IEI Integration Corp.

MODEL:

PUZZLE-M801

1U Network Appliance with Marvell® ARMADA® 8040 CPU, DDR4, 32 GB eMMC, 10GbE SFP+ Ports, PCIe x2 Slot, M.2, Console Port, Dual USB 3.2, Rack Mount, and RoHS

User Manual

Rev. 1.02 – March 31, 2020

RoHS Lead Free

Revision

Date	Version	Changes
March 31, 2020	1.02	Added username and password information for system login in Section 3.9 Power-On Procedure.
January 31, 2020	1.01	Deleted driver download
April 15, 2019	1.00	Initial release

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Manual Conventions

WARNING

Warnings appear where overlooked details may cause damage to the equipment or result in personal injury. Warnings should be taken seriously.

CAUTION

Cautionary messages should be heeded to help reduce the chance of losing data or damaging the product.

NOTE

These messages inform the reader of essential but non-critical information. These messages should be read carefully as any directions or instructions contained therein can help avoid making mistakes.

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Chapter

1

Introduction

1.1 Overview

Figure 1-1: PUZZLE-M801 Series

The PUZZLE-M801 is a 1U network appliance series powered by Marvell® ARMADA® 8040 processor. It is optimized to host VNFs (Virtual Network Functions) and is ideal for SD-WAN.

The PUZZLE-M801 supports two 10GbE SFP+ ports and four 1GbE ports for high-speed network applications, and it is equipped with a PCIe x16 (x2 mode) slot for upgrading with expansion cards, such as NIC cards or accelerator cards.

Multiple storage interfaces for fast and stable data transmission are offered through two SATA 6Gb/s connectors.

1.2 Model Variations

The model variations of the PUZZLE-M801 are listed below.

Model No.	Memory	SSD
PUZZLE-M801-A1	N/A	N/A
PUZZLE-M801-A1/8G	8 GB DDR4	256 GB

Table 1-1: PUZZLE-M801 Model Variations

1.3 Features

The PUZZLE-M801 features are listed below:

- Powered by Marvell® ARMADA® 8040 processor
- Support two 2400 MHz DDR4 non-ECC RDIMMs (system max. 16 GB)
- 32 GB eMMC and support two 2.5” SATA SSD/HDD
- Equipped with two 10GbE SFP+ ports
- Up to four 1GbE connections via Marvell® ALASKA® 88E1512P PHY
- Upgradable with future expansion card by one PCIe x16 (x2 mode) slot and one M.2 B-key slot
- One RJ-45 RS-232 serial port
- Supports two USB 3.2 Gen 1 (5 Gb/s) ports
- 1U chassis for rack mounting
- RoHS compliant

1.4 Front Panel

The overview of the front panel is shown in **Figure 1-2**.

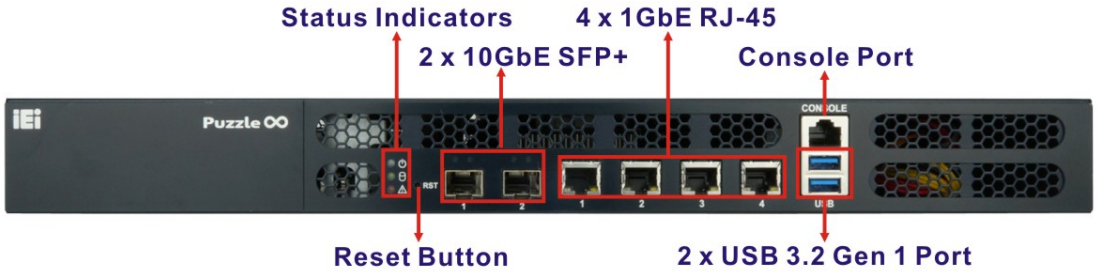


Figure 1-2: PUZZLE-M801 Front Panel

The states of the system status indicators located on the front panel are listed below.

Power LED	Off	The system is off.
	Blue	The system is on.
HDD Status LED	Off	No HDD activity
	Blinking Green	HDD activity
Alert LED	Off	No alert
	Red	Alert

1.5 Rear Panel

An overview of the PUZZLE-M801 rear panel is shown in **Figure 1-3** below.

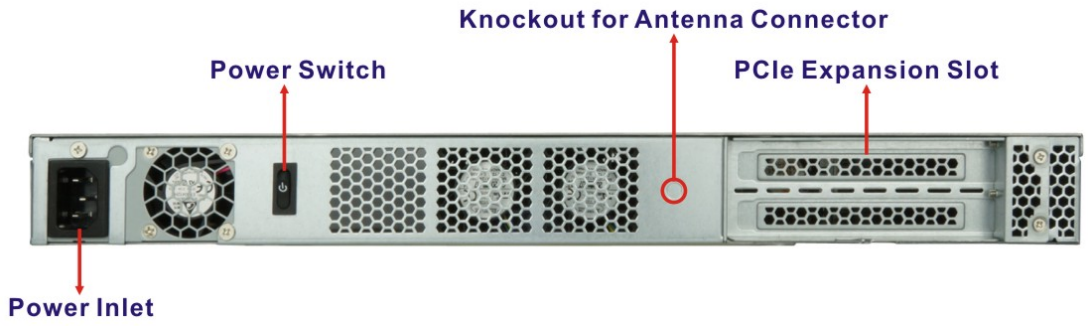


Figure 1-3: PUZZLE-M801 Rear Panel

1.6 Technical Specifications

The PUZZLE-M801 technical specifications are listed below.

System	
Form Factor	1U
CPU (SoC)	Marvell® ARMADA® 8040 processor (quad-core, 1.8 GHz)
Memory	One 288-pin 2400 MHz DDR4 ECC/non-ECC RDIMM slot (system max. 16 GB) (8G SKUs are pre-installed with one 8 GB memory module)
Networking	2 x 10GbE SFP+ port 4 x 1GbE LAN port via Marvell® ALASKA® 88E1512P PHY
Network Acceleration and Security	Configurable packet processor HW offload for networking Acceleration engines for storage, networking and security Public Key Processor (RSA/DH/ECC) Secure Storage Secure boot

Storage	2 x 2.5" SATA 6Gb/s HDD/SSD bay 32 GB eMMC
Operating System	Linux Ubuntu 16.04
Expansion	
PCIe	1 x PCIe x16 (x2 mode) slot
M.2	1 x M.2 B-key 2242 slot (supports SATA and USB 3.2 Gen 1 signals)
I/O and Indicators	
Console	1 x RJ-45 RS-232
USB	2 x USB 3.2 Gen 1 (5 Gb/s) port
Indicator	Power status (blue) HDD status (green) Alert LED (programmable, red)
Switch/Button	Power switch (rear panel) Reset button (front panel)
Antenna Connector	1 x Knockout hole for antenna connector
Power	
Power Input	100 V ~ 240 V ATX power, 250 W
Thermal Solution	1 x Passive heatsink for CPU 4 x Smart fan
Environmental and Mechanical	
Mounting	1U rack mount
Operating Temperature	0°C~40°C (32°F~104°F)
Storage Temperature	-10°C~50°C (14°F~122°F)
Operating Humidity	5%~90%, non-condensing
Safety	CE, FCC
Weight	5 kg
Physical Dimensions	430 mm x 320 mm x 44.2 mm (W x D x H)

