MLB-3100 Series

Embedded System supporting MXM Graphics Module
with 12th/13th/14th Gen Intel® Core™ i9/i7/i5/i3
in LGA1700 Socket

User's Manual



Manual Rev.: 1.0

Revision Date: August 9, 2024

Part No: 50M-DN000-1000

LEADING EDGE COMPUTING

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Revision History

Revision	Release Date	Description of Change(s)
1.0	2024-08-09	Initial release

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Preface

Copyright © 2024 ADLINK Technology Inc.

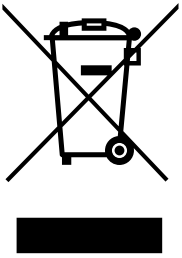
This document contains proprietary information protected by copyright. All rights are reserved. No part of this manual may be reproduced by any mechanical, electronic, or other means in any form without prior written permission of the manufacturer.

Disclaimer

The information in this document is subject to change without prior notice in order to improve reliability, design, and function and does not represent a commitment on the part of the manufacturer.

In no event will the manufacturer be liable for direct, indirect, special, incidental, or consequential damages arising out of the use or inability to use the product or documentation, even if advised of the possibility of such damages.

Environmental Responsibility



ADLINK is committed to fulfill its social responsibility to global environmental preservation through compliance with the European Union's Restriction of Hazardous Substances (RoHS) directive and Waste Electrical and Electronic Equipment (WEEE) directive. Environmental protection is a top priority for ADLINK. We have enforced measures to ensure that our products, manufacturing processes, components, and raw materials have as little impact on the environment as possible. When products are at their end of life, our customers are encouraged to dispose of them in accordance with the product disposal and/or recovery programs prescribed by their nation or company.

Battery Labels (for products with battery)



Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

California Proposition 65 Warning

WARNING: This product can expose you to chemicals including acrylamide, arsenic, benzene, cadmium, Tris(1,3-dichloro-2-propyl) phosphate (TDCPP), 1,4-Dioxane, formaldehyde, lead, DEHP, styrene, DINP, BBP, PVC, and vinyl materials, which are known to the State of California to cause cancer, and acrylamide, benzene, cadmium, lead, mercury, phthalates, toluene, DEHP, DIDP, DnHP, DBP, BBP, PVC, and vinyl materials, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Trademarks

Product names mentioned herein are used for identification purposes only and may be trademarks and/or registered trademarks of their respective companies.

Conventions

Take note of the following conventions used throughout this manual to make sure that users perform certain tasks and instructions properly.

NOTE:

Additional information, aids, and tips that help users perform tasks.

CAUTION:

Information to prevent ***minor*** physical injury, component damage, data loss, and/or program corruption when trying to complete a task.
ATTENTION: Informations destinées à prévenir les blessures corporelles mineures, les dommages aux composants, la perte de données et/ou la corruption de programme lors de l'exécution d'une tâche.

WARNING:

Information to prevent ***serious*** physical injury, component damage, data loss, and/or program corruption when trying to complete a specific task.
AVERTISSEMENT: Informations destinées à prévenir les blessures corporelles graves, les dommages aux composants, la perte de données et/ou la corruption de programme lors de l'exécution d'une tâche spécifique.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Table of Contents

Preface iii

List of Tables vii

List of Figures ix

1 Introduction 1
- 1.1 Overview 1
- 1.2 Features 2
- 1.3 Packing List 3
- 1.4 Optional Accessories 4

2 Specifications 5
- 2.1 MLB-3100 5
- 2.2 MLB-3102 7
- 2.3 MLB-3100 Functional Block Diagram 9
- 2.4 Display Options 10
- 2.5 Mechanical Dimensions 11

3 System Layout 15
- 3.1 Panel I/O 15
- 3.2 Jumper Settings 17

4 Getting Started 21
- 4.1 Installing 2.5” Storage 22
- 4.2 Installing an M.2 Module 24
- 4.3 Mounting 34
- 4.4 Driver Installation 36

5 Appendix: BIOS Setup 37
- 5.1 Restoring Default Settings 37
- 5.2 Enabling PXE / Network Boot 38

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Important Safety Instructions **41**

Consignes de Sécurité Importante **44**

Getting Service **47**

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

List of Tables

Table 2-1: Maximum Display Resolution 10
Table 3-1: I/O Legend 17
Table 3-2: SATA/PCIe Mode jumper settings 18

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

This page intentionally left blank.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

List of Figures

Figure 2-1: MLB-3100 Functional Block Diagram 9
Figure 2-2: MLB-3100 Rear View..... 11
Figure 2-3: MLB-3102 Rear View..... 12
Figure 2-4: MLB-3100 Left Side View 12
Figure 2-5: MLB-3102 Left Side View 13
Figure 2-6: MLB-3100 Front View..... 13
Figure 2-7: MLB-3100/3102 Bottom View..... 14
Figure 3-1: MLB-3100 Series Rear Panel I/O 15
Figure 3-2: MLB-3100 Series Front Panel I/O..... 16

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

This page intentionally left blank.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

1 Introduction

1.1 Overview

The MLB-3100 series is an optimized computing platform supporting performance-hungry workloads, such as deep learning, with expandability options and active cooling for applications requiring very high levels of computing in a limited space. The MLB-3100 series is one of the smallest embedded GPU platforms (5.5 liters) with a low TDP reliable MXM GPU design, scalable graphics processing ranging from Turing to Ampere GPU cards, coupled with Intel Thunderbolt 4, and two PCIe Gen3 x4 expansion slots for full-height, half-length add-on card support.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

1.2 Features

- ADLINK MXM Graphics module support (Type A/B, up to 120W)
- 12th/13th/14th Gen Intel® Core™ i9/i7/i5/i3 processors in LGA1700 socket
- Dual SODIMMs for up to 64GB DDR5 non-ECC memory (CPU dependent)
- 5x DisplayPort (1 from CPU, 4 from MXM)
- 1x HDMI port (from CPU)
- 1x M.2 E key supporting 1630 or 2230 for Wi-Fi/Bluetooth module
- 1x M.2 M key supporting 2242 or 2280 for PCIe x4 frame grabber
- 1x M.2 M key supporting 2242 or 2280 for SATA/PCIe x1 storage module
- Reliable Molex type 24V DC-in connector
- 2x Intel® i225-LM
- 2x PCIe Gen3 x4 expansion slot for full-height, half-length add-on card. Each slot supports 25W power with an additional Molex 4-pin power cable (12V/1.5A and 5V/2A)
- Windows 10/11 IoT Enterprise SAC/GAC 64-bit support
- Ubuntu 24.04 LTS 64-bit support
- 2x SATA 6Gb/s SSD, and Intel® RST Raid support if needed

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

1.3 Packing List

Before unpacking, check the shipping carton for any damage. If the shipping carton and/or contents are damaged, inform your dealer immediately. Retain the shipping carton and packing materials for inspection. Obtain authorization from your dealer before returning any product to ADLINK. Ensure that the following items are included in the package.

