ARL998 User Reference Manual

SPECIFICATIONS

Model No	ARL998	ARL998-B
CPU	Intel Core i5-9500E, 3.00GHz Option: Intel i7-9700E, 2.60GHz	Intel Core i5-9500TE, 2.20 GHz Option: Intel i7-9700TE, 1.80GHz
Chipset	Intel® 9th/8th Gen. Core™ processors with Intel® Q370 PCH	
Slot	2x PCIe (x8) expansion slots Option: 2PCI expansion slots Option: 1x PCIe (x16) expansion slot	
Display	17.3" LCD display, 1920x 1080 Anti-reflection tempered strengthen glass	
VGA	HD graphics integrated into the processor	
Memory	2x 8GB DDR4	
HDD	1x SSD 240GB 2.5", support 1x 2.5" removable SATA	
Interfaces	2x DB9 for COM1, COM2, DVI-D, HDMI, DP connector, 6x USB 3.0 connector 2x Gbit LAN RJ-45, RCA Jack 3x1 for HD audio	
LAN	IntelR I219LM GbE LAN Intel® I210AT / I211AT GbE LAN	
Audio	Intel® Q370 PCH-H built-in HD audio controller With Realtek Codec ALC888S-VD2-GR	
Speaker	Built-in amplified 2x 3W speakers	
KB/MS	Industrial keyboard with touchpad Keyboard layout: CH, FR, GR, KR, RU, SP, UK, US	
Power Supply	400W, 100~240 VAC, Auto switch	2x 95W Li-ION battery Packs (Hot-Swappable), 100W AC Adapter, up to 4 hours battery life
Construction	Rugged Aluminum Construction with shock absorbing rubber corners	
Dimension	428.6x 110.8x 367.5 mm (Wx Hx D)	
Weight	6.8 kgs	
Carrying Case	Padded carrying case with wheels	

ENVIRONMENTAL FACTORS

	Operating	Non-Operating
Temperature	0°C~50°C	-20°C~60°C
Relative Humidity	10%~90%	10%~95%
Approval	CE, FCC, RoHS	

OPTIONS

Power Supply		
	ARL998: 400W, 100~240 VAC, Auto switch	
	ARL998-B: 2x 95W Li-ION battery Packs (Hot-Swappable)	
Processor		
	●	Intel Core i7-9700E, 2.60 GHz Processors
		Intel Core i7-9700TE, 1.80 GHz Processors

Standard Accessory Kits

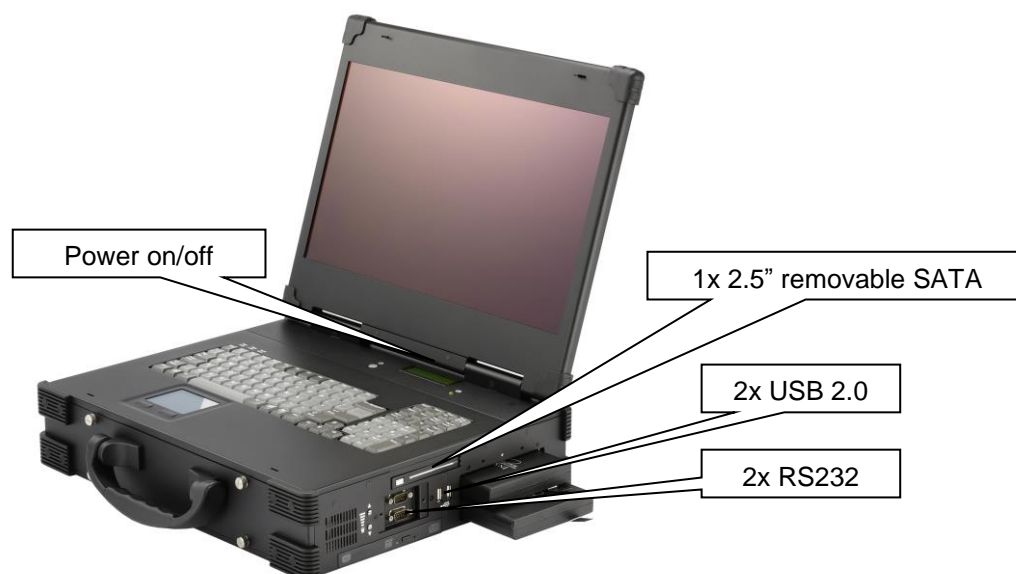| ARL998 / ARL998-B			
Model		**Accessory Kit**	**Qty**
ARL998	1	ARL998 Portable Computer system	1
	2	Carrying Case with wheels	1
	3	Driver CD	1
	4	User's Manual	1
	5	Power Cord	1
	6	Anti-Static Bag	1
	7	Screw Pack (stabilizer)	1
	8	Stabilizer Supports Pack	1
	9		