Table 1-2: Technical Specifications

1.7 Dimensions

The physical dimensions are shown below:

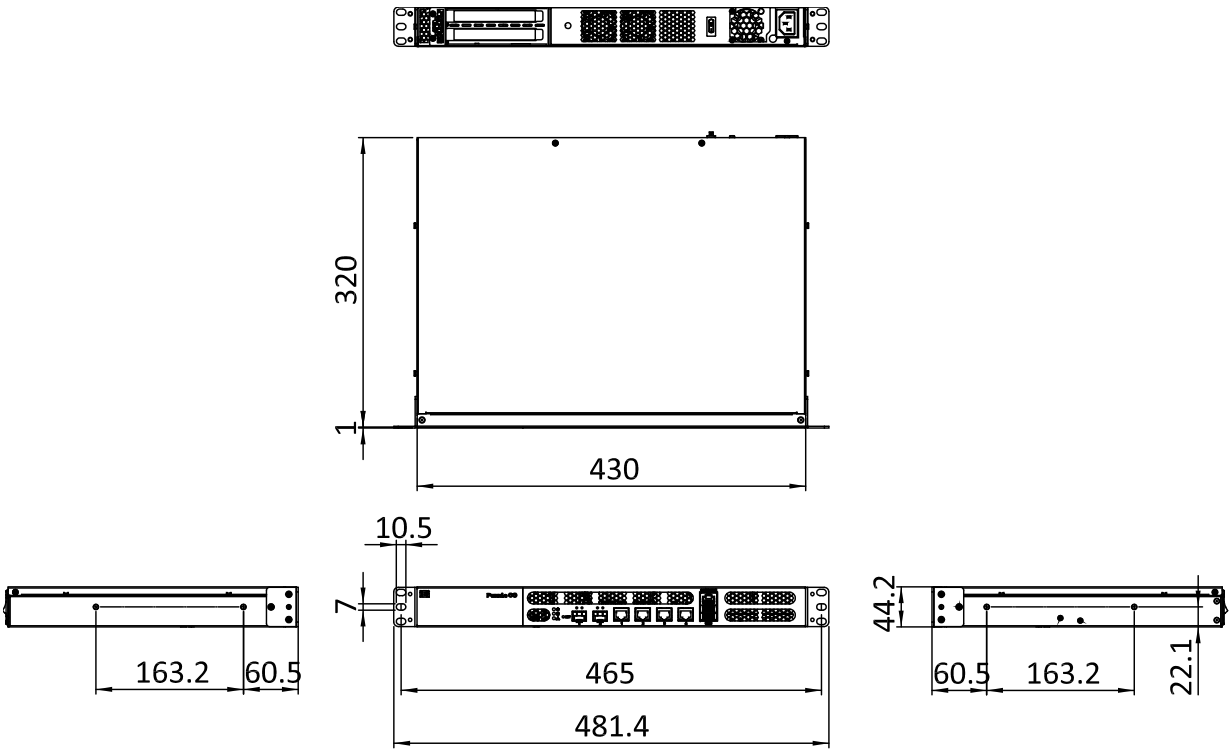


Figure 1-4: Physical Dimensions (millimeters)

Chapter

2

Unpacking

2.1 Anti-static Precautions

WARNING:

Failure to take ESD precautions during installation may result in permanent damage to the PUZZLE-M801 and severe injury to the user.

Electrostatic discharge (ESD) can cause serious damage to electronic components, including the PUZZLE-M801. Dry climates are especially susceptible to ESD. It is therefore critical that whenever the PUZZLE-M801 or any other electrical component is handled, the following anti-static precautions are strictly adhered to.

- ***Wear an anti-static wristband***: Wearing a simple anti-static wristband can help to prevent ESD from damaging the board.
- ***Self-grounding***: Before handling the board, touch any grounded conducting material. During the time the board is handled, frequently touch any conducting materials that are connected to the ground.
- ***Use an anti-static pad***: When configuring the PUZZLE-M801, place it on an anti-static pad. This reduces the possibility of ESD damaging the PUZZLE-M801.

2.2 Unpacking Precautions

When the PUZZLE-M801 is unpacked, please do the following:

- Follow the anti-static precautions outlined in **Section 2.1**.
- Make sure the packing box is facing upwards so the PUZZLE-M801 does not fall out of the box.
- Make sure all the components shown in **Section 2.2** are present.

2.3 Packing List

NOTE:

If some of the components listed in the checklist below are missing, please do not proceed with the installation. Contact the IEI reseller or vendor you purchased the PUZZLE-M801 from or contact an IEI sales representative directly. To contact an IEI sales representative, please send an email to sales@ieiworld.com.

The PUZZLE-M801 is shipped with the following components:

Quantity	Item	Image
1	PUZZLE-M801	
1	Power cord	
2	Rack mounting bracket	
6	Mounting bracket screw (M4*6)	
1	USB to console cable (only for SKUs with memory)	

Quantity	Item	Image
1	RS-232 to console cable (only for SKUs without memory)	

2.4 Optional Items

The following table lists the optional items that can be purchased separately.

Optional Item	Image
Slide rail (**P/N**: RAIL-B02)	
USB to console cable (**P/N**: 32013-004000-100-RS)	
RS-232 to console cable (**P/N**: 32005-005100-100-RS)	

Chapter

3

Installation

3.1 Installation Precautions

During installation, be aware of the precautions below:

- **Read the user manual**: The user manual provides a complete description of the PUZZLE-M801, installation instructions and configuration options.
- **DANGER! Disconnect Power**: Power to the PUZZLE-M801 must be disconnected during the installation process. Failing to disconnect the power may cause severe injury to the body and/or damage to the system.
- **Qualified Personnel**: The PUZZLE-M801 must be installed and operated only by trained and qualified personnel. Maintenance, upgrades, or repairs may only be carried out by qualified personnel who are familiar with the associated dangers.
- **Air Circulation**: Make sure there is sufficient air circulation when installing the PUZZLE-M801. The PUZZLE-M801's cooling vents must not be obstructed by any objects. Blocking the vents can cause overheating of the PUZZLE-M801. Leave at least 5 cm of clearance around the PUZZLE-M801 to prevent overheating.
- **Grounding**: The PUZZLE-M801 should be properly grounded. The voltage feeds must not be overloaded. Adjust the cabling and provide external overcharge protection per the electrical values indicated on the label attached to the back of the PUZZLE-M801.

