RJ45(HDBaseT) & DVI-D INTERFACE BOARD

Model: HDBT Tx

Part number: 41602080x-3

INSTRUCTIONS

CONTENTS

It is essential that these instructions are read and understood before connecting or powering up this board.

Introduction

HDBT Tx is a transmitter board. It integrated with RJ45(HDBaseT) and DVI-D interface

➢ **Support RJ45(HDBaseT) Output up to 1080p/WUXGA input resolution**

Ordering information :

Board	Part number	Ordering part number
HDBT Tx	P/N 41602080x-3	P/N 41602080x-3

IMPORTANT USAGE NOTE
This product is for use by system developers and integrators. The manufacturer accepts no liability for damage or injury caused by the use of this product. It is the responsibility of the developer, integrators or other user of this product to:
➢ Ensure that all necessary and appropriate safety measures are taken.
➢ Obtain suitable regulatory approvals as may be required.
➢ Check power settings to all component parts before connection.
➢ Understand the operation and connectivity requirements of the board
DISCLAIMER
There is no implied or expressed warranty regarding this material.

SYSTEM DESIGN

A typical monitor with RJ45(HDBaseT) interface connects with HDBT Tx Board:
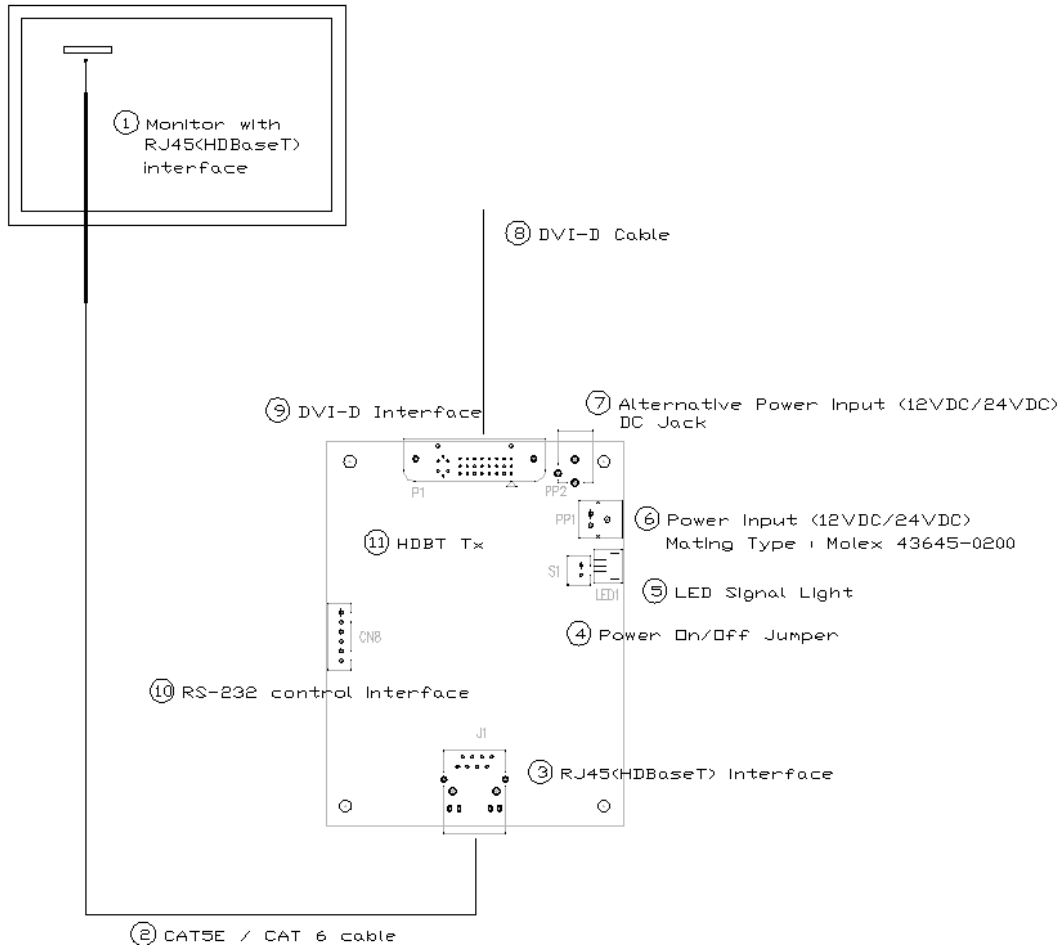
Summary:
1. Monitor with RJ45(HDBaseT) interface
2. CAT5E / CAT 6 cable
3. RJ45(HDBaseT) interface
4. Power On/Off jumper
5. LED Signal light connector
6. Power input (12VDC/24VDC) - Mating Type : Molex 43645-0200
7. Alternative Power input (12VDC/24VDC) - DC Jack
8. DVI-D Cable
9. DVI-D Interface
10. RS-232 control interface
11. HDBT Tx Board