- 1x MLB-3100 Embedded Computer
- 1x 450W Medical PSU
- Fasteners:
  - 3x M3 screws, I-head, L4, Ni for M.2
    (P/N: 33-03342-0030-A0)
  - 8x M3 screws, F-head, L4, Nylok for 2.5” storage bay
    (P/N: 33-03103-1040)
  - 2x M3 screws, I-head, L4, Nylok for MXM
    (P/N: 33-03306-0040)

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

1.4 Optional Accessories

- Wall-mount bracket set (P/N: 34-34546-0000-A0) (2 pcs)
- EU power cord (PN: 32-50032-1000-A0)
- US power cord (PN: 30-00001-0030)

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

2 Specifications

2.1 MLB-3100

Model	MLB-3100		
MXM Support	EGX-MXM-A1000	EGX-MXM-A2000	EGX-MXM-A4500
Processor	▶ Intel® Core™ i9-12900E, 5.0GHz, 14M Cache, 65W TDP, LGA1700, DDR5 4800MHz support ▶ Intel® Core™ i7-12700E, 3.6GHz, 12M Cache, 65W TDP, LGA1700, DDR5 4800MHz support ▶ Intel® Core™ i5-12500E, 3.0GHz, 7.5M Cache, 65W TDP, LGA1700, DDR5 4800MHz support ▶ Intel® Core™ i3-12100E, 3.2GHz, 5M Cache, 65W TDP, LGA1700, DDR5 4800MHz support		
Chipset	Intel® Q680E Chipset		
Memory	Non-ECC DDR5 4800MHz, 2x SODIMM, up to 64GB		
I/O Interface			
Display	1x HDMI 2.0, 5x DisplayPort (1 from CPU, 4 from MXM)		
Ethernet	2x GbE (Intel® i225-LM)		
Serial Ports	1x RS-232/422/485, 1x RS-232		
USB	[Front] 1x USB 3.2 Gen 2 Type A [Rear] 2x USB 3.2 Gen 2 Type A, 4x USB 3.2 Gen 1 Type A, 1x USB 3.2 Gen 1 Type C		
Audio	Default: Mic-in and Line-out Option: L/R speaker-out (2W + 6W), Mic-in		
M.2	▶ 1x M.2 E key for 2230 WiFi/BT module ▶ 1x M.2 M key for 2242 or 2280 PCIe/SATA storage ▶ 1x M.2 M key for 2242 or 2280 PCIe Gen 4 x4 for NVMe and frame grabber		
DI/O	1x DI/DO with 4 in, 4 out		
TPM 2.0	Default: w/ TPM		

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Model	MLB-3100
Storage	
SATA/PCIe	▶ 2x SATA 6Gb/s for 2.5” external drive bays ▶ 1x M.2 2242/2280 M key for SATA/PCIe Gen 3 x3 ▶ 1x M.2 2242/2280 M key for PCIe Gen 4 x4
Physical	
Dimensions	280 x 198 x 98mm (W x D x H, without foot pads)
Weight	7.9kg
Mounting	Optional wall-mount bracket
Power Supply	
DC Input	DC 24V input (Molex DC-in jack)
AC Input	450W (24V/18.75A) AC/DC Medical-grade adapter
Environmental	
Operating Temperature	0°C to 40°C
Storage Temperature	-20°C to 70°C
Humidity	5% to 95%, non-condensing
Vibration	Operating: 2Grms, 5-500Hz, 3 axes Package (non operating): 3.44Grms, 10-1000Hz, 3 axes (w/MXM, w/SSD)
EMC	EN55032/35, CE, FCC
Safety	UL/cUL and CB (62368-1:2014)
Medical	Compliant with IEC 60601-1:2005 + A1:2012 + A2:2020 3.2 ed / IEC 60601-1-2:2014 + A1:2020 4.1 ed

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

2.2 MLB-3102

Model	MLB-3102		
MXM Support	EGX-MXM-A1000	EGX-MXM-A2000	EGX-MXM-A4500
Processor	▶ Intel® Core™ i9-12900E, 5.0GHz, 14M Cache, 65W TDP, LGA1700, DDR5 4800MHz support ▶ Intel® Core™ i7-12700E, 3.6GHz, 12M Cache, 65W TDP, LGA1700, DDR5 4800MHz support ▶ Intel® Core™ i5-12500E, 3.0GHz, 7.5M Cache, 65W TDP, LGA1700, DDR5 4800MHz support ▶ Intel® Core™ i3-12100E, 3.2GHz, 5M Cache, 65W TDP, LGA1700, DDR5 4800MHz support		
Chipset	Intel® Q680E Chipset		
Memory	Non-ECC DDR5 4800MHz, 2x SODIMM, up to 64GB		
I/O Interface			
Display	1x HDMI 2.0, 5x DisplayPort (1 from CPU, 4 from MXM)		
Ethernet	2x GbE (Intel® i225-LM)		
Serial Ports	1x RS-232/422/485, 1x RS-232		
USB	[Front] 1x USB 3.2 Gen 2 Type A [Rear] 2x USB 3.2 Gen 2 Type A, 4x USB 3.2 Gen 1 Type A, 1x USB 3.2 Gen 1 Type C		
Audio	Default: Mic-in and Line-out Option: L/R speaker-out (2W + 6W), Mic-in		
M.2	▶ 1x M.2 E key for 2230 WiFi/BT module ▶ 1x M.2 M key for 2242 or 2280 PCIe/SATA storage ▶ 1x M.2 M key for 2242 or 2280 PCIe Gen 4 x4 for NVMe and frame grabber		
DI/O	1x DI/DO with 4 in, 4 out		
TPM 2.0	Default: w/ TPM		
Expansion	2x PCIe Gen 3 x4 expansion slots for full-height, half-length add-on card Each slot supports 25W power and an additional Molex 4-pin power cable (12V/1.5A and 5V/2A)		
Storage			
SATA/PCIe	▶ 2x SATA 6Gb/s for 2.5” external drive bays ▶ 1x M.2 2242/2280 M key for SATA/PCIe Gen 3 x3 ▶ 1x M.2 2242/2280 M key for PCIe Gen 4 x4		
Physical			
Dimensions	280 x 198 x 150mm (W x D x H, without foot pads)		
Weight	8.4kg		

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Model	MLB-3102
Mounting	Optional wall-mount bracket
Power Supply	
DC Input	DC 24V input (Molex DC-in jack)
AC Input	450W (24V/18.75A) AC/DC Medical-grade adapter
Environmental	
Operating Temperature	0°C to 40°C
Storage Temperature	-20°C to 70°C
Humidity	5% to 95%, non-condensing
Vibration	Operating: 2Grms, 5-500Hz, 3 axes Package (non operating): 3.44Grms, 10-1000Hz, 3 axes (w/MXM, w/SSD)
EMC	EN55032/35, CE, FCC
Safety	UL/cUL and CB (62368-1:2014)
Medical	Compliant with IEC 60601-1 3.1 ed / IEC 60601-1-2:2014 + A1:2020

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

2.3 MLB-3100 Functional Block Diagram

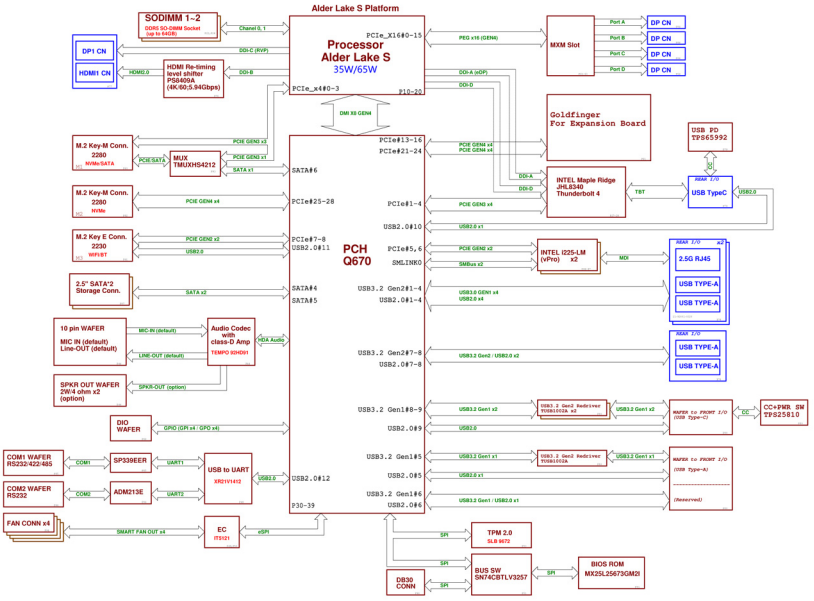


Figure 2-1: MLB-3100 Functional Block Diagram

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

2.4 Display Options

The MLB-3100 includes one HDMI from the CPU and five DisplayPort connectors, one from the CPU and four from MXM. All DisplayPorts support DP++. Use DisplayPort1 (DP 1) or HDMI (HDMI 1) to connect a monitor when booting the system for the first time to properly access the display settings in the BIOS menu.

