System Features Onboard Intel Elkhart Lake Processor

AGE215

User Manual

Title	AGE215
System Features	Onboard Intel® Elkhart Lake Processor / Intel Atom® x6211E Processor
	1 x 260-pin DDR4 4GB
	M.2 64GB SSD；Wide Temp: - 40 to +85C
	4 x USB 2 x COM, PORT RS232 2 x LAN PORT(RJ45)
	DC Power Input from 12~ 24v in
	3mm glass with logo two color - black in frame and black 7C light for logo print
	21.5” 1920 x 1080 ,P CAP Touch + LED Driving board
	60W Power adapter & Power cord
	Wall mount
	Screws & nuts
	Individual box
	Window 10 IOT (64bit) (Avalue don’t need install it in the system)
	Support TPM 2.0
	Customer 1. Stainless (hair-line surface treatment) keep appearance the original size 2. Radar board include sensor function (Avalue don’t need install it in the system) 3. RFID (Avalue don’t need install it in the system)
Intended Use of the Product	
Description	(Please specify in detail as much as possible the application use for the end users that this product will be applied to if this is a Medical product) →Non-medical models
Product Environmental Standards	
Description	The project member must make sure all the components that are adopted to this product complies with the environmental law and regulation of the EU in accordance with the “Product Environmental Protection Management Procedure (QQ2-019)” requirement. →Non-medical models
Working Principles & Functionality of the Product	
Description	(Please specify the working principles or functionality of this product in detail as much as possible if this is a Medical product)→ Non-medical models
Risk Management	
Description	(Please specify the result of the Risk Management evaluation performed by the project initiator, ex. customer, in detail as much as possible if this is medical product) → Non-medical models

Specifications		Confirm
Component		
Mother Board	ARC-EHL	☐
CPU	Onboard Intel® Elkhart Lake Processor Intel Atom® x6211E Processor	☐
CPU Cooler (Type)	By mechanical design Heatsink	☐
Memory	1 x 260-pin DDR4 4GB	☐
Power Supply	DC Power 12~ 24v in	☐
Adapter	60W, 12V power adaptor + power cord	☐
System Fan	N/A	☐
Microphone	N/A	☐
Speaker	1 Speaker	☐
Camera	N/A	☐
Wireless LAN	N/A	☐
Bluetooth	N/A	☐
Operating System	Window 10 IOT (64bit) (Avalue don't need install it in the system)	☐
Expansion Card	N/A	☐
Other Component	TPM 2.0 (NuvoTon_NPCT754AADYX / Infineon_SLB9670VQ2.0 co-lay) Default is NuvoTon by Option for customer request	☐
Radar board	Radar board include sensor function / I2C (Use SMBUS is pulled out to define as I2C) (Avalue don't need install it in the system)	☐
RFID	RFID (Avalue don't need install it in the system)	☐
Storage		
Floppy Disk Drive	N/A	☐
Hard Disk Drive	N/A	☐
Optical Disk Drive	N/A	☐
Solid State Drive	N/A	☐
Other Storage Device	M.2 64GB SSD ；Wide Temp: - 40 to +85C	☐
Panel		
LCD Panel	21.5" BOE LCD:E9689421502R	☐
LCD Control Board	N/A	☐
B/L Inverter/Converter	E968X000244R	☐
Touch Screen	21.5" Touch screen -3mm (Customized)	☐
Touch Controller	EETI By Touch screen is attached	☐
Others	1.21.5" LED Driving board 2.Bonding Panel: 21.5" BOE LCD:E9689421502R + Touch screen	☐
External I/O		
PS/2 KB & Mouse	N/A	☐
Serial Port	1 x DB-9 COM1 (RS-232/422/485, selectable by BIOS & JUPMER, RS-485 supports Auto Flow, Pin-9 selected for Ring/+5V/+12V by Jumper) 1 x DB-9 COM2 (RS-232, Pin-9 selected for Ring/+5V/+12V by	☐