3.2 Top Cover Removal

Before installing or maintaining the internal components, the top cover must be removed from the PUZZLE-M801. Follow the steps below to complete the task.

Step 1: Remove the four retention screws indicated in **Figure 3-1**.

Step 2: Slide the top cover towards the rear side and gently lift the top cover (**Figure 3-1**).

Figure 3-1: Top Cover Removal

3.3 DIMM Installation

To install the DIMM module, please follow the steps below.

Step 1: Remove the top cover from the PUZZLE-M801 by following the instruction described in **Section 3.2**.

Step 2: Locate the DIMM slot on the motherboard.

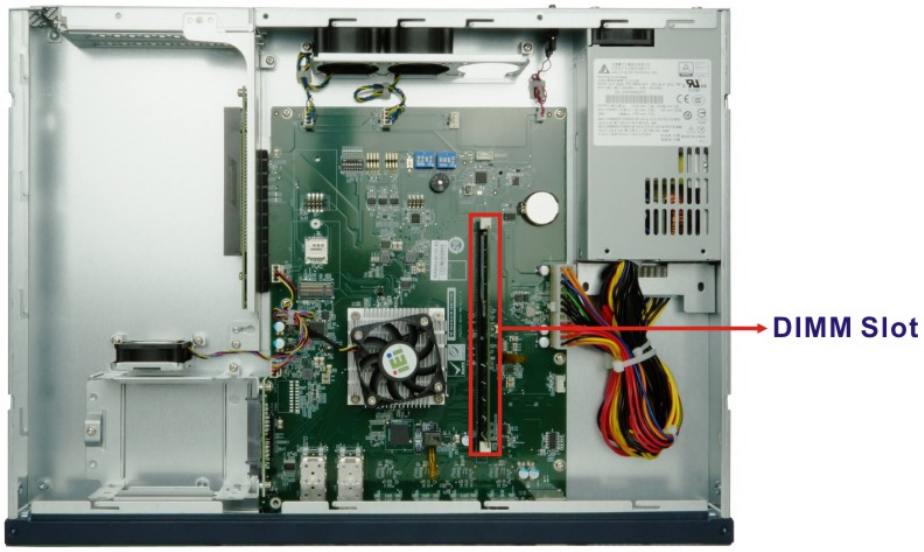


Figure 3-2: DIMM Slot Location

Step 3: Open the DIMM socket handles. Open the two handles outwards as far as they can.

Step 4: Align the DIMM so the notch on the memory lines up with the notch on the memory socket.

Step 5: Once aligned, press down until the DIMM is properly seated. Clip the two handles into place.

Step 6: To remove a DIMM, push both handles outward. The memory module is ejected by a mechanism in the socket.

3.4 HDD Installation

The PUZZLE-M801 allows installation of two 2.5” SATA HDD/SSD. To install HDDs into the system, please follow the steps below.

Step 1: Remove the top cover from the PUZZLE-M801 by following the instruction described in **Section 3.2**.

Step 2: Remove the HDD bracket from the system. To do this, remove the three retention screws indicated below and disconnect the SATA connector module from the motherboard.

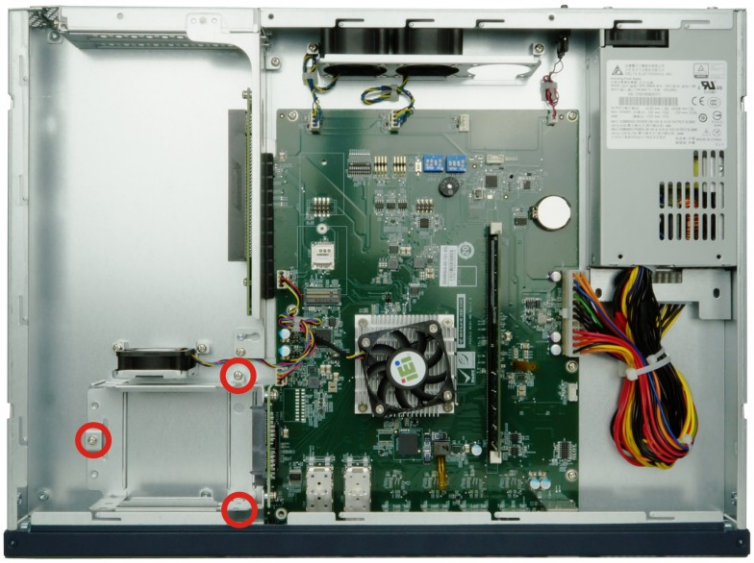


Figure 3-3: HDD Bracket Retention Screws

Step 3: Insert an HDD into the bracket until the HDD is properly connected to the SATA connector. Secure the HDD with four retention screws (M3*4). See **Figure 3-5**.

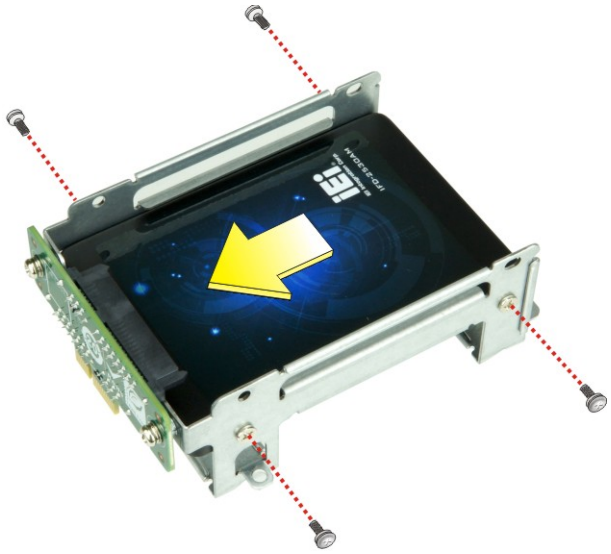


Figure 3-4: Secure HDD to the Bracket

Step 4: Re-connect the SATA connector module to the motherboard. Secure the bracket to the chassis with three screws removed previously (**Figure 3-5**).

Figure 3-5: HDD Installation

Step 5: Re-install and secure the top cover to the system.

3.5 PCIe Expansion Card Installation

The PUZZLE-M801 allows installation of one PCIe x16 (x2 mode) card. To install a PCIe expansion card, please follow the steps below.

Step 1: Remove the top cover from the PUZZLE-M801 (refer to **Section 3.2**).

Step 2: Remove the four expansion slot module retention screws indicated below.

Figure 3-6: Expansion Slot Module Retention Screws

Step 3: Push the expansion slot module with strength to disconnect the module from the motherboard edge connector.

