Asus AAEON BOXER-6406U-ADN User Manual

Fanless embedded box pc

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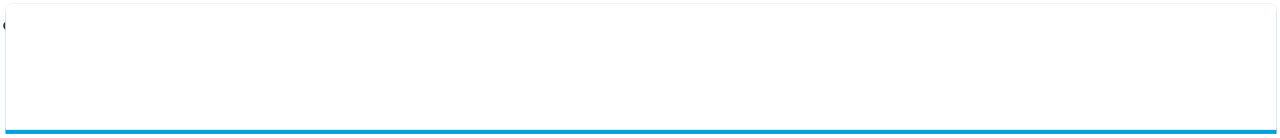

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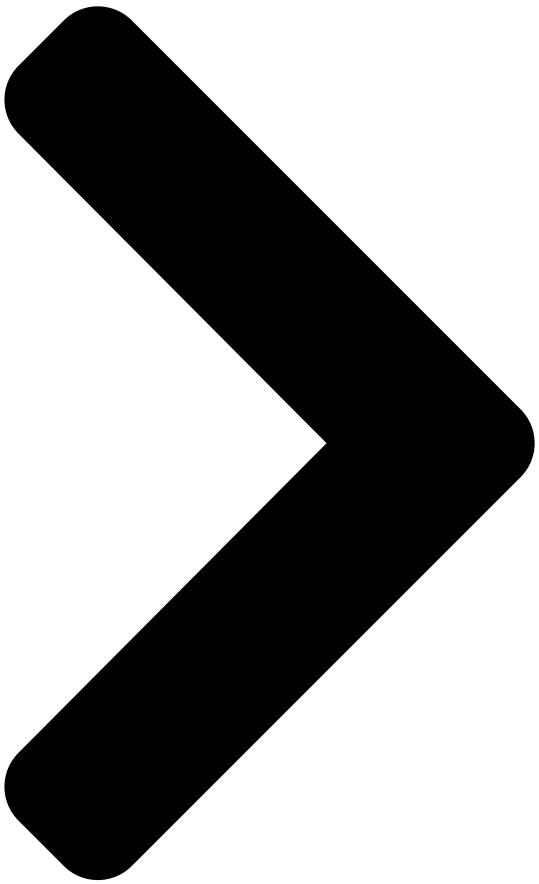

BOXER-6406U-ADN

Fanless Embedded Box PC

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User's Manual 1

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Last Updated: July 3, 2024

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Related Manuals for Asus AAEON BOXER-6406U-ADN

Industrial PC Asus AAEON BOXER-6615 User Manual

Fanless embedded box pc (101 pages)

Industrial PC Asus Aaeon BOXER-8331AI User Manual

Embedded ai vision system (108 pages)

Industrial PC Asus AAEON BOXER-6642-CML User Manual

Fanless embedded box pc (112 pages)

Industrial PC Asus Aaeon BOXER-8254AI User Manual

Compact fanless embedded aiaedge box pc with nvidia jetson xavier nx (42 pages)

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Fanless embedded box pc (104 pages)

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Industrial PC Asus Aaeon GENESYS-APL7 User Manual

Compact embedded system (85 pages)

Industrial PC Asus AAEON PICO-APL4-SEMI Quick Installation Manual

(3 pages)

Industrial PC Asus EBE-4U User Manual

Industrial computer barebone (69 pages)

Summary of Contents for Asus AAEON BOXER-6406U-ADN

Page 1 BOXER-6406U-ADN Fanless Embedded Box PC User’s Manual 1 Last Updated: July 3, 2024...

Page 2

Page 3 Acknowledgement All other product name or trademarks are properties of their respective owners. Microsoft Windows®, Windows® 10, and Windows® 11 are registered ● trademarks of Microsoft Corp. Intel® and Atom® are registered trademarks of Intel Corporation. ● Linux® is a registered trademark of Linus Torvalds in the U.S. and other ●...

Page 4 Packing List Before setting up your product, please make sure the following items have been shipped: Item Quantity BOXER-6406U-ADN ● Wall Mount Bracket ● 60W 12V Power Adapter ● Screw Pack ● If any of these items are missing or damaged, please contact your distributor or sales representative immediately.

