



Asus AAEON UP 4000 M.2 Plus User Manual

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

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

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•

[Table of Contents](#)

•

Bookmarks

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UP 4000 M.2 Plus

Carrier Board

UP-APL03CB



User's Manual 1st Ed

Last Updated: September 30, 2022

Table of Contents

[Next Page](#)

1
2
3
4
5

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[Carrier boards Asus AAEON ECB-980A User Manual](#)

Com hpc client carrier board (102 pages)

[Carrier boards Asus AAEON UPCR-HDMI User Manual](#)

Hdmi in carrier board (41 pages)

Summary of Contents for Asus AAEON UP 4000 M.2 Plus

[Page 1](#) UP 4000 M.2 Plus Carrier Board UP-APL03CB User's Manual 1st Ed Last Updated: September 30, 2022...

[Page 2](#) Copyright Notice This document is copyrighted, 2022. All rights are reserved. The original manufacturer reserves the right to make improvements to the products described in this manual at any time without notice. No part of this manual may be reproduced, copied, translated, or transmitted in any form or by any means without the prior written permission of the original manufacturer.

[Page 3](#) Acknowledgement All other products' name or trademarks are properties of their respective owners. Preface...

[Page 4](#) Packing List Before setting up your product, please make sure the following items have been shipped: Item Quantity UP-APL03CB (UP 4000 M.2 Plus Carrier Board) • FPC Cable • Screws (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.

[Page 9](#) China RoHS Requirements (CN) AAEON Main Board/ Daughter Board/ Backplane (Pb) (Hg) (Cd) (Cr(VI)) (PBB) (PBDE) SJ/T 11363-2006 X

[Page 10](#) China RoHS Requirement (EN) Poisonous or Hazardous Substances or Elements in Products AAEON Main Board/ Daughter Board/ Backplane Poisonous or Hazardous Substances or Elements Hexavalent Polybrominated Polybrominated Component Lead Mercury Cadmium

Chromium Biphenyls Diphenyl Ethers (Pb) (Hg) (Cd) (Cr(VI)) (PBB) (PBDE) PCB &...

[Page 11: Table Of Contents](#)

Table of Contents Chapter 1 - Product Specifications.....1 Specifications2
Chapter 2 - Hardware Information3 UP-APL03-A10-0001 (M.2 B/E-Key) Dimensions
.....4 UP-APL03-A10-0001 (M.2 B/E-Key) Jumpers and Connectors 5 UP-APL03-A10-0001
(M.2 B/E-Key) List of Jumpers and Connectors ..5 UP-APL03-A10-0001 (M.2 B/E-Key) Connector
Index

[Page 12: Chapter 1 - Product Specifications](#)

Chapter 1 Chapter 1 - Product Specifications...

[Page 13: Specifications](#)

Specifications I/O Placements UP-APL03CB-A10-0001: M.2 3052/3042 B Key x 1 (USB 3.0) M.2
2230 E Key x 1 (PCIe x1) Push-push Nano SIM card x 1 41-pin FPC Connector x 1 UP-APL03CB-
A10-0002: M.2 2280 M Key x 1 (PCIe x1) 41-pin FPC Connector x 1 Dimension UP-APL03CB-
A10-0001: 2"...

[Page 14: Chapter 2 - Hardware Information](#)

Chapter 2 - Hardware Information Chapter 2...

[Page 15: Up-Apl03-A10-0001 \(M.2 B/E-Key\) Dimensions](#)

UP-APL03-A10-0001 (M.2 B/E-Key) Dimensions Chapter 2 - Hardware Information...

[Page 16: Up-Apl03-A10-0001 \(M.2 B/E-Key\) Jumpers And Connectors](#)

UP-APL03-A10-0001 (M.2 B/E-Key) Jumpers and Connectors UP-APL03-A10-0001 (M.2 B/E-Key)
List of Jumpers and Connectors Label Functional Description FPC/FFC Conn M.2 B-Key M.2 E-Key
Nano SIM Card Socket Chapter 2 - Hardware Information...

[Page 17: Up-Apl03-A10-0001 \(M.2 B/E-Key\) Connector Index](#)

UP-APL03-A10-0001 (M.2 B/E-Key) Connector Index Reference Functional Connector Type
Designation Description (TF)FPC/FFC Conn.41P .90D(F).SMD FPC/FFC Conn
.06mm.Hirose.FH35C-41S-0.3SHW(50) (TF)M.2 KEY-B SLOT.75P .90D(F).SMD.H M.2 B-Key
=8.5mm.FOXCONN.2E0BC21-S85BB-7H (TF)M.2 Key-E Slot.H=4.0mm conn.75P .90D(F). M.2 E-
Key BLACK.SMD.FOXCONN.AS0BC21-S40BE-7H Nano SIM Card (AOH)(TF)Nano SIM Card
Socket.7P .90D(F). Socket SMD.Push-Push type.TRONTEK.TH63-SIM07-137 2.4.1...

