an IDE hard disk drive. Select [CHS] for this item if you set the IDE Primary Master/Slave to [Manual]. Configuration options: [CHS] [LBA] [Large] [Auto] Before attempting to configure a hard disk drive, make sure you have the correct configuration information supplied by the drive manufacturer. Incorrect settings may cause the system to fail to recognize the installed hard disk. 2-16 Chapter 2: BIOS setup Capacity Displays the auto-detected hard disk capacity. This item is not configurable. Cylinder Shows the number of the hard disk cylinders. This item is not configurable. Head Shows the number of the hard disk read/write heads.

This item is not configurable. Sector Shows the number of sectors per track. This item is not configurable. PIO Mode [Auto] Sets the PIO mode for the IDE device. Configuration options: [Auto] [Mode 0] [Mode 1] [Mode 2] [Mode 3] [Mode 4] UDMA Mode [Auto] Disables or sets the UDMA mode.

Configuration options: [Disabled] [Auto] Transfer Mode Shows the Transfer mode. This item is not configurable. After entering the IDE hard disk drive information into BIOS, use a disk utility, such as FDISK, to partition and format new IDE hard disk drives. This is necessary so that you can write or read data from the hard disk. Make sure to set the partition of the Primary IDE hard disk drives to active.



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