BOXER-8250AI

Compact Fanless Embedded AI@Edge Box PC
with NVIDIA® Jetson Xavier™ NX

User's Manual 1st Ed

Last Updated: September 8, 2020

Copyright Notice

Acknowledgements

Packing List

Before setting up your product, please make sure the following items have been shipped:

Item	Quantity
● BOXER-8250AI	1
● Power Connector	1

If any of these items are missing or damaged, please contact your distributor or sales representative immediately.

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.

Safety Precautions

Please read the following safety instructions carefully. It is advised that you keep this manual for future references

1. All cautions and warnings on the device should be noted.
2. All cables and adapters supplied by AAEON are certified and in accordance with the material safety laws and regulations of the country of sale. Do not use any cables or adapters not supplied by AAEON to prevent system malfunction or fires.
3. Make sure the power source matches the power rating of the device.
4. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
5. Always completely disconnect the power before working on the system's hardware.
6. No connections should be made when the system is powered as a sudden rush of power may damage sensitive electronic components.
7. If the device is not to be used for a long time, disconnect it from the power supply to avoid damage by transient over-voltage.
8. Always disconnect this device from any AC supply before cleaning.
9. While cleaning, use a damp cloth instead of liquid or spray detergents.
10. Make sure the device is installed near a power outlet and is easily accessible.
11. Keep this device away from humidity.
12. Place the device on a solid surface during installation to prevent falls
13. Do not cover the openings on the device to ensure optimal heat dissipation.
14. Watch out for high temperatures when the system is running.
15. Do not touch the heat sink or heat spreader when the system is running
16. Never pour any liquid into the openings. This could cause fire or electric shock.

17. As most electronic components are sensitive to static electrical charge, be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and contain all electronic components in any static-shielded containers.

18. If any of the following situations arises, please the contact our service personnel:

    i. Damaged power cord or plug
    ii. Liquid intrusion to the device
    iii. Exposure to moisture
    iv. Device is not working as expected or in a manner as described in this manual
    v. The device is dropped or damaged
    vi. Any obvious signs of damage displayed on the device

19. DO NOT LEAVE THIS DEVICE IN AN UNCONTROLLED ENVIRONMENT WITH TEMPERATURES BEYOND THE DEVICE'S PERMITTED STORAGE TEMPERATURES (SEE CHAPTER 1) TO PREVENT DAMAGE.

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. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions and your local government's recycling or disposal directives.

Attention:

Il y a un risque d'explosion si la batterie est remplacée de façon incorrecte.
Ne la remplacer qu'avec le même modèle ou équivalent recommandé par le constructeur.
Recycler les batteries usées en accord avec les instructions du fabricant et les directives gouvernementales de recyclage.

China RoHS Requirements (CN)

产品中有毒有害物质或元素名称及含量

AAEON System QO4-381 Rev.A0

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚(PBDE)
印刷电路板及其电子组件	×	○	○	○	○	○
外部信号连接器及线材	×	○	○	○	○	○
外壳	○	○	○	○	○	○
中央处理器与内存	×	○	○	○	○	○
硬盘	×	○	○	○	○	○
液晶模块	×	×	○	○	○	○
光驱	×	○	○	○	○	○
触控模块	×	○	○	○	○	○
电源	×	○	○	○	○	○
电池	×	○	○	○	○	○

本表格依据 SJ/T 11364 的规定编制。

○：表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572标准规定的限量要求以下。

×：表示该有害物质的某一均质材料超出了GB/T 26572的限量要求，然而该部件仍符合欧盟指令2011/65/EU 的规范。

备注：

一、此产品所标示之环保使用期限，系指在一般正常使用状况下。

二、上述部件物质中央处理器、内存、硬盘、光驱、电源为选购品。

三、上述部件物质液晶模块、触控模块仅一体机产品适用。

China RoHS Requirement (EN)

Hazardous and Toxic Materials List

AAEON System QO4-381 Rev.A0

Component Name	Hazardous or Toxic Materials or Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated biphenyls (PBBs)	Polybrominated diphenyl ethers (PBDEs)
PCB and Components	X	O	O	O	O	O
Wires & Connectors for Ext.Connections	X	O	O	O	O	O
Chassis	O	O	O	O	O	O
CPU & RAM	X	O	O	O	O	O
HDD Drive	X	O	O	O	O	O
LCD Module	X	X	O	O	O	O
Optical Drive	X	O	O	O	O	O
Touch Control Module	X	O	O	O	O	O
PSU	X	O	O	O	O	O
Battery	X	O	O	O	O	O

This form is prepared in compliance with the provisions of SJ/T 11364.