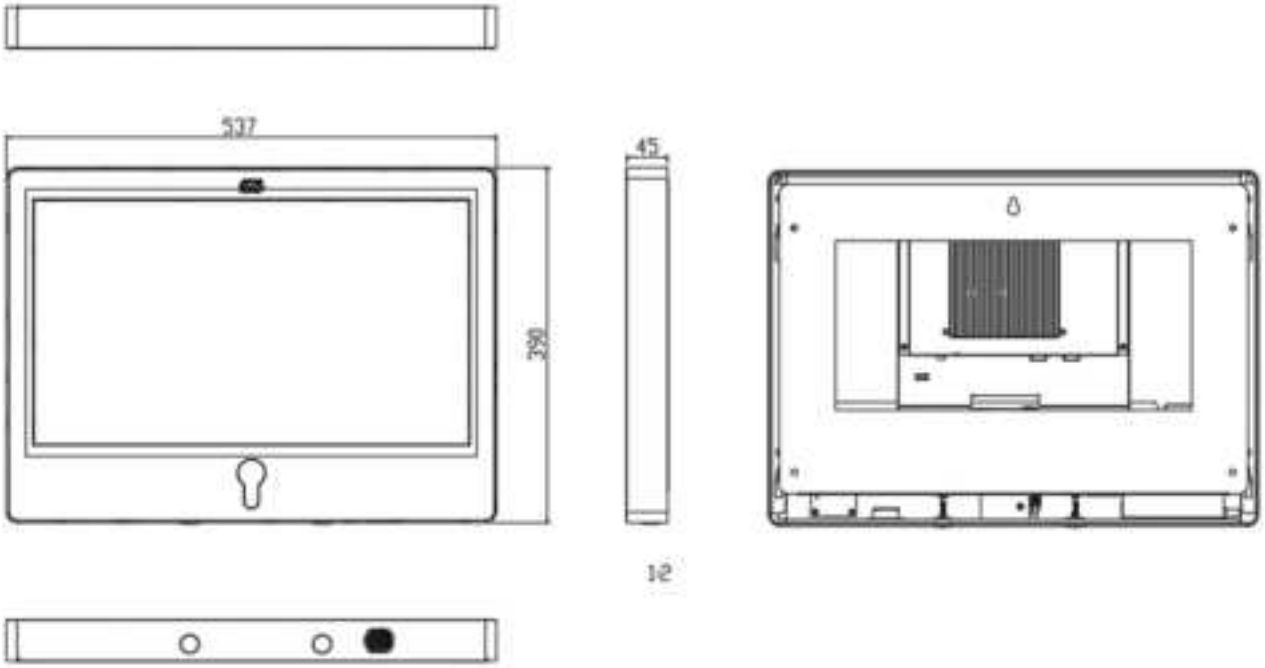
	Jumper)	
Parallel Port	N/A	☐
USB Port	4 x USB3.2 Gen2x1 (10Gbp/s) (2 x Dual Deck, Type A)	☐
1394 Port	N/A	☐
PCMCIA Port	N/A	☐
DIO Port	N/A	☐
LAN Port	2 x Intel® I225-IT 2.5 Gigabit Ethernet (RJ45)→I22C-IT#1 Blocked	☐
Wireless LAN Antenna	N/A	☐
Switch	N/A	☐
Indicator Light	HDD LED, Power LED (Green for Power, Yellow for HDD)	☐
Expansion Slots	N/A	☐
Others	ARC-EHL board Remove PenMount6000, LAN I225-1 (Not using this function)	☐

Mechanical		
Power Type	12V~24V wide voltage DC input	☐
Power Connector Type	1 x DC-J 3P 90D(M) 2.5mm	☐
Dimension	537 x 390 x45mm	☐
Weight	TBD	☐
Color	Stainless (hair-line surface treatment)	☐
Fanless	Yes	☐
OS Support	Window 10 IOT (64bit) (Avalue don't need install it in the system)	☐
Software Specification		
Description	N/A	☐
Reliability		
Dust and Rain Test	TBC	☐
Vibration Test	Random Vibration Operation 1. PSD: 0.00454G²/Hz , 1.5 Grms 2. operation mode 3. Test Frequency : 5-500Hz 4. Test Axis : X,Y and Z axis 5. 30 minutes per each axis 6. IEC 60068-2-64 Test:Fh 7. Storage : CF or SSD Random vibration test (Non-operation) 1 Test Acceleration : 2G 2 Test frequency : 5~500 Hz 3 Sweep：1 Oct/ per one minute. (logarithmic) 4 Test Axis : X,Y and Z axis 5 Test time :10 min. each axis 6 System condition : Non-Operating mode 7. Reference IEC 60068-2-6 Testing procedures	☐
Mechanical Shock	10Grms, IEC 60068-2-27, Half Sine, 11ms	☐