	Port	Resolution
Display Port 1 from CPU	HDMI 1	4096x2304@60Hz
Display Port 2 from CPU	DP 1	4096x2304@60Hz
Display Port A from MXM	DP A	Based on MXM module
Display Port B from MXM	DP B	Based on MXM module
Display Port C from MXM	DP C	Based on MXM module
Display Port D from MXM	DP D	Based on MXM module

Table 2-1: Maximum Display Resolution

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

2.5 Mechanical Dimensions

NOTE:

All dimensions are in millimeters, unless noted.

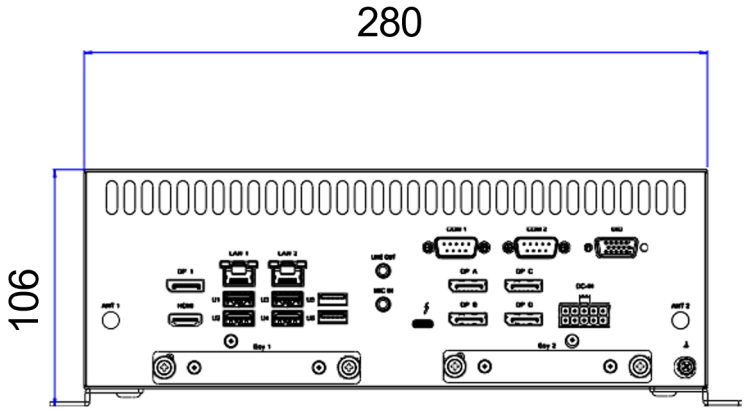


Figure 2-2: MLB-3100 Rear View
(including wall-mount brackets and footpads)

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

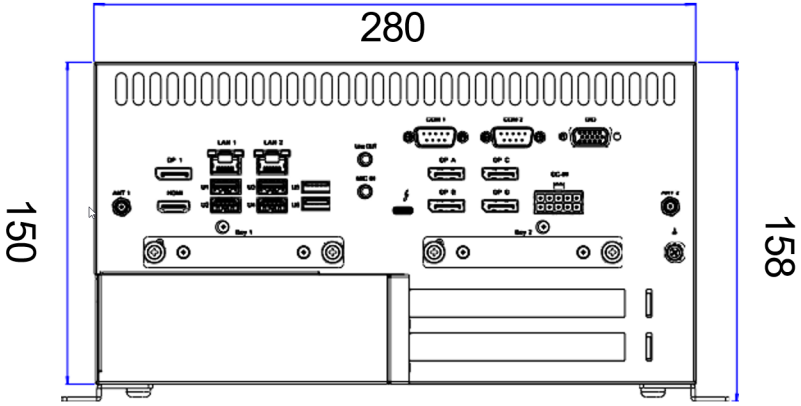


Figure 2-3: MLB-3102 Rear View
(including wall-mount brackets and footpads)

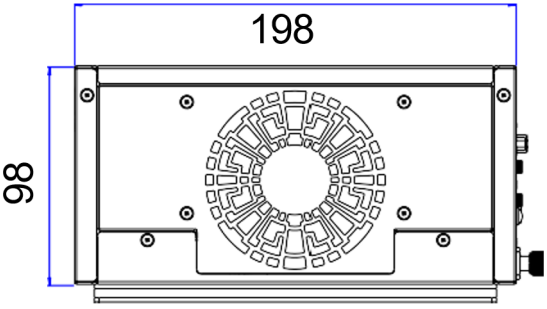


Figure 2-4: MLB-3100 Left Side View

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

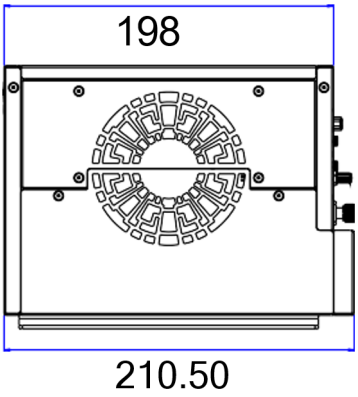


Figure 2-5: MLB-3102 Left Side View

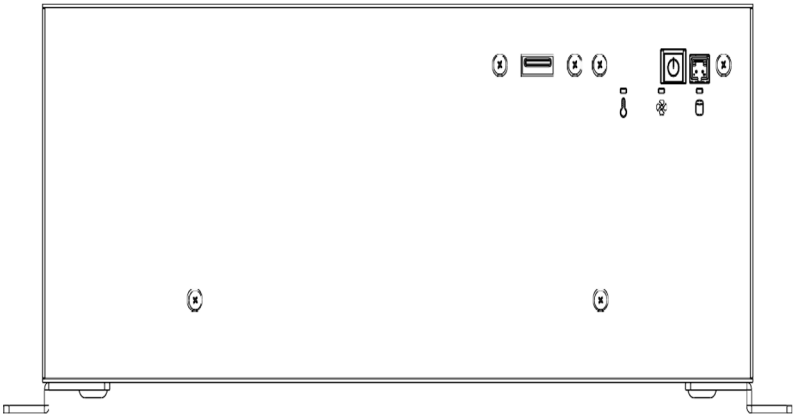


Figure 2-6: MLB-3100 Front View

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

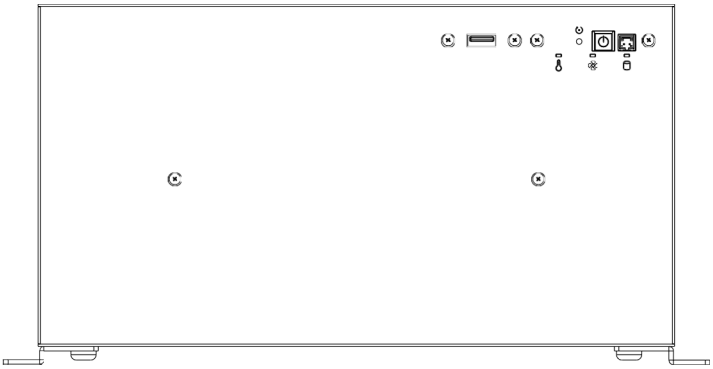


Figure 2-7: MLB-3100/3102 Bottom View

WARNING:

To prevent damage to the system, ensure there is a minimum 10 cm clearance around the air vents for unrestricted airflow. The air temperature inside the enclosure could rise above the specified operating temperature limits if the airflow through the vents is restricted.

AVERTISSEMENT: Pour éviter d'endommager le système, assurez-vous qu'il y a un dégagement minimum de 10 cm autour des bouches d'aération pour une circulation d'air sans restriction. La température de l'air à l'intérieur du boîtier peut dépasser les limites de température de fonctionnement spécifiées si le flux d'air à travers les évents est restreint.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

3 System Layout

3.1 Panel I/O

The MLB-3100 Series provides the following I/O access features. Features available is dependent on the model used.