O: The level of toxic or hazardous materials present in this component and its parts is below the limit specified by GB/T 26572.

X: The level of toxic of hazardous materials present in the component exceed the limits specified by GB/T 26572, but is still in compliance with EU Directive 2011/65/EU (RoHS 2).

Notes:

1. The Environment Friendly Use Period indicated by labelling on this product is applicable only to use under normal conditions.
2. Individual components including the CPU, RAM/memory, HDD, optical drive, and PSU are optional.
3. LCD Module and Touch Control Module only applies to certain products which feature these components.

Table of Contents

Chapter 1

Product Specifications

1.1 Specifications

System	
CPU	6-core NVIDIA Carmel ARM® v8.2 64-bit CP
Chipset	—
System Memory	8GB LPDDR4x
AI Solution	Nvidia Jetson Xavier NX
Display Interface	HDMI 2.0
Storage Device	16GB eMMC 5.1 and MicroSD card slot
Ethernet	10/100/1000Base-TX x 5
I/O	USB 3.2 Gen 1 x 4
	LAN x 5
	RS-232 x 2
	HDMI x 1
	Micro-USB for Flash OS x 1
	DC Power Input x 1
	Power Button x 1
	Recovery Button x 1
	MicroSD card slot x1
Expansion	—
Indicator	Power LED x 1
OS Support	ACLinux 4.9 or above (Compatible with Ubuntu 18.04)

Power Supply	
Power Requirement	10 ~ 24V DC with 2-pin terminal block

Mechanical

Mounting	Wall-mount
Dimensions (W x D x H)	6.92" x 3.94" x 1.54" (175.8 mm x 100.0 mm x 39.0 mm)
Gross Weight	2.48 lbs. (1.12 kg)
Net Weight	1.46 lbs. (0.66 kg)

Environmental

Operating Temperature	14°F ~ 149°F (-10°C ~ 65°C, according to IEC60068-2 with 0.5 m/s airflow)
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Storage Humidity	95% @ 40°C, non-condensing
Anti-Vibration	3.5 Grms/ 5 ~ 500Hz/ operation – MicroSD or eMMC
Certification	CE/FCC class A

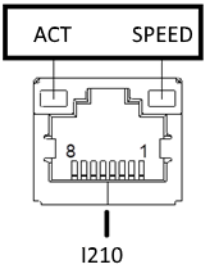
1.2 Product Notice

Micro-USB: Micro-USB port is ideally for flashing image only.

USB ports: USB ports do not support USB DVD ROM because of file system.

USB 3.2 Gen 1: USB 3.2 Gen 1 is the current name for 5Gbps specification, formerly USB 3.0.