Page 5 About this Document This User's Manual contains all the essential information, such as detailed descriptions and explanations on the product's hardware and software features (if any), its specifications, dimensions, jumper/connector settings/definitions, and driver installation instructions (if any), to facilitate users in setting up their product. Users may refer to the product page at AAEON.com for the latest version of this document.

Page 6 Safety Precautions Please read the following safety instructions carefully. It is advised that you keep this manual for future references All cautions and warnings on the device should be noted. Make sure the power source matches the power rating of the device. Position the power cord so that people cannot step on it.

Page 7 If any of the following situations arises, please the contact our service personnel: Damaged power cord or plug Liquid intrusion to the device iii. Exposure to moisture Device is not working as expected or in a manner as described in this manual The device is dropped or damaged Any obvious signs of damage displayed on the device...

Page 8 FCC Statement This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation. Caution: There is a danger of explosion if the battery is incorrectly replaced.

Page 9 China RoHS Requirements (CN) □□□□□□□□□□□□□□□□□□ AAEON System QO4-381 Rev.A0 □□□□□□□□□ □□□□ □ □ □ □□□ □□□□ □□□□ □(PBDE) (Pb) (Hg) (Cd) (Cr(VI)) (PBB) □□□□□ × ○ ○ ○ ○ ○ □ □□□□□ □□□□ × ○ ○ ○ ○ ○ □□□□□□ ○ ○...

Page 10 China RoHS Requirement (EN) Hazardous and Toxic Materials List AAEON System QO4-381 Rev.A0 Hazardous or Toxic Materials or Elements Component Name PCB and Components Wires & Connectors for Ext.Connections Chassis CPU & RAM HDD Drive LCD Module Optical Drive Touch Control Module Battery This form is prepared in compliance with the provisions of SJ/T 11364.

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Page 14: Chapter 1 - Product Specifications

Chapter 1 Chapter 1 - Product Specifications...

Page 15: Specifications

Specifications System Intel Atom® Processor X Series/Intel® Processor N-series Processors: Intel Atom® x7211E Processor Intel® Processor N200 Intel® Processor N50 Chipset Intel® SoC

System Memory DDR5 4800MHz SODIMM x 1, up to 32GB Display Interface HDMI 2.0 x 2 Storage M.2 2280 M-Key x 1 (PCIe Gen 3 [x2]) 2.5"...

Page 16 System SIM Slot x 1 Indicator Power Button x 1 with LED Security Onboard TPM 2.0 OS Support Windows® 10 IoT Ent LTSC Windows® 11 Pro Ubuntu 22.04 Power Supply Power Requirement Lockable DC Jack x 1 for 12V DC-in Mechanical Mounting Wall Mount...

Page 17 Environmental Drop 30” (760mm), 1 Corner, 3 Edge, 6 Surface Certification CE/FCC Class A Note: Industrial grade memory modules are recommended (temperature range: -40°F ~ 185°F (-40°C ~ 85°C) or above). Note: For Gen 4 storage module, a thermal solution is mandatory for heat-dissipation. Please check with your AAEON representative if you have any queries regarding this requirement.

Page 18: Chapter 2 - Hardware Information

Chapter 2 Chapter 2 – Hardware Information...

Page 19: Dimensions

Dimensions Chapter 2 – Hardware Information...

Page 20 Chapter 2 – Hardware Information...

Page 21: Jumpers And Connectors

Jumpers and Connectors Chapter 2 – Hardware Information...

Page 22: List Of Jumpers

List of Jumpers The board has a number of jumpers that allow you to configure your system to suit your application. The table below shows the function of each of the board's jumpers Label Function Auto-Power Button Selection (ATX/AT) CMOS Control Selection 2.3.1 Setting Jumpers You can configure your system to match the needs of your application by setting...

Page 23: Atx/At Mode Selection (Jp3)

2.3.2 ATX/AT Mode Selection (JP3) ATX (Default) 2.3.3 CMOS Control Selection (JP1) 1 2 3 Normal (Default) Clear CMOS Chapter 2 – Hardware Information...

