

# ARP998 User Reference Manual



## SPECIFICATIONS

<b>Model No</b>	<b>ARP998</b>
<b>CPU</b>	Intel Core i5-9500E, 3.00GHz Processors Option: Intel Core i7-9700E, 2.60 GHz
<b>Chipset</b>	Intel 9th/8th Gen. Core™ i5 /i7 processors with Intel Q370 PCH
<b>Operating System</b>	Support: Windows 10 (64-bit), Linux Fedora (64-bit) & Ubuntu (64-bit)
<b>Slot</b>	2 PCI, 1PCI-E (x16) full-length expansion slots Option: 3 PCI-E (x8, x8, x4) full-length expansion slots (M.2 slot is used) Option: 3 PCI-E (x8, x8, x1) full-length expansion slots
<b>Display</b>	17.3" 1920x 1080 LCD Monitor Option: 17.3", 3840x 2160 resolution
<b>Graphics</b>	HD graphics integrated into the processor
<b>Memory</b>	16GB DDR4 RAM
<b>HDD</b>	1x 500GB SSD Support 2x 2.5" removable SATA
<b>Interfaces</b>	2x DB9 for COM1, COM2, DVI-D, HDMI, DP, 6x USB 3.0 connectors 2x Gbit LAN RJ-45, RCA Jack 3x1 for HD audio
<b>LAN</b>	Intel I219LM GbE LAN GbE Intel I210AT/ I211AT Gigabit LAN (as 2nd GbE)
<b>Audio</b>	Built HD audio with Realtek ALC888S
<b>Speaker</b>	Built-in amplified 2x 3W speakers
<b>KB/MS</b>	Industrial keyboard with touchpad Keyboard layout: CH, FR, GR, KR, RU, SP, UK, US
<b>Power Supply</b>	400W, 100~240 VAC, Auto switch
<b>Construction</b>	Rugged Aluminum Construction with shock absorbing rubber corners
<b>Dimension</b>	418x 352x 166 mm (Wx Hx D)
<b>Weight</b>	7.6 kgs
<b>Carrying Case</b>	Padded carrying case with wheels

## ENVIRONMENTAL FACTORS

	<b>Operating</b>	<b>Non-Operating</b>
<b>Temperature</b>	0°C~50°C	-20°C~60°C
<b>Relative Humidity</b>	10%~90%	10%~95%
<b>Shock</b>	10g, 11ms, half-Sine	30g, 11ms, half-Sine
<b>Vibration</b>	10-500Hz (0.4 Grms)	10-500Hz (1.12 Grms)
<b>Approval</b>	CE, FCC, RoHS	

## ORDERING INFORMATION

Product No.	Description
ARP998-17WUSA	17.3" FHD LCD, i5-9500E, 16G RAM, 3 PCIe (x8, x8, x1), 500G SSD, 400W PSU, Carrying case
ARP998-17WUSB	17.3" FHD LCD, i5-9500E, 16G RAM, 2 PCIe (x16, x1), 500G SSD, 400W PSU, Carrying case
ARP998-17WUSC	17.3" FHD LCD, i5-9500E, 16G RAM, 1 PCIe (x16), 2 PCI, 500G SSD, 400W PSU, Carrying case
Option:	
17.3", 3840x 2160 resolution	
Intel Core i7-9700E, 2.60 GHz	
Touch screen (Resistive)	
Sunlight readable (1000 nits)	
Keyboard layout: CH, FR, GR, KR, RU, SP, UK, US	

## Standard Accessory Kits

<b>ARP 998</b>			
<b>Model</b>	<b>Accessory Kit SKD</b>		<b>Qty</b>
<b>ARP998</b>	<b>1</b>	ARP998 Portable Computer system	1
	<b>2</b>	Carrying Case with wheels	1
	<b>3</b>	Driver CD	1
	<b>4</b>	User's Manual	1
	<b>5</b>	Power Cord	1
	<b>6</b>	Anti-Static Bag	1
	<b>7</b>	Screw Pack (stabilizer)	1
	<b>8</b>	Stabilizer Supports Pack	1
	<b>9</b>		