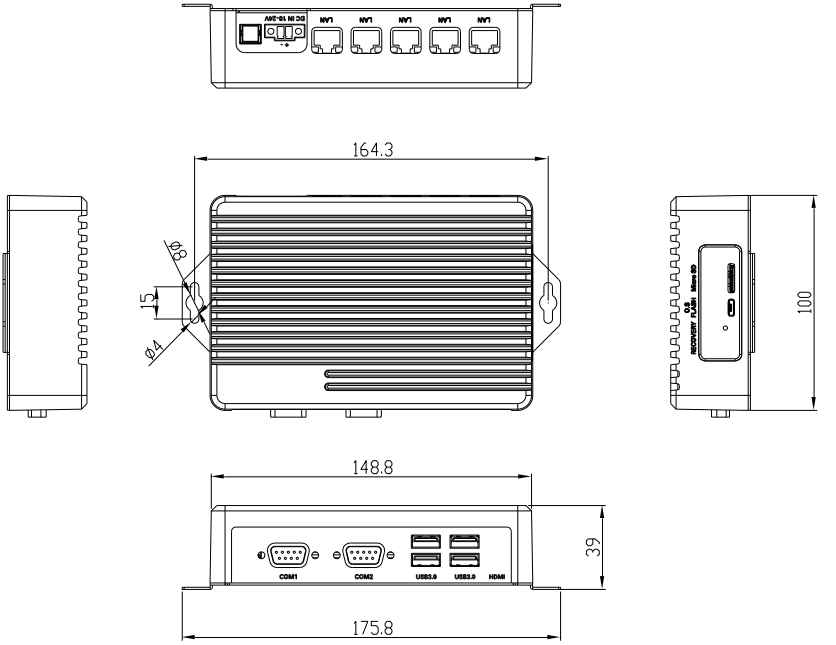
LAN Indicator Behavior



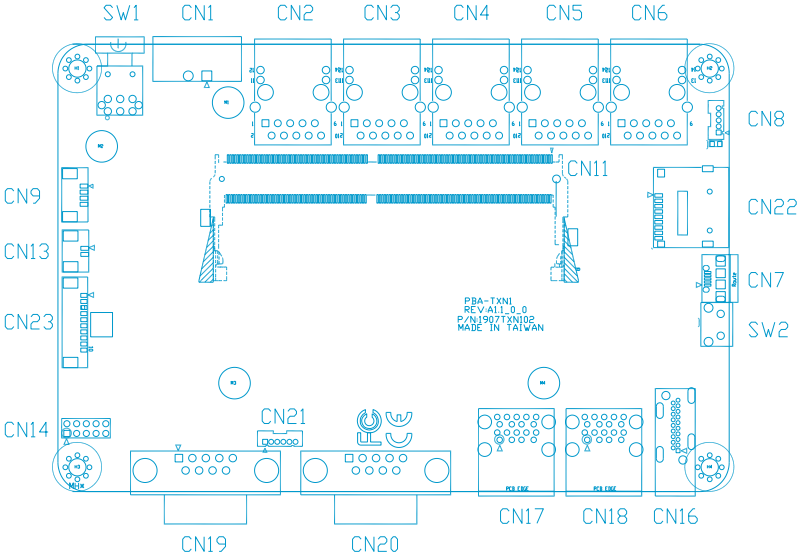
Chapter 2

Hardware Information

2.1 Dimensions



2.2 Jumpers and connectors



2.3 List of Jumpers

The board has a number of jumpers that allow you to configure your system to suit your application.

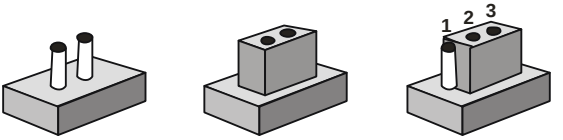
The table below shows the function of each of the board's jumpers

Label	Function
CN14 (Pin 7-8)	AT/ATX mode select

2.3.1 Setting Jumpers

You can configure your system to match the needs of your application by setting jumpers. A jumper is the simplest kind of electric switch. It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To "close" a jumper you connect the pins with the clip.

To "open" a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2 and 3. In this case you would connect either pins 1 and 2 or 2 and 3.



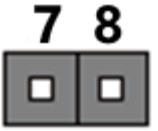
Open **Closed** **Closed 2-3**

A pair of needle-nose pliers may be helpful when working with jumpers.

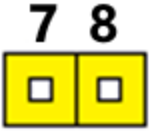
If you have any questions about the best hardware configuration for your application, contact your local distributor or sales representative before you make any changes. Generally, you simply need a standard cable to make most connections.

2.3.2 AT/ATX Mode Select (CN14 Pins 7-8)

The AT/ATX Mode Select functions by connecting pins 7 and 8 of CN14. To prevent damage to the system, do not connect pins 7 and 8 to any other pin.



Open – AT Mode



Closed – ATX Mode
(Default)

CN14 pins 7-8	Function
7-8 Open	AT Power Mode
7-8 Closed	ATX Power Mode (Default)

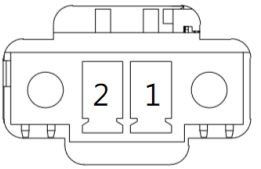
2.4 List of Connectors

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

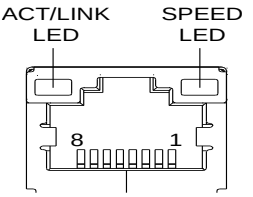
Label	Function
CN1	DC Power In connector
CN2	Jetson Xavier NX Giga LAN Connector
CN3	I210AT Giga LAN Connector
CN4	I210AT Giga LAN Connector
CN5	I210AT Giga LAN Connector
CN6	I210AT Giga LAN Connector
CN7	USB 2.0 Connector for Flash Image
CN8	USB 2.0 Connector
CN9	FAN Connector
CN11	Jetson Xavier NX CPU module connector
CN13	RTC Battery Connector
CN14	Front Panel Connector
CN15	Debug UART/I2C
CN16	HDMI connector
CN17	USB 3.0 Connector
CN18	USB 3.0 Connector
CN19	COM 1 connector (/dev/THS1)
CN20	COM 2 connector (/dev/THS0)
SW1	Power switch
SW2	Recovery switch

2.4.1 DC Power In Connector (CN1)



Pin	Signal	Pin	Signal
1	PWR IN	2	GND

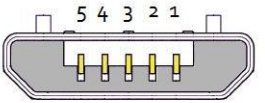
2.4.2 LAN RJ45 Port (CN2—CN6)



Pin	Signal	Pin	Signal
1	MDI0+	2	MDI0-
3	MDI1+	4	MDI1-
5	MDI2+	6	MDI2-
7	MDI3+	8	MDI3-

Note: CN2 is the Jetson Xavier Gigabit LAN port. Ports CN3, CN4, CN5, and CN6 are I210AT Gigabit LAN Ports.