Page 24: List Of Connectors

List of Connectors The board has a number of connectors that allow you to configure your system to suit your application. The table below shows the function of each of the board's connectors. Label Function CN41 SODIMM Channel A Dual HDMI Port CN4, CN5 RJ-45 LAN Connector CN26...

Page 25 Label Function BAT1 RTC Connector Reset Switch Box Connector PS_ON Box Connector Chapter 2 – Hardware Information...

Page 26: Audio Box Connector (Cn34)

2.4.1 Audio Box Connector (CN34) Pin Name Signal Type LINE_OUT_R MIC_R LINE_OUT_L MIC_L HPOUT-JD MIC-JD AUD_GND AUD_GND LINE_IN_JD LINE_IN_R +VDD_AUD LINE_IN_L AUD_GND AUD_GND Chapter 2 – Hardware Information...

Page 27: Dual Hdmi Port (Cn40)

2.4.2 Dual HDMI Port (CN40) Pin Name Signal Type HDMI1_DATA2_P DIFF HDMI1_DATA2_N DIFF HDMI1_DATA1_P DIFF HDMI1_DATA1_N DIFF HDMI1_DATA0_P HDMI1_DATA0_N HDMI1_CLK_P DIFF HDMI1_CLK_N DIFF HDMI1_SCL HDMI1_SDA +V5S_HDMI_CON HDMI1_HPD HDMI2_DATA2_P HDMI2_DATA2_N Chapter 2 – Hardware Information...

Page 28: Dual Usb 3.2 Port (Cn29)

Pin Name Signal Type HDMI2_DATA1_P HDMI2_DATA1_N HDMI2_DATA0_P HDMI2_DATA0_N HDMI2_CLK_P HDMI2_CLK_N HDMI2_SCL HDMI2_SDA +V5S_HDMI_CON HDMI2_HPD 2.4.3 Dual USB 3.2 Port (CN29) Pin Name Signal Type +5VSB USB_D- DIFF USB_D+ DIFF USB3_RX_N DIFF

Chapter 2 – Hardware Information...

Page 29: Dual Usb 2.0 Port (Cn38)

Pin Name Signal Type USB3_RX_P DIFF USB3_TX_N DIFF USB3_TX_P DIFF +5VSB USB_D- DIFF USB_D+ DIFF USB3_RX_N DIFF USB3_RX_P DIFF USB3_TX_N DIFF USB3_TX_P DIFF 2.4.4 Dual USB 2.0 Port (CN38) Pin Name Signal Type +5VSB USB_D- DIFF USB_D+ DIFF +5VSB USB_D- DIFF USB_D+ DIFF...

Page 30: Lan (Cn4/Cn5)

2.4.5 RJ-45 LAN (CN4/CN5) Pin Name Signal Type MDI0+ DIFF MDI0- DIFF MDI1+ DIFF MDI2+ DIFF MDI2- DIFF MDI1- DIFF MDI3+ DIFF MDI3- DIFF 2.4.6 M.2 2280 M-Key (CN25) Pin Name Signal Type Pin Name Signal Type +3.3V +3.3V Chapter 2 – Hardware Information...

Page 31

Pin Name Signal Type Pin Name Signal Type CARD_PWR_OF PCIE_RXN0 PCIE_RXP0 PCIE_TXN0 +3.3V PCIE_TXP0 +3.3V +3.3V PCIE_RXN1 +3.3V PCIE_RXP1 PCIE_TXN1 PCIE_TXP1 PCIE_RXN2 PCIE_RXP2 PCIE_TXN2 PCIE_TXP2 DEVSLP SMB_CLK_M2 PCIE_RXP3 SMB_DATA_M2 PCIE_RXN3 PCIE_TXN3 PCIE_TXP3 RESET# CLKREQ# PCIE_M.2_CLK# WAKE# PCIE_M.2_CLK Chapter 2 – Hardware Information...