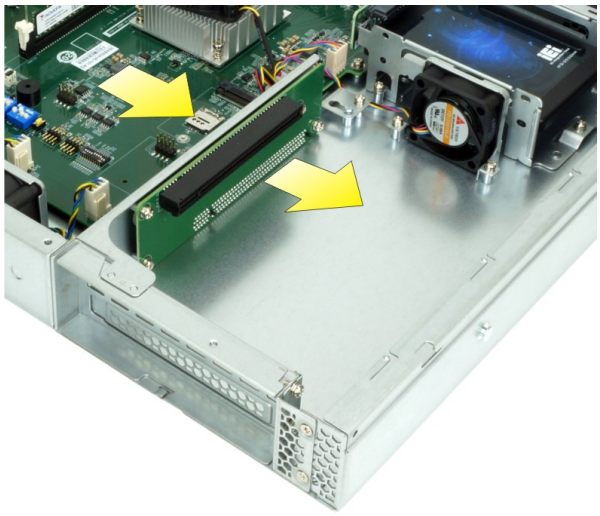


Figure 3-7: Disconnect the Expansion Slot Module

Step 4: Remove the blank bracket panel that aligns with the PCIe slot for installing the expansion card. Save the bracket screw.

Figure 3-8: Blank Bracket Screw

Step 5: Align the expansion card to the PCIe slot. Press gently, but firmly, to seat the expansion card correctly in the slot. Install the bracket screw to secure the card to the expansion slot module.

Figure 3-9: PCIe Expansion Card Installation

Step 6: Place the expansion slot module back to the original position by hooking the slotted hole into the positioning stud in the chassis (**Figure 3-10 A**). Push the connector of the expansion slot module into the edge connector to install it. During installation, ensure that

1. the connector on the slot module is properly aligned and connected to the edge connector;
2. the two studs on the side is going through the two holes in the chassis;
3. the slot module tab is going under the chassis tab.

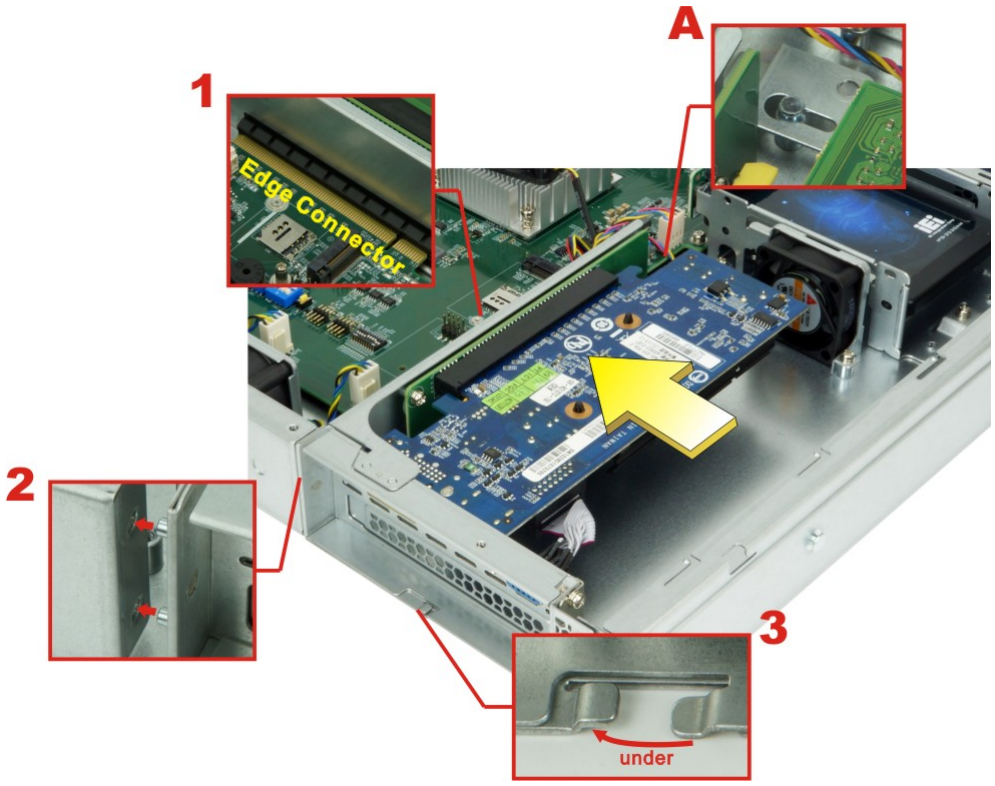


Figure 3-10: Expansion Slot Module Installation

Step 7: Secure the expansion slot module with the four retention screws previously removed.

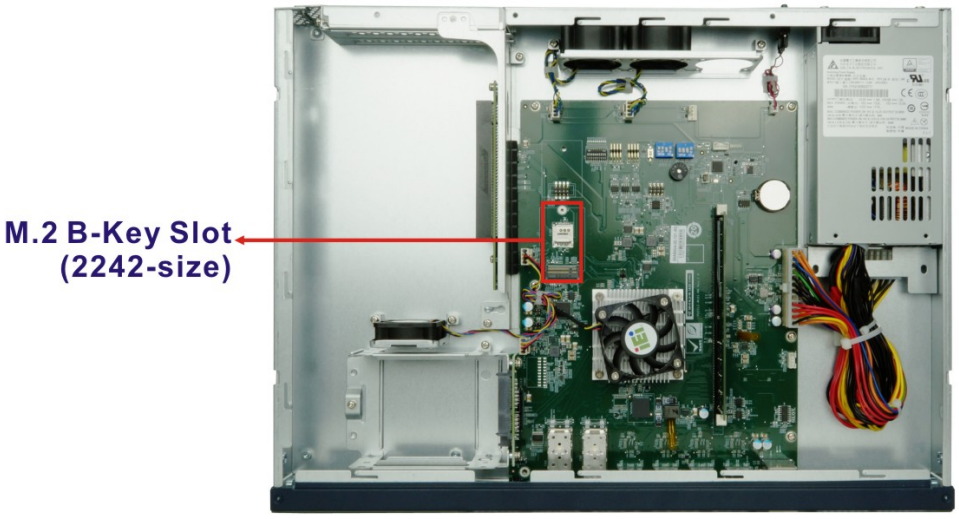
Step 8: Re-install the top cover.

3.6 M.2 Module Installation

The M.2 slot is keyed in the B position and provides mounting screw position for 2242-size M.2 module. To install an M.2 module, please follow the steps below.

Step 1: Remove the top cover from the PUZZLE-M801 (refer to **Section 3.2**).

Step 2: Locate the M.2 slot on the motherboard.



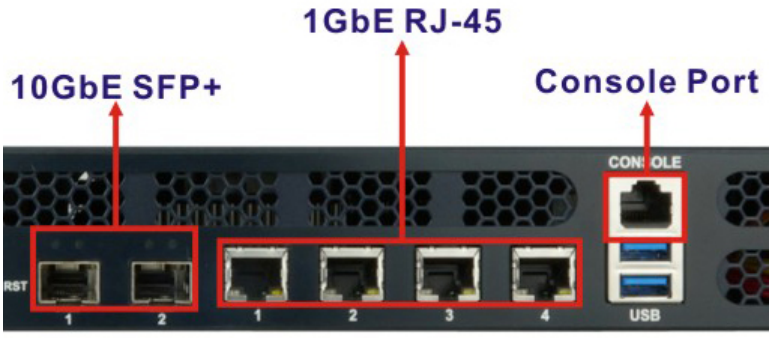
Step 3: Remove the on-board retention screw.