2.4.3 USB 2.0 Connector for Flash Image (CN7)



USB Micro-B

Pin	Signal	Pin	Signal
1		2	USB1-
3	USB1+	4	
5	GND		

2.4.4 Jetson Xavier NX CPU Module Connector (CN11)

Module Signal Name	Pin #		Pin #	Module Signal Name
GND	1		2	GND
CSI1_D0_N	3		4	CSI0_D0_N
CSI1_D0_P	5		6	CSI0_D0_P
GND	7		8	GND
CSI1_CLK_N	9		10	CSI0_CLK_N
CSI1_CLK_P	11		12	CSI0_CLK_P
GND	13		14	GND
CSI1_D1_N	15		16	CSI0_D1_N
CSI1_D1_P	17		18	CSI0_D1_P
GND	19		20	GND
CSI3_D0_N	21		22	CSI2_D0_N
CSI3_D0_P	23		24	CSI2_D0_P
GND	25		26	GND
CSI3_CLK_N	27		28	CSI2_CLK_N
CSI3_CLK_P	29		30	CSI2_CLK_P
GND	31		32	GND
CSI3_D1_N	33		34	CSI2_D1_N
CSI3_D1_P	35		36	CSI2_D1_P
GND	37		38	GND
DP0_TXD0_N	39		40	CSI4_D2_N
DP0_TXD0_P	41		42	CSI4_D2_P
GND	43		44	GND
DP0_TXD1_N	45		46	CSI4_D0_N
DP0_TXD1_P	47		48	CSI4_D0_P
GND	49		50	GND
DP0_TXD2_N	51		52	CSI4_CLK_N
DP0_TXD2_P	53		54	CSI4_CLK_P
GND	55		56	GND
DP0_TXD3_N	57		58	CSI4_D1_N
DP0_TXD3_P	59		60	CSI4_D1_P
GND	61		62	GND
DP1_TXD0_N	63		64	CSI4_D3_N
DP1_TXD0_P	65		66	CSI4_D3_P
GND	67		68	GND
DP1_TXD1_N	69		70	DSI_D0_N
DP1_TXD1_P	71		72	DSI_D0_P
GND	73		74	GND

Module Signal Name	Pin #		Pin #	Module Signal Name
PCIE0_RX0_P	133		134	PCIE0_TX0_N
GND	135		136	PCIE0_TX0_P
PCIE0_RX1_N	137		138	GND
PCIE0_RX1_P	139		140	PCIE0_TX1_N
GND	141		142	PCIE0_TX1_P
CAN_RX	143		144	GND
KEY	KEY		KEY	KEY
CAN_TX	145		146	GND
GND	147		148	PCIE0_TX2_N
PCIE0_RX2_N	149		150	PCIE0_TX2_P
PCIE0_RX2_P	151		152	GND
GND	153		154	PCIE0_TX3_N
PCIE0_RX3_N	155		156	PCIE0_TX3_P
PCIE0_RX3_P	157		158	GND
GND	159		160	PCIE0_CLK_N
USB3S_RX_N	161		162	PCIE0_CLK_P
USB3S_RX_P	163		164	GND
GND	165		166	USB3S_TX_N
PCIE1_RX0_N	167		168	USB3S_TX_P
PCIE1_RX0_P	169		170	GND
GND	171		172	PCIE1_TX0_N
PCIE1_CLK_N	173		174	PCIE1_TX0_P
PCIE1_CLK_P	175		176	GND
GND	177		178	MOD_SLEEP*
PCIE_WAKE*	179		180	PCIE0_CLKREQ*
PCIE0_RST*	181		182	PCIE1_CLKREQ*
PCIE1_RST*	183		184	GBE_MDI0_N
I2C0_SCL	185		186	GBE_MDI0_P
I2C0_SDA	187		188	GBE_LED_LINK
I2C1_SCL	189		190	GBE_MDI1_N
I2C1_SDA	191		192	GBE_MDI1_P
I2S0_DOUT	193		194	GBE_LED_ACT
I2S0_DIN	195		196	GBE_MDI2_N
I2S0_FS	197		198	GBE_MDI2_P
I2S0_SCLK	199		200	GND
GND	201		202	GBE_MDI3_N
UART1_TXD	203		204	GBE_MDI3_P

