

SID-21W9

Intel® Atom Z3735F 21.5" Semi Industrial Ultra Slim Panel PC

Quick Reference Guide

3rd Ed –21 February 2023

Copyright Notice

Copyright © 2023 Avalue Technology Inc., ALL RIGHTS RESERVED.

FCC Statement**Federal Communication Commission Interference Statement**

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 UNDESIRE OPERATION.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of 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 instruction, 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.

Notice:

- (1) A Unshielded-type power cord is required in order to meet FCC emission limits and also to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord be used.
- (2) Use only shielded cables to connect I/O devices to this equipment.
- (3) Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement

This Wireless LAN radio device has been evaluated under FCC Bulletin OET 65 and found compliant to the requirements as set forth in CFR 47 Sections 2.1091, 2.1093, and 15.247 (b) (4) addressing RF Exposure from radio frequency devices. The radiated output power of this Wireless LAN device is far below the FCC radio frequency exposure limits. Nevertheless, this device shall be used in such a manner that the potential for human contact during normal operation is minimized. When nearby persons has to be kept to ensure RF exposure compliance, in order to comply with RF exposure limits established in the ANSI C95.1 standards, the distance between the antennas and the user should not be less than 20 cm.

WARNING

“CAUTION – Use suitable mounting apparatus to avoid risk of injury.”

“CAUTION - Use a power cord that matches the voltage of the power outlet, which has been approved and complies with the safety standard of your particular country.”

“WARNING – To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth.”

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.

Copyright Notice

Copyright © 2023 Avalue Technology Inc., ALL RIGHTS RESERVED.

No part of this document may be reproduced, copied, translated, or transmitted in any form or by any means, electronic or mechanical, for any purpose, without the prior written permission of the original manufacturer.

Trademark Acknowledgement

Brand and product names are trademarks or registered trademarks of their respective owners.

Disclaimer

Avalue Technology Inc. reserves the right to make changes, without notice, to any product, including circuits and/or software described or contained in this manual in order to improve design and/or performance. Avalue Technology assumes no responsibility or liability for the use of the described product(s), conveys no license or title under any patent, copyright, or masks work rights to these products, and makes no representations or warranties that

these products are free from patent, copyright, or mask work right infringement, unless otherwise specified. Applications that are described in this manual are for illustration purposes only. Avalue Technology Inc. makes no representation or warranty that such application will be suitable for the specified use without further testing or modification.

Life Support Policy

Avalue Technology's PRODUCTS ARE NOT FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE PRIOR WRITTEN APPROVAL OF Avalue Technology Inc.

As used herein:

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.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

A Message to the Customer

Avalue Customer Services

Each and every Avalue's product is built to the most exacting specifications to ensure reliable performance in the harsh and demanding conditions typical of industrial environments. Whether your new Avalue device is destined for the laboratory or the factory floor, you can be assured that your product will provide the reliability and ease of operation for which the name Avalue has come to be known.

Your satisfaction is our primary concern. Here is a guide to Avalue's customer services. To ensure you get the full benefit of our services, please follow the instructions below carefully.

Technical Support

We want you to get the maximum performance from your products. So if you run into technical difficulties, we are here to help. For the most frequently asked questions, you can easily find answers in your product documentation. These answers are normally a lot more detailed than the ones we can give over the phone. So please consult the user's manual first.

To receive the latest version of the user's manual; please visit our Web site at:

<http://www.avalue.com.tw/>

Content

- 1. Getting Started6**
 - 1.1 Safety Precautions6
 - 1.2 Packing List6
 - 1.3 System Specifications7
 - 1.4 System Overview.....9
 - 1.4.1 Front View 9
 - 1.4.2 Bottom View 9
 - 1.5 System Dimensions10
 - 1.5.1 Front and Rear side 10
- 2. Hardware Configuration.....11**
 - 2.1 SID-21W9 connector mapping12
 - 2.1.1 Serial port connector (COM) 12

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. Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions.

Français:

Attention!



Débranchez le câble d'alimentation de votre châssis chaque fois que vous travaillez avec le matériel. Ne faites pas de connexion lorsque le système est allumé. Les composants électroniques sensibles peuvent être endommagés par les surtensions soudaines. Seule les personnels expérimentés de l'électronique peuvent ouvrir le châssis du PC.

Précaution!



Il faut toujours mettre à la masse pour éliminer l'électricité statique avant de toucher la carte CPU. Les appareils électroniques modernes sont très sensibles aux électricité statique. Pour des raisons de sécurité, utilisez un bracelet électrostatique. Placez tous les composants électroniques sur une surface antistatique ou dans un sac antistatique quand ils ne sont pas dans le châssis.