Step 4: Line up the notch on the module with the notch on the slot. Slide the M.2 module into the socket at an angle of about 20º.

Step 5: Push the M.2 module down and secure it with the previously removed retention screw.

3.7 External Interface Connection

The front panel has several external I/O ports. The pinouts of these I/O ports are listed in the following sections.



Each Ethernet connector has a physical number (printed on the front panel) and a logical number (under Linux). The following table shows the physical number to logical number relationship on the PUZZLE-M801.

	Physical Number	Logical Number
10GbE SFP+	1	3
	2	0
1GbE RJ-45	1	5
	2	4
	3	1
	4	2

3.7.1 LAN Connection - 1GbE

The four 1GbE LAN connectors on the front panel allow connection to an external network. The pinouts of the LAN connectors are listed below.

Pin	Description	Pin	Description
1	D_MDP0	6	GND
2	D_MDN0	7	D_MDP2
3	D_MDP1	8	D_MDN2
4	D_MDN1	9	D_MDP3
5	GND	10	D_MDN3

Table 3-1: 1GbE Port1 Pinouts

Pin	Description	Pin	Description
1	C_MDP0	6	GND
2	C_MDN0	7	C_MDP2
3	C_MDP1	8	C_MDN2
4	C_MDN1	9	C_MDP3
5	GND	10	C_MDN3

Table 3-2: 1GbE Port2 Pinouts

Pin	Description	Pin	Description
1	B_MDP0	6	GND
2	B_MDN0	7	B_MDP2
3	B_MDP1	8	B_MDN2
4	B_MDN1	9	B_MDP3
5	GND	10	B_MDN3

Table 3-3: 1GbE Port3 Pinouts

Pin	Description	Pin	Description
1	A_MDP0	6	GND
2	A_MDN0	7	A_MDP2
3	A_MDP1	8	A_MDN2
4	A_MDN1	9	A_MDP3
5	GND	10	A_MDN3

Table 3-4: 1GbE Port4 Pinouts

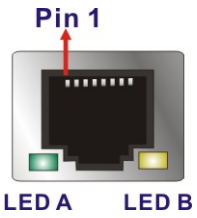


Figure 3-11: RJ-45 1GbE Connector

The RJ-45 Ethernet connector has two status LEDs, one yellow and one green/orange. The yellow LED indicates activity on the port and the green/orange LED indicates the speed. See **Table 3-5**.

LED	Description	LED	Description
A	off: 10 Mb/s green: 100 Mb/s orange: 1000 Mb/s	B	on: linked blinking: data is being sent/received

Table 3-5: RJ-45 1GbE Connector LEDs

3.7.2 LAN Connection - 10GbE SFP+

The two 10GbE SFP+ connectors on the front panel allow transfer rate of up to 10 gigabits per second. The pinouts of the 10GbE LAN connectors are listed below.

Pin	Description	Pin	Description
1	GND	11	GND
2	SFP+2_TX_FAULT	12	SFP+2_SRD_RX-
3	SFP+2_TX_DISABLE	13	SFP+2_SRD_RX+
4	SFP+2_SDA	14	GND
5	SFP+2_SCL	15	SFP+2_VCCR
6	SFP+2_MOD_ABS	16	SFP+2_VCCT
7	SFP+2_RS0	17	GND
8	SFP+2_RX_LOS	18	SFP+2_SRD_TX+
9	SFP+2_RS1	19	SFP+2_SRD_TX-
10	GND	20	GND

Table 3-6: 10GbE Port1 Pinouts

Pin	Description	Pin	Description
1	GND	11	GND
2	SFP+1_TX_FAULT	12	SFP+1_SRD_RX-
3	SFP+1_TX_DISABLE	13	SFP+1_SRD_RX+
4	SFP+1_SDA	14	GND
5	SFP+1_SCL	15	SFP+1_VCCR
6	SFP+1_MOD_ABS	16	SFP+1_VCCT
7	SFP+1_RS0	17	GND
8	SFP+1_RX_LOS	18	SFP+1_SRD_TX+
9	SFP+1_RS1	19	SFP+1_SRD_TX-
10	GND	20	GND

Table 3-7: 10GbE Port2 Pinouts

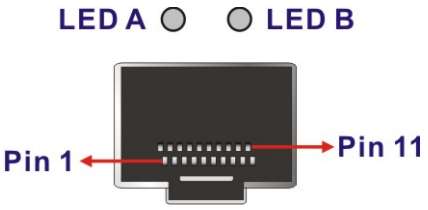


Figure 3-12: 10GbE SFP+ Connector

NOTE:

The 10GbE LED indicators will be enabled in the next software update.

3.7.3 Console Connection

The PUZZLE-M801 has one RJ-45 serial device connector on the front panel. The RJ-45 connector for the serial port can be identified easily as the RJ-45 for the network has two LEDs on the port, while the connectors for the serial cables don't. The pinouts of the serial port are listed below.

Pin	Description	Pin	Description
1	NC	5	GND
2	NC	6	NSIN1
3	NSOUT1	7	NC
4	GND	8	NC

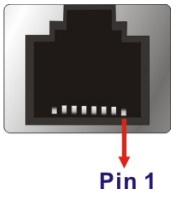


Table 3-8: RJ-45 Serial Port Pinouts

The serial device slot (RJ-45) connects to a cable with a standard D-sub 9 connector or a USB connector (varied from SKU) at the other end.

3.8 Mounting the System

The PUZZLE-M801 is shipped with two mounting brackets that support 1U rack mount. To install the mounting brackets, please follow the steps below.

Step 1: Align the three retention screw holes in each bracket with the corresponding retention screw holes on the sides of the PUZZLE-M801.

Step 2: Secure the brackets to the system by inserting three retention screws (M4*6) into each bracket (**Figure 3-13**). Make sure the screws are tight and on the right positions.

Figure 3-13: Rack Mounting Bracket Installation

3.9 Power-On Procedure

WARNING:

Make sure a power supply with the correct input voltage is being fed into the system. Incorrect voltages applied to the system may cause damage to the internal electronic components and may also cause injury to the user.

To power-on the PUZZLE-M801 please follow the steps below:

Step 1: Connect the power source to the power inlet on the rear panel.

Step 2: Turn on the power switch to power up the system.

Step 3: The power LED indicator on the front panel turns to green.

Step 4: Use the following information when prompted for the username and password for login to the system.

