

IP-TBOXB

Compact Fanless HDBaseT Extender

Quick Reference Guide

2nd Ed – 25 October 2018

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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 UNDESIRE 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.

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/>

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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 IP-TBOXB Fanless HDBaseT™ Transmitter Box
- Other major components include the followings:
 - 1 x Power Cord
 - 1 x Adapter
 - 1 x Mounting Bracket
 - 1 x Screws pack



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

1.3 System Specifications

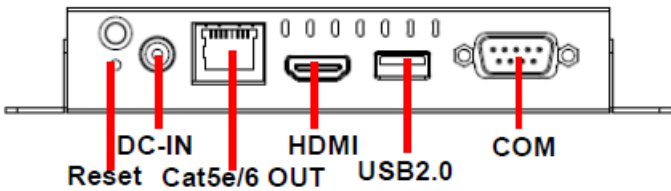
Component	
Processor	<ul style="list-style-type: none"> Valens VS2310TX
Power Supply	<ul style="list-style-type: none"> DC-in
Adapter	<ul style="list-style-type: none"> 60W (BCC-ADP-060-N-01R)
System Fan	<ul style="list-style-type: none"> Fan-less
I/O	
External I/O Connector	<ul style="list-style-type: none"> 1 x RJ-45 for HDBaseT™ out with Powered LAN (60W) 1 x USB 2.0(Type A) (input) 1 x HDMI-IN 1 x DC-in
Internal I/O Connector	<ul style="list-style-type: none"> 1 x 2 x 3 (2 x 5) pin, pitch 2.00mm connector for COM(support Tx & Rx only)
Mechanical & Environmental	
Power Requirement	<ul style="list-style-type: none"> +12 ~ 26V DC In
Power Connector Type	<ul style="list-style-type: none"> Lockable DC Jack
Mounting	<ul style="list-style-type: none"> Screw fixing
Dimensions	<ul style="list-style-type: none"> 130 x130 mm
Weight	<ul style="list-style-type: none"> 0.5 Kg



Note: Specifications are subject to change without notice.

