MTP-1233

12.1” Fanless Touch Panel PC

Quick Reference Guide

2nd Ed – 05 March, 2020

Part No. E2017M230A1R

FCC Statement

THIS DEVICE COMPLIES WITH PART 15 FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE.

(2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS "A" DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES.

THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND, IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS.

OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE.

Notice

This guide is designed for experienced users to setup the system within the shortest time. For detailed information, please always refer to the electronic user's manual.

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1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into body, or (b) support or sustain life and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.
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To receive the latest version of the user's manual; please visit our Web site at:
http://www.avalue.com.tw/

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1. Getting Started

1.1 Safety Precautions

Warning!

Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

Caution!

Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

1.2 Packing List

- 1 x MTP-1233 Panel PC

If any of the above items is damaged or missing, contact your retailer.

1.3 System Specifications

Component	
Mother Board	EBM-APL
CPU	Onboard Intel® Apollo Lake Mobile Processor N4200
CPU Cooler (Type)	Fanless Heatsink
Memory	4GB DDR3L SO-DIMM (One 204-pin DDR3L SODIMM Socket, Supports Up to 8GB DDR3L 1866MTs SDRAM (Non-ECC))
Power Supply	External power adapter
60W Adapter	Not included
Power Requirement	+12 ~ 26V
System Fan	Fanless
Speaker	2W x 2
Wireless LAN	ACC-MPCIE-WIFI-06R SparkLan WPEA-121N
Operating System	Win10 IoT Ent LTSB 2016 MultiLang OEI Entry EPKEA (ESD) ESW-060R
Storage	
Solid State Drive	1 x 2.5” Drive Bay 128GB SSD
Panel	
LCD Panel	12.1" XGA TFT LED PANEL CMO G121X1-L03 1024 x 768 pixels
Touch Screen	Touch panel 5 wire Analog RoHS T121S-5RB014N-0A18R0-200FH
Touch Controller	USB touch (EETI)
External I/O	
Serial Port	2 x RS-232/422/485
USB Port	Side USB 2.0 * 2 Ports Rear USB 3.0 * 4 Ports
Audio Port	1 x Line-Out
LAN Port	2 x RJ-45
Wireless LAN Antenna	PCB Antenna 2.4/5.0GHz-IPEX Ø1.13mm 50cm x 2
Others	1 x HDMI
Mechanical	
Power Type	AT/ATX (ATX is default setting)
Power Connector Type	Lockable DC Jack

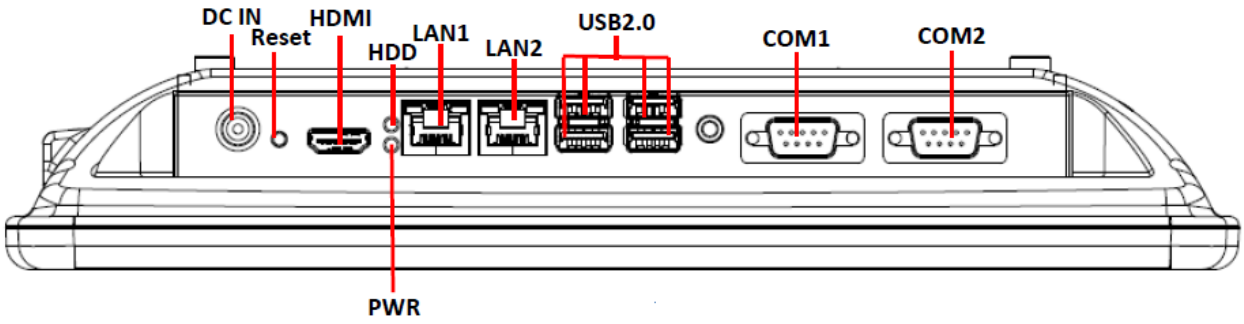
Dimension	260 x 310 x 51mm
Weight	2.3 kg
Color	CoolGray2C Plastic Front & Rear
Fanless	Yes
Reliability	
EMI Test	FCC
Dust and Rain Test	IP-65 on Front Panel
Vibration Test	Ramdom Vibration Operation Reference IEC60068-2-64 Testing procedures Test Fh : Vibration boardband random Test 1 Test PSD : 0.00454G²/Hz , 1.5 Grms 2 Test frequency : 5~500 Hz 3 Test axis : X,Y and Z axis 4 Test time : 30 minutes each axis 5 System condition : operation mode 6 Test curve Sine Vibration Test Reference IEC60068-2-6 Testing procedures Test Fc : Vibration sinusoidal 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 :30 min. each axis 6 System condition : Non-Operating mode 7 Test curve Package Vibration Test: Reference IEC60068-2-64 Testing procedures Test Fh : Vibration boardband random Test 1 Test PSD : 0.026G²/Hz , 2.16 Grms 2 Test frequency : 5~500 Hz 3 Test axis : X,Y and Z axis 4 Test time : 30 minutes each axis 5 Test curve
Mechanical Shock Test	With CF/SSD: 10Grms, IEC 60068-2-27, Half Sine, 11ms
Drop Test	Package drop test Reference ISTA 2A, Method : IEC-60068-2-32 Test:Ed Test Ea : Drop Test 1 Test phase : One corner, three edges, six faces

	2 Test high : 3 Package weight : 4 Test drawing
Operating Temperature	Normal Temperature: 0°C ~ 40°C (32°F ~ 104°F)
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Storage Temperature	Normal Temperature: -20°C ~ 60°C

Note: Specifications are subject to change without notice.