Risque d'explosion si la batterie est remplacée par un type incorrect. Jetez les piles usagées selon les instructions

1.2 Packing List

- 1 x SID-21W9 Panel PC
- 1 x AC/DC Power adapter 19V/3.42A
- 1 x Power cord

1.3 System Specifications

Component	
Mother Board	<ul style="list-style-type: none"> BCX11
CPU	<ul style="list-style-type: none"> ATOM Baytrail-T CR Z3735F CPU
CPU Cooler (Type)	<ul style="list-style-type: none"> By mechanical design
Memory	<ul style="list-style-type: none"> Onboard 2GB DDR3L
Power Supply	<ul style="list-style-type: none"> DC in Power adapter Delta ADP-65JH (BCC-ADP-065N-01R)
I/O chip	<ul style="list-style-type: none"> ENE IO3737LU
Audio Chipset	<ul style="list-style-type: none"> Realtek ALC5645-CGT
Ethernet chipset	<ul style="list-style-type: none"> Microchip LAN9512
Operating System	<ul style="list-style-type: none"> Windows 8.1/ Windows 10/ Andriod 4.4/ Ubuntu 14.04
WLAN	
WLAN standard	<ul style="list-style-type: none"> IEEE 802.11b/g/n, Wi-Fi compliant
Major chipset	<ul style="list-style-type: none"> Realtek RTL8723BS
WIFI PID/ VID	<ul style="list-style-type: none"> B723 / 024C
Antenna Type	<ul style="list-style-type: none"> PIFA
Frequency Range	<ul style="list-style-type: none"> WLAN: 2.4 GHz Band 2.412-2.472 GHz
Number of Channels	<ul style="list-style-type: none"> 802.11b: USA, Canada and Taiwan : 1 ~ 11 Most European Countries : 1 ~ 13 Japan : 1 ~ 13 802.11g: USA and Canada : 1 ~ 11 Most European Countries : 1 ~ 13 802.11n: USA and Canada : 1 ~ 11 Most European Countries : 1 ~ 13
Modulation	<ul style="list-style-type: none"> WLAN: DSSS, OFDM, BPSK(9/6Mbps), QPSK(18/12Mbps), DBPSK(1Mbps), DQPSK(2Mbps), CCK(11/5.5Mbps), 16-QAM(36/24Mbps), 64-QAM (72.2/54/48Mbps)
WLAN	
Solid State Drive	<ul style="list-style-type: none"> Onboard 32GB eMMC
Panel	
LCD Panel	<ul style="list-style-type: none"> 21.5" M215HJK-L3B with PCAP Touch (10f)
Resolution	<ul style="list-style-type: none"> 1920 x 1080
Luminance	<ul style="list-style-type: none"> 250 cd/m²
View angle	<ul style="list-style-type: none"> 89 (U), 89 (D), 89 (L), 89 (R)
Others	<ul style="list-style-type: none"> Membrane for power/ volume/ brightness
External I/O	
Serial Port	<ul style="list-style-type: none"> 1 x RS-232 (Tx/Rx)
USB Port	<ul style="list-style-type: none"> 2 x USB 2.0
Video Port	<ul style="list-style-type: none"> 1 x HDMI
Audio Port	<ul style="list-style-type: none"> Line out

SID-21W9

LAN Port	<ul style="list-style-type: none">1 x RJ45 10/100M only
Mechanical	
Power Type	<ul style="list-style-type: none">DC 12V ~ 24V Wide Voltage input
Power Connector Type	<ul style="list-style-type: none">DC Jack
Dimension	<ul style="list-style-type: none">303.3 x 505 x 41.7mm
Weight	<ul style="list-style-type: none">5.5kg
Color	<ul style="list-style-type: none">Metal housing black
Fanless	<ul style="list-style-type: none">Yes
Mounting	<ul style="list-style-type: none">Wall/Stand/VESA 100mm x 100mm
Reliability	
EMI Test	<ul style="list-style-type: none">CE/ FCC class B
Dust and Rain Test	<ul style="list-style-type: none">Front Panel IP65
Vibration Test	<ul style="list-style-type: none">IEC 60068-2-64, Random, 5~500Hz, 1hr/axis
Mechanical Shock Test	<ul style="list-style-type: none">With CF/SSD: 10Grms, IEC 60068-2-27, Half Sine, 11ms
Drop Test	<ul style="list-style-type: none">IEC-60068-2-32 Drop test standard
Operating Temperature	<ul style="list-style-type: none">0 ~ 40 degree
Operating Humidity	<ul style="list-style-type: none">0 ~ 90% Relative Humidity, Non-condensing
Storage Temperature	<ul style="list-style-type: none">-20 ~ 60 degree