Carrying Case with Wheels

ARL998/ ARL998-B features:

● All-in-one design rugged laptop
● Rugged Aluminum Construction with shock absorbing rubber corners
● Compact Size Lightweight Design
● Built-in 17.3" LCD display, 1920x 1080 resolution with anti-reflection tempered glass
● Intel® 9th/8th Gen. Core™ i5 /i7 processors with Intel® Q370 PCH
● Mini-ITX MB, Intel Core i5-9500E or i7-9700E (ARL998) Processors
  Intel Core i5-9500TE or i7-9700TE (ARL998-B) Processors
● 2 PCIe (x8) expansion slots
  Option: 2x PCI expansion slots
  Option: 1x PCIe (x16) expansion slot
● Industrial Keyboard multi-language with touchpad
● 400W PSU or 2x 95W Li-ion battery packs, up to 4 hours battery life
● Built-in 240GB SSD, support 1x 2.5" removable SATA
● Dual Gigabit Ethernet Support
● Carrying case to manage portable PC with ease

The ARL998-B is a laptop-style multi-slot battery computing system with rugged aluminum chassis construction and corner bumper protection. It features the Intel 9th Generation Core i7 or i5 processors with ultra fast DDR4 memory. The unit offers 1PCI-E (x16) and 1PCI-E (x1) or 2 PCI full-length expansion slots for latest high speed acquisition boards. Internal storage starts at 240G SSD, and offers a removable 2.5" drive space. Everything is combining in a portable package with a 17.3", 1920x 1080 resolution LCD with anti-reflection tempered glass and foldable multi-languages keyboard and touchpad. Interfacing with the unit takes place further with the built-in dual Gigabit Ethernet, 6x USB 3.0, Serial ports and output feature DVI, DisplayPort and HDMI.

Dual high capacity Li-ion hot-swappable battery totaling 190WHr makes the ARL998-B ideal for critical application. It also can operate with 100W AC adapter for AC operation and recharging, and the LCD panel for battery capacity shows battery array fuel gauge, power, current, charge/ discharge state, time to fully charged and time to empty.

Applications: Military, Industrial automation, Digital TV test & analysis, Mobile Computing,
         Outdoor Computers, video conferencing, E-learning, Speech Technologies,
         Portable Workstation, Telemedicine, Multimedia, Mission Critical Computing

Power on/off

1x 2.5" removable SATA

2x USB 2.0

2x RS232

2.0 Internal Hardware Access

Be sure power cable is not connected to the system before proceeding
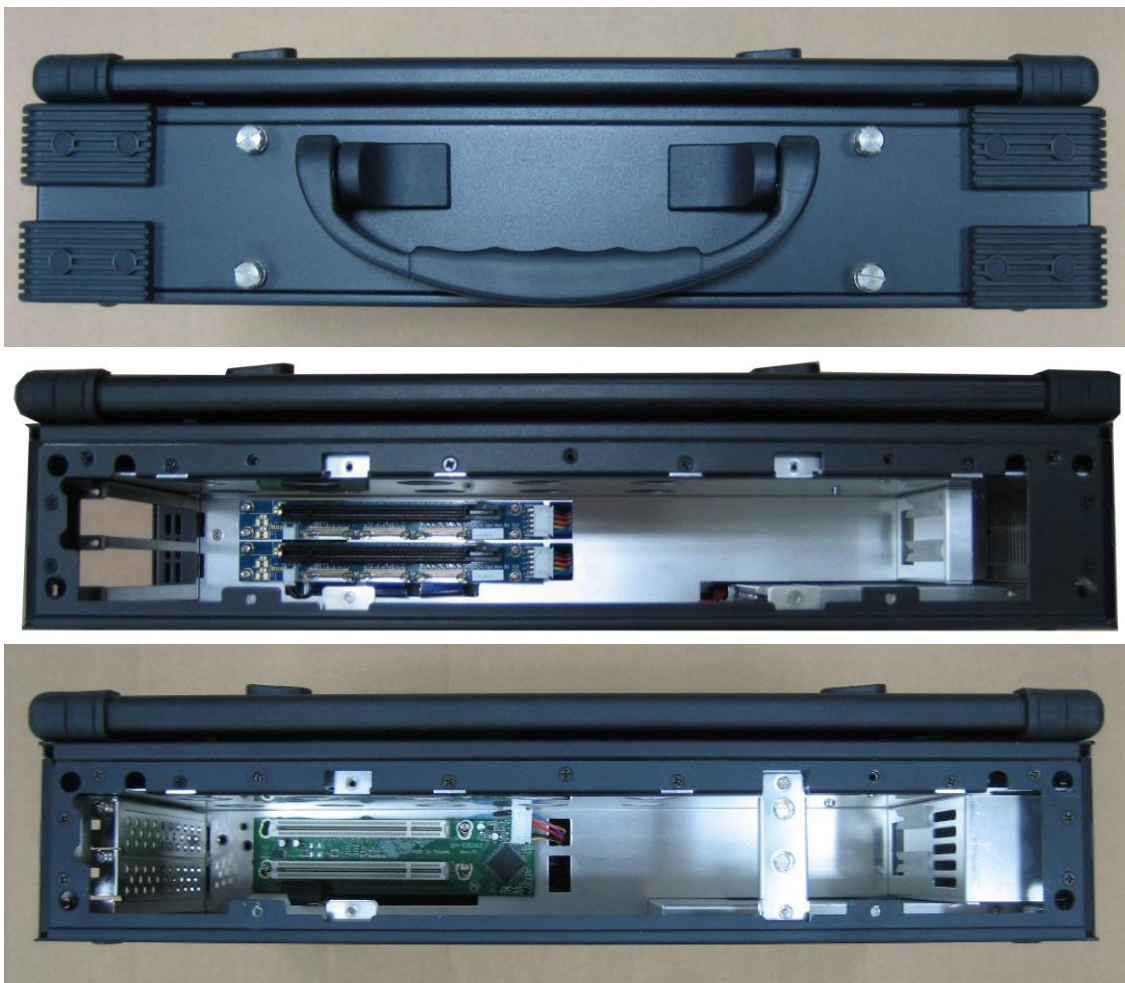
1. Unscrew the 4 thumb screws to remove the cover.