Page 32: Remote Button Box Connector (Cn10)

Pin Name Signal Type Pin Name Signal Type +3.3V +3.3V +3.3V 2.4.7 Remote Button Box Connector (CN10) Pin Name Signal Type PWR_BUTTON 2.4.8 Full Size Mini Card (CN2) Pin Name Signal Type PCIE_WAKE# +3.3V Chapter 2 – Hardware Information...

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Pin Name Signal Type +1.5V PCIE_CLK_REQ# UIM_PWR UIM_DATA PCIE_REF_CLK- DIFF UIM_CLK PCIE_REF_CLK+ DIFF UIM_RESET UIM_VPP W_DISABLE# PCIE_RST# PCIE_RX- DIFF +3.3VSB PCIE_RX+ DIFF +1.5V SMB_CLK PCIE_TX- DIFF SMB_DATA PCIE_TX+ DIFF USB_D- DIFF Chapter 2 – Hardware Information...

Page 34: Debug Card Connector (Cn12)

Pin Name Signal Type USB_D+ DIFF +3.3VSB +3.3VSB MINICARD_SATA_PCIE_DET +1.5V +3.3VSB 2.4.9 Debug Card Connector (CN12) Pin Name Signal Type ESPI_IO_0 ESPI_IO_1 Chapter 2 – Hardware Information...

Page 35: Sata Connector (Cn14)

Pin Name Signal Type ESPI_IO_2 ESPI_IO_3 +3.3V ESPI_IO_CS# ESPI_IO_RST# EPSI_IO_LCLK SMCLK SMDAT 2.4.10 SATA Connector (CN14) Pin Name Signal Type SATA_TX+ DIFF SATA_TX- DIFF SATA_RX- DIFF SATA_RX+ DIFF Chapter 2 – Hardware Information...

Page 36: Sata Pwr Connector (Cn15)

2.4.11 SATA PWR Connector (CN15) Pin Name Signal Type +5VS 2.4.12 DIO Port (CN39) Pin Name Signal Type Signal Level DIO0 DIO1 DIO2 DIO3 DIO4 DIO5 DIO6 DIO7 Chapter 2 – Hardware Information...

Page 37: Dio Box Connector (Cn45)

Pin Name Signal Type Signal Level 2.4.13 DIO Box Connector (CN45) DIO0 DIO1 DIO2 DIO3 DIO4 DIO5 DIO6 DIO7 Pin Name Signal Type Signal Level DIO0 DIO1 DIO2 DIO3 DIO4 DIO5 DIO6 DIO7 Chapter 2 – Hardware Information...

Page 38: Com Port 1 ~ 3 (Rs-232/422/485) (Cn17, Cn18, Cn21)

2.4.14 COM Port 1 ~ 3 (RS-232/422/485) (CN17, CN18, CN21) RS-232 RS-422 RS-485 Signal Type RS422_TX- RS485_D- RS422_TX+ RS485_D+ RS422_RX+ RS422_RX- 2.4.15 COM 1 Box Connector (Optional) (CN19) RS-232 RS-422 RS-485 Signal Type DCD1 RS422_TX- RS485_D- DSR1 RS422_TX+ RS485_D+ Chapter 2 – Hardware Information...

Page 39: Com 2 Box Connector (Optional) (Cn20)

RS-232 RS-422 RS-485 Signal Type RTS1 RS422_RX+ CTS1 DTR1 RS422_RX- 2.4.16 COM 2 Box Connector (Optional) (CN20) RS-232 RS-422 RS-485 Signal Type DCD2 RS422_TX- RS485_D- DSR2 RS422_TX+ RS485_D+ RTS2 RS422_RX+ CTS2 DTR2 RS422_RX- Chapter 2 – Hardware Information...

Page 40: Com 3 Box Connector (Optional) (Cn23)

2.4.17 COM 3 Box Connector (Optional) (CN23) RS-232 RS-422 RS-485 Signal Type DCD3 RS422_TX- RS485_D- DSR3 RS422_TX+ RS485_D+ RTS3 RS422_RX+ CTS3 DTR3 RS422_RX- Chapter 2 – Hardware Information...