Digital View offers a range of accessories such as listed above, to make up complete display solution.

CONNECTORS, PINOUTS & JUMPERS

The various connectors are:
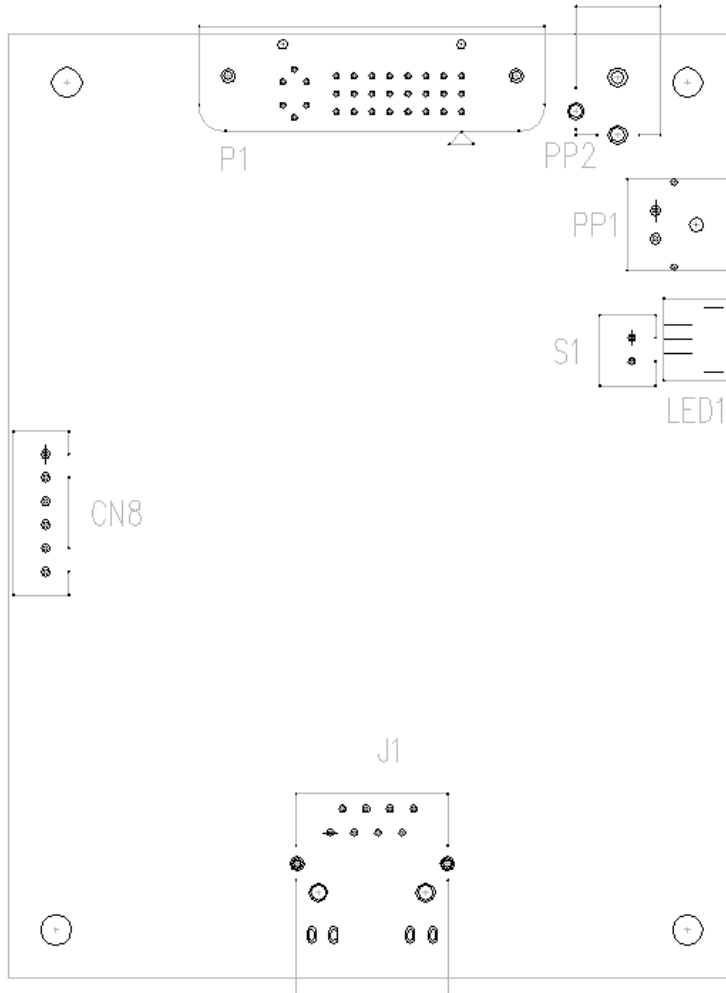
Summary: Connectors

Connector	Purpose	Description
CN8	RS-232 firmware upgrade	Molex 53261-0671, 6 ways 1.25mm pitch (Mating type : Molex 51021-0600)
J1	RJ45(HDBaseT) Input	RJ-45 connector
P1	DVI-D Input	DVI-D connector
PP1	Power Input	Molex 43650-0200 compatible (Mating type : Molex 43645-0200 compatible)
PP2	Power Input	DC jack 2.5 mm
S1	Power On/Off jumper setting	Power On/Off 1-2 closed = On Open = Off
LED	Connect to LED Signal Light	LED Power On Status

CN8 – RS-232 serial control: Molex 53261-0671, 6 ways 1.25mm pitch   (Matching type : Molex 51021-0600)

PIN	SYMBOL	DESCRIPTION
1	SDATA	Reserved
2	SCLK	Reserved
3	VCC	+5V
4	TXD	RS-232 Tx data
5	GND	Ground
6	RXD	RS-232 Rx data

PP1 - Power supply   (Mating type : Molex 43645-0200 compatible)