Module Signal Name	Pin #		Pin #	Module Signal Name
DP1_TXD2_N	75		76	DSI_CLK_N
DP1_TXD2_P	77		78	DSI_CLK_P
GND	79		80	GND
DP1_TXD3_N	81		82	DSI_D1_N
DP1_TXD3_P	83		84	DSI_D1_P
GND	85		86	GND
GPIO00	87		88	DP0_HPD
SPI0_MOSI	89		90	DP0_AUX_N
SPI0_SCK	91		92	DP0_AUX_P
SPI0_MISO	93		94	HDMI_CEC
SPI0_CS0*	95		96	DP1_HPD
SPI0_CS1*	97		98	DP1_AUX_N
UART0_TXD	99		100	DP1_AUX_P
UART0_RXD	101		102	GND
UART0_RTS*	103		104	SPI1_MOSI
UART0_CTS*	105		106	SPI1_SCK
GND	107		108	SPI1_MISO
USB0_D_N	109		110	SPI1_CS0*
USB0_D_P	111		112	SPI1_CS1*
GND	113		114	CAM0_PWDN
USB1_D_N	115		116	CAM0_MCLK
USB1_D_P	117		118	GPIO01
GND	119		120	CAM1_PWDN
USB2_D_N	121		122	CAM1_MCLK
USB2_D_P	123		124	GPIO02
GND	125		126	GPIO03
GPIO04	127		128	GPIO05
GND	129		130	GPIO06
PCIE0_RX0_N	131		132	GND

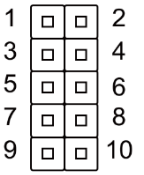
Module Signal Name	Pin #		Pin #	Module Signal Name
UART1_RXD	205		206	GPIO07
UART1_RTS*	207		208	GPIO08
UART1_CTS*	209		210	CLK_32K_OUT
GPIO09	211		212	GPIO10
CAM_I2C_SCL	213		214	FORCE_RECOVERY*
CAM_I2C_SDA	215		216	GPIO11
GND	217		218	GPIO12
SDMMC_DAT0	219		220	I2S1_DOUT
SDMMC_DAT1	221		222	I2S1_DIN
SDMMC_DAT2	223		224	I2S1_FS
SDMMC_DAT3	225		226	I2S1_SCLK
SDMMC_CMD	227		228	GPIO13
SDMMC_CLK	229		230	GPIO14
GND	231		232	I2C2_SCL
SHUTDOWN_REQ*	233		234	I2C2_SDA
PMIC_BBAT	235		236	UART2_TXD
POWER_EN	237		238	UART2_RXD
SYS_RESET*	239		240	SLEEP/WAKE*
GND	241		242	GND
GND	243		244	GND
GND	245		246	GND
GND	247		248	GND
GND	249		250	GND
VDD_IN	251		252	VDD_IN
VDD_IN	253		254	VDD_IN
VDD_IN	255		256	VDD_IN
VDD_IN	257		258	VDD_IN
VDD_IN	259		260	VDD_IN

Legend	Ground	Power

2.4.5 RTC Battery Connector (CN13)

Pin	Signal	Pin	Signal
1	+3V	2	GND

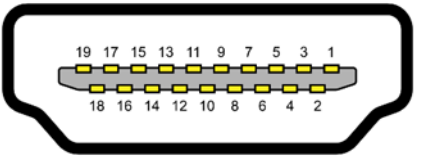
2.4.6 Front Panel Connector (CN14)



Pin	Signal	Pin	Signal
1	Button power	2	GND
3	Recovery	4	GND
5	Reset	6	GND
7	Latch set	8	Latch set
9	PWR LED	10	+5V

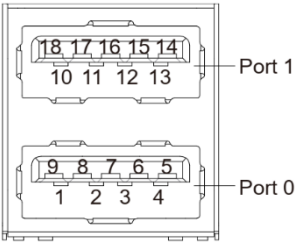
Note: Pin 7 and 8 are used for setting AT/ATX Power Mode. See **Chapter 2.3.2** for information. To prevent damage to your system, do not connect Pins 7 and 8 with any other pin.