Page 41: Com 4 Box Connector (Optional) (Cn24)

2.4.18 COM 4 Box Connector (Optional) (CN24) RS-232 RS-422 RS-485 Signal Type DCD4 RS422_TX- RS485_D- DSR4 RS422_TX+ RS485_D+ RTS4 RS422_RX+ CTS4 DTR4 RS422_RX- Chapter 2 – Hardware Information...

Page 42: 2230 E-Key (Cn26)

2.4.19 M.2 2230 E-Key (CN26) Pin Name Signal Type Pin Name Signal Type +3.3V USB_2.0_P DIFF +3.3V USB_2.0_N DIFF PCIE_TXP DIFF PCIE_TXN DIFF PCIE_RXP DIFF PCIE_RXN DIFF Chapter 2 – Hardware Information...

Page 43: Usb 2.0 Wafer Box Connector (Cn31/Cn32)

Pin Name Signal Type Pin Name Signal Type PCIE_CLK DIFF PCIE_CLK# DIFF SUSCLK PLT_RESET# PCIE_CLKREQ# BT_DIS# PCIE_WAKE# WLAK_DIS# +3.3V +3.3V +3.3V 2.4.20 USB 2.0 Wafer Box Connector (CN31/CN32) Pin Name Signal Type USBD- DIFF USBD+ DIFF Chapter 2 – Hardware Information...

Page 44: Hardware Assembly

Hardware Assembly This section details the hardware assembly steps for the BOXER-6406-ADN. Please read this section thoroughly before beginning installation and ensure you have all necessary peripheral hardware ready. 2.5.1 2.5” SATA Drive Installation Before installing the SATA Drive, ensure the system is powered down and disconnect the power cord from the system.

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Step 2: Attach the assembled HDD to the HDD Base Bracket using four screws as shown in the figure below. Please use the rubber washers provided when affixing HDD to bracket. Attach the SATA and SATA Power cables to the board and the SATA drive. Chapter 2 –...

Page 46: M.2 Module Installation

2.5.2 M.2 Module Installation The M.2 2230 E-Key, M.2 2280 M-Key, and Mini Card slots are accessible by removing the bottom panel. Follow standard procedures for expansion card installation, aligning the notch on each M.2 SSD with its respective key slot. Chapter 2 –...

Page 47: Dimm Heatsink Installation

2.5.3 DIMM Heatsink Installation Note: As the BOXER-6406U-ADN supports both single and double-sided DDR5 modules, please ensure to follow the below guidance on thermal pad thickness. DDR5 Type Thermal Pad Single 2.0mm Double 1.0mm Follow the below diagram to install DIMM heatsink, ensuring a DIMM thermal pad is placed between the DIMM heatsink and DIMM module.

Page 48: Wall Mount Installation

2.5.4 Wall Mount Installation For wall mount assembly, affix the two (2) wall mount brackets to the bottom side of the chassis using the four (4) screws provided. Chapter 2 – Hardware Information...

Page 49: Chapter 3 - Ami Bios Setup

Chapter 3 Chapter 3 - AMI BIOS Setup...

Page 50: System Test And Initialization

System Test and Initialization The system uses certain routines to perform testing and initialization. If an error, fatal or non-fatal, is encountered, a few short beeps or an error message will be outputted. The board can usually continue the boot up sequence with non-fatal errors. The system configuration verification routines check the current system configuration against the values stored in the CMOS memory.

Page 51: Ami Bios Setup

AMI BIOS Setup The AMI BIOS ROM has a pre-installed Setup program that allows users to modify basic system configurations, which is stored in the battery-backed CMOS RAM and BIOS NVRAM so that the information is retained when the power is turned off. To enter BIOS Setup, press <Del>...

Page 52: Setup Submenu: Main

Setup Submenu: Main Chapter 3 – AMI BIOS Setup...

Page 53: Setup Submenu: Advanced

Setup Submenu: Advanced Chapter 3 – AMI BIOS Setup...