Carrying Case with Wheels

## 1.0 Introduction

### **ARP 998 features:**

- All-in-one design rugged portable computer
- Rugged Aluminum Construction with shock absorbing rubber corners
- Compact Size Lightweight Design
- Built-in 17.3" LCD display, 1920x 1080
- Intel 9th Core i5-9500E or i7-9700E Processors
- 3x PCI-E (x8, x8, x1) full-length expansion slots
  - Option1: 2x PCI-E (x16, x1) full-length expansion slots
  - Option2: 2 PCI, 1x PCI-E (x16) full-length expansion slots
- 400W Power supply
- Built-in 500GB SSD, Support 2x 2.5" removable SATA
- Dual Gigabit Ethernet Support
- Industrial Keyboard multi-language with touchpad
- Keyboard is integrated with the portable to allow closing against the portable for both convenience and protection in transportation
- Large handle provides convenience transportation of the portable with comfort and ease
- Carrying case to manage portable PC with ease

The ARP998 is a lightweight portable systems, It offers 3x PCI-E (x8, x8, x1) or option: 2x PCI-E (x16, x1) or option: 2PCI, 1PCI-E (x16) expansion slots platform built using heavy duty metal to provide tough, go-anywhere unit ideally suitable for harsh/severe environments and mission critical applications.

ARP998 is designed for harsh environment operations; Every ARP998 is constructed with easy access to its expansion ports for immediate system upgrade or maintenance. Functional practicality combined with the simple and polished design, the ARP998 with its extra-rugged construction to sustain bumps and impacted blows, is the most cost-effective, durable and efficient portable solution for your mission critical applications.

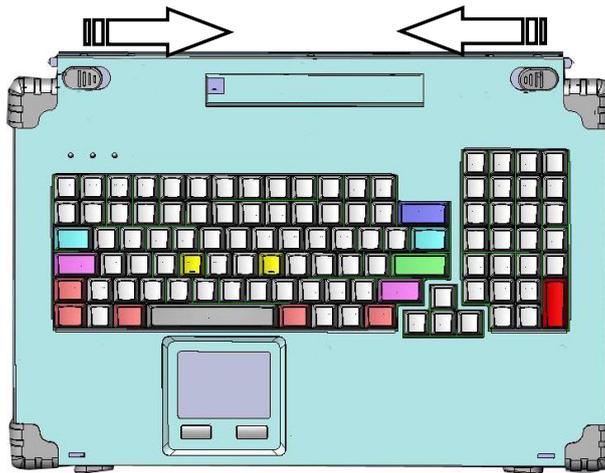
Applications: Military, Industrial automation, Digital TV test & analysis, Mobile Computing, Outdoor Computers, video conferencing, E-learning, Speech Technologies, Portable Workstation, Telemedicine, Multimedia, Mission Critical Computing

## 2.0 Operation

1. Releasing Keyboard by pushing the 2 taps located on top side of the chassis to release the locking mechanism, and then pull out the keyboard.



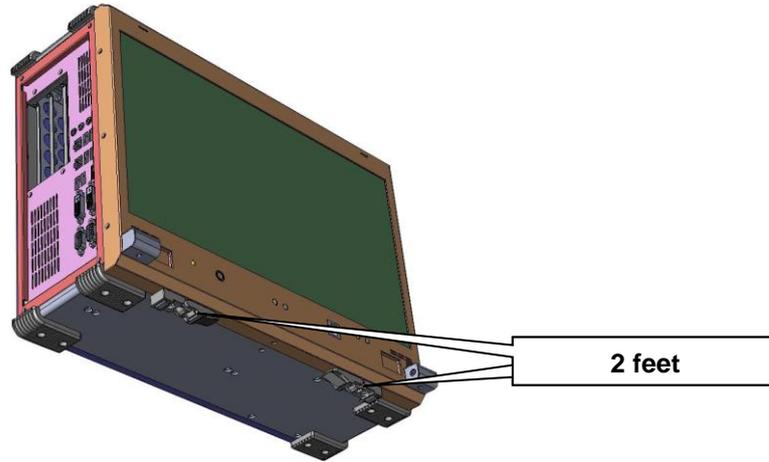
2. You have the option of leaving the keyboard attached to the chassis or they can be release independently from the chassis by pushing the two levers inward to release the lock.