Unscrew

Unscrew

2. Install user's add-in cards.
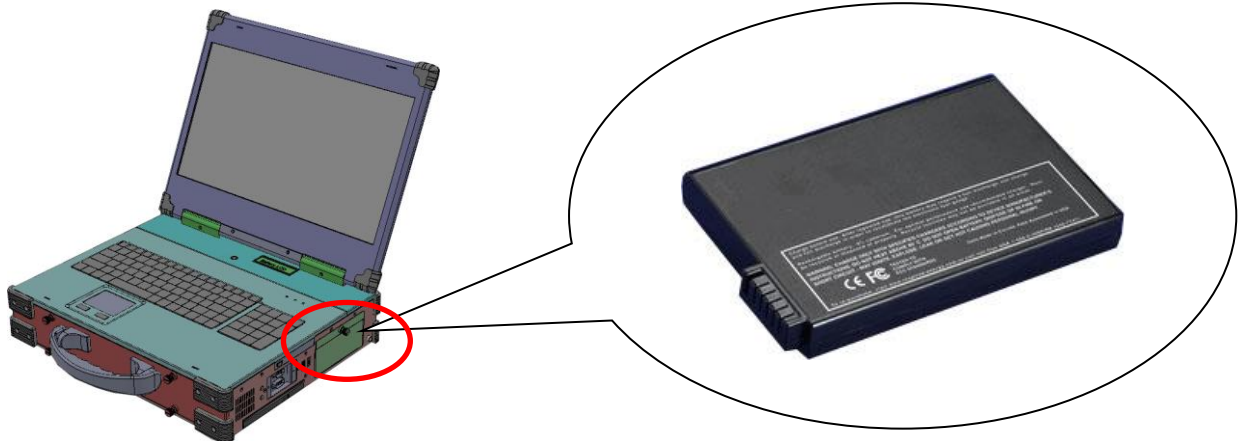**A: 1PCI-E (x16), 1PCI-E (x1) full-length expansion slot**
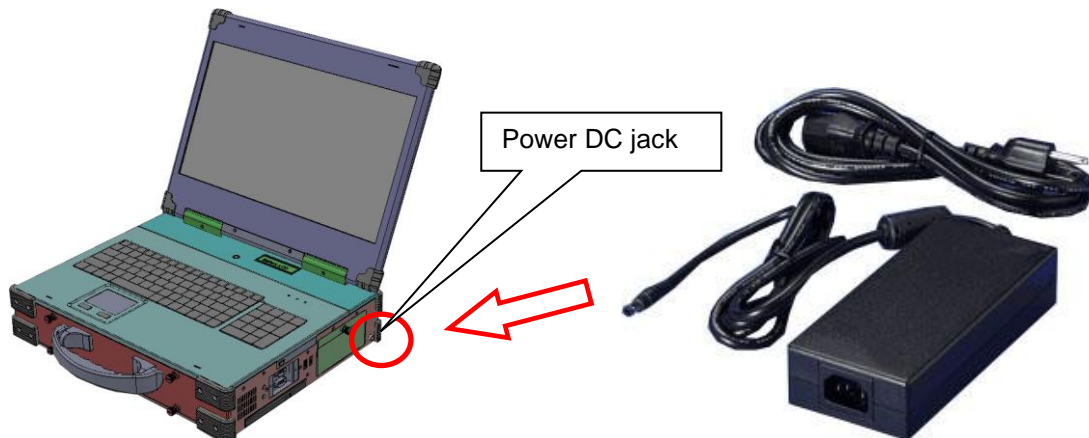**B: 2 PCI full-length expansion slots**

3.0 Battery Pack (ARL998-B)

1. **Battery Pack**
   The lithium ion battery pack is on the right side of the computer.