Page 54: Cpu Configuration

3.4.1 CPU Configuration Options Summary Intel (VMX)Virtualization Disabled Technology Enabled Optimal Default, Failsafe Default When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology. Intel(R) SpeedStep(tm) Disabled Enabled Optimal Default, Failsafe Default Allows more than two frequency ranges to be supported. Turbo Mode Disabled Enabled...

Page 55: Memory Configuration

3.4.2 Memory Configuration Chapter 3 – AMI BIOS Setup...

Page 56: Pch-Fw Configuration

3.4.3 PCH-FW Configuration Chapter 3 – AMI BIOS Setup...

Page 57: Firmware Update Configuration

3.4.3.1 Firmware Update Configuration Options Summary Me FW Image Re-Flash Enabled Disabled Optimal Default, Failsafe Default Enable/Disable Me FW Image Re-Flash function. FW Update Enabled Disabled Optimal Default, Failsafe Default Enable/Disable Me FW Update function. Chapter 3 – AMI BIOS Setup...

Page 58: Hardware Monitor

3.4.4 Hardware Monitor Chapter 3 – AMI BIOS Setup...

Page 59: Power Management

3.4.5 Power Management Options Summary Power Mode ATX Type Optimal Default, Failsafe Default AT Type Select system power mode. Restore AC Power Loss Last State Optimal Default, Failsafe Default Always On Always Off System Wake On RTC Disabled Optimal Default, Failsafe Default By Date By Weekday Bypass...

Page 60: Aaeon Bios Robot

3.4.6 AAEON BIOS Robot Options Summary Sends watch dog before Disabled Optimal Default, Failsafe Default BIOS POST Enabled Enabled – Robot set Watch Dog Timer (WDT) right after power on, before BIOS start POST process. And then Robot will clear WDT on completion of POST. WDT on completion of POST.

Page 61: Device Detecting Configuration

Options Summary Delayed POST (DXE phase) Disabled Optimal Default, Failsafe Default Enabled Enabled -Robot holds BIOS before POST completion. This allows BIOS POST to start with stable power or start after system is physically warmed-up. Note: Robot does this after 'Sends watch dog before BIOS POST'. 3.4.6.1 Device Detecting Configuration Options Summary...

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Options Summary At time After shoe logo Optimal Default, Failsafe Default Before show logo Select robot action time: After show logo -Robot will do action after logo is displayed. System devices are almost ready. Before show logo - Robot will do action earlier before logo, but some devices may not be ready.

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3.4.6.1.2 Device #2 Detecting Configuration Options Summary Interface Disabled Optimal Default, Failsafe Default SMBUS Legacy I/O Super I/O MMIO Select interface robot

should use to communicate with device. Chapter 3 – AMI BIOS Setup...

Page 64 3.4.6.1.3 Device #3 Detecting Configuration Options Summary Interface Disabled Optimal Default, Failsafe Default SMBUS Legacy I/O Super I/O MMIO Select interface robot should use to communicate with device. Chapter 3 – AMI BIOS Setup...

Page 65 3.4.6.1.4 Device #4 Detecting Configuration Options Summary Interface Disabled Optimal Default, Failsafe Default SMBUS Legacy I/O Super I/O MMIO Select interface robot should use to communicate with device. Chapter 3 – AMI BIOS Setup...

Page 66 3.4.6.1.5 Device #5 Detecting Configuration Options Summary Interface Disabled Optimal Default, Failsafe Default SMBUS Legacy I/O Super I/O MMIO Select interface robot should use to communicate with device. Chapter 3 – AMI BIOS Setup...

Page 67: Setup Submenu: System I/O

Setup Submenu: System I/O Chapter 3 – AMI BIOS Setup...

Page 68: Storage Configuration

3.5.1 Storage Configuration Options Summary SATA Controller(s) Enabled Optimal Default, Failsafe Default Disabled Enable/Disable to SATA Device. Port 1 Enabled Optimal Default, Failsafe Default Disabled Enable/Disable to SATA Port. Chapter 3 – AMI BIOS Setup...