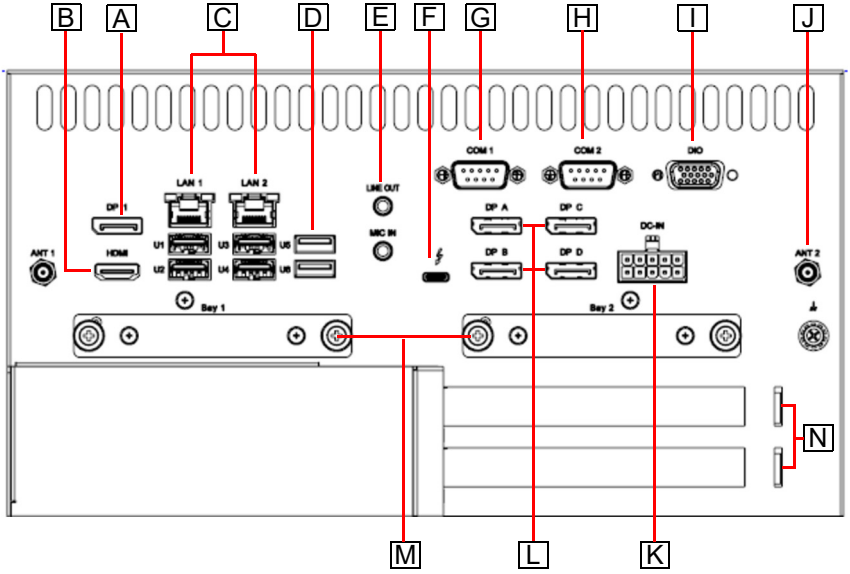


Figure 3-1: MLB-3100 Series Rear Panel I/O

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

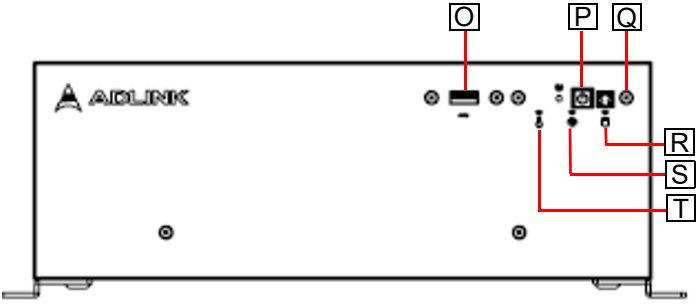


Figure 3-2: MLB-3100 Series Front Panel I/O

A	DisplayPort (DP1)	**B**	HDMI 2.0 (HDMI)
C	Intel I225LM (LAN 1/2) & 2x USB 3.2 Gen 1 Type A (U1/ U2/U3/U4)	**D**	2x USB 3.2 Gen 2 Type A (U5/U6)
E	MIc-in, Line out	**F**	Thunderbolt 4.0 / USB Type-C connector
G	*RS-232/422/485 (COM 1)	**H**	*RS-232 (COM 2)
I	DI/DO (DIO1)	**J**	Antenna (ANT 1/2)
K	24V DC Power input	**L**	4x DisplayPort (DP A/B/C/D)
M	2.5” hot swappable storage bay (Bay 1/2)	**N**	2x PCIe x4 Gen 3 slots (only for MLB-3102)
O	USB 3.1 Gen 1 Type A	**P**	Power on button. Lights blue when the system is powered on, blinks when the system suspends to RAM, and is off when the system suspends to disk.
Q	Remote Power-on button connector, with left and right pin being respectively GND and PWRBTN, short enabled. Requires additional cable with an ALEX 9566-02G tin-plated connector (MPN: ALEX-9553-02-PBT, black)	**R**	Fan Alarm LED. Blinks amber when CPU, GPU, or system fan is <300 rpm. CPU Fan abnormal: Lights up and darkens 10 times. System Fan1 abnormal: lights up and blinks twice 10 times. GPU Fan abnormal: Lights up and blinks thrice 10 times.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

S	Temperature Alarm LED. Blinks when the CPU (≥ 100°C) or GPU (≥ 95°C) overheats.	**T**	Storage Status LED. Blinks red when storage is being accessed.

Table 3-1: I/O Legend

NOTE:

*Due to chipset limitations, the program cannot assign specific COM port numbers to the device to fit various operating systems. For further information or assistance, please contact our ADLINK representative.

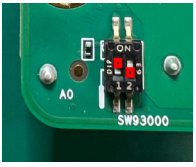
3.2 Jumper Settings

This section describes how to set the jumpers of the MLB-3100 Series to achieve the desired configuration for SATA/PCIe switching and thermal policy management.

3.2.1 Switching to SATA/PCIe Mode

The SW93000 jumper is used to switch between SATA or PCIe mode.

- SATA/PCIe Mode: Place the jumper cap on the designated pins to enable SATA or PCIe mode for the specified slots.

	Pins 1,4	Pins 2,3	Illustration
PCIe Mode	On	Off	

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

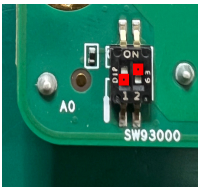
	Pins 1,4	Pins 2,3	Illustration
SATA Mode	Off	On	

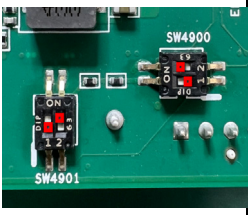
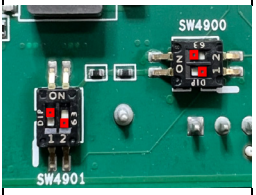
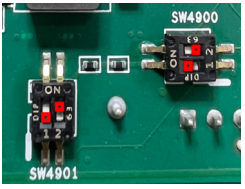
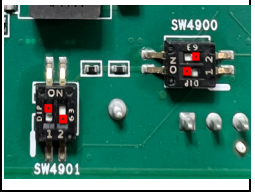
Table 3-2: SATA/PCIe Mode jumper settings

3.2.2 Configuring Thermal Policy

The MLB-3100 Series supports four thermal policies to optimize acoustic and thermal performance, particularly when using MXM Type A/B GPU cards.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

These policies are selected using specific jumper settings, as detailed below.

System	MXM GPU	SW4900		SW4901		Illustration
		Pins 1,4	Pins 2,3	Pins 1,4	Pins 2,3	
MLB-3100	Type A	Off	On	Off	On	
MLB-3102				On	Off	
MLB-3103	Type B	On	Off	Off	On	
MLB-3104				On	Off	

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

This page intentionally left blank.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4 Getting Started

This chapter outlines the procedures for 2.5" storage, M.2 module, wall-mount brackets, and driver installation.



Installation of an add-on device must be carried out by ADLINK service personnel only. Users must not disassemble the device themselves. Failure to comply with this instruction will result in loss of warranty.
AVERTISSEMENT: L'installation d'une carte d'extension PCIe doit être effectuée uniquement par le personnel de service ADLINK. Les utilisateurs ne doivent pas démonter l'appareil eux-mêmes.