1.4 System Overview

1.4.1 Right View

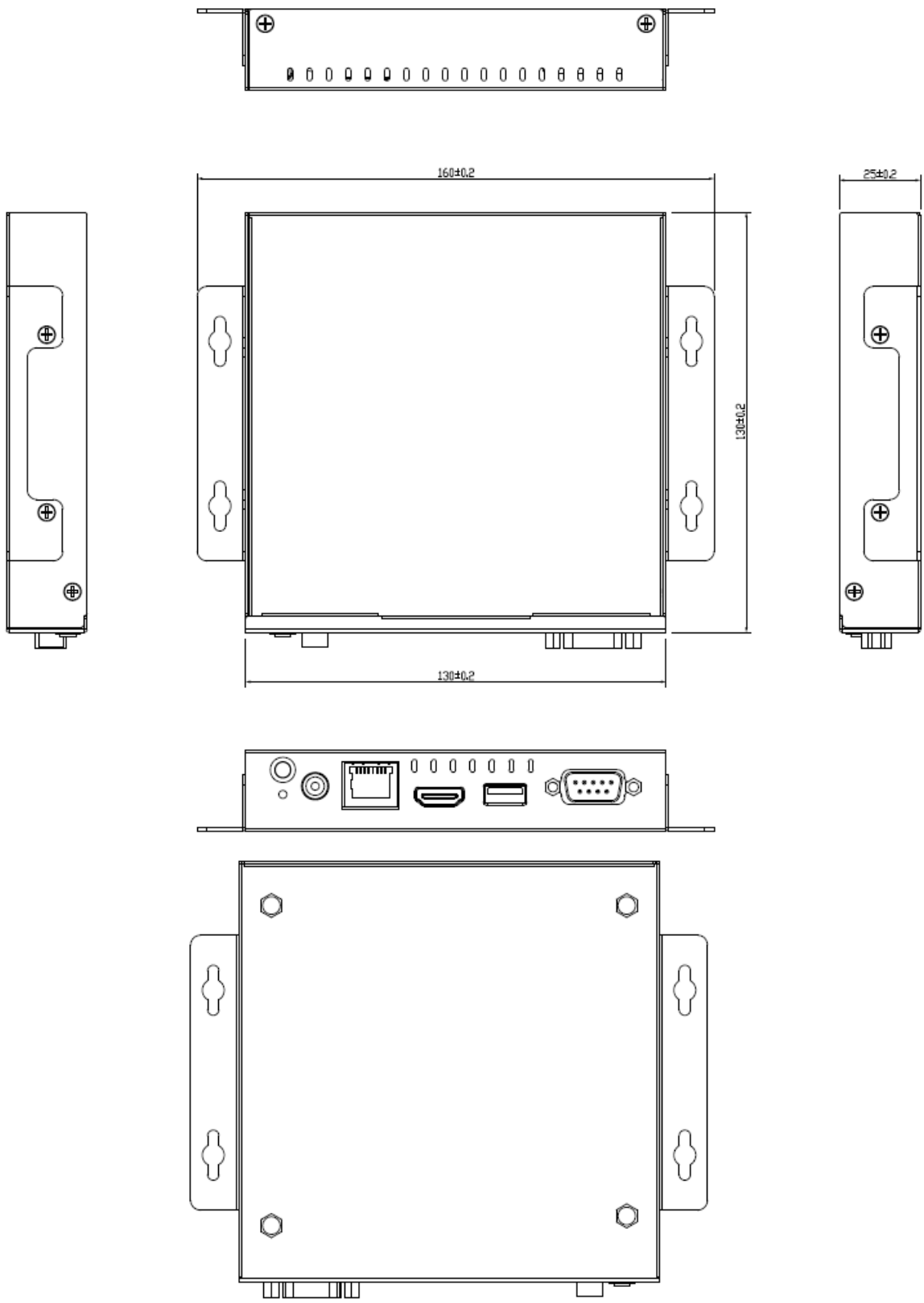


Connectors

Label	Function	Note
Cat5e/6 OUT	Cat5e/6 OUT	
USB2.0	USB2.0 connector	
HDMI	HDMI connector	
COM	Serial port connector	support TX & RX only
DC-IN	DC power-in connector	
Reset	Reset button	

1.5 System Dimensions

1.5.1 Front & Top View



(Unit: mm)

2. Hardware Configuration

For advanced information, please refer to:

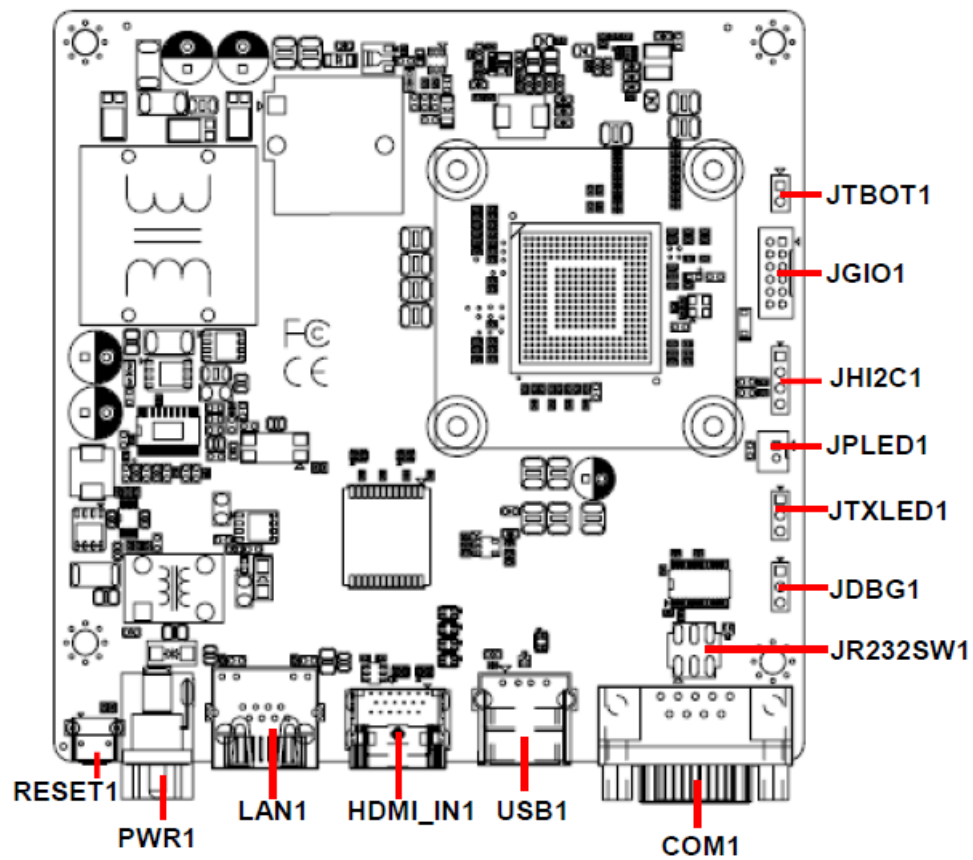
- 1- IP-TBOXB board included in this manual.



