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You can read the recommendations in the user guide, the technical guide or the installation guide for GIGABYTE GA-78LMT-S2P. You'll find the answers to all your questions on the GIGABYTE GA-78LMT-S2P in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual GIGABYTE GA-78LMT-S2P
User guide GIGABYTE GA-78LMT-S2P
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GA-78LMT-USB3
GA-78LMT-S2P

User's Manual
Rev. 3101
12ME-78LMT-USB3-3101R



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Manual abstract:

Com Identifying Your Motherboard Revision The revision number on your motherboard looks like this: "REV: X. 0" means the revision of the motherboard is

1. 0. Check your motherboard revision before updating motherboard BIOS, drivers, or when looking for technical information. 37 -4- GA-78LMT-USB3/GA-78LMT-S2P Motherboard Layout KB_MS ATX_12V VGA AM3+ CPU_FAN ATX DVI R_USB Etron EJ168 j USB_LAN AUDIO F_AUDIO Realtek RTL8111E PCIEX16 iTE IT8720 AMD 760G DDR3_1 DDR3_2 F_PANEL PCIEX1 BAT GA-78LMT-USB3/ GA-78LMT-S2P AMD SB710 CODEC PCI SATA2_2 SATA2_1 SATA2_0 SATA2_5 SATA2_4 SATA2_3 M_BIOS B_BIOS CLR_CMOS COM F_USB2 SYS_FAN F_USB1 Box Contents GA-78LMT-USB3 or GA-78LMT-S2P motherboard Motherboard driver disk Two SATA cables User's Manual I/O Shield * The box contents above are for reference only and the actual items shall depend on the product package you obtain. Prior to installation, carefully read the user's manual and follow these procedures:
• Prior to installation, do not remove or break motherboard S/N (Serial Number) sticker or warranty sticker provided by your dealer. These stickers are required for warranty validation.
• Always remove the AC power by unplugging the power cord from the power outlet before installing or removing the motherboard or other hardware components.
• When connecting hardware components to the internal connectors on the motherboard, make sure they are connected tightly and securely.
• When handling the motherboard, avoid touching any metal leads or connectors.
• It is best to wear an electrostatic discharge (ESD) wrist strap when handling electronic components such as a motherboard, CPU or memory. If you do not have an ESD wrist strap, keep your hands dry and first touch a metal object to eliminate static electricity.
• Prior to installing the motherboard, please have it on top of an antistatic pad or within an electrostatic shielding container.
• Before unplugging the power supply cable from the motherboard, make sure the power supply has been turned off.
• Before turning on the power, make sure the power supply voltage has been set according to the local voltage standard.

• Before using the product, please verify that all cables and power connectors of your hardware components are connected.
• To prevent damage to the motherboard, do not allow screws to come in contact with the motherboard circuit or its components.
• Make sure there are no leftover screws or metal components placed on the motherboard or within the computer casing.
• Do not place the computer system on an uneven surface.
• Do not place the computer system in a high-temperature environment.

• Turning on the computer power during the installation process can lead to damage to system components as well as physical harm to the user.
• If you are uncertain about any installation steps or have a problem related to the use of the product, please consult a certified computer technician.

-7- Hardware Installation 1-2 Product Specifications CPU Socket: - AMD AM3+ processor - AMD AM3 Phenom II processor/ AMD Athlon II processor (Go to GIGABYTE's website for the latest CPU support list.) 4400 MT/s North Bridge: AMD 760G South Bridge: AMD SB710 2 x 1.5V DDR3 DIMM sockets supporting up to 8 GB of system memory Hyper Transport Bus Chipset Memory * to Windows 32-bit operating system limitation, when more than 4 GB of physical Due memory is installed, the actual memory size displayed will be less than 4 GB. Onboard Graphics Audio Dual channel memory architecture Support for DDR3 1333+ (O. c.)/1066/800 MHz memory modules to GIGABYTE's website for the latest supported memory speeds and memory (Go modules. 1-channel audio, you have to use an HD front panel audio module and To enable the multi-channel audio feature through the audio driver. LAN 1 x Realtek RTL8111E chip (10/100/1000 Mbit) Expansion Slots x PCI Express x16 slot, running at x16 1 x PCI Express x1 slot (All PCI Express slots conform to the PCI Express 2.