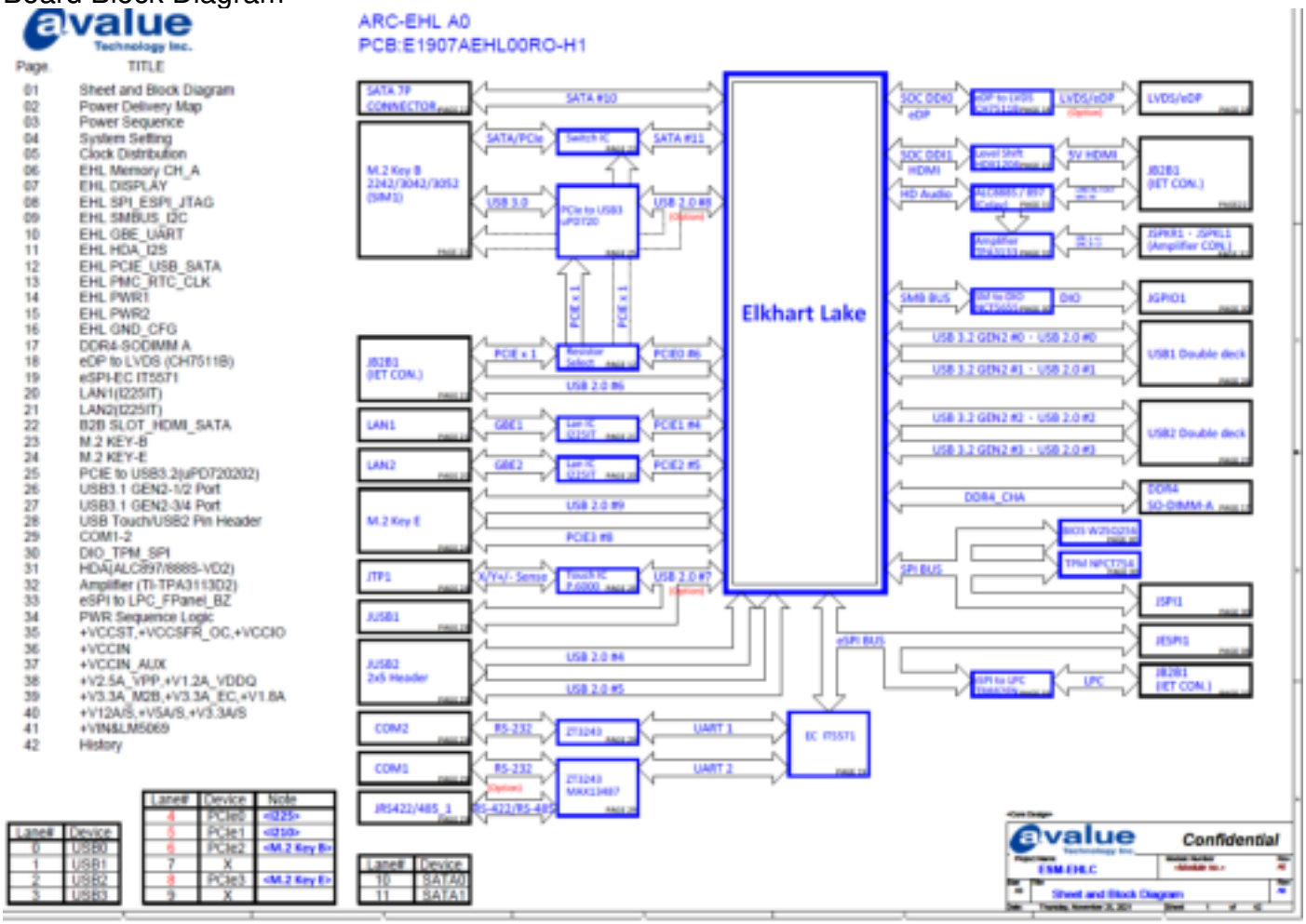
Test			
Package Drop Test	Package drop test 1 One corner , three edges, six faces 2 ISTA 2A, IEC-60068-2-32 Test:Ed		☐
Operating Temperature	0°C ~ 40°C		☐
Operating Humidity	0%~90% relative humidity, non-condensing		☐
Storage Temperature	-20°C ~ 60°C		☐
Other Test	N/A		☐
Package vibration test	1. PSD:0.026G^2/Hz, 2.16 Grms 2. Non-operation mode 3. Test Frequency: 5-500Hz 4. Test Axis: X,Y and Z axis 5. 30 min. per each axis 6. IEC 60068-2-64 Test: Fh		☐
Bump Test	1. Wave form: Half Sine wave 2. Acceleration Rate: 10 g for operation mode 3. Duration Time: 11ms 4. No. of Shock: Z axis 300 times 5. Test Axis: Z axis 6. Operation mode 7. Reference IEC 60068-2-29 Testing procedures Test Eb: Bump Test		☐
EMC Certification (EMI+EMS)			
驗證內容 Verification Standards	選項 Options		備註：對於只做預掃描測試且安勤未協助申請證書的專案，PCB 上不可印有 CE/FCC Logo Remarks: For projects that only do pre-scan test and Avalue does not assist in applying for certificates, CE/FCC Logo cannot be printed on PCB
CE 2014/30/EU EMC EN55032+55035	☐ Class A	歐盟(資訊類產品) EU (ITE)	
	■ Class B		
2017/745/ EU CE EN60601-1-2	☐ CE	歐盟(醫療類產品) EU (Medical)	
Others	N/A		
EMI Certification			
驗證內容 Verification Standards	選項 Options		備註：對於只做預掃描測試且安勤未協助申請證書的專案，PCB 上不可印有 CE/FCC Logo Remarks: For projects that only do pre-scan test and Avalue does not assist in applying for certificates, CE/FCC Logo cannot be printed on PCB
FCC part 15B Federal Communication Commission	☐ Class A	美國地區(資訊類產品) US region (ITE)	
	■ Class B		
ICES-003 (Canada EMI requirement)	☐	加拿大地區,Based on FCC Canada Region	
UKCA (United Kingdom EMI requirement)	☐	英國地區(資訊類產品) UK Region (ITE)	
VCCI (Japan EMI	☐ Without WiFi	日本地區(會員才可以投件) Japan Region	