Page 69: Hd Audio Configuration

3.5.2 HD Audio Configuration Options Summary HD Audio Disabled Enabled Optimal Default, Failsafe Default Control Detection of the HD-Audio device. Disabled = HDA will be unconditionally disabled. Enabled = HDA will be unconditionally enabled. Chapter 3 – AMI BIOS Setup...

Page 70: Digital Io Port Configuration

3.5.3 Digital IO Port Configuration Options Summary DIO1 Input Output Optimal Default, Failsafe Default Set DIO as Input or Output Output Level High Optimal Default, Failsafe Default Set output level when DIO pin is output DIO2 Input Optimal Default, Failsafe Default Output Optimal Default, Failsafe Default Set DIO as Input or Output...

Page 71: Legacy Logical Devices Configuration

Options Summary DIO4 Input Optimal Default, Failsafe Default Output Optimal Default, Failsafe Default Set DIO as Input or Output Output Level High Optimal Default, Failsafe Default Set output level when DIO pin is output DIO5 Input Optimal Default, Failsafe Default Output Set DIO as Input or Output DIO6...

Page 72: Serial Port 1

3.5.4.1 Serial Port 1 Options Summary Use This Device Disabled Enabled Optimal Default, Failsafe Default Enable or Disable this Logical Device. Possible: Use Automatic Settings Optimal Default, Failsafe Default IO=3F8; IRQ=4; IO=2F8; IRQ=3; Allows the user to change the device resource settings. New settings will be reflected on this setup page after system restarts.

Page 73: Serial Port 2

3.5.4.2 Serial Port 2 Options Summary Use This Device Disabled Enabled Optimal Default, Failsafe Default Enable or Disable this Logical Device. Possible: Use Automatic Settings Optimal Default, Failsafe Default IO=2F8; IRQ=3; IO=3F8; IRQ=4; Allows the user to change the device resource settings. New settings will be reflected on this setup page after system restarts.

Page 74: Serial Port Console Redirection

3.5.5 Serial Port Console Redirection Options Summary Console Redirection Disabled Optimal Default, Failsafe Default Enabled Console Redirection Enable or Disable. Console Redirection EMS Disabled Optimal Default, Failsafe Default Enabled Console Redirection Enable or Disable. Chapter 3 – AMI BIOS Setup...

Page 75: Console Redirection Settings (Com0)

3.5.5.1 Console Redirection Settings (COM0) Options Summary Terminal Type VT100 VT100Plus

VT-UTF8 ANSI Optimal Default, Failsafe Default Emulation: ANSI: Extended ASCII char set. VT100: ASCII char set. VT100Plus: Extends VT100 to support color, function keys, etc. VT-UTF8: Uses UTF8 encoding to map Unicode chars onto 1 or more bytes. Bits per second 9600 19200...

Page 76 Options Summary Parity None Optimal Default, Failsafe Default Even Mark Space A parity bit can be sent with the data bits to detect some transmission errors. Even: parity bit is 0 if the num of 1's in the data bits is even. Odd: parity bit is 0 if num of 1's in the data bits is odd.

Page 77: Console Redirection Settings (Out-Of-Band Mgmt Port)

3.5.5.2 Console Redirection Settings (Out-of-Band Mgmt Port) Options Summary Out-of-Band Mgmt Port COM0 Optimal Default, Failsafe Default COM1(Pci Bus0, Dev0, Func0) (Disabled) Microsoft Windows Emergency Management Services (EMS) allows for remote management of a Windows Server OS through a serial port. Terminal Type EMS VT100 VT100Plus...

Page 78 Options Summary Flow Control EMS None Optimal Default, Failsafe Default Hardware RTS/CTS Software Xon/Xoff Flow control can prevent data loss from buffer overflow. When sending data, if the receiving buffers are full, a 'stop' signal can be sent to stop the data flow. Once the buffers are empty, a 'start' signal can be sent to re-start the flow.

Page 79: Setup Submenu: Security

Setup Submenu: Security Change User/Administrator Password You can set a User Password once an Administrator Password. The password will be required during boot up, or when the user enters the Setup utility. Please Note that a User Password does not provide access to many of the features in the Setup utility. Select the password you wish to set, press Enter to open a dialog box to enter your password (you can enter no more than six letters or numbers).

