avalue Technology AGE215 Features Onboard Intel Elkhart Lake Processor System Datasheet

Contents

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Product Usage Instructions

Power Connection:

Connect the DC power input from 12~24v to the designated port on the system.

Peripheral Connections:

Connect your USB devices to the available USB ports and LAN cables to the LAN ports.

Mounting:

Use the provided wall mount screws and nuts to securely mount the device on a wall.

Operating System:

The system comes with Windows 10 IOT pre-installed; no additional installation is required.

Touch Screen:

The system features a capacitive touch screen; use it by tapping on the screen with your finger.

FAQ

Q: What are the environmental standards for this product?

A: The components comply with EU environmental regulations.

Q: Can I upgrade the memory on this system?

A: The system comes with 4GB DDR4 memory, and it is not user upgradeable.

Q: Does this product support Bluetooth connectivity?

A: Yes, the system supports Bluetooth connectivity.

AGE215

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 th at this product will be applied to if this is a Medical product) èNon-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. èNon-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)è 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) è Non-medical models

Specifications

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 o ut 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)èI22C-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 t his 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)			
Verification Standards	Options		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	EU (ITE)	
	Class B		
2017/745/ EU CE EN60601-1-2	CE	EU (Medical)	
Others	N/A		
EMI Certification			
Verification Standards	Options		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	US region (ITE)	
	Class B		
ICES-003 (Canada EMI requirement)		,Based on FCC Canada Region	
UKCA (United Kingdom EMI requirement)		UK Region (ITE)	

VCCI (Japan EMI	Without WiFi	Japan Region	

requirement))		(Only members can submit application)	
Others	N/A		
RF Certification			
Verification Standards	Options		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	EU	
WIFI (for FCC ID) FCC part 15C	FCC	US region	
Others	N/A		
Safety Certification			
Verification Standards	Options		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	EU, Safety (ITE)	EN 62368-1
(EU)2017/745 MDR EN 60601-1	CE	EU (Medical) Safety Risk assessment report	
		required	

UL( ) UL/cUL-62368-1	UL	ITE	
ULUL/cUL-60601-1	UL	Medical, risk assessment re port required	
Others	N/A		

Class B: (Section 15.105)

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.

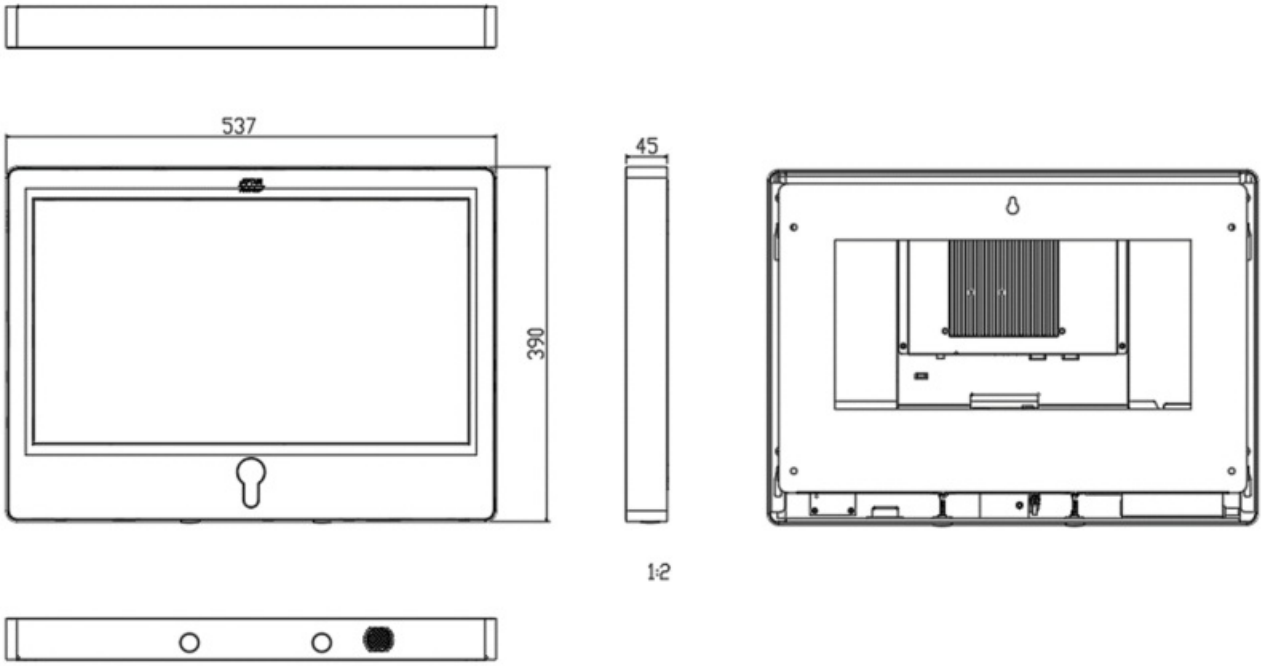
(Section 15.21)
CAUTION:
Any changes or modifications not expressly approved by the grantee of this device could void the user’s authority to operate the equipment.