1 ports (2 on the back panel, 4 via the USB brackets Up connected to the internal USB headers) j - to 8 USB 2. 0/1. 1 ports (4 on the back panel, 4 via the USB brackets Up connected to the internal USB headers) k Etron EJ168 chip: j - to 2 USB 3. 0/2. 0 ports on the back panel Up j Only for GA-78LMT-USB3. k Only for GA-78LMT-S2P. Hardware Installation -8- Internal Connectors Back Panel Connectors 1 x 24-pin ATX main power connector 1 x 4-pin ATX 12V power connector 6 x SATA 3Gb/s connectors 1 x CPU fan header 1 x system fan header 1 x front panel header 1 x front panel audio header 2 x USB 2. 1 ports k 1 x RJ-45 port 3 x audio jacks (Line In/Line Out/Microphone) System voltage detection CPU/System temperature detection CPU/System fan speed detection CPU overheating warning CPU/System fan fail warning CPU fan speed control I/O Controller Hardware Monitor iTE IT8720 chip * Whether the CPU fan speed control function is supported will depend on the CPU cooler you install. 0b Support for @BIOS Support for Q-Flash Support for Xpress BIOS Rescue Support for Download Center Support for Xpress Install Support for Xpress Recovery2 Support for EasyTune Support for Smart Recovery j Only for GA-78LMT-USB3. Hardware Installation Unique Features Bundled Software Operating System Form Factor Support for Auto Green Support for ON/OFF Charge Support for Cloud OC Support for Q-Share Norton Internet Security (OEM version) Support for Microsoft® Windows 7/Vista/XP Micro ATX Form Factor; 24.4cm x 20.6cm * GIGABYTE reserves the right to make any changes to the product specifications and product-related information without prior notice.



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1-3 Installing the CPU and CPU Cooler Read the following guidelines before you begin to install the CPU: **Make sure that the motherboard supports the CPU. (Go to GIGABYTE's website for the latest CPU support list.)** **Always turn off the computer and unplug the power cord from the power outlet before installing the CPU to prevent hardware damage.**

Locate the pin one of the CPU. The CPU cannot be inserted if oriented incorrectly. (Or you may locate the notches on both sides of the CPU and alignment keys on the CPU socket.) **Apply an even and thin layer of thermal grease on the surface of the CPU.** **Do not turn on the computer if the CPU cooler is not installed, otherwise overheating and damage of the CPU may occur.**

Set the CPU host frequency in accordance with the CPU specifications. It is not recommended that the system bus frequency be set beyond hardware specifications since it does not meet the standard requirements for the peripherals. If you wish to set the frequency beyond the standard specifications, please do so according to your hardware specifications including the CPU, graphics card, memory, hard drive, etc. installing the CPU A. Locate the pin one (denoted by a small triangle) of the CPU socket and the CPU. A Small Triangle Mark Denotes Pin One of the Socket AM3+ Socket A Small Triangle Marking Denotes CPU Pin One AM3+/AM3 CPU Hardware Installation - 10 - 1-4 Installing the Memory Read the following guidelines before you begin to install the memory: **Make sure that the motherboard supports the memory. It is recommended that memory of the same capacity, brand, speed, and chips be used. (Go to GIGABYTE's website for the latest supported memory speeds and memory modules.) **Always turn off the computer and unplug the power cord from the power outlet before installing the memory to prevent hardware damage.** **Memory modules have a foolproof design.****