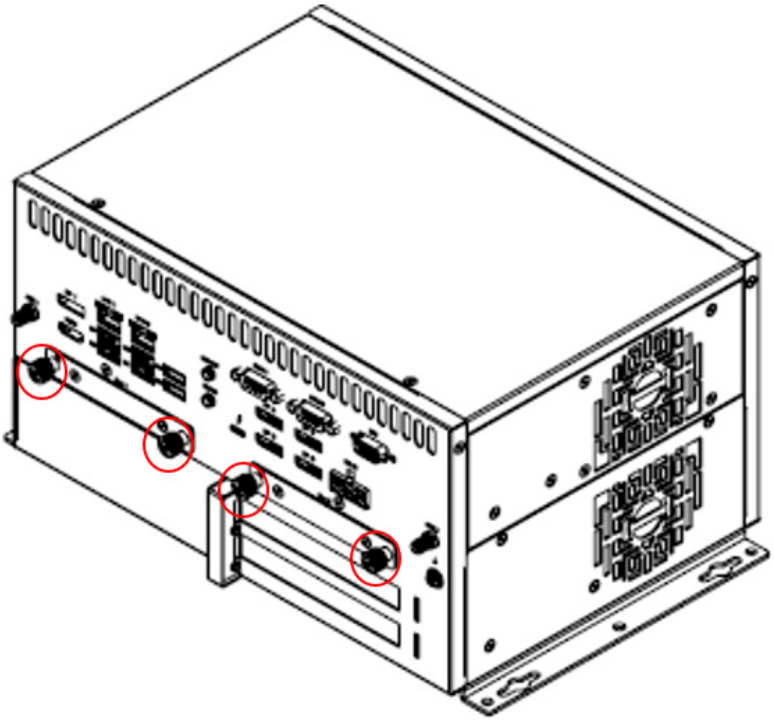
Disconnect the unit from power before opening the chassis, or installing any internal components. See “Important Safety Instructions” on page 41.
ATTENTION: Débranchez l'unité de l'alimentation avant d'ouvrir le châssis ou d'installer des composants internes. Le non-respect de cette instruction entraînera la perte de la garantie. Voir “Consignes de sécurité importantes” à la page 135.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4.1 Installing 2.5” Storage

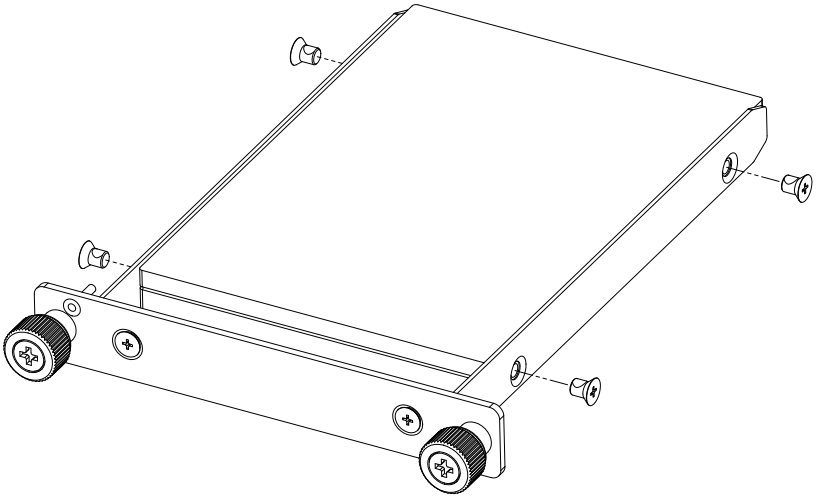
Before installing a disk drive, the drive bracket must be removed.

1. Remove the thumbscrews and take out the 2.5” drive bay.



Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

2. Place a 2.5” SSD up to 9mm thick into the bracket and use the 4 provided M3 screws at 4kgf/cm torque to attach the drive to the bracket.



3. Gently slide the bracket back into the drive bay until the SATA connector on the PCB is engaged, and then refasten the thumbscrews.

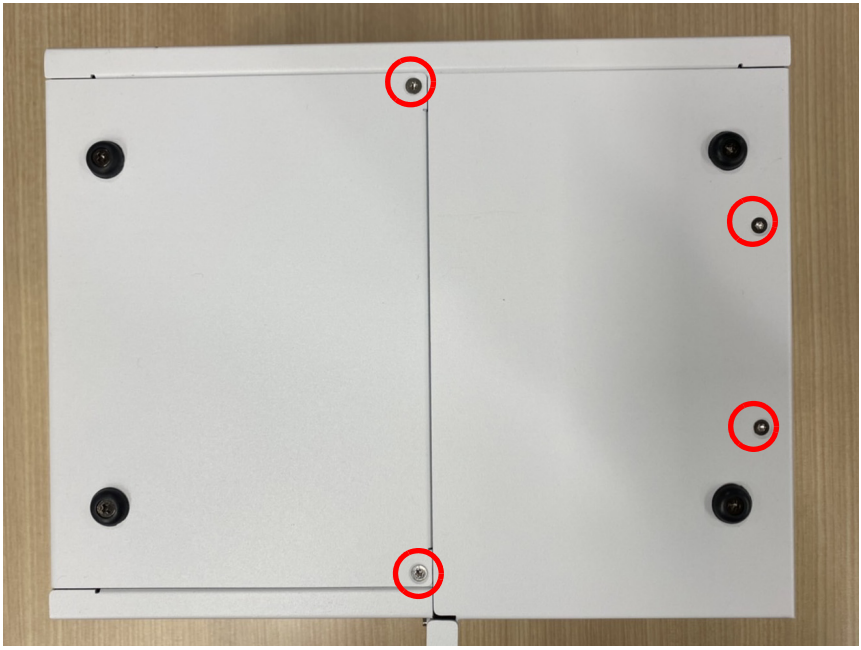
LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4.2 Installing an M.2 Module

Remove the bottom panel before installing an M.2 Module.

1. Remove 10 screws total to release the bottom panel from the chassis: 4 on the bottom, 2 on the left side, and 4 on the right side.

Bottom screws



Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Left side screws



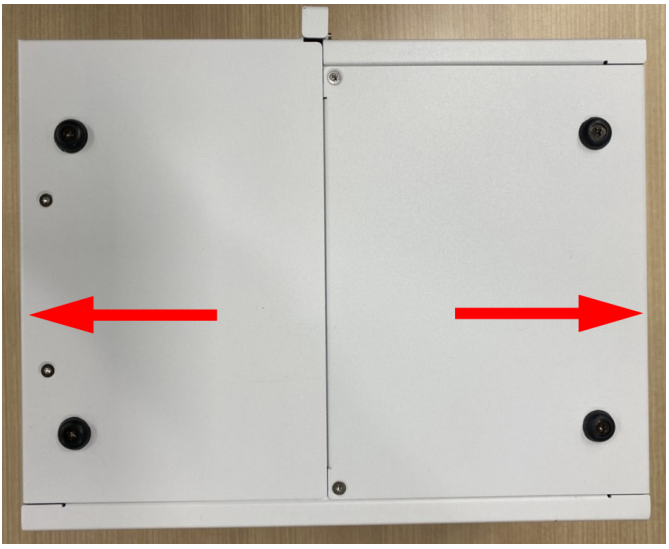
Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