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

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

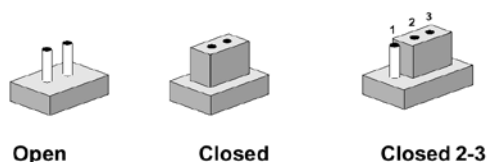
2.2 IP-TBOXB Board Overviews



2.3 IP-TBOXB Board Jumper and Connector list

You can configure your board to match the needs of your application by setting jumpers. A jumper is the simplest kind of electric switch.

It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To “close” a jumper you connect the pins with the clip. To “open” a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2, and 3. In this case, you would connect either two pins.



The jumper settings are schematically depicted in this manual as follows:



A pair of needle-nose pliers may be helpful when working with jumpers.

Connectors on the board are linked to external devices such as hard disk drives, a keyboard, or floppy drives. In addition, the board has a number of jumpers that allow you to configure your system to suit your application.

If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any changes.

The following tables list the function of each of the board's jumpers and connectors.

Jumpers

Label	Function	Note
JR232SW1	Setting for COM1	3 x 2 header, pitch 2.54mm
JTBOT1	Select boot source for VS2310TX	3 x 1 header, pitch 2.00mm

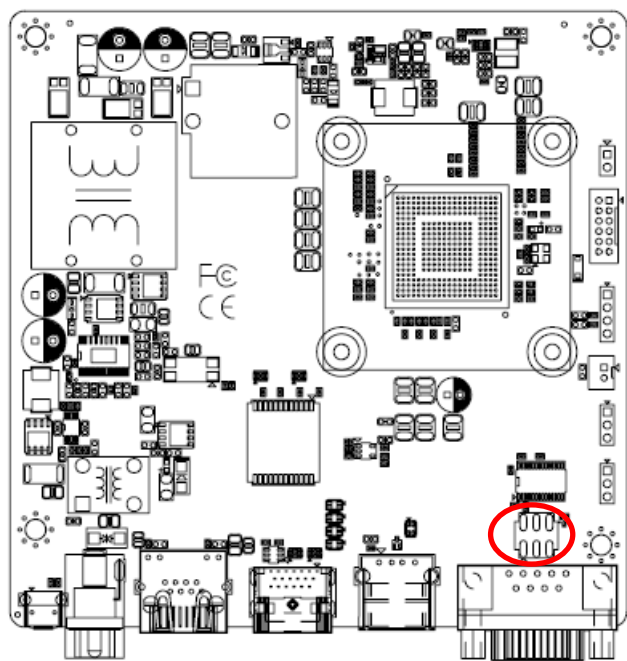
Connectors

Label	Function	Note
COM1	Serial port connector	
HDMI_IN1	HDMI Input connector	
USB1	USB2.0 connector	
LAN1	Cat5e/6 OUT	
PWR1	Power connector	
RESET1	Reset button	
JGIO1	General purpose I/O connector	6 x 2 wafer, pitch 2.00mm

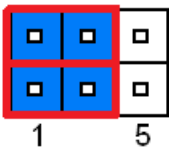
JHI2C1	I2C connector	4 x 1 header, pitch 2.54mm
JPLED1	Power LED indicator	2 x 1 wafer, pitch 2.00mm
JTXLED1	Data Link LED indicator	3 x 1 header, pitch 2.54mm
JDBG1	Debug connector	3 x 1 header, pitch 2.54mm

2.4 IP-TBOXB Board Jumpers & Connectors settings

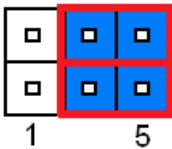
2.4.1 Setting for COM1 (JR232SW1)