2.4.7 HDMI Connector (CN16)



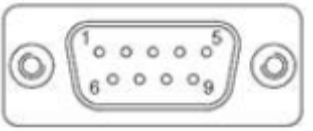
Pin	Signal	Pin	Signal
1	HDMI_DATA2_P	2	GND
3	HDMI_DATA2_N	4	HDMI_DATA1_P
5	GND	6	HDMI_DATA1_N
7	HDMI_DATA0_P	8	GND
9	HDMI_DATA0_N	10	HDMI_CLK_P
11	GND	12	HDMI_CLK_N
13	NC	14	NC
15	HDMI_SCL	16	HDMI_SDA
17	GND	18	HDMI_PWR
19	HDMI_HDP		

2.4.8 USB 3.0 Connector (CN17/18)



Pin	Signal	Pin	Signal
U1	VBUS_1	U10	VBUS_2
U2	(A)D-	U11	(B)D-
U3	(A)D+	U12	(B)D+
U4	GND	U13	GND
U5	(A)SSRX-	U14	(B)SSRX-
U6	(A)SSRX+	U15	(B)SSRX+
U7	GND	U16	GND
U8	(A)SSTX-	U17	(B)SSTX-
U9	(A)SSTX+	U18	(B)SSTX+

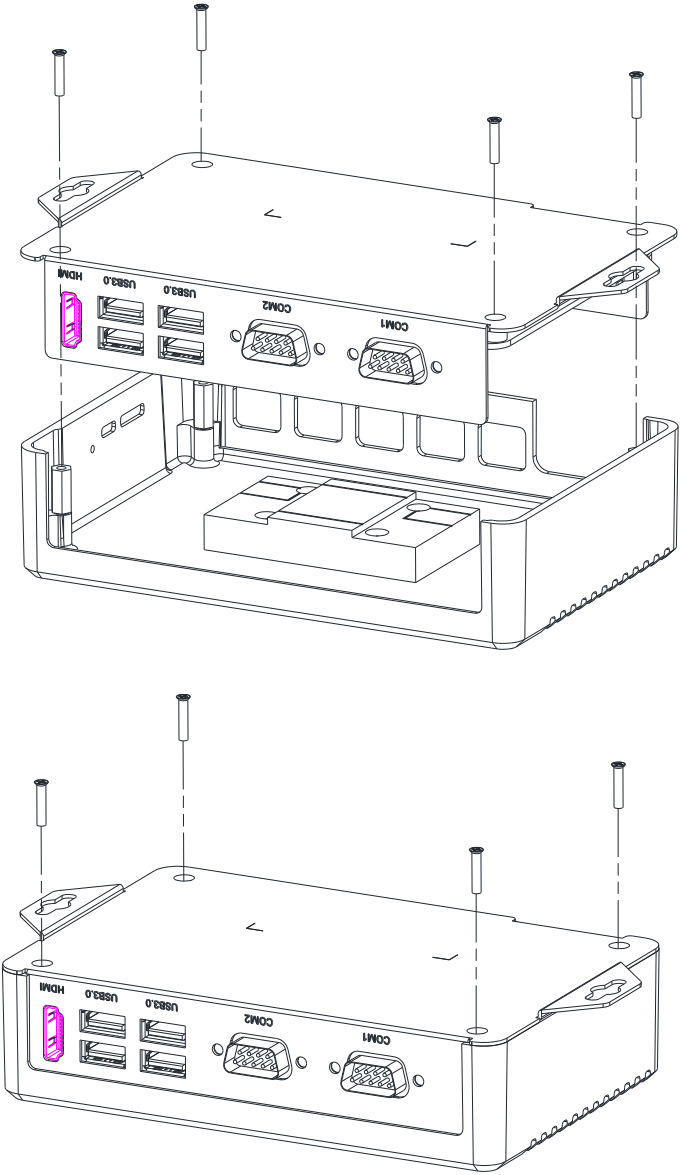
2.4.9 COM Port Connector (CN19/20)



Pin	RS-232	UART
1		UART RXD
2	RXD	
3	TXD	
4		
5	GND	
6		UART TXD
7	RTS	
8	CTS	
9		

Note: When using UART mode, RS-232 Receiver U21, U22 must be removed.