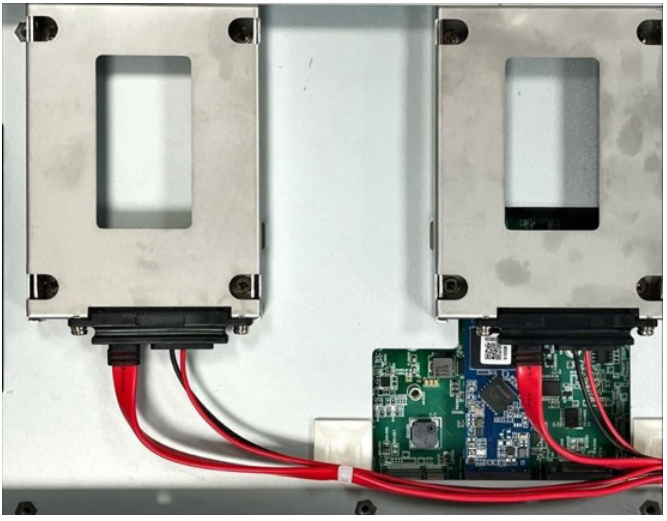
Right side screws



Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

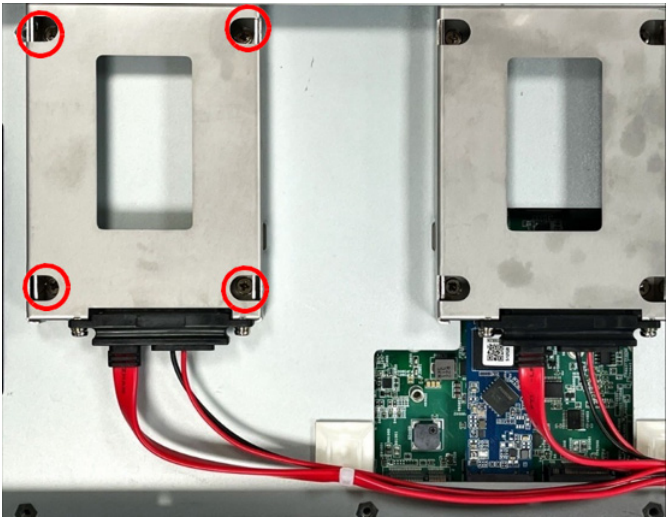
2. Apply the minimum amount of pressure necessary to slide the panels apart in the directions shown to reveal the internal contents of the unit.





LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

3. Remove the 4 screws attaching the left drive bay to the chassis.



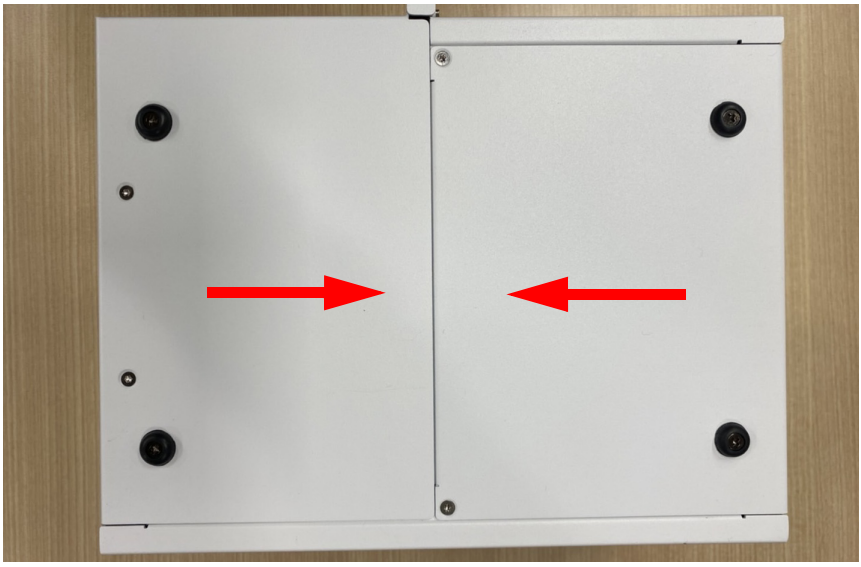
LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4. Move the drive bay to reveal the M.2 socket underneath and install an M.2 module with an M3 screw at 4kgf/cm torque. (P/N: 33-03342-0030-A0)
   - ▷ M.2 E-key module: Wi-Fi Kit Intel® Wireless-AX210 non-vPRO (P/N: 91-95266-0020)
   - ▷ Middle M.2 M-key module example: M.2 PCIe Gen 3 x4 SSD
   - ▷ Left M.2 M-key (SATA/PCIe) module example: M.2 2280 SATA SSD



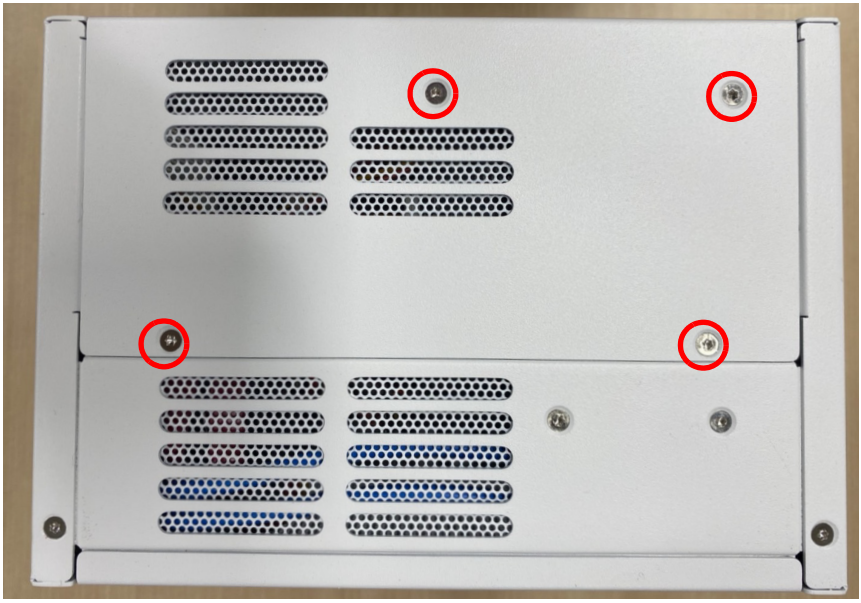
LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

5. After reinstalling the left and right side covers, fasten all the screws at 6kgf/cm torque.



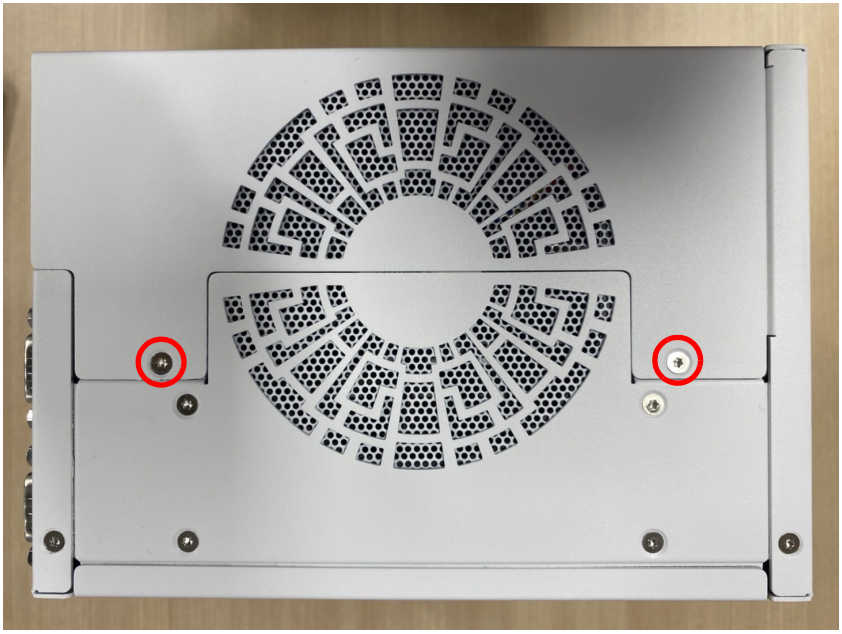
Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Right side screws