For Debug*

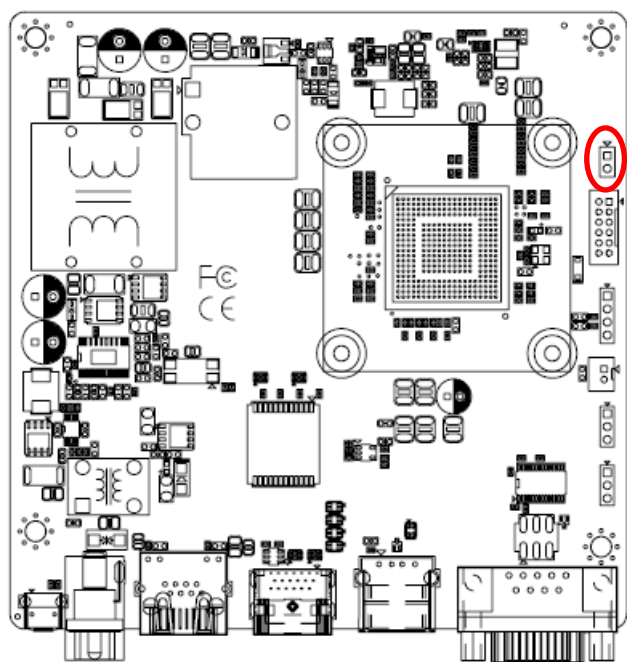


Serial port 1

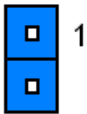


*Default

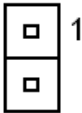
2.4.2 Select boot source for VS2310TX (JTBOT1)



External Boot*

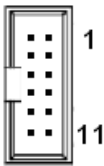
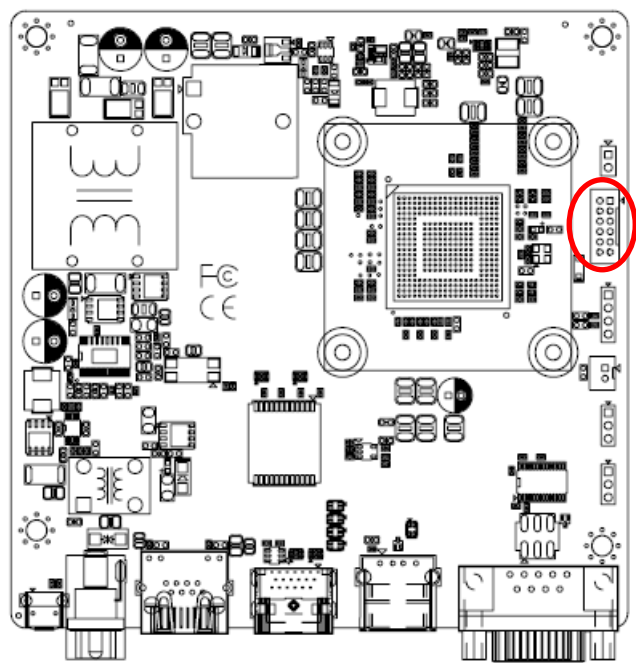