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.

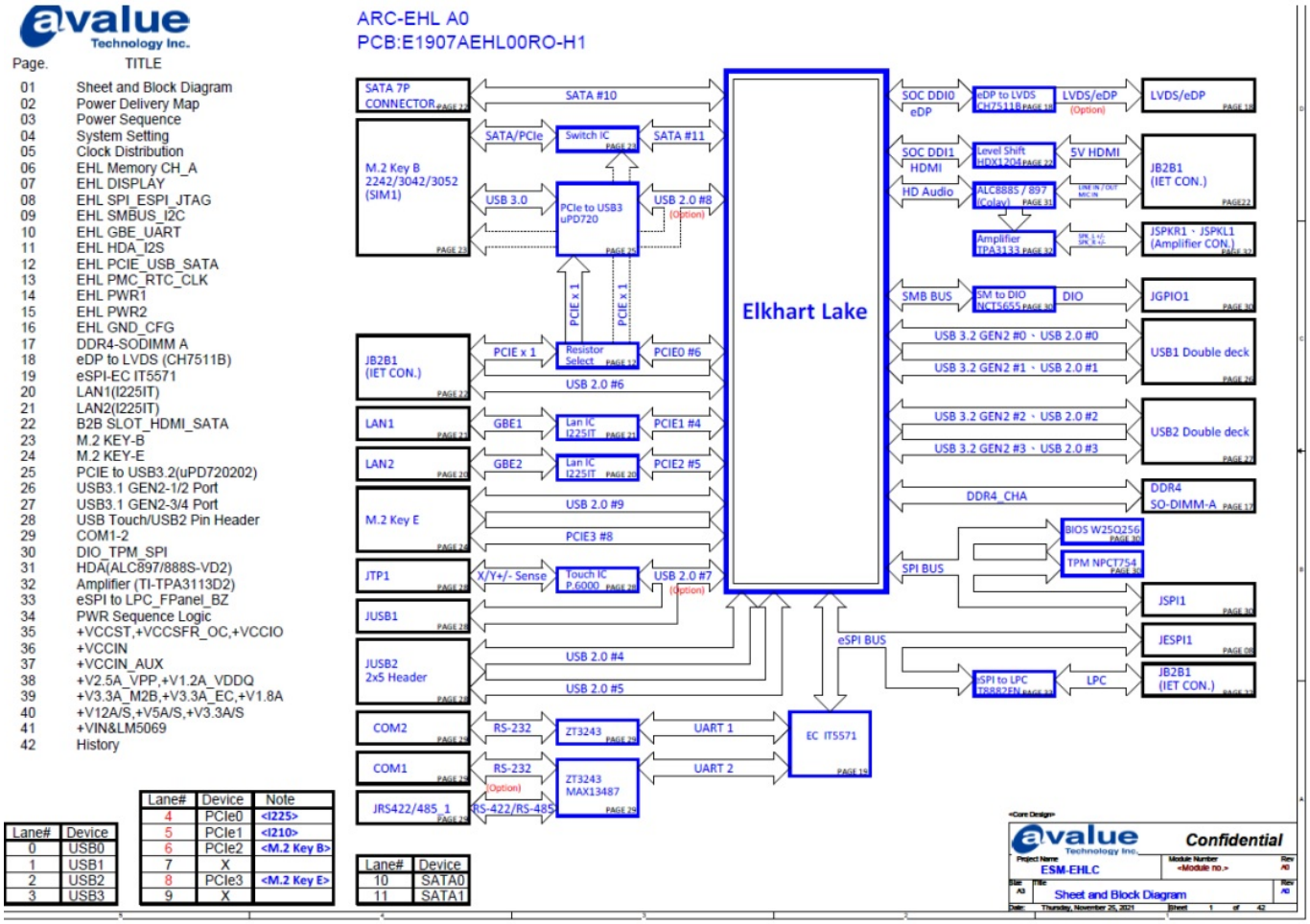
RF Exposure

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.