1.4 System Overview

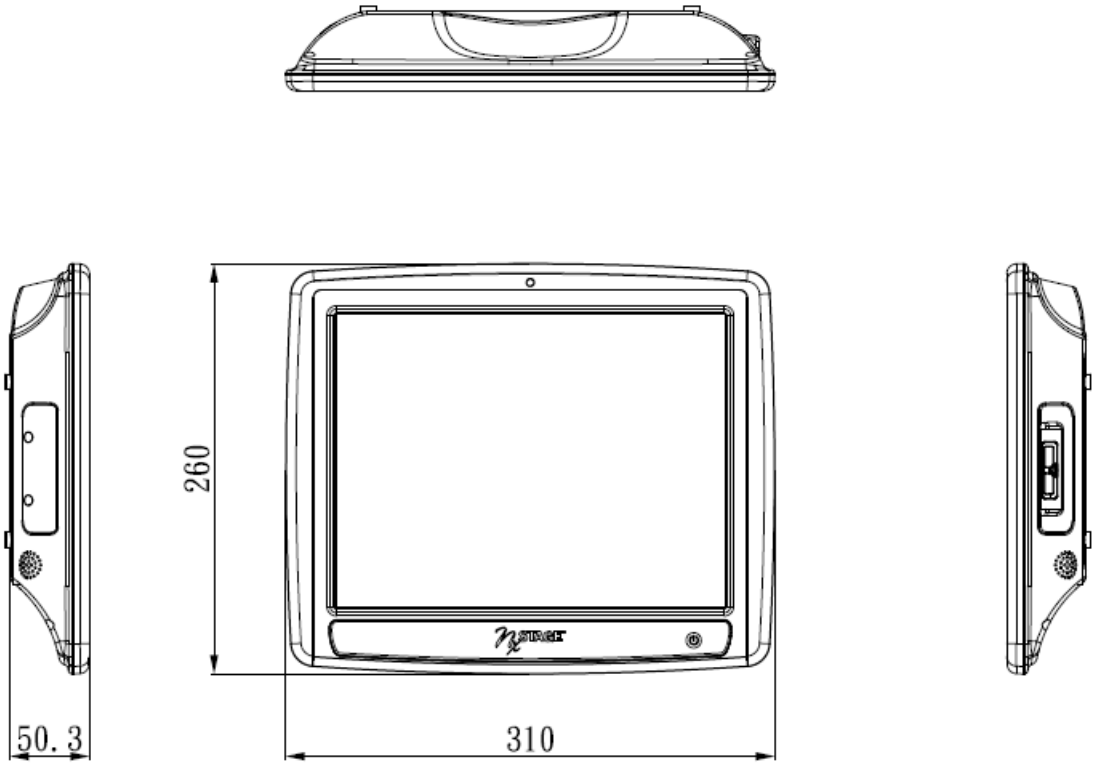
1.4.1 Rear View

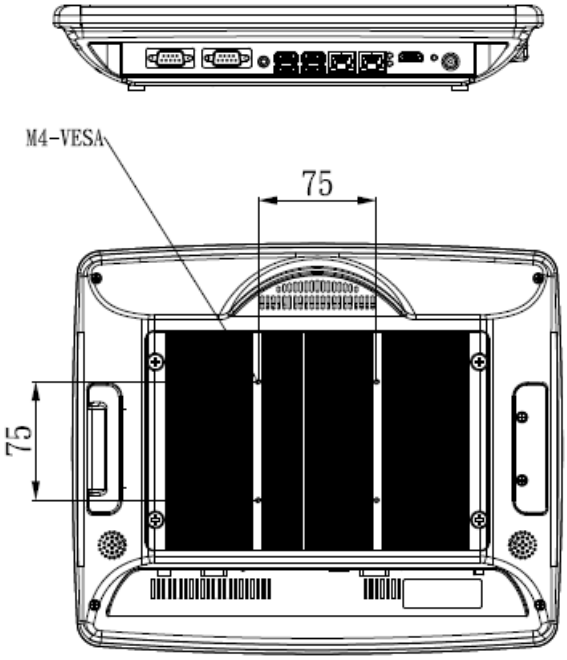


Connectors

Label	Function	Note
DC IN	DC-in power connector	
Reset	Reset button	
HDMI	HDMI connector	
HDD	HDD LED	
PWR	Power LED	
LAN1/2	RJ-45 Ethernet connector 1/2	
USB2.0	4 x USB 2.0 connector	
COM1/2	Serial port connector 1/2	DB-9 male connector

1.5 System Dimensions





(Unit: mm)

2. Hardware Configuration

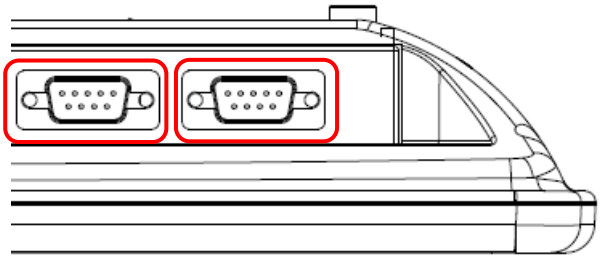
- Please refer to EBM-APL User's Manual for further information.

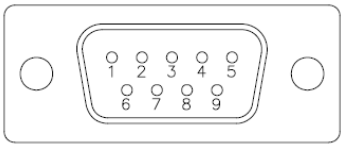
Note: If you need more information, please visit our website:

http://www.avalue.com.tw

2.1 MTP-1233 connector setting

2.1.1 Serial port connector 1/2 (COM1/2)





Signal	PIN	PIN	Signal
DCD#	1	6	DSR#
RXD	2	7	RTS#
TXD	3	8	CTS#
DTR#	4	9	RI#
GND	5		