PIN	DESCRIPTION
1	+12VDC/24VDC 5A max
2	Ground

LED1 – Status LED connector: 3-pin header

PIN	DESCRIPTION
1	Green LED pin (anode)
2	LED pin common (cathode)
3	Red LED pin (anode)

P1 – DVI-D in

PIN	SYMBOL	DESCRIPTION
1	/RX2	TMDS Data 2-
2	RX2	TMDS Data 2+
3	GND	Digital Ground
4	NC	No connection
5	NC	No connection
6	DDC_CLK	DDC Clock
7	DDC_DAT	DDC Data
8	VS_IN	Analog vertical Sync
9	/RX1	TMDS Data 1-
10	RX1	TMDS Data 1+
11	GND	Digital Ground
12	NC	No connection
13	NC	No connection
14	DDC_5V	+5V power supply for DDC (optional)
15	GND	Ground (+5, Analog H/V Sync)
16	HPD	Hot plug detect
17	/RX0	TMDS Data 0-
18	RX0	TMDS Data 0+
19	GND	Digital Ground
20	NC	No connection
21	NC	No connection
22	GND	Digital Ground
23	RXC	TMDS Clock+
24	/RXC	TMDS Clock-
C1	R	Red
C2	G	Green
C3	B	Blue
C4	HS_IN	Analog horizontal sync
C5	GND	Ground
C6	NC	No connection

BOARD DIMENSIONS
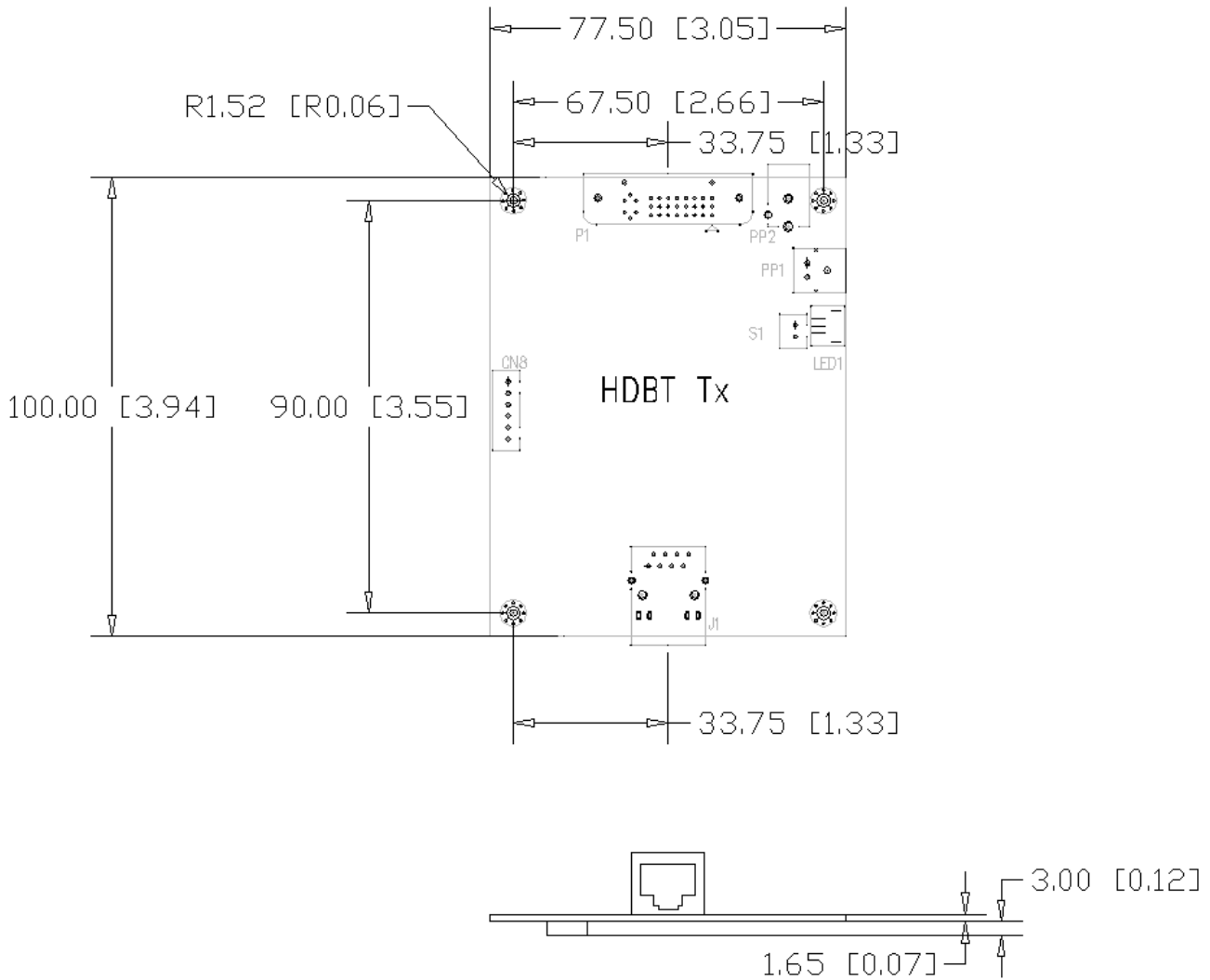
The maximum thickness of the board is 13.95mm (measured from bottom of PCB to top of components, including any underside components & leads). We recommend clearances of:
- 5mm from bottom of PCB - if mounting on a metal plate we also recommend a layer of suitable insulation material is added to the mounting plate surface.
- 10mm above the components
- 3~5mm around the edges