DIMENSION

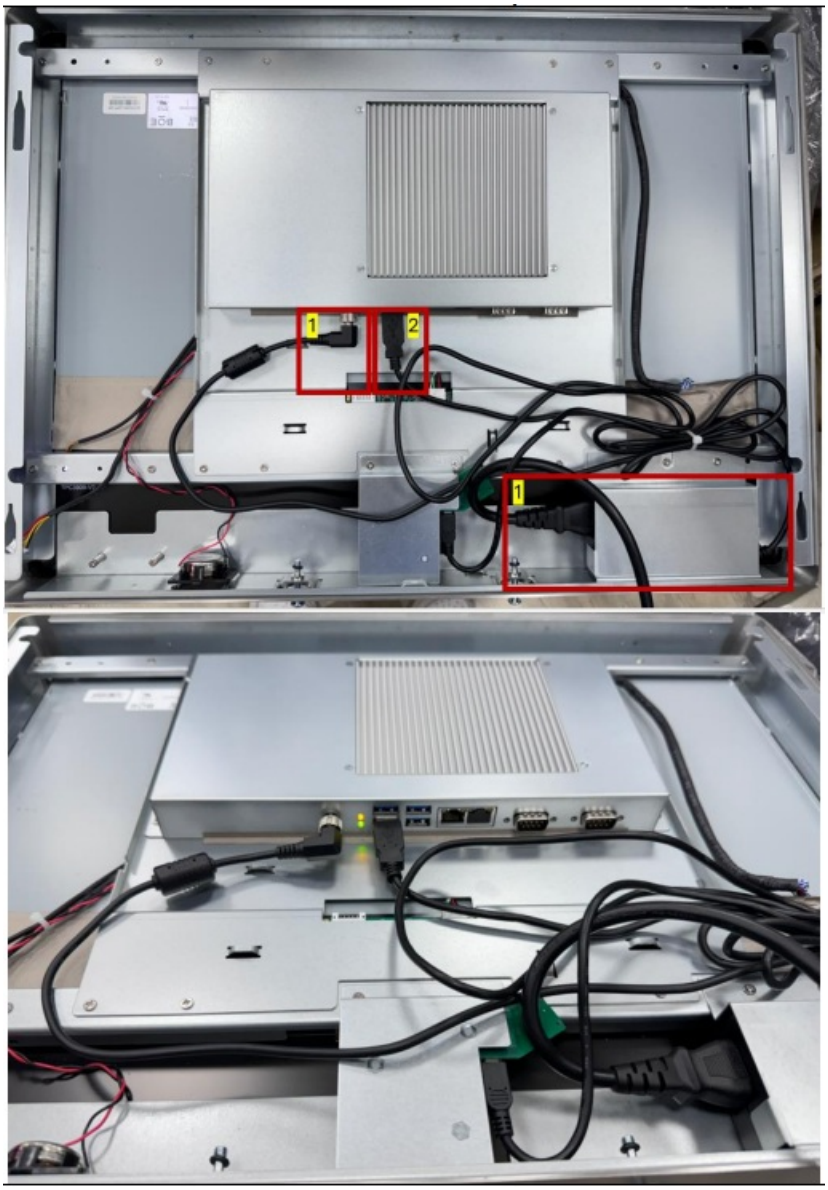


Board Block Diagram



Operation Manual

- **Step 1:**
  - The lower right adapter on the back of the machine powers the Panel PC via the power cord.
  - The USB of the intermediate RFID is inserted into the USB port.

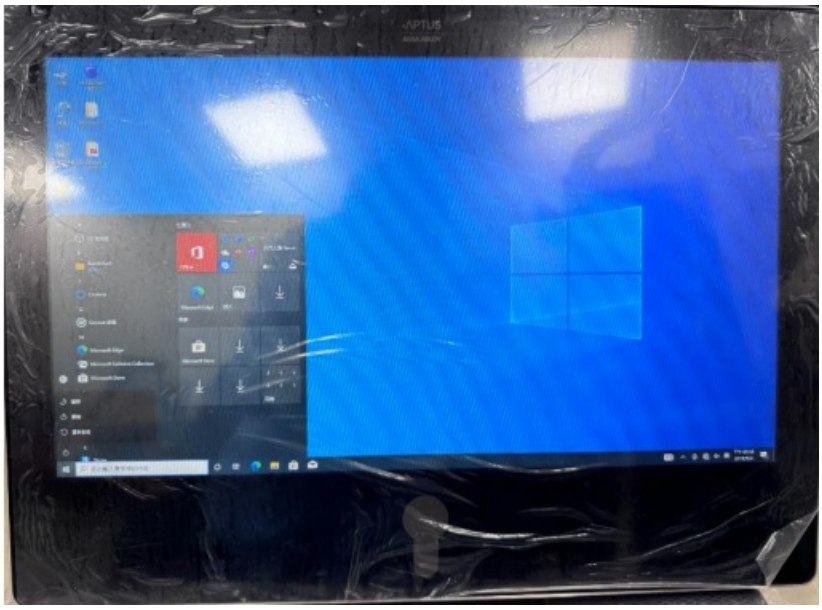


- **Step2:**

  The Panel PC boots successfully.

- **Step3:**

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



Documents / Resources

System Features Onboard Intel Elkhart Lake Processor AGE215 User Manual	avalue Technology AGE215 Features Onboard Intel Elkhart Lake Processor System [pdf] Datasheet AGE215, AGE215 Features Onboard Intel Elkhart Lake Processor System, Features Onboard Intel Elkhart Lake Processor System, Onboard Intel Elkhart Lake Processor System, Elkhart Lake Processor System, Lake Processor System, Processor System, System

References

- User Manual