Username: puzzle

Password: admin

Figure 3-14: Power-on

3.10 Online Resources

All the information for the PUZZLE-M801 is available on IEI Resource Download Center (https://download.ieiworld.com). Type PUZZLE-M801 and press Enter to find all the relevant utilities, and documentation.

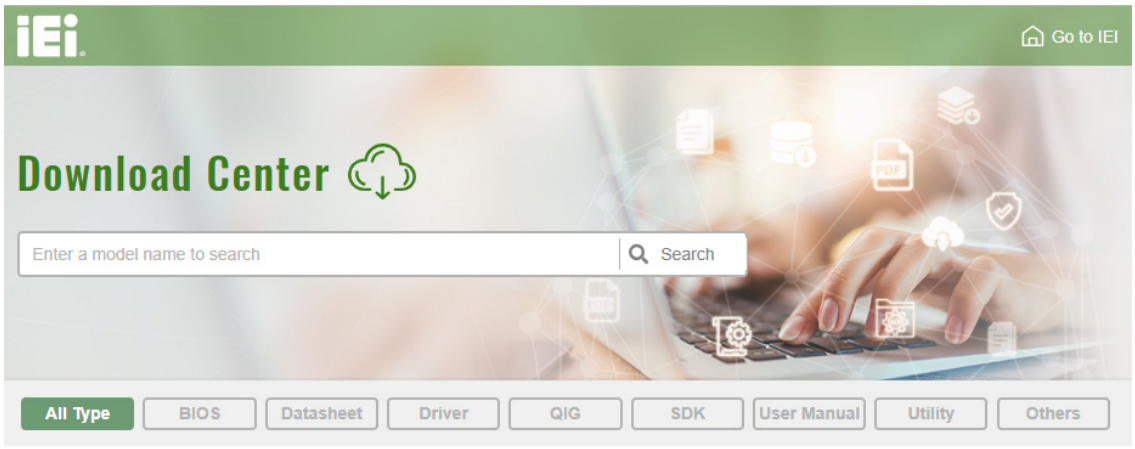


Figure 3-15: IEI Resource Download Center

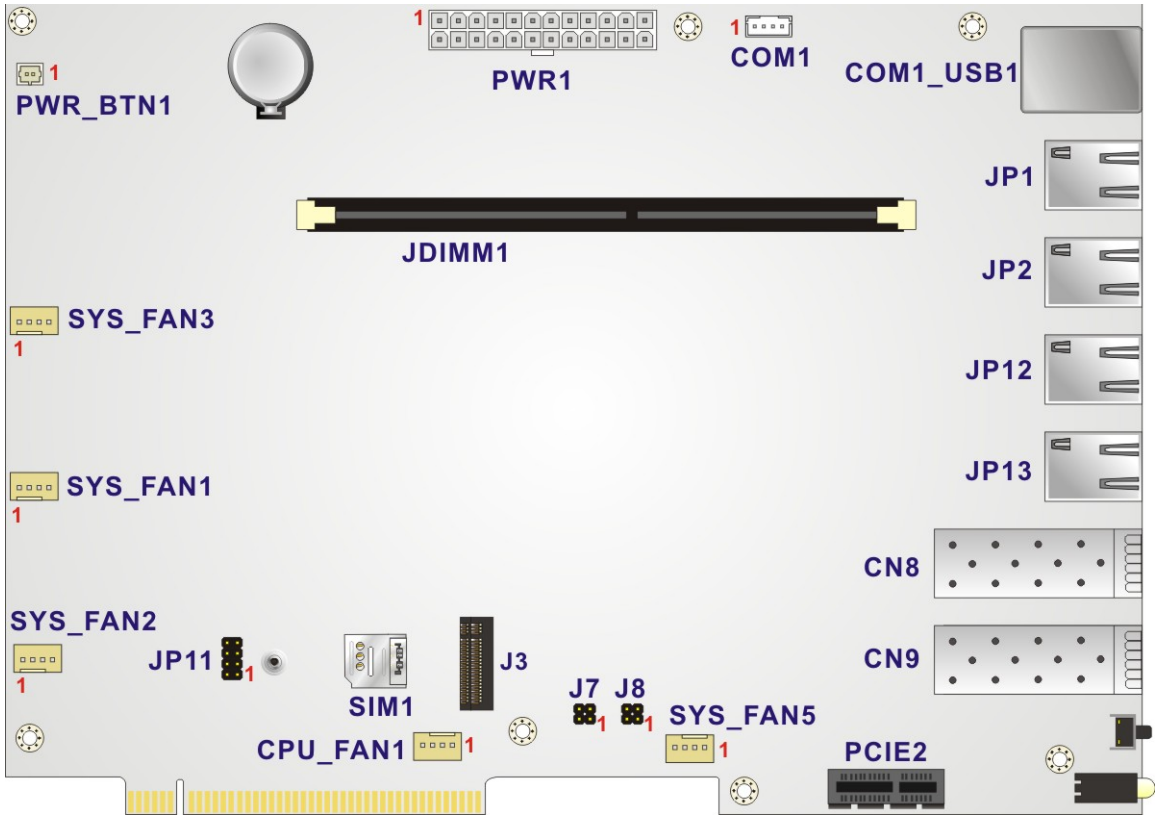
Chapter

4

Interface Connectors

4.1 Peripheral Interface Connectors

The connector locations of the PUZZLE-M801's motherboard are shown below. The connector pinouts for these connectors are listed in the following sections.



4.2 Internal Peripheral Connectors

The table below shows a list of the connectors on the motherboard. Pinouts of these connectors can be found in the following sections.

Connector	Type	Label
ATX power connector	24-pin connector	PWR1
Fan connectors	4-pin wafer	CPU_FAN1, SYS_FAN1, SYS_FAN2, SYS_FAN3 SYS_FAN5
LCM connector	4-pin wafer	COM1
M.2 slot	M.2 B-key slot	J3
Memory slot	DDR4 DIMM slot	JDIMM1
PCIe x2 socket for SATA module	PCIe x2 socket	PCIE2
Power switch connector	2-pin wafer	PWR_BTN1
SIM card slot	SIM card slot	SIM2
USB DOM connector	8-pin header	JP11

Table 4-1: Peripheral Interface Connectors

4.2.1 ATX Power Connector (PWR1)

Pin	Description	Pin	Description
1	+3.3 V	13	+3.3 V
2	+3.3 V	14	N/C
3	GND	15	GND
4	+5 V	16	PS-ON
5	GND	17	GND
6	+5 V	18	GND
7	GND	19	GND
8	PW-OK	20	N/C
9	+5VSB	21	+5 V