Any of the holes shown above can be used for mounting the PCB, they are 3 mm in diameter.

CAUTION: Ensure adequate insulation is provided for all areas of the PCB with special attention to high voltage parts such as the inverter.

SPECIFICATIONS

Input Port	DVI-D
Output Port	RJ45(HDBaseT)
Input voltage	12VDC/24VDC ,
On*board*power*on/off*	Yes
Board dimensions	100 mm x 77.50mm x 13.95mm
Storage temperature limits	-40°C to +70°C
Operating temperature limits	0°C to +60°C
Connection	Support up to 70m CAT5E / CAT 6 cable to connect with controller DD-1920-HDBT.**

** Overall suitability for usage in critical applications must be independently tested and verified by the user.

NOTES
Please note the following:
- Re-layout and custom development services are available.

WARRANTY

The products are warranted against defects in workmanship and material for a period of three (3) year from the date of purchase provided no modifications are made to it and it is operated under normal conditions and in compliance with the instruction manual.

The warranty does not apply to:
- Product that has been installed incorrectly, this specifically includes but is not limited to cases where electrical short circuit is caused.
- Product that has been altered or repaired except by the manufacturer (or with the manufacturer's consent).
- Product that has subjected to misuse, accidents, abuse, negligence or unusual stress whether physical or electrical.
- Ordinary wear and tear.

Except for the above express warranties, the manufacturer disclaims all warranties on products furnished hereunder, including all implied warranties of merchantability and fitness for a particular application or purpose. The stated express warranties are in lieu of all obligations or liabilities on the part of the manufacturer for damages, including but not limited to special, indirect consequential damages arising out of or in connection with the use of or performance of the products.

CAUTION

Whilst care has been taken to provide as much detail as possible for use of this product it cannot be relied upon as an exhaustive source of information. This product is for use by suitably qualified persons who understand the nature of the work they are doing and are able to take suitable precautions and design and produce a product that is safe and meets regulatory requirements.

LIMITATION OF LIABILITY

The manufacturer's liability for damages to customer or others resulting from the use of any product supplied hereunder shall in no event exceed the purchase price of said product.

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- HDBT Tx

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CONTACT DETAILS

Digital View has offices in Asia, Europe and USA :

USA

Digital View Inc.
18440 Technology Drive
Building 130
Morgan Hill,
California, 95037
USA
Tel: (1) 408-782 7773 **Fax**: (1) 408-782 7883
Sales: ussales@digitalview.com

EUROPE

Digital View Ltd.
The Lake House
Knebworth Park
Herts, SG3 6PY
UK
Tel: +44-(0)20-7631-2150 **Fax**: Fax: +44-(0)20-7631-2156
Sales: uksales@digitalview.com

ASIA

Digital View Ltd
2nd Floor Bamboos Center
52 Hung To Road
Kwun Tong
Hong Kong
Tel: (852) 2861 3615 **Fax**: (852) 2520 2987
Sales: hksales@digitalview.com

WEBSITE

www.digitalview.com

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