2.5 Hardware Assembly

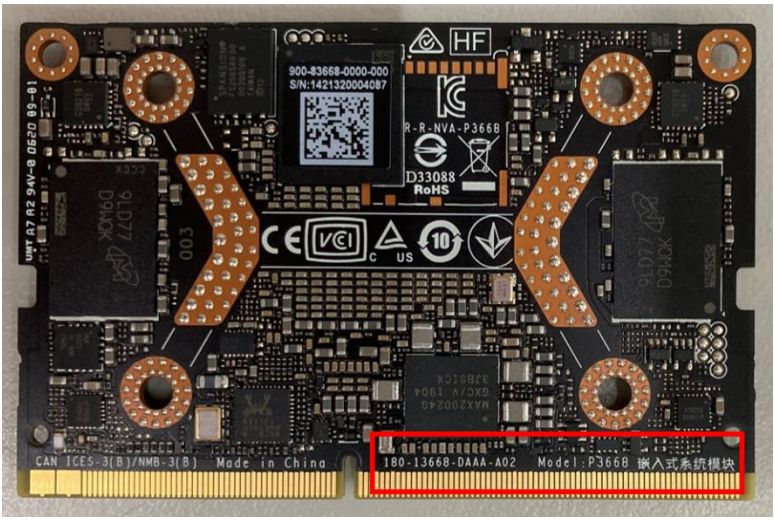


Chapter 3

OS Flash Guide

3.1 Before Installation

Before starting the process make sure your BOXER-8250AI system is turned off and the power in is disconnected. You will need a host PC running Ubuntu 16.04 or 18.04, and make sure the NVIDIA Jetson Xavier NX module is installed onto the BOXER-8250AI carrier board/ system.



Download the compressed OS image file. The file name will follow the format of:

`ACLinux_4.9_{OS_IF}.{PLF_IF}.{PJ_IF}.{BN}.tar.gz`

For example:

`ACLinux_4.9_ACLNX49D.NV05.BOXER-8250AI.2.tar.gz`

Note: Filename may differ from this example.

I. {OS_IF} is OS Information. For example, **ACLNX49D** means ACLinux 4.9, **D**esktop version.

II. {PLF_IF} is Platform Information; e.g. **NV05**

III. {PJ_IF} is Project Information; e.g. **BOXER-8250AI**

IV. {BN} is Build Number; e.g. 0, 1, 2, etc.

3.2 Connecting to PC/Force Recovery Mode

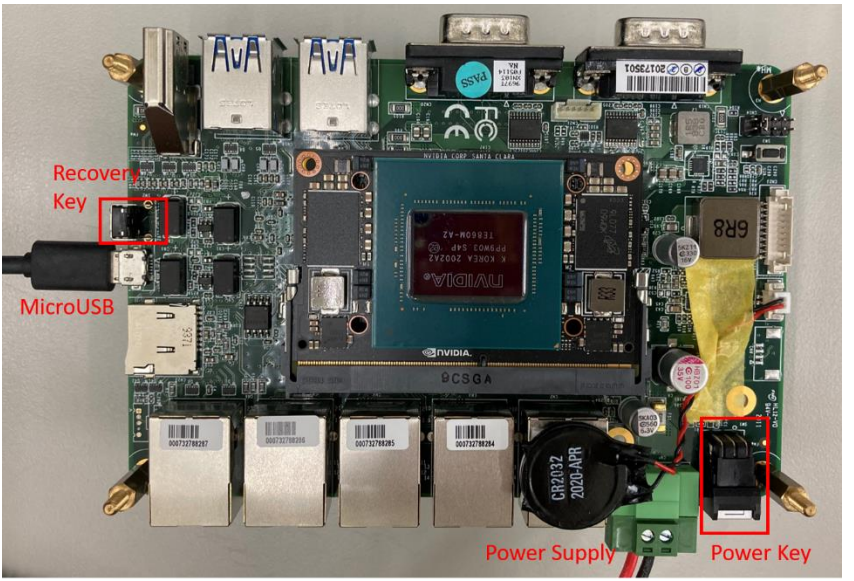
On Host Computer, open Linux terminal and enter the following command to extract compressed OS image files (*file name may vary*):

```
$ tar -zxvf ACLinux_4.9_ACLNX49D.NV05.BOXER-8250AI.2.tar.gz
```

Next, perform the following steps to force the system to start in USB Recovery Mode:

1. Connect the Micro-USB plug on the USB cable to the Recovery Port on the BOXER-8250AI and the other end to an available USB port on the host PC.
2. Connect the BOXER-8250AI power supply.
3. Press and hold the recovery key button. While holding the recovery key button, power on the system, and continue to hold the recovery key button for two seconds, then release. The BOXER-8250AI should enter recovery mode.
4. When device is in recovery mode, lsusb command on host PC will list a line of **"0955:7e19 Nvidia Corp"**

Recovery mode can also be initiated with the system disassembled. Ensure the NVIDIA Jetson Xavier NX module is installed and refer to the image below to perform the steps:



3.3 Flash Image to Board

Use the following steps to flash the OS to the BOXER-8250AI.