Internal Boot



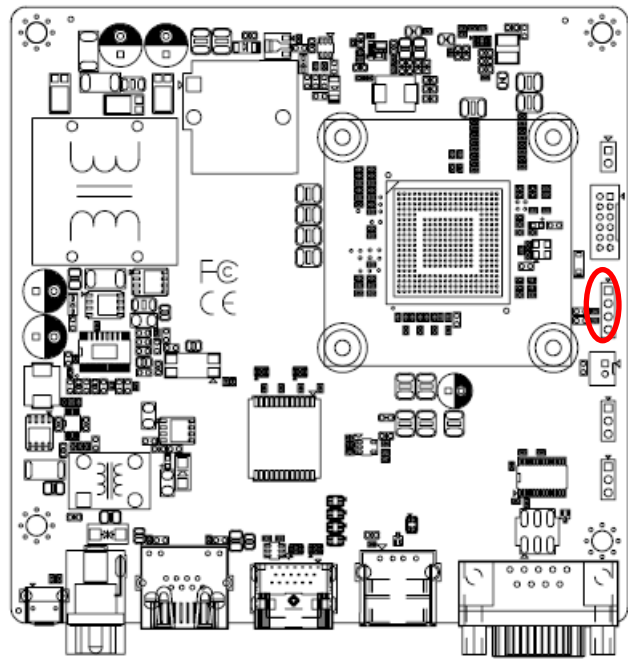
*Default

2.4.3 General purpose I/O connector (JGIO1)



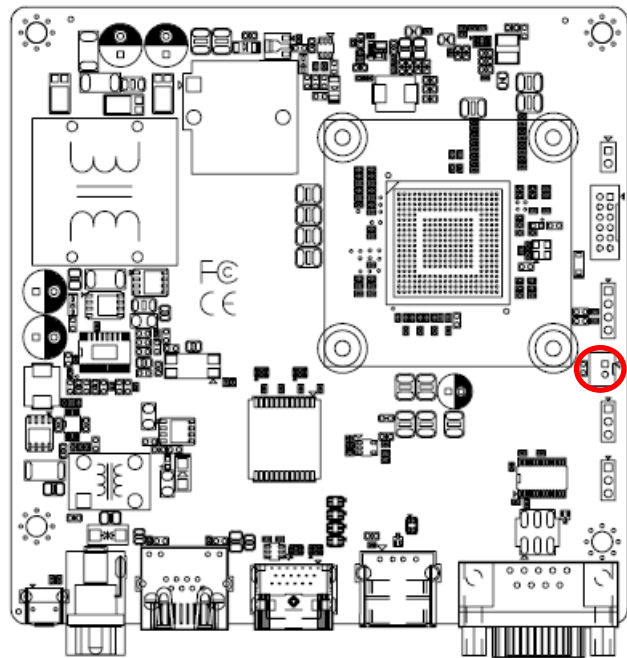
Signal	PIN	PIN	Signal
TGPIO20	2	1	NC
TGPIO23	4	3	NC
TGPIO26	6	5	NC
TGPIO29	8	7	NC
TGPIO31	10	9	NC
GND	12	11	NC

2.4.4 I2C connector (JHI2C1)



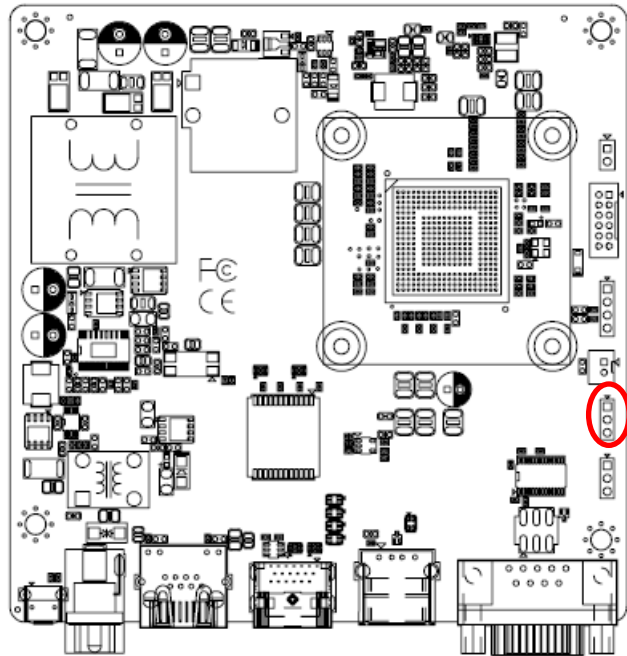
Signal	PIN
GND	1
HOST_SDA	2
+3.3VSB	3
HOST_SCL	4

2.4.5 Power LED indicator (JPLED1)



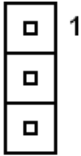
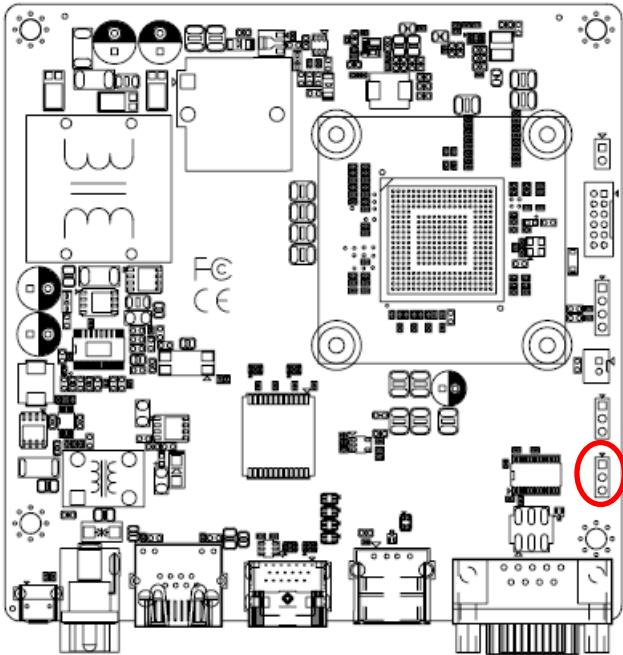
Signal	PIN
+3.3VSB	1
GND	2

2.4.6 Data Link LED indicator (JTXLED1)



Signal	PIN
TXLAN_LINK_R	1
+3.3VSB	2
TXLAN_HDCP_R	3

2.4.7 Debug connector (JDBG1)



Signal	PIN
TDBG_RX	1
GND	2
TDBG_TX	3