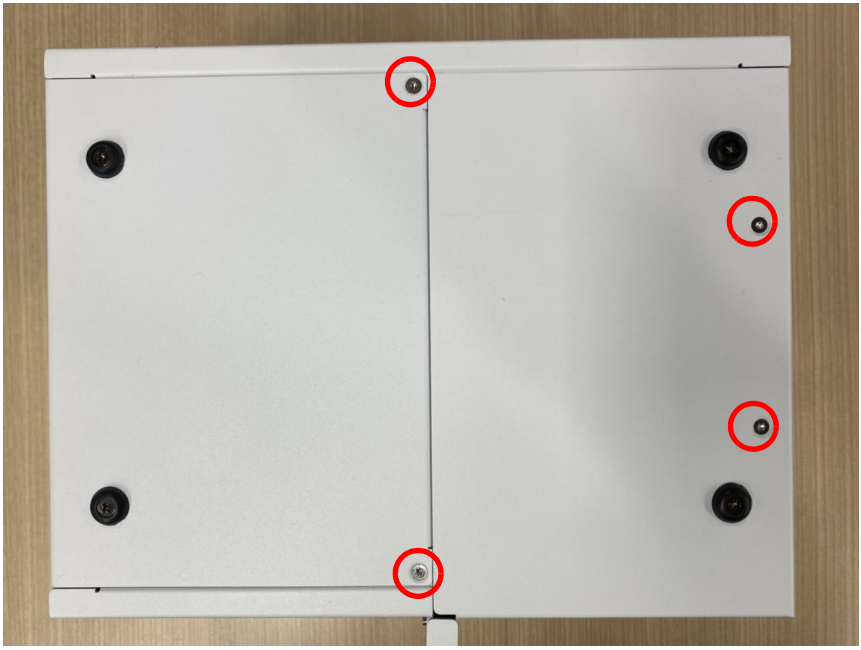
Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Left side screws



Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Bottom screws



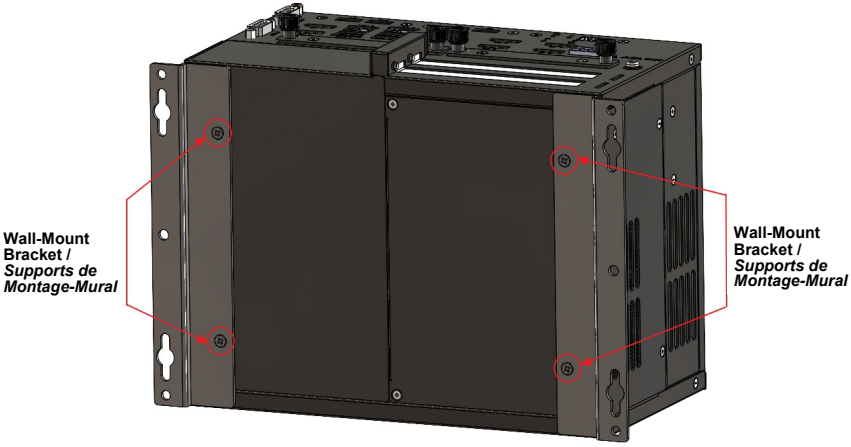
Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4.3 Mounting

4.3.1 Installing the Wall-Mount Brackets / Installation des Supports de Montage-Mural

Use the 4 footpad screws to attach the 2 wall-mount brackets to the chassis.

Utilisez les 4 incluses dans la boîte d'accessoires pour fixer les 2 supports de montage mural inclus au châssis.

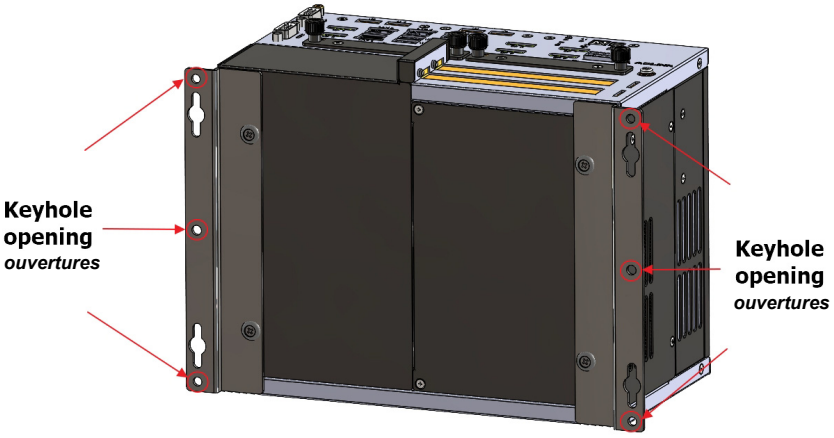


Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Mounting the Device / Montage de l'Appareil

Mount the device to a wall using the 4 keyhole openings indicated with M4 6mm screws torqued to 6kgf/cm, or the 6 mounting holes circled, according to the spacing dimensions of the holes in the bracket as shown in Figure 2-3 MLB-3100/MLB-3102 bottom view.

Montez l'appareil sur un mur en utilisant les 4 ouvertures en forme de trou de serrure indiquées avec des vis M4 de 6 mm serrées à 6 kgf/cm, ou les 6 trous de montage encerclés, selon les dimensions d'espacement des trous dans le support comme indiqué dans Figure 2-3 MLB-3100/MLB-3102 bottom view.



Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4.4 Driver Installation

Download the Windows 10 drivers from the product page at https://www.adlinktech.com/Products/Medical_Panel_Computer_Tablet/medical-box-pc/MLB-3100_with_NVIDIA_MXM_GPU?lang=zh-Hant

The following drivers must be installed:

- Intel GPU
- Chipset
- ME
- LAN
- Audio (There are two different codec drivers. Check the audio device after driver installation.)
- MXM
- DIO
- RAID

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Appendix 5 BIOS Setup

The Basic Input/Output System (BIOS) is a program that provides a basic level of communication between the processor and peripherals. In addition, the BIOS also contains codes for various advanced features applied to the device. The BIOS setup program includes menus for configuring settings and enabling device features. Most users do not need to use the BIOS setup program, as the device ships with default settings that work well for most configurations.


WARNING:

BIOS options used in this manual are for reference only, and are subject to change. Users can download the latest BIOS version from the ADLINK website


NOTE:

Changing BIOS settings may lead to unexpected system behavior and the possible inability to boot.

The procedures described in this chapter outline the most common operations performed with the system BIOS

5.1 Restoring Default Settings

Restoring the BIOS to default settings can sometimes revolve unexpected behavior or misconfiguration.


NOTE:

This procedure will also work if the display stays dark and the BIOS itself is not corrupted.

To restore default settings, do the following.

1. Power on the device and press the <DEL> key once the POST / boot logo screen appears. The BIOS setup menu will appear on screen. If the BIOS does not respond, make sure to wait to press <DEL> until the key-

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

board is initialized (indicated by flashing keyboard LEDs).

2. Press <F9>, and then press <ENTER> key to restore default settings.
3. Press <F10>, and then press <ENTER> to save your settings and exit.

The device will reboot with the BIOS default settings.

5.2 Enabling PXE / Network Boot

Some configurations may require booting the device from a network. The device supports Preboot Execution (PXE) ROM from the integrated Ethernet interface.


NOTE:

Ensure connection of necessary services and servers to your network before initiating a network boot.

To enable network book in the system BIOS, do the following.

1. Power on the device and press the <DEL> key once the POST / boot logo screen appears. The BIOS setup menu will appear on screen. If the BIOS does not respond, make sure to wait to press <DEL> until the key-

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

board is initialized (indicated by flashing keyboard LEDs).

2. Navigate to the Advanced screen.
3. Select Network Stack Configuration, and then press <Enter> twice.
4. Selected Enabled, and then press <Enter>
5. Configure network settings, and then press <Enter>.
6. Press <ESC. to return to the main menu.
7. Navigate to the Boot screen.
8. Select **Boot Option #1**, and then press <Enter>.
9. Select **Network**, and then press <Enter>.
10. Set all other boot devices to **Disabled**.
11. Press <F10>, and then press <Enter> to save your settings and to reboot the device.