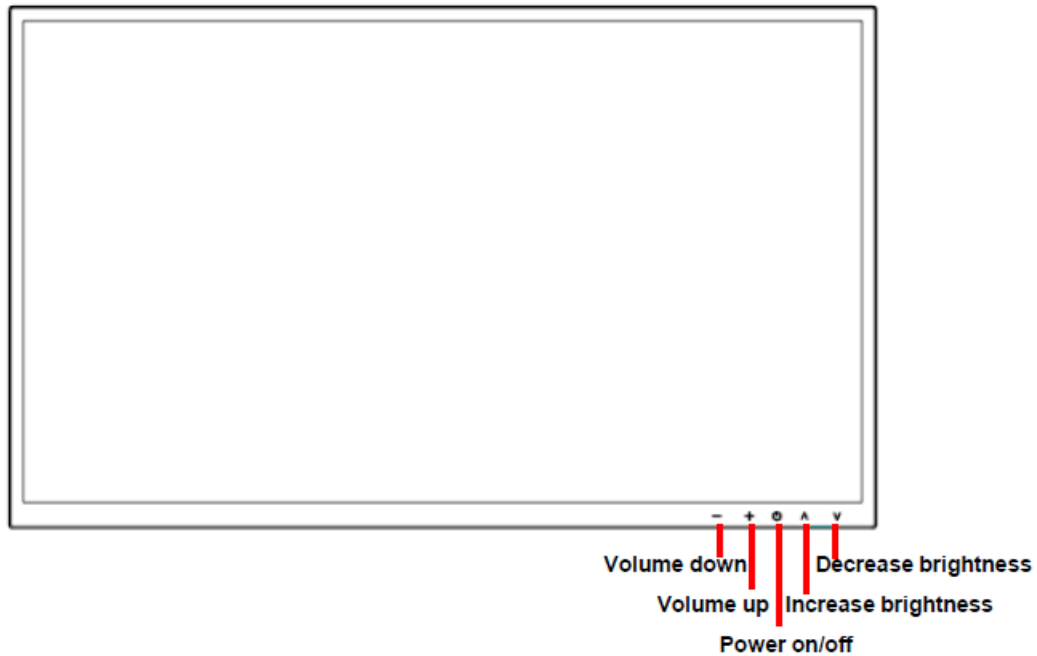


Note:

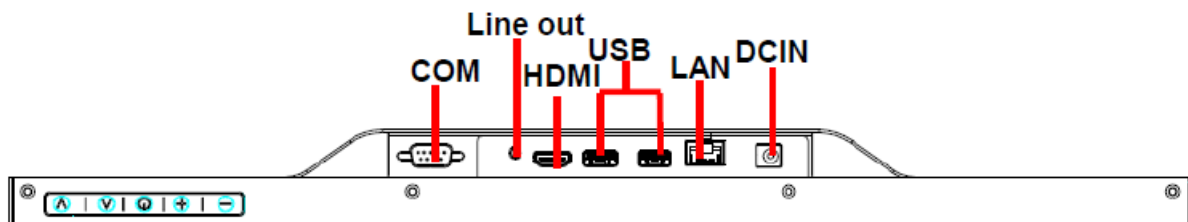
- Specifications are subject to change without notice.
- Limitation: CPU Intel Z3735F only has S0iX or S5 without S3 & S4.
S0iX needs hardware support that means all of device must have S0iX support or will not wake up.
Please strongly advice customers to not get into sleep mode, just backlight off.