A memory module can be installed in only one direction. If you are unable to insert the memory, switch the direction. Dual Channel Memory Configuration This motherboard provides two DDR3 memory sockets and supports Dual Channel Technology. After the memory is installed, the BIOS will automatically detect the specifications and capacity of the memory. Enabling Dual Channel memory mode will double the original memory bandwidth. The two DDR3 memory sockets are divided into two channels and each channel has one memory socket as following: Channel 0: DDR3_1 Channel 1: DDR3_2 Due to CPU limitations, read the following guidelines before installing the memory in Dual Channel mode. 111 Dual Channel mode cannot be enabled if only one DDR3 memory module is installed. 222 When enabling Dual Channel mode with two memory modules, it is recommended that memory of the same capacity, brand, speed, and chips be used for optimum performance. 1-5 Installing an Expansion Card Read the following guidelines before you begin to install an expansion card: **Make sure the motherboard supports the expansion card. Carefully read the manual that came with your expansion card.**

Always turn off the computer and unplug the power cord from the power outlet before installing an expansion card to prevent hardware damage. - 11 Hardware Installation DDR3_1 DDR3_2 1-6 Back Panel Connectors j k PS/2 Keyboard and PS/2 Mouse Port D-Sub Port Use the upper port (green) to connect a PS/2 mouse and the lower port (purple) to connect a PS/2 keyboard. the D-Sub port supports a 15-pin D-Sub connector. Connect a monitor that supports D-Sub connection to this port. DVI-D Port (Note) The DVI-D port conforms to the DVI-D specification and supports a maximum resolution of 1920x1200 (the actual resolutions supported depend on the monitor being used).

Connect a monitor that supports DVI-D connection to this port. Use this port for USB devices such as a USB keyboard/mouse, USB printer, USB flash drive and etc. the Gigabit Ethernet LAN port provides Internet connection at up to 1 Gbps data rate. The following describes the states of the LAN port LEDs. Use this port for USB devices such as a USB keyboard/mouse, USB printer, USB flash drive and etc.

Line In Jack (Blue) The default line in jack. Use this audio jack for line in devices such as an optical drive, walkman, etc. Line Out Jack (Green) Mic In Jack (Pink) The default line out jack. Use this audio jack for a headphone or 2-channel speaker. This jack can be used to connect front speakers in a 4/5.

Microphones must be connected to this jack. to enable 7. 1-channel audio, you have to use an HD front panel audio module and enable the multi-channel audio feature through the audio driver. **When removing the cable connected to a back panel connector, first remove the cable from your device and then remove it from the motherboard.** **When removing the cable, pull it straight out from the connector.**

Do not rock it side to side to prevent an electrical short inside the cable connector. Hardware Installation - 12 - 1-7 Internal Connectors 1 3 2 7 6 11 5 10 9 4 8 1) 2) 3) 4) 5) 6) ATX_12V ATX CPU_FAN SY0 On S1 Blinking tem is in S1 sleep state. The LED is off when the system is in S3/S4 sleep S3/S4/S5 Off state or powered off (S5). **PW (Power Switch, Red):** Connects to the power switch on the chassis front panel. You may configure the way to turn off your system using the power switch (refer to Chapter 2, "BIOS Setup," "Power Management Setup," for more information). **SPEAK (Speaker, Orange):** Connects to the speaker on the chassis front panel. the system reports system startup status by issuing a beep code. One single short beep will be heard if no problem is detected at system startup. If a problem is detected, the BIOS may issue beeps in different patterns to indicate the problem. **HD (Hard Drive Activity LED, Blue)** Connects to the hard drive activity LED on the chassis front panel.

The LED is on when the hard drive is reading or writing data. **RES (Reset Switch, Green):** Connects to the reset switch on the chassis front panel. Press the reset switch to restart the computer if the computer freezes and fails to perform a normal restart. **CI (Chassis Intrusion Header, Gray):** Connects to the chassis intrusion switch/sensor on the chassis that can detect if the chassis cover has been removed. This function requires a chassis with a chassis intrusion switch/sensor.