The device will reboot and attempt to boot from the network with your settings.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

This page intentionally left blank.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Important Safety Instructions

For user safety, please read and follow all instructions, Warnings, Cautions, and Notes marked in this manual and on the associated device before handling/operating the device, to avoid injury or damage.

- Read these safety instructions carefully.
- Keep the User's Manual for future reference.
- Read the Specifications section of this manual for detailed information on the recommended operating environment.
- It is recommended that the device be installed in Information Technology Rooms that are in accordance with Article 645 of the National Electrical Code and NFPA 75.
- To avoid electrical shock and/or damage to device:
  - Keep device away from water or liquid sources.
  - Keep device away from high heat or humidity.
  - Keep device properly ventilated (do not block or cover ventilation openings).
  - Always use recommended voltage and power source settings.
  - Always install and operate device near an easily accessible electrical outlet.
  - Secure the power cord (do not place any object on/over the power cord).
  - Only install/attach and operate device on stable surfaces and/or recommended mountings.
  - The power cord must be connected to a socket or outlet with a ground connection.
- This apparatus is powered by an adapter, and make sure the adapter should be kept with an earth connection if it has protective earthing. Please follow the steps below.

1. System Preparation: Ensure the system is ready. Locate the equipotential terminal on the device. This terminal is used to optionally connect to the hospital's grounding/

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

earthing system. Please refer to Figure 3-1: MLB-3100 Rear Panel I/O.

2. Prepare the Grounding Wire: Prepare the grounding wire and connect one end to the hospital's grounding/earthing system.
3. Connect to Equipotential Terminal: Connect the grounding wire to the equipotential terminal of the device.

- If the device will not be used for long periods of time, turn off and unplug from its power source.
- Never attempt to repair the device, which should only be serviced by qualified technical personnel using suitable tools.
- A Lithium-type battery may be provided for uninterrupted backup or emergency power.



Risk of explosion if battery is replaced with one of an incorrect type; please dispose of used batteries appropriately.

- This equipment is not suitable for use in locations where children are likely to be present.
- The device must be serviced by authorized technicians when:
  - The power cord or plug is damaged
  - Liquid has entered the device interior
  - The device has been exposed to high humidity and/or moisture
  - The device is not functioning or does not function according to the User's Manual
  - The device has been dropped and/or damaged and/or shows obvious signs of breakage

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

- Disconnect the power supply cord before loosening the thumbscrews and always fasten the thumbscrews with a screwdriver before starting the system up
- It is recommended that the device be installed only in a server room or computer room where access is:
  - Restricted to qualified service personnel or users familiar with restrictions applied to the location, reasons therefor, and any precautions required
  - Only afforded by the use of a tool or lock and key, or other means of security, and controlled by the authority responsible for the location

	**BURN HAZARD** **Hot surface! Do not touch!** Touching this surface could result in bodily injury. To reduce risk, allow the surface to cool before touching.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Consignes de Sécurité Importante

S'il vous plaît prêter attention stricte à tous les avertissements et mises en garde figurant sur l'appareil, pour éviter des blessures ou des dommages.

- *Lisez attentivement ces consignes de sécurité.*
- *Conservez le manuel de l'utilisateur pour pouvoir le consulter ultérieurement.*
- *Lisez la section Spécifications de ce manuel pour des informations détaillées sur l'environnement d'exploitation recommandé.*
- *Il est recommandé d'installer l'appareil dans des salles de technologie de l'information conformes à l'article 645 du National Electrical Code et à la NFPA 75.*
- *Pour éviter les chocs électriques et/ou d'endommager l'appareil:*
  - *Tenez l'appareil à l'écart de toute source d'eau ou de liquide.*
  - *Tenez l'appareil à l'écart d'une forte chaleur ou d'une humidité élevée.*
  - *Maintenez l'appareil correctement ventilé (n'obstruer ou ne couvrez pas les ouvertures de ventilation).*
  - *Utilisez toujours les réglages de tension et de source d'alimentation recommandés.*
  - *Installez et utilisez toujours l'appareil près d'une prise de courant facilement accessible.*
  - *Fixez le cordon d'alimentation (ne placez aucun objet sur le cordon d'alimentation).*
  - *Installez/fixez et utilisez l'appareil uniquement sur des surfaces stables et/ou sur les fixations recommandées.*
  - *Le cordon d'alimentation doit être connecté à une prise ou à une prise de courant avec mise à la terre.*
- *Si l'appareil ne doit pas être utilisé pendant de longues périodes, éteignez-le et débranchez-le de sa source d'alimentation*

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

- *N'essayez jamais de réparer l'appareil, qui ne doit être réparé que par un personnel technique qualifié à l'aide d'outils appropriés*
- *Une batterie de type Lithium peut être fournie pour une alimentation de secours ininterrompue ou d'urgence.*



ATTENTION: Risque d'explosion si la pile est remplacée par une autre de type incorrect. Veuillez jeter les piles usagées de façon appropriée.

- *Cet équipement ne convient pas à une utilisation dans des lieux pouvant accueillir des enfants.*
- *L'appareil doit être entretenu par des techniciens agrees lorsque:*
- *Le cordon d'alimentation ou la prise est endommagé(e)*
- *Un liquide a pénétré à l'intérieur de l'appareil.*
- *L'appareil a été exposé à une forte humidité et/ou de la buée.*
- *L'appareil ne fonctionne pas ou ne fonctionne pas selon le manuel de l'utilisateur.*
- *L'appareil est tombé et/ou a été endommagé et/ou présente des signes évidents de dommage.*
- *Débranchez le cordon d'alimentation avant de desserrer les vis à oreilles et serrez toujours les vis à oreilles avec un tournevis avant de mettre le système en marche.*
- *Il est recommandé d'installer l'appareil uniquement dans une salle de serveurs ou une salle informatique où l'accès est:*
  - *Réservé au personnel de service qualifié ou aux utilisateurs familiarisés avec les restrictions appliquées à l'emplacement, aux raisons de ces restrictions et toutes les précautions requises*
  - *Uniquement autorisé par l'utilisation d'un outil, d'une serrure et d'une clé, ou d'un autre moyen de sécurité, et contrôlé par l'autorité responsable de l'emplacement.*

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

	***RISQUE DE BRÛLURES*** ***Partie chaude!*** *Ne touchez pas cette surface, cela pourrait entraîner des blessures. Pour éviter tout danger, laissez la surface refroidir avant de la toucher.*

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Getting Service

Ask an Expert: http://askanexpert.adlinktech.com

ADLINK Technology, Inc.
No. 66, Huaya 1st Rd., Guishan District
Taoyuan City 333411, Taiwan
Tel: +886-3-216-5088
Fax: +886-3-328-5706
Email: service@adlinktech.com

Ampro ADLINK Technology, Inc.
6450 Via Del Oro
San Jose, CA 95119-1208, USA
Tel: +1-408-360-0200
Toll Free: +1-800-966-5200 (USA only)
Fax: +1-408-600-1189
Email: info@adlinktech.com

ADLINK Technology (China) Co., Ltd.
300 Fang Chun Rd., Zhangjiang Hi-Tech Park
Pudong New Area, Shanghai, 201203 China
Tel: +86-21-5132-8988
Fax: +86-21-5132-3588
Email: market@adlinktech.com

ADLINK Technology GmbH
Hans-Thoma-Straße 11
D-68163 Mannheim, Germany
Tel: +49-621-43214-0
Fax: +49-621 43214-30
Email: emea@adlinktech.com

Please visit the Contact page at www.adlinktech.com for information on how to contact the ADLINK regional office nearest you.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000