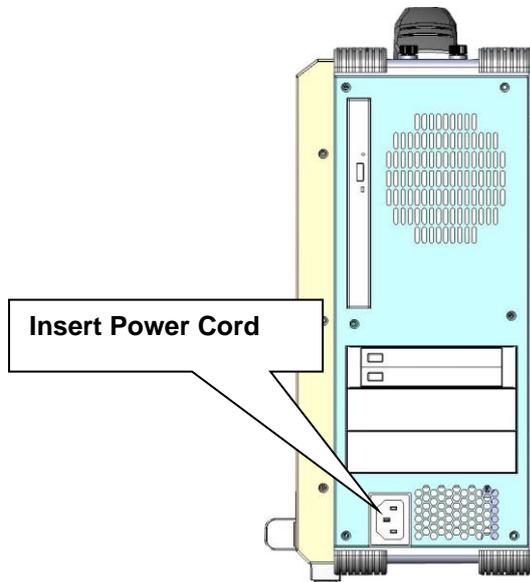
3. Connect the RJ-45 keyboard/touchpad cable to the front bottom right corner of the computer. Make sure the pin direction is correct when inserting.



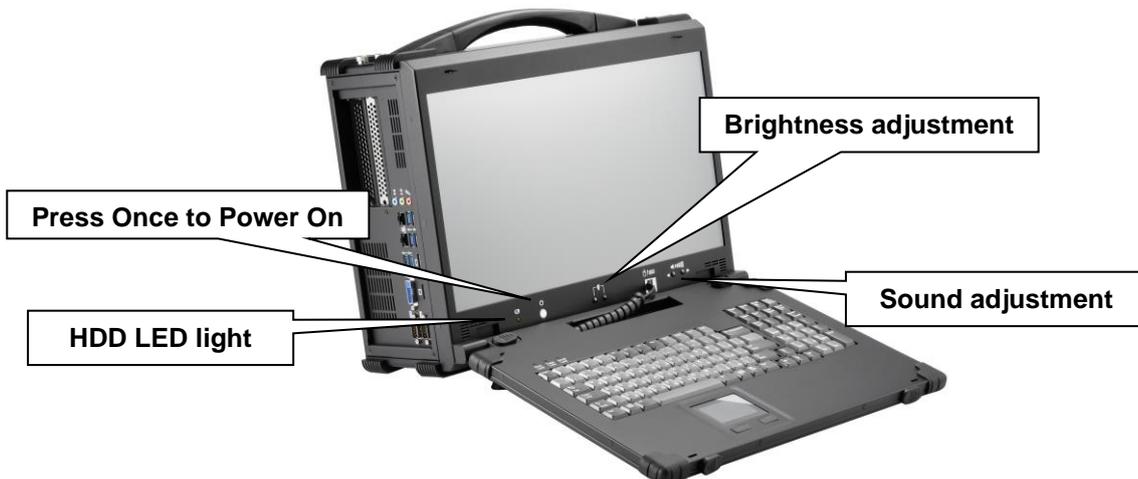
4. You can flip the 2 feet located underneath the computer outward to help create an angle for the computer for viewing comfort.