2. **AC Operation / Battery Charging**
   Insert the adapter cord into the Power DC jack for recharging
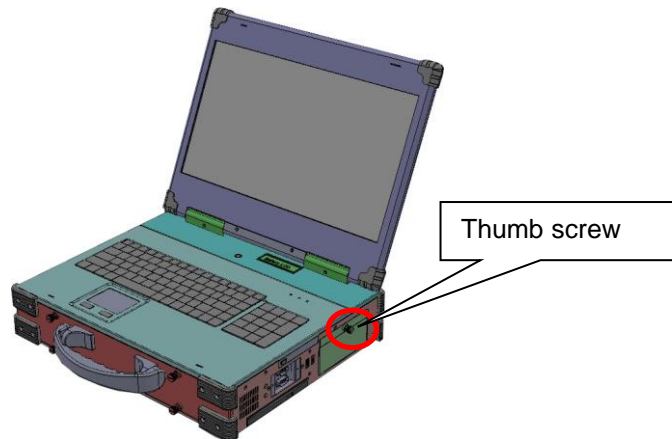
   Power DC jack

3. **LCD panel for battery capacity**
   The LCD display shows battery array fuel gauge, power, current, charge/ discharge state, time to fully charged, time to empty.

   65% Discharg. 3.1H

4. Replacing the battery

4.1 Release the thumb screw of the battery cover

Thumb screw

4.2 Pull out the battery connector from the slot

4.0 Software Installation

You can use the built-in DVD-RW to load operating system and additional applications software into the system. Available medium from USB or download can also be possible.

DOS Boot up: DOS boot up requires you to have a version of the DOS installed on hard disk drive or floppy. Depending on the execution sequence you have set in the batch file, you will usually get a DOS prompt after loading.

Window Boot up: Windows boot up requires you to have Windows installed in the hard disk drive. During Windows boot up, you will see a sequence of access to your hard disk drive which will eventually take you into a graphical user interface environment.

Other O/S description: Many other operating systems are available in the market, such as Linux, Windows, Solaris and DOS. These operating systems will behave differently and you should react accordingly.

5.0 Troubleshooting

1. Installation problem:
1. Normally problem with a fail start up is due to installation problem.
2. Double check all the peripheral cards or items you have added to the ARL.
3. Are all the items seated properly?
4. Are all the cables connected back to its original or correct position?
5. Are the items you have added compatible?
6. Before you check for these, turn the computer off and unplug the power cord.
7. Check for 1 thru 5 and then re-power up the computer.
8. Remove all items that were added and re-try system power up.
9. If the system starts now, try inserting 1 new item in at a time and try powering up.
10. Repeat this step until you get the desired result.

2. BIOS Beep Code:
The BIOS beep code indicates error in system initialization. The BIOS of the system board will associate with video and memory error. Please check your video card is properly seated and your memory is installed properly.

3. System Fails to power up:
1. Check you power connection first.
2. Check the main power switch is in the ON positions (I) *If cold switch is available.
3. Press the power button located on the machine.

4. No display (LCD):
1. Check all the proper power up procedure has been taken.
2. Hook up an external LCD to the VGA port, to check if video is present.
3. If video is present on external LCD, check the internal LCD cable connection.
4. Or check your VGA setting to make sure LCD video is enabled.
5. If there is no video on external, check your system to make sure everything is seated properly.
6. If everything is seated properly and still no video, call us for further assistance.

5. External LCD no display:
1. Check to see if you have internal LCD video.
2. Check if your LCD is functioning properly.
3. Check your VGA setting to make sure external video is enabled.

6. Keyboard fails:
1. Make sure the keyboard plug is inserted completely into the portable.
2. Make sure you do not have another keyboard connected to the side I/O PS/2 port.

7. TOUCHPAD fails:
1. Make sure the keyboard plug is inserted completely into the portable.
2. If you have an external PS/2 mouse hook up on the side I/O PS/2 port, the touch pad will not function simultaneously.
3. If your operating system requires and does not load the mouse driver automatically, make sure you have the proper mouse driver loaded.