Pin	Description	Pin	Description
10	+12V	22	+5 V
11	+12V	23	+5 V
12	+3.3 V	24	GND

Table 4-2: ATX Power Connector (PWR1) Pinouts

4.2.2 Fan Connectors (CPU_FAN1, SYS_FAN1/2/3/5)

PIN NO.	DESCRIPTION
1	GND
2	+12V
3	FANIO
4	PWM

Table 4-3: Fan Connectors (CPU_FAN1, SYS_FAN1/2/3/5) Pinouts

4.2.3 LCM Connector (COM1)

PIN NO.	DESCRIPTION
1	SIN_LCM
2	VCC5V
3	SOUT_LCM
4	GND

Table 4-4: LCM Connector (COM1) Pinouts

4.2.4 M.2 Slot (J3)

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	N/C	2	+3.3V
3	GND	4	+3.3V
5	GND	6	N/C
7	USB_D+	8	N/C

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
9	USB_D-	10	N/C
11	GND	12	N/C
13	N/C	14	N/C
15	N/C	16	N/C
17	N/C	18	N/C
19	N/C	20	N/C
21	N/C	22	N/C
23	N/C	24	N/C
25	N/C	26	N/C
27	GND	28	N/C
29	USB3.0_RX-	30	SIM_RST
31	USB3.0_RX+	32	SIM_CLK
33	GND	34	SIM_DATA
35	USB3.0_TX-	36	SIM_PWR
37	USB3.0_TX+	38	N/C
39	GND	40	I2C_CLK
41	SRD_RX+	42	I2C_DAT
43	SRD_RX-	44	N/C
45	GND	46	N/C
47	SRD_TX-	48	N/C
49	SRD_TX+	50	RESET-
51	GND	52	CLKREQ
53	REFCLK-	54	LAN_WOL#
55	REFCLK+	56	N/C
57	GND	58	N/C
59	ANTCTL0	60	COEX3
61	ANTCTL1	62	COEX2
63	ANTCTL2	64	COEX1
65	ANTCTL3	66	N/C
67	PCIE_RST-	68	N/C
69	GND	70	+3.3V
71	GND	72	+3.3V

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
73	GND	74	+3.3V
75	GND		

Table 4-5: M.2 Slot (J3) Pinouts

4.2.5 PCIe x2 Socket for SATA Module (PCIE2)

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
B1	+12V	A1	N/C
B2	+12V	A2	+12V
B3	+12V	A3	+12V
B4	GND	A4	GND
B5	N/C	A5	+5V
B6	N/C	A6	+5V
B7	GND	A7	N/C
B8	+3.3V	A8	N/C
B9	+5V	A9	+3.3V
B10	+5V	A10	+3.3V
B11	+5V	A11	+5V
B12	+5V	A12	GND
B13	GND	A13	+5V
B14	SATA_TX0-	A14	+5V
B15	SATA_TX0+	A15	GND
B16	GND	A16	SATA_RX0-
B17	+5V	A17	SATA RX0+
B18	GND	A18	GND

Table 4-6: PCIe x2 Socket for SATA Module (PCIE2) Pinouts

4.2.6 Power Switch Connector (PWR_BTN1)

PIN NO.	DESCRIPTION
1	PWRBTN_SW+
2	PWRBTN_SW-

Table 4-7: Power Switch Connector (PWR_BTN1) Pinouts

4.2.7 USB DOM Connector (JP11)

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	VCC5V	2	N/A
3	USB-	4	N/A
5	USB+	6	N/A
7	GND	8	N/A

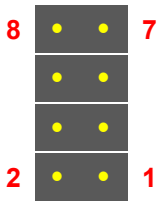


Table 4-8: USB DOM Connector (JP11) Pinouts

Appendix

A

Regulatory Compliance

DECLARATION OF CONFORMITY

CE

This equipment is in conformity with the following EU directives:

- EMC Directive 2014/30/EU
- Low-Voltage Directive 2014/35/EU
- RoHS II Directive 2011/65/EU

If the user modifies and/or install other devices in the equipment, the CE conformity declaration may no longer apply.

If this equipment has telecommunications functionality, it also complies with the requirements of the R&TTE Directive 1999/5/EC.

English IEI Integration Corp declares that this equipment is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Български [Bulgarian] IEI Integration Corp. декларира, че този оборудване е в съответствие със съществените изисквания и другите приложими правила на Директива 1999/5/EC.
Česky [Czech] IEI Integration Corp tímto prohlašuje, že tento zařízení je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
Dansk [Danish] IEI Integration Corp erklærer herved, at følgende udstyr overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
Deutsch [German] IEI Integration Corp, erklärt dieses Gerät entspricht den grundlegenden Anforderungen und den weiteren entsprechenden Vorgaben der Richtlinie 1999/5/EU.
Eesti [Estonian] IEI Integration Corp deklareerib seadme seadme vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.

Español [Spanish] IEI Integration Corp declara que el equipo cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
Ελληνική [Greek] IEI Integration Corp ΔΗΛΩΝΕΙ ΟΤΙ ΕΞΟΠΛΙΣΜΟΣ ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
Français [French] IEI Integration Corp déclare que l'appareil est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Italiano [Italian] IEI Integration Corp dichiara che questo apparecchio è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian] IEI Integration Corp deklarē, ka iekārta atbilst būtiskajām prasībām un citiem ar to saistītajiem noteikumiem Direktīvas 1999/5/EK.
Lietuvių [Lithuanian] IEI Integration Corp deklaruoja, kad šis įranga atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
Nederlands [Dutch] IEI Integration Corp dat het toestel toestel in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
Malti [Maltese] IEI Integration Corp jiddikjara li dan prodott jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
Magyar [Hungarian] IEI Integration Corp nyilatkozom, hogy a berendezés megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.
Polski [Polish] IEI Integration Corp oświadcza, że wyrobu jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
Português [Portuguese] IEI Integration Corp declara que este equipamento está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.

Româna [Romanian] IEI Integration Corp declară că acest echipament este in conformitate cu cerinţele esenţiale şi cu celelalte prevederi relevante ale Directivei 1999/5/CE.
Slovensko [Slovenian] IEI Integration Corp izjavlja, da je ta opreme v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky [Slovak] IEI Integration Corp týmto vyhlasuje, že zariadenia spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
Suomi [Finnish] IEI Integration Corp vakuuttaa täten että laitteet on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish] IEI Integration Corp förklarar att denna utrustningstyp står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

FCC WARNING

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

ROHS STATEMENT

The label on the product indicates this product conforms to European (EU) Restriction of Hazardous Substances (RoHS) that set maximum concentration limits on hazardous materials used in electrical and electronic equipment.

CHINA ROHS

The label on the product indicates the estimated “Environmentally Friendly Use Period” (EFUP). This is an estimate of the number of years that these substances would “not leak out or undergo abrupt change.” This product may contain replaceable sub-assemblies/components which have a shorter EFUP such as batteries and lamps. These components will be separately marked.

Appendix

B

Safety Precautions

B.1 Safety Precautions

WARNING:

The precautions outlined in this appendix should be strictly followed. Failure to follow these precautions may result in permanent damage to the PUZZLE-M801.