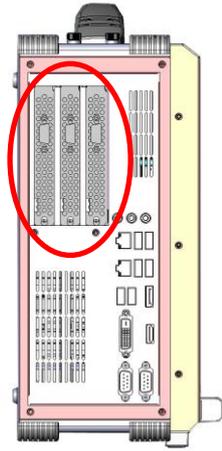
5. Connect the power cable outlet into the AC power supply unit



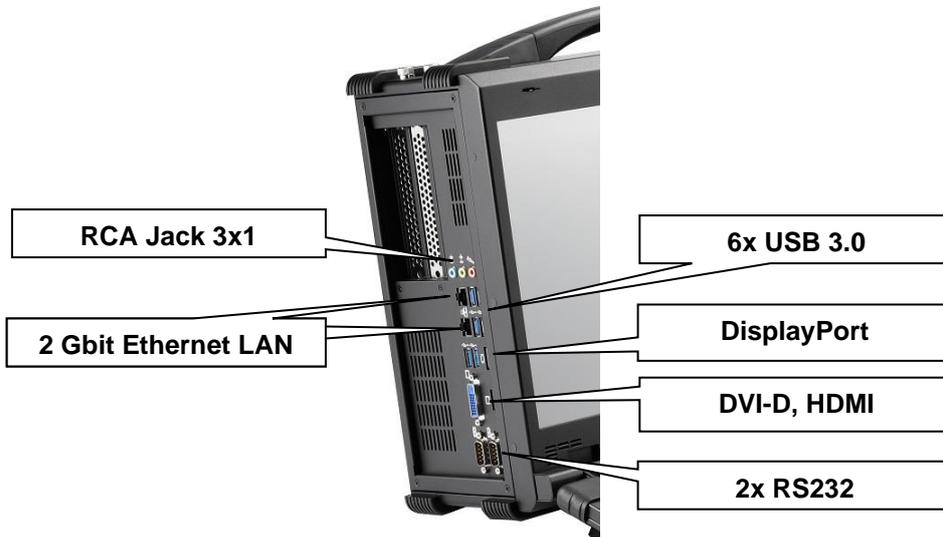
6. Press the power switch located on the front panel of the computer to power up the unit. There are indicator HDD LED light, brightness adjustment and sound adjustment located on the front panel



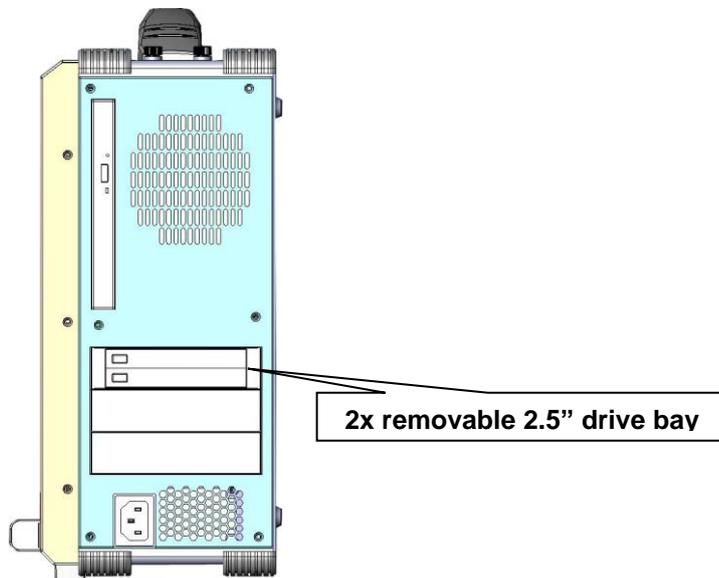
7. Access the available expansion slots on the left side of the computer.