1) Open terminal on Ubuntu host PC, then access the bootloader folder you extracted in the previous section.

2) Enter the following command in terminal to flash the image:

```
$ sudo ./flashall.sh
```

3) Wait as the image is installed. Once finished you should see the following:

```
[ 293.2436 ] Writing partition bpmp-fw-dtb with tegra194-a02-bpmp-p3668-a00_sigheader.dtb.encrypt
[ 303.9612 ] [.............................................] 100%
[ 303.9665 ] Writing partition bpmp-fw-dtb_b with tegra194-a02-bpmp-p3668-a00_sigheader.dtb.encrypt
[ 306.1408 ] [.............................................] 100%
[ 306.1458 ] Writing partition VER with qspi_bootblob_ver.txt
[ 308.3194 ] [.............................................] 100%
[ 308.3208 ] Writing partition VER_b with qspi_bootblob_ver.txt
[ 308.3323 ] [.............................................] 100%
[ 308.3342 ] Writing partition master_boot_record with mbr_1_3.bin
[ 308.3448 ] [.............................................] 100%
[ 308.3460 ] Writing partition APP with system.img
[ 308.3520 ] [.............................................] 100%
[ 1182.8634 ] Writing partition kernel with boot_sigheader.img.encrypt
[ 1182.8639 ] [.............................................] 100%
[ 1189.4815 ] Writing partition kernel_b with boot_sigheader.img.encrypt
[ 1189.5005 ] [.............................................] 100%
[ 1191.1915 ] Writing partition kernel-dtb with tegra194-p3668-all-p3509-0000_sigheader.dtb.encrypt
[ 1191.2108 ] [.............................................] 100%
[ 1191.4403 ] Writing partition kernel-dtb_b with tegra194-p3668-all-p3509-0000_sigheader.dtb.encrypt
[ 1191.4504 ] [.............................................] 100%
[ 1191.9762 ]
[ 1192.1310 ] tegradevflash_v2 --write BCT br_bct_BR.bct
[ 1192.1320 ] Bootloader version 01.00.0000
[ 1192.6810 ] Writing partition BCT with br_bct_BR.bct
[ 1192.6919 ] [.............................................] 100%
[ 1192.9400 ]
[ 1192.9972 ] tegradevflash_v2 --write MB1_BCT mb1_cold_boot_bct_MB1_sigheader.bct.encrypt
[ 1192.9984 ] Bootloader version 01.00.0000
[ 1193.5449 ] Writing partition MB1_BCT with mb1_cold_boot_bct_MB1_sigheader.bct.encrypt
[ 1193.5455 ] [.............................................] 100%
[ 1194.1843 ]
[ 1194.1856 ] tegradevflash_v2 --write MB1_BCT_b mb1_cold_boot_bct_MB1_sigheader.bct.encrypt
[ 1194.1866 ] Bootloader version 01.00.0000
[ 1194.7332 ] Writing partition MB1_BCT_b with mb1_cold_boot_bct_MB1_sigheader.bct.encrypt
[ 1194.7340 ] [.............................................] 100%
[ 1195.1284 ]
[ 1195.1370 ] tegradevflash_v2 --write MEM_BCT mem_coldboot_sigheader.bct.encrypt
[ 1195.1379 ] Bootloader version 01.00.0000
[ 1195.6850 ] Writing partition MEM_BCT with mem_coldboot_sigheader.bct.encrypt
[ 1195.6855 ] [.............................................] 100%
[ 1198.2719 ]
[ 1198.2730 ] tegradevflash_v2 --write MEM_BCT_b mem_coldboot_sigheader.bct.encrypt
[ 1198.2738 ] Bootloader version 01.00.0000
[ 1198.8211 ] Writing partition MEM_BCT_b with mem_coldboot_sigheader.bct.encrypt
[ 1198.8217 ] [.............................................] 100%
[ 1201.3157 ]
[ 1201.3158 ] Flashing completed

[ 1201.3160 ] Coldbooting the device
[ 1201.5699 ] tegrarcm_v2 --ismb2
[ 1202.8176 ]
[ 1202.8199 ] tegradevflash_v2 --reboot coldboot
[ 1202.8221 ] Bootloader version 01.00.0000
[ 1203.3858 ]
*** The target t186ref has been flashed successfully. ***
Reset the board to boot from internal eMMC.
```