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.



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This item is configurable only when CPU Smart FAN Control is enabled. Auto Lets the BIOS automatically detect the type of CPU fan installed and sets the optimal CPU fan control mode. N Exit Without Saving iP'iP©iP§iP: Select Item F10: Save & Exit Setup Load Fail-Safe Defaults F11: Save CMOS to BIOS F12: Load CMOS from BIOS ESC: Quit F8: Q-Flash Press <Enter> on this item and then press the <Y> key to load the safest BIOS default settings. In case system instability occurs, you may try to load Fail-Safe defaults, which are the safest and most stable BIOS settings for the motherboard. N PnP/PCI Configurations Exit Without Saving PC Health Status iP'iP©iP§iP: Select Item F10: Save & Exit Setup Load Optimized Defaults F11: Save CMOS to BIOS F12: Load CMOS from BIOS ESC: Quit F8: Q-Flash Press <Enter> on this item and then press the <Y> key to load the optimal BIOS default settings. The BIOS defaults settings help the system to operate in optimum state. Always load the Optimized defaults after updating the BIOS or after clearing the CMOS values.) Standard CMOS Features Advanced BIOS Features Integrated Peripherals Power Management Setup Enter Password: PnP/PCI Configurations PC Health Status Load Fail-Safe Defaults Load Optimized Defaults Set Supervisor Password Set User Password Save & Exit Setup Exit Without Saving F11: Save CMOS to BIOS F12: Load CMOS from BIOS ESC: Quit F8: Q-Flash iP'iP©iP§iP: Select Item F10: Save & Exit Setup Change/Set/Disable Password Press <Enter> on this item and type the password with up to 8 characters and then press <Enter>. You will be requested to confirm the password. Type the password again and press <Enter>. The BIOS Setup program allows you to specify two separate passwords: Supervisor Password When a system password is set and the Password Check item in Advanced BIOS Features is set to Setup, you must enter the supervisor password for entering BIOS Setup and making BIOS changes. When the Password Check item is set to System, you must enter the supervisor password (or user password) at system startup and when entering BIOS Setup. User Password When the Password Check item is set to System, you must enter the supervisor password (or user password) at system startup to continue system boot.

In BIOS Setup, you must enter the supervisor password if you wish to make changes to BIOS settings. The user password only allows you to view the BIOS settings but not to make changes. To clear the password, press <Enter> on the password item and when requested for the password, press <Enter> again. The message "PASSWORD DISABLED" will appear, indicating the password has been cancelled. Y Integrated Peripherals Set User Password Power Management Setup Save & Exit Setup PnP/PCI Configurations Exit Without Saving PC Health Status iP'iP©iP§iP: Select Item F10: Save & Exit Setup Save Data to CMOS F11: Save CMOS to BIOS F12: Load CMOS from BIOS ESC: Quit F8: Q-Flash Press <Enter> on this item and press the <Y> key. This saves the changes to the CMOS and exits the BIOS Setup program. Press <N> or <Esc> to return to the BIOS Setup Main Menu. Set Supervisor Password N Set User Password iP'iP©iP§iP: Select Item F10: Save & Exit Setup Abandon all Data Save & Exit Setup Exit Without Saving F11: Save CMOS to BIOS F12: Load CMOS from BIOS ESC: Quit F8: Q-Flash Press <Enter> on this item and press the <Y> key. This exits the BIOS Setup without saving the changes made in BIOS Setup to the CMOS. Press <N> or <Esc> to return to the BIOS Setup Main Menu. BIOS Setup - 36 - Chapter 3 Drivers Installation âPç Before installing the drivers, first install the operating system. âPç After installing the operating system, insert the motherboard driver disk into your optical drive. The driver Autorun screen is automatically displayed which looks like that shown in the screen shot below. (If the driver Autorun screen does not appear automatically, go to My Computer, double-click the optical drive and execute the Run. exe program.