Please follow the safety precautions outlined in the sections that follow:

B.1.1 General Safety Precautions

Please ensure the following safety precautions are adhered to at all times.

- ***Make sure the power is turned off and the power cord is disconnected*** when moving, installing or modifying the system.
- ***Do not apply voltage levels that exceed the specified voltage range***. Doing so may cause fire and/or an electrical shock.
- ***Electric shocks can occur*** if opened while still powered on.
- ***Do not drop or insert any objects*** into the ventilation openings.
- ***If considerable amounts of dust, water, or fluids enter the system***, turn off the power supply immediately, unplug the power cord, and contact the system vendor.
- **DO NOT**:
  - Drop the system against a hard surface.
  - In a site where the ambient temperature exceeds the rated temperature

B.1.2 Anti-static Precautions

WARNING:

Failure to take ESD precautions during the installation of the PUZZLE-M801 may result in permanent damage to the PUZZLE-M801 and severe injury to the user.

Electrostatic discharge (ESD) can cause serious damage to electronic components, including the PUZZLE-M801. Dry climates are especially susceptible to ESD. It is therefore critical that whenever the PUZZLE-M801 is opened and any of the electrical components are handled, the following anti-static precautions are strictly adhered to.

- ***Wear an anti-static wristband***: Wearing a simple anti-static wristband can help to prevent ESD from damaging any electrical component.
- ***Self-grounding***: Before handling any electrical component, touch any grounded conducting material. During the time the electrical component is handled, frequently touch any conducting materials that are connected to the ground.
- ***Use an anti-static pad***: When configuring or working with an electrical component, place it on an anti-static pad. This reduces the possibility of ESD damage.
- ***Only handle the edges of the electrical component***: When handling the electrical component, hold the electrical component by its edges.

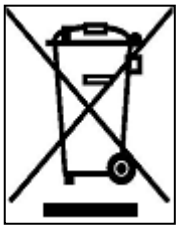
B.1.3 Product Disposal

CAUTION:

Risk of explosion if the battery is replaced by an incorrect type;

Dispose of used batteries according to instructions and local regulations.

- Outside the European Union - If you wish to dispose of used electrical and electronic products outside the European Union, please contact your local authority so as to comply with the correct disposal method.
- Within the European Union:



EU-wide legislation, as implemented in each Member State, requires that waste electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste. This includes monitors and electrical accessories, such as signal cables or power cords. When you need to dispose of your display products, please follow

the guidance of your local authority, or ask the shop where you purchased the product. The mark on electrical and electronic products only applies to the current European Union Member States.

Please follow the national guidelines for electrical and electronic product disposal.

B.2 Maintenance and Cleaning Precautions

When maintaining or cleaning the PUZZLE-M801, please follow the guidelines below.

B.2.1 Maintenance and Cleaning

Prior to cleaning any part or component of the PUZZLE-M801, please read the details below.

- The interior of the PUZZLE-M801 does not require cleaning. Keep fluids away from the PUZZLE-M801 interior.
- Be cautious of all small removable components when vacuuming the PUZZLE-M801.
- Turn the PUZZLE-M801 off before cleaning the PUZZLE-M801.
- Never drop any objects or liquids through the openings of the PUZZLE-M801.
- Be cautious of any possible allergic reactions to solvents or chemicals used when cleaning the PUZZLE-M801.
- Avoid eating, drinking and smoking within vicinity of the PUZZLE-M801.

B.2.2 Cleaning Tools

Some components in the PUZZLE-M801 may only be cleaned using a product specifically designed for the purpose. In such case, the product will be explicitly mentioned in the cleaning tips. Below is a list of items to use when cleaning the PUZZLE-M801.

- ***Cloth*** – Although paper towels or tissues can be used, a soft, clean piece of cloth is recommended when cleaning the PUZZLE-M801.
- ***Water or rubbing alcohol*** – A cloth moistened with water or rubbing alcohol can be used to clean the PUZZLE-M801.
- ***Using solvents*** – The use of solvents is not recommended when cleaning the PUZZLE-M801 as they may damage the plastic parts.

- ***Vacuum cleaner*** – Using a vacuum specifically designed for computers is one of the best methods of cleaning the PUZZLE-M801. Dust and dirt can restrict the airflow in the PUZZLE-M801 and cause its circuitry to corrode.
- ***Swabs*** - Swaps moistened with rubbing alcohol or water are excellent tools for wiping hard to reach areas. Whenever possible, it is best to use lint free swabs such as foam swabs for cleaning.

Appendix

C

Hazardous Materials Disclosure

C.1 RoHS II Directive (2015/863/EU)

The details provided in this appendix are to ensure that the product is compliant with the RoHS II Directive (2015/863/EU). The table below acknowledges the presences of small quantities of certain substances in the product, and is applicable to RoHS II Directive (2015/863/EU).

Please refer to the following table.

Part Name	Toxic or Hazardous Substances and Elements									
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (CR(VI))	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)	Bis(2-ethylhexyl) phthalate (DEHP)	Butyl benzyl phthalate (BBP)	Dibutyl phthalate (DBP)	Diisobutyl phthalate (DIBP)
Housing	O	O	O	O	O	O	O	O	O	O
Printed Circuit Board	O	O	O	O	O	O	O	O	O	O
Metal Fasteners	O	O	O	O	O	O	O	O	O	O
Cable Assembly	O	O	O	O	O	O	O	O	O	O
Fan Assembly	O	O	O	O	O	O	O	O	O	O
Power Supply Assemblies	O	O	O	O	O	O	O	O	O	O
Battery	O	O	O	O	O	O	O	O	O	O

O: This toxic or hazardous substance is contained in all of the homogeneous materials for the part is below the limit requirement in Directive (EU) 2015/863.

X: This toxic or hazardous substance is contained in at least one of the homogeneous materials for this part is above the limit requirement in Directive (EU) 2015/863.

C.2 China RoHS

此附件旨在确保本产品符合中国 RoHS 标准。以下表格标示此产品中某有毒物质的含量符合中国 RoHS 标准规定的限量要求。

本产品上会附有"环境友好使用期限"的标签，此期限是估算这些物质"不会有泄漏或突变"的年限。本产品可能包含有较短的环境友好使用期限的可替换元件，像是电池或灯管，这些元件将会单独标示出来。

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)
壳体	O	O	O	O	O	O
印刷电路板	O	O	O	O	O	O
金属螺帽	O	O	O	O	O	O
电缆组装	O	O	O	O	O	O
风扇组装	O	O	O	O	O	O
电力供应组装	O	O	O	O	O	O
电池	O	O	O	O	O	O

O: 表示该有毒有害物质在该部件所有物质材料中的含量均在SJ/T11364-2014與GB/T26572-2011标准规定的限量要求以下。

X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11364-2014 與 GB/T26572-2011 标准规定的限量要求。