requirement))		(Only members can submit application)	
Others	N/A		
RF (無線通訊設備) Certification			
驗證內容 Verification Standards	選項 Options		備註：對於只做預掃描測試且安勤未協助申請證書的專案，PCB 上不可印有 CE/FCC Logo Remarks: For projects that only do pre-scan test and Avalue does not assist in applying for certificates, CE/FCC Logo cannot be printed on PCB
EN 300 330	■ CE	歐盟 EU	
WIFI (for FCC ID) FCC part 15C	☐ FCC	美國地區 US region	
Others	N/A		
Safety Certification			
驗證內容 Verification Standards	選項 Options		備註：對於只做預掃描測試且安勤未協助申請證書的專案，PCB 上不可印有 CE/FCC Logo Remarks: For projects that only do pre-scan test and Avalue does not assist in applying for certificates, CE/FCC Logo cannot be printed on PCB
2014/35/EU LVD EN 62368-1 Low Voltage Directive	■ CE	歐盟(資訊類產品) EU, Safety (ITE)	EN 62368-1
(EU)2017/745 MDR EN 60601-1	☐ CE	歐盟(醫療類產品) 需附風險評估報告 EU (Medical) Safety Risk assessment report required	
UL(系統) UL/cUL-62368-1	☐ UL	資訊類 ITE	
UL(系統) UL/cUL-60601-1	☐ UL	醫療類需附風險評估報告 Medical, risk assessment report required	
Others	N/A		

Class B: (Section 15.105) 一般性警語(適用所有產品, 成品)
FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: -Reorient or relocate the receiving antenna. -Increase the separation between the equipment and receiver. -Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. -Consult the dealer or an experienced radio/ TV technician for help. (Section 15.21) CAUTION: Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.
標籤的需求 (Section 15.19)(a)(3) 備註 1. 若本段文字無法排版於標籤上(EUT 小於 8*10cm 時) ,可移至使用手冊 備註 2. 若產品同時有 DoC, 可將警語移至使用手冊
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
RF Exposure
RF exposure warning This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.