ARP998 provides the system I/O port, include: 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



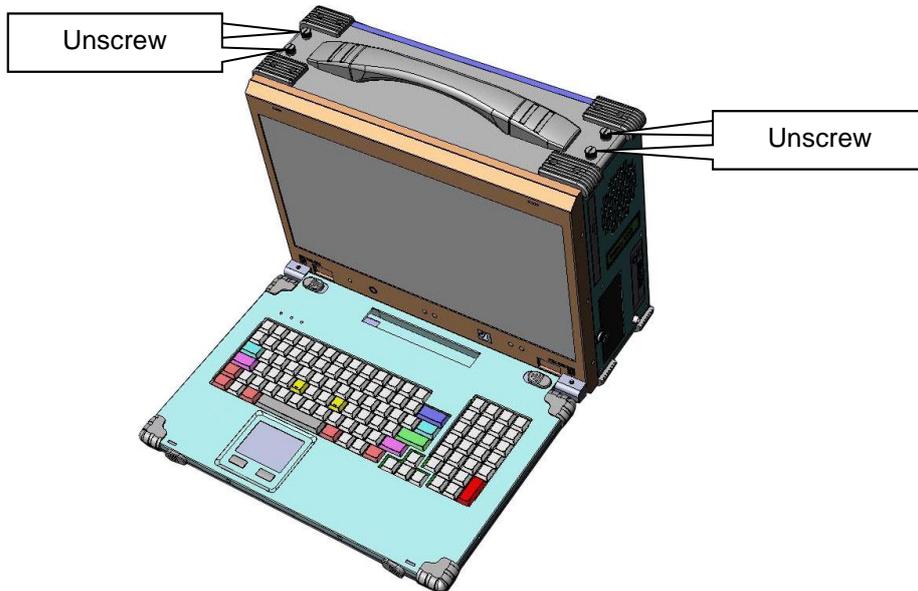
8. There are 2x removable 2.5" drive bay on the right side of the computer.



### 3.0 Internal Hardware Access

**Be sure power cable is not connected to the system before proceeding**

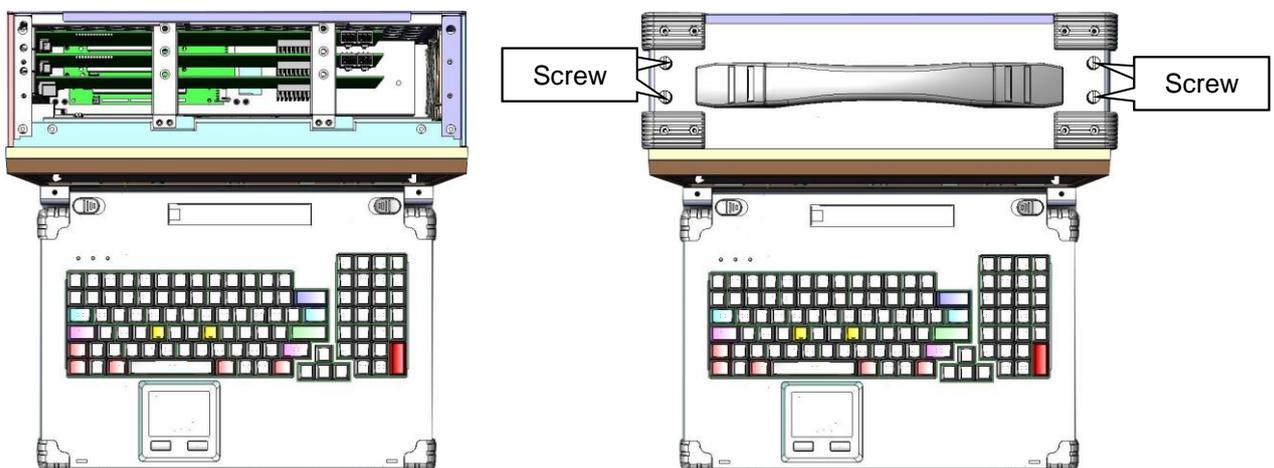
**1. Unscrew the top 4 thumb screws to release the top computer cover.**



**2. Remove the top cover, and 2x card stabilizer bars, install add-in card into the slot.**



**3. Install 2x card stabilizer bars, and close the top cover.**



## 5.0 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.

## 6.0 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 ARP.
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.