1.4 System Overview

1.4.1 Front View



1.4.2 Bottom View

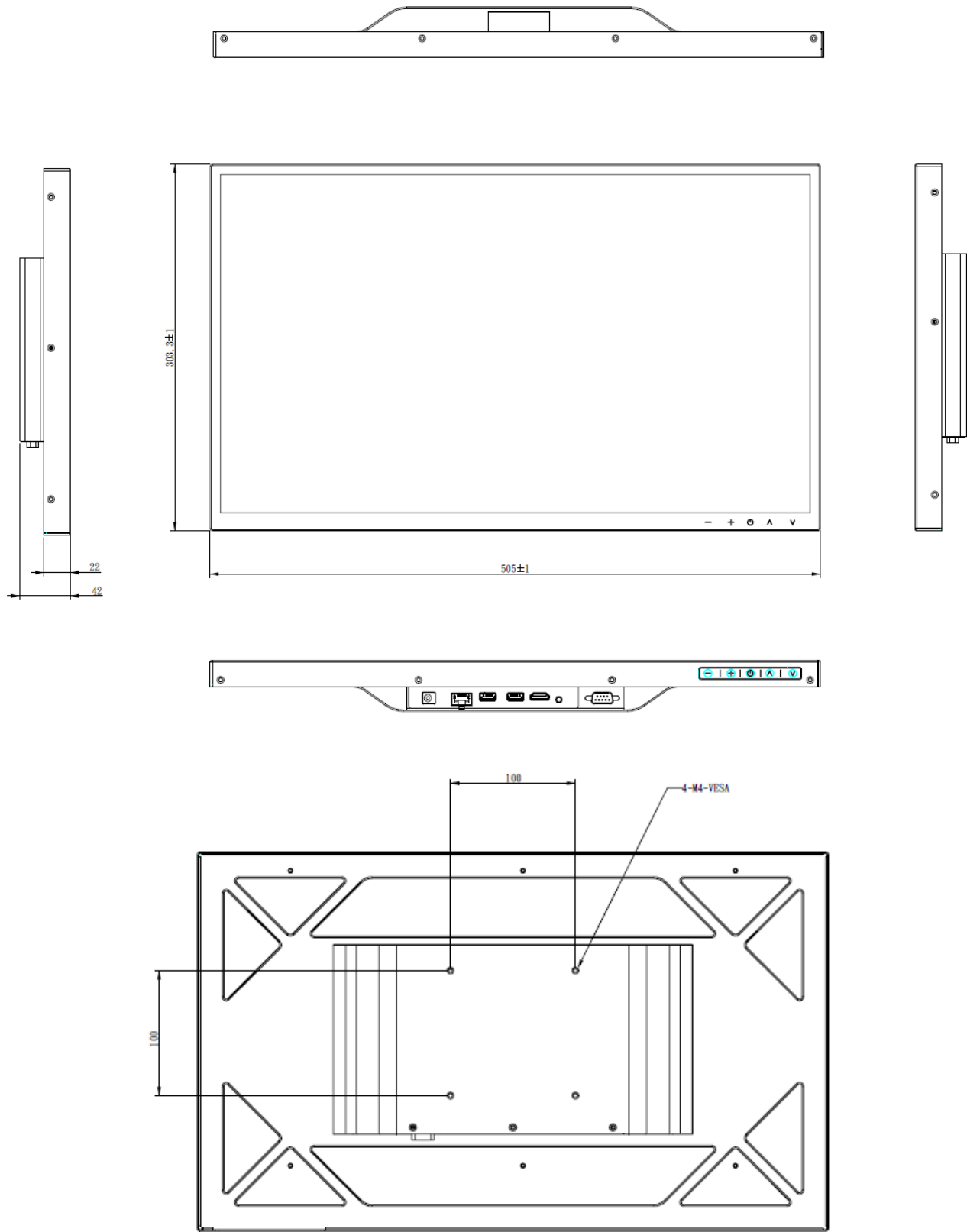


Connectors

Label	Function	Note
Line out	Audio line-out connector	
HDMI	HDMI connector	
USB	2 x USB 2.0 connector	
DCIN	DC power-in connector	
LAN	10/100 Fast Ethernet	RJ-45
COM	RS-232(Tx,Rx)	DSUB-9 type

1.5 System Dimensions

1.5.1 Front and Rear side



(Unit: mm)

2. Hardware Configuration

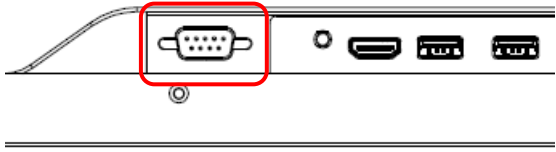


Note: If you need more information, please visit our website:

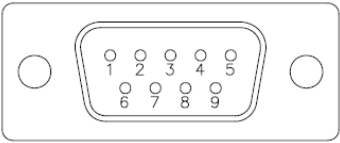
<http://www.avalue.com.tw>

2.1 SID-21W9 connector mapping

2.1.1 Serial port connector (COM)



*Default



RS-232*

Signal	PIN	PIN	Signal
NC	1	6	NC
RXD	2	7	NC
TXD	3	8	NC
NC	4	9	NC
GND	5		