[Page 18](#) Signal Description Signal Description PCIE_RXP PCIE_RXN PCIE_TXN PCIE_TXP PCIe
wake Suspend clock SMBus ALERT SMBus Clock SMBus Data Platform reset Platform sleep
S3(3.3V) Platform sleep S0(3.3V) +1.8V +1.8V +12V +12V +12V +12V +12V +12V +12V +12V
Chapter 2 - Hardware Information...

[Page 19: B-Key \(Cn2\)](#)

2.4.2 M.2 B-Key (CN2) Signal Description Signal Description +3.3V +3.3V Full card power
USB2_DP 5G power Enable USB2_DN 5G wake USB3_RXN UIM_Reset USB3_RXP UIM_Clock
UIM_Data USB3_TXN UIM_Power USB3_TXP Chapter 2 - Hardware Information...

[Page 20](#) Signal Description Signal Description Platform reset PCIe clock request M.2 wake
SIM_Detect WWAN_RESET +3.3V +3.3V +3.3V Chapter 2 - Hardware Information...

[Page 21: E-Key \(Cn5\)](#)

2.4.3 M.2 E-Key (CN5) Signal Description Signal Description +3.3V +3.3V PCIE_TXP PCIE_TXN
PCIE_RXP Chapter 2 - Hardware Information...

[Page 22](#) Signal Description Signal Description PCIE_RXN PCIE_Clock_P PCIE_Clock_N Suspend
clock WIFI_RST# Bluetooth enable (internal pull M.2 Clock request high to 3.3V) Wi-Fi enable
(internal pull high PCIe Wake to 3.3V) +3.3V +3.3V Chapter 2 - Hardware Information...

[Page 23: Nano Sim Card Socket \(U2\)](#)

2.4.4 Nano SIM Card Socket (U2) Signal Description Signal Description UIM_POWER UIM_Reset UIM_Clock GND_UIM UIM_Data SIM_DETECT GND_UIM GND_UIM GND_UIM GND_UIM GND_UIM GND_UIM Chapter 2 - Hardware Information...

[Page 24: Up-Apl03-A10-0002 \(M.2 M-Key\) Dimensions](#)

UP-APL03-A10-0002 (M.2 M-Key) Dimensions Chapter 2 - Hardware Information...

[Page 25: Up-Apl03-A10-0002 \(M.2 M-Key\) Jumpers And Connectors](#)

UP-APL03-A10-0002 (M.2 M-Key) Jumpers and Connectors UP-APL03-A10-0002(M.2 M-Key) List of Jumpers and Connectors Label Functional Description FPC/FFC Connector M.2 M-Key UP-APL03-A10-0002(M.2 M-Key) Connector Index Reference Functional Connector Type Designation Description (TF)FPC/FFC Conn.41P .90D(F).SMD.0.6mm.Hirose FPC/FFC Conn .FH35C-41S-0.3SHW(50) (TF)M.2 Key-M Slot.75P .90D(F).Standard M.2 M-Key type.BLACK.SMD.H=8.5mm conn.FOXCONN.2E0BC21-S85BM-7H...

[Page 26: Fpc/Ffc Connector \(Cn1\)](#)

2.8.1 FPC/FFC Connector (CN1) Signal Description Signal Description PCIE_Clock_N PCIE_Clock_P PCIE_RXP0 PCIE_RXN0 PCIE_TXN0 PCIE_TXP0 PCIe Wake(1.8V) Suspend clock SMBus ALERT SMBus Clock SMBus Data Platform reset Sleep S3(3.3V) Sleep S0(3.3V) +1.8V +1.8V +12V +12V +12V Chapter 2 - Hardware Information...

[Page 27: M-Key \(Cn3\)](#)

Signal Description Signal Description +12V +12V +12V +12V 2.8.2 M.2 M-Key (CN3) Signal Description Signal Description +3.3V +3.3V +3.3V +3.3V +3.3V +3.3V Chapter 2 - Hardware Information...

[Page 28](#) Signal Description Signal Description SMBus Data PCIE_RXN SMBus Clock PCIE_RXP SMBus ALERT# PCIE_TXN PCIE_TXP Platform reset PCIE_REFCLK0_N PCIe Wake PCIE_REFCLK0_P Suspend clock +3.3V +3.3V +3.3V Chapter 2 - Hardware Information...

[Page 29: Chapter 3 - Module Installation](#)

Chapter 3 Chapter 3 - Module Installation...

[Page 30: Up 4000 M.2 Plus Module Installation](#)

UP 4000 M.2 Plus Module Installation For this process you will need a Phillips head screwdriver. Step 1: First, make sure to unlock the UP 4000's FPC connector, then plug the FPC cable into the FPC connector, noting the direction of the FPC cable. Chapter 3 -...

[Page 31](#) Step 2: Remove the four screws and lock the four pillars. Chapter 3 - Module Installation...

[Page 32](#) Step 3: Reaffix the four screws with the UP 4000 M.2 Plus. Chapter 3 - Module Installation...

[Page 33](#) Step 4: Unlock the FPC connector, the plug the FPC cable into it. Chapter 3 - Module Installation...

[Page 34](#) Step 5: Assemble the 2230/3042/3052/2280 card as needed. Chapter 3 - Module Installation...

This manual is also suitable for:

[Aaeon up-apl03cb](#)