) After inserting the driver disk, "Xpress Install" will automatically scan your system and then list all the drivers that are recommended to install. You can click the Install All button and "Xpress Install" will install all the recommended drivers. Or click Install Single Items to manually select the drivers you wish to install. Chapter 4 Appendix Configuring SATA Hard Drive(s) Before you begin Please prepare: âPç At least two SATA hard drives (to ensure optimal performance, it is recommended that you use two hard drives with identical model and capacity). If you do not want to create RAID, you may prepare only one hard drive.

Installing SATA hard drive(s) in your computer Attach one end of the SATA signal cable to the rear of the SATA hard drive and the other end to available SATA port on the motherboard. Then connect the power connector from your power supply to the hard drive. b. Configuring SATA controller mode in BIOS Setup Make sure to configure the SATA controller mode correctly in system BIOS Setup. Turn on your computer and press <Delete> to enter BIOS Setup during the POST (Power-On Self-Test). The BIOS Setup menus described in this section may differ from the exact settings for your motherboard. The actual BIOS Setup menu options you will see shall depend on the motherboard you have and the BIOS version. enter the RAID BIOS setup utility to configure a RAID array. After the POST memory test begins and before the operating system boot begins, look for a message which says "Press <Ctrl-F> to enter RAID Option ROM Utility". press <Ctrl> + <F> to enter the RAID BIOS setup utility.

@@@In the following procedure, we'll create RAID 0 as an example. steps: 1. @@Under the Drives Assignments section, press the up or down arrow key to highlight a drive. 4. Press the <SPACE> key or <Y> to change the Assignment option to Y. This action adds the drive to the disk array. The Drv section will show the number of disks assigned. 5. Press <Ctrl>+<Y> keys to save the information. If you do not input the array name, the default array name will be used.

Please press Ctrl-Y key to input the LD Name or press any key to exit. If you do not input any LD name, the default LD name will be used. When the next message appears, press <Ctrl>+<Y> to clear the MBR or press other keys to ignore this option. Fast Initialization Option has been selected It will erase the MBR data of the disk. <Press Ctrl-Y Key if you are sure to erase it> <Press any other key to ignore this option> Figure 2 7.



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Then, the message in Figure 8 will appear. Press <Ctrl>+<Y> to set the capacity of the RAID array or press other keys to set the array to its maximum capacity. Press Ctrl-Y to Modify Array Capacity or press any other key to use maximum capacity. figure 3 8. After the creation is complete, the screen will return to LD View Menu where you will see the newlycreated array.

9. Press <Esc> to return to Main Menu and press <Esc> again if you want to exit the RAID BIOS utility. Appendix - 38 - Copy the driver for the SATA controller from the motherboard driver disk to a floppy disk (for Windows XP) or a USB flash drive (for Windows 7/Vista). For example, to copy the RAID driver for Windows XP 32-bit operating system, copy the driver from the following directory to your floppy disk: \BootDrv\SBxxx\x86. (To install Windows 64-bit, copy the files in the x64 folder. Restart your system to boot from the Windows XP setup disk and press <F6> as soon as you see the message "Press F6 if you need to install a 3rd party SCSI or RAID driver. " Insert the floppy disk containing the SATA controller driver. Follow the on-screen instructions to install the two drivers displayed. When completed, proceed with the Windows XP installation. b.

Installing Windows 7/Vista Restart your system to boot from the Windows 7/Vista setup disk and perform standard OS installation steps. select Load Driver. Insert the floppy disk/USB flash drive (for users using a SATA optical drive) containing the driver or insert the motherboard driver disk. For Windows 32-bit, browse to \BootDrv\SBxxxW7\RAID\W7 to load the driver and continue the OS installation. For Windows 64-bit, browse to \BootDrv\SBxxxW7\RAID\ W764A to load the driver and continue the OS installation. Tw You may go to the GIGABYTE website, select your language in the language list on the top right corner of the website. Tw Then select your language to enter the system. .



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