Page 80: Trusted Computing

3.6.1 Trusted Computing Options Summary Security Device Support Enable Optimal Default, Failsafe Default Disable Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be available. SHA256 PCR Bank Disabled Enabled Optimal Default, Failsafe Default...

Page 81 Options Summary Storage Hierarchy Disabled Enabled Optimal Default, Failsafe Default Enable or Disable Storage Hierarchy Endorsement Hierarchy Disabled Enabled Optimal Default, Failsafe Default Enable or Disable Endorsement Hierarchy Physical Presence Spec Version Optimal Default, Failsafe Default Select to Tell O.S. to support PPI Spec Version 1.2 or 1.3. Note some HCK tests might not support 1.3.

Page 82: Secure Boot

3.6.2 Secure Boot Options Summary Secure Boot Disabled Optimal Default, Failsafe Default Enabled Secure Boot feature is Active if Secure Boot is Enabled, Platform Key (PK) is enrolled and the System is in User mode. The mode change requires platform reset. Secure Boot Mode Standard Custom...

Page 83: Key Management

3.6.2.1 Key Management Options Summary Factory Key Provision Disabled Optimal Default, Failsafe Default Enabled Install factory default Secure Boot keys after the platform reset and while the System is in Setup mode. Restore Factory Keys Force System to User Mode. Install factory default Secure Boot key databases. Enroll Efi Image Allow Efi image to run in Secure Boot mode.

Page 84 Options Summary (dbt) Append OsRecovery Signatures (dbr) Update Append Enroll Factory Defaults or load certificates from a file: 1. Public Key Certificate: EFI_SIGNATURE_LIST EFI_CERT_X509 (DER) EFI_CERT_RSA2048 (bin) EFI_CERT_SHAXXX 2. Authenticated UEFI Variable 3. EFI PE/COFF Image (SHA256) Key Source: Factory, External, Mixed Chapter 3 –...

Page 85: Setup Submenu: Boot

Setup Submenu: Boot Options Summary Quiet Boot Disabled Enabled Default Enables/disables Quiet Boot option. Network Stack Disabled Default Enabled Enable/Disable UEFI Network Stack. Boot Option #1 Hard Disk Boot Option #2 NVME Boot Option #3 USB Device Boot Option #4 Network Sets the system boot order.

Page 86: Uefi Bbs Priorities

3.7.1 UEFI BBS Priorities Options Summary Quiet Boot Disabled Enabled Default Enables/disables Quiet Boot option. Network Stack Disabled Default Enabled Enable/Disable UEFI Network Stack. Boot Option #1 Hard Disk Boot Option #2 NVME Boot Option #3 USB Device Boot Option #4 Network Sets the system boot order.

Page 87: Setup Submenu: Save & Exit

Setup Submenu: Save & Exit Chapter 3 – AMI BIOS Setup...

Page 88: Chapter 4 - Drivers Installation

Chapter 4 Chapter 4 – Drivers Installation...

Page 89: Drivers Download And Installation

Drivers Download and Installation Drivers for the BOXER-6406U-ADN can be downloaded from the product page on the AAEON website by following this link: https://www.aaeon.com/en/ Download the driver(s) you need and follow the steps below to install them. Install Chipset Driver Open the Chipset folder Run the SetupChipset.exe file in the folder Follow the instructions...

Page 90 Install ME & TXE Drivers Open the ME & TXE folder Run the SetupME.exe file in the folder Follow the instructions Drivers will be installed automatically Install Serial Port Patch (Optional) Open the Serial Port Driver (Optional) folder Run the FintekSerial.exe file in the folder Follow the instructions Drivers will be installed automatically Chapter 4 –...

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Appendix A Appendix A – I/O Information...

Page 92: I/O Address Map

I/O Address Map Appendix A – I/O Information...

Page 93: A.2 Memory Address Map

A.2 Memory Address Map Appendix A – I/O Information...

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A.3 Large Memory Address Map Appendix A – I/O Information...

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A.4 IRQ Mapping Chart Appendix A – I/O Information...

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