Board Block Diagram

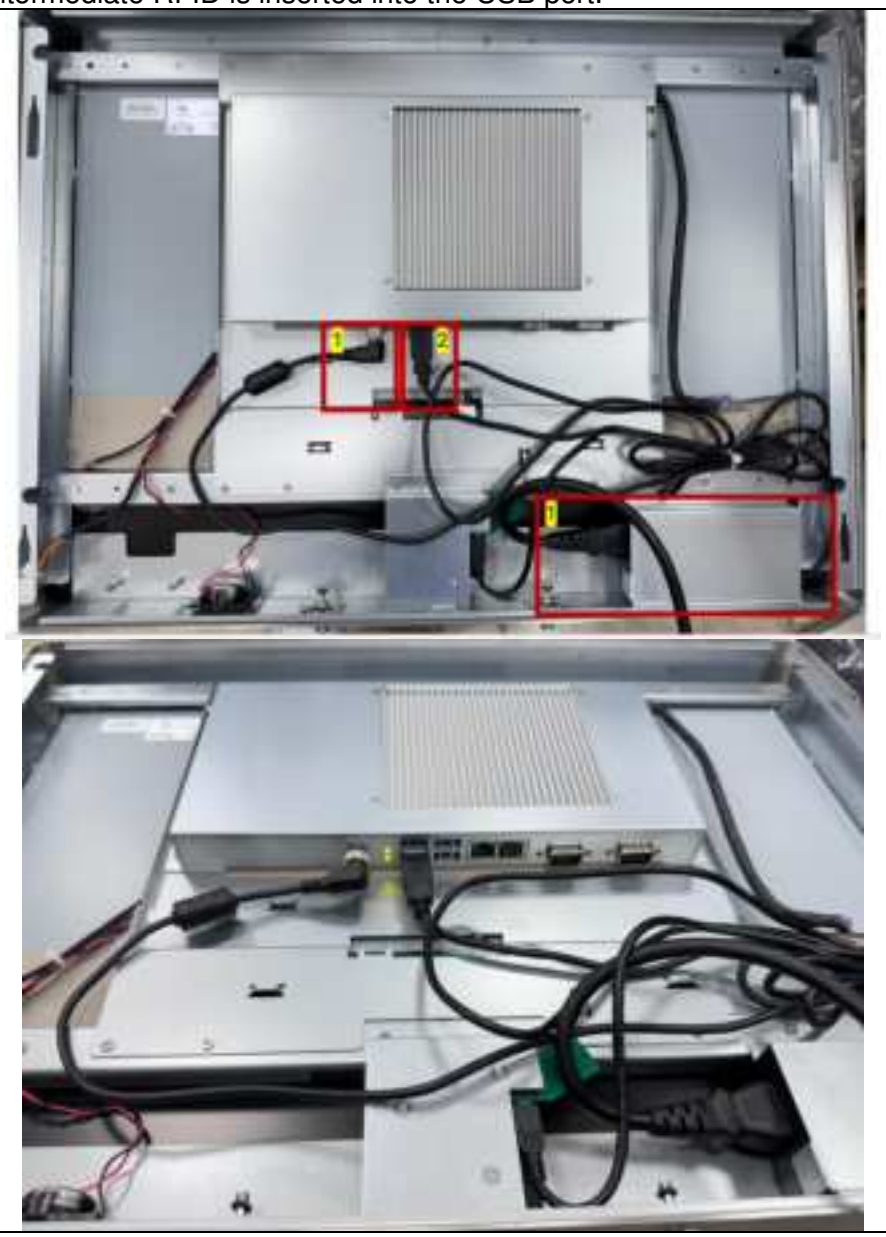


Lane#	Device
0	USB0
1	USB1
2	USB2
3	USB3

Lane#	Device	Note
4	PCIe0	<I225>
5	PCIe1	<I210>
6	PCIe2	<M.2 Key B>
7	X	
8	PCIe3	<M.2 Key E>
9	X	

Lane#	Device
10	SATA0
11	SATA1

Operation Manual
Step1: 1.The lower right adapter on the back of the machine powers the Panel PC via the power cord. 2.The USB of the intermediate RFID is inserted into the USB port.



Step2:
The Panel PC boots successfully.

Step3:
Power off: Click the bottom left corner of the screen to select Power Off