



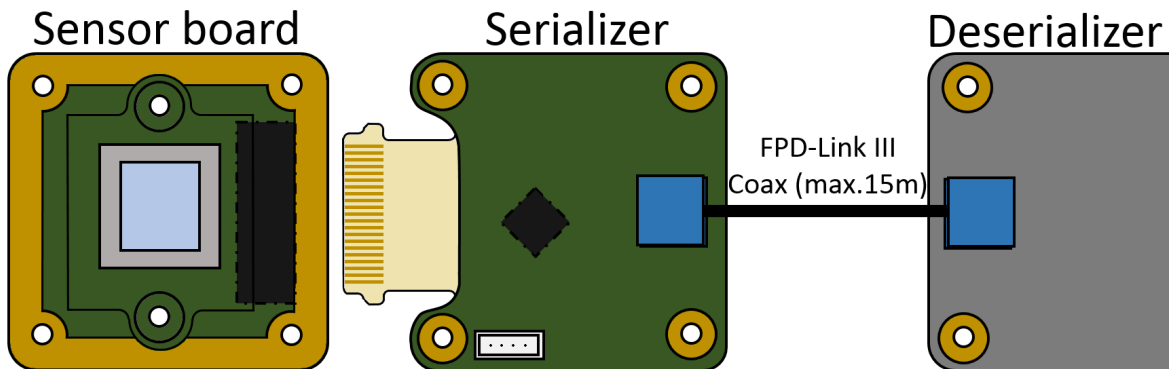
# MDSER-FPD-1CH 2.00



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## 1 Introduction

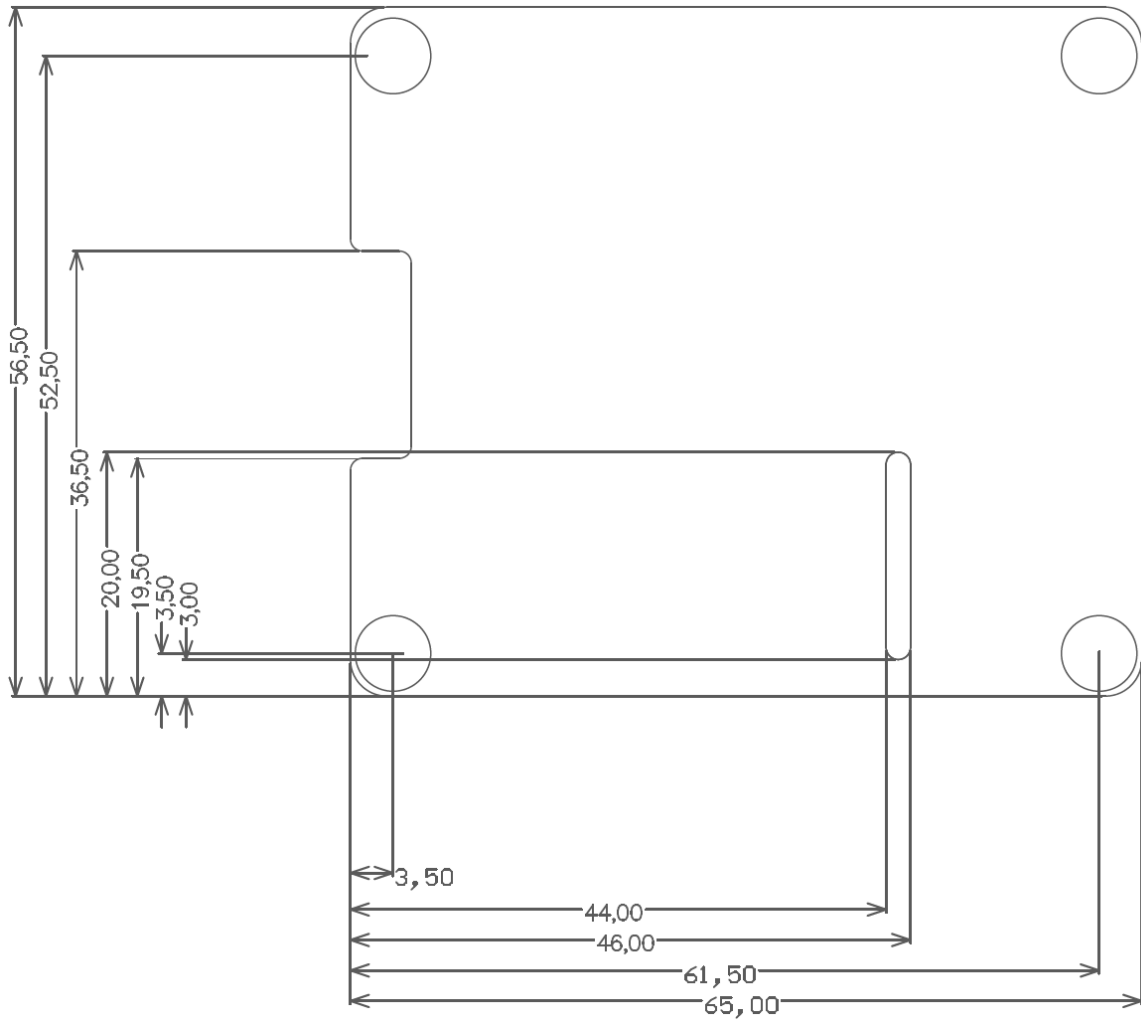
MDSER-FPD-1CH is a deserializer board from the MDSER product family which is based on the Texas Instruments FPD-Link III deserializer chip, DS90UB954-Q1. This board is intended for use with the Raspberry Pi platform (from Rev. 3) or with the NVIDIA® Jetson Nano™ A02 (single-camera interface) and a single FPD-Link III MIPI CSI-2 camera. The typical setup is shown below:





## 2 MDSER-FPD-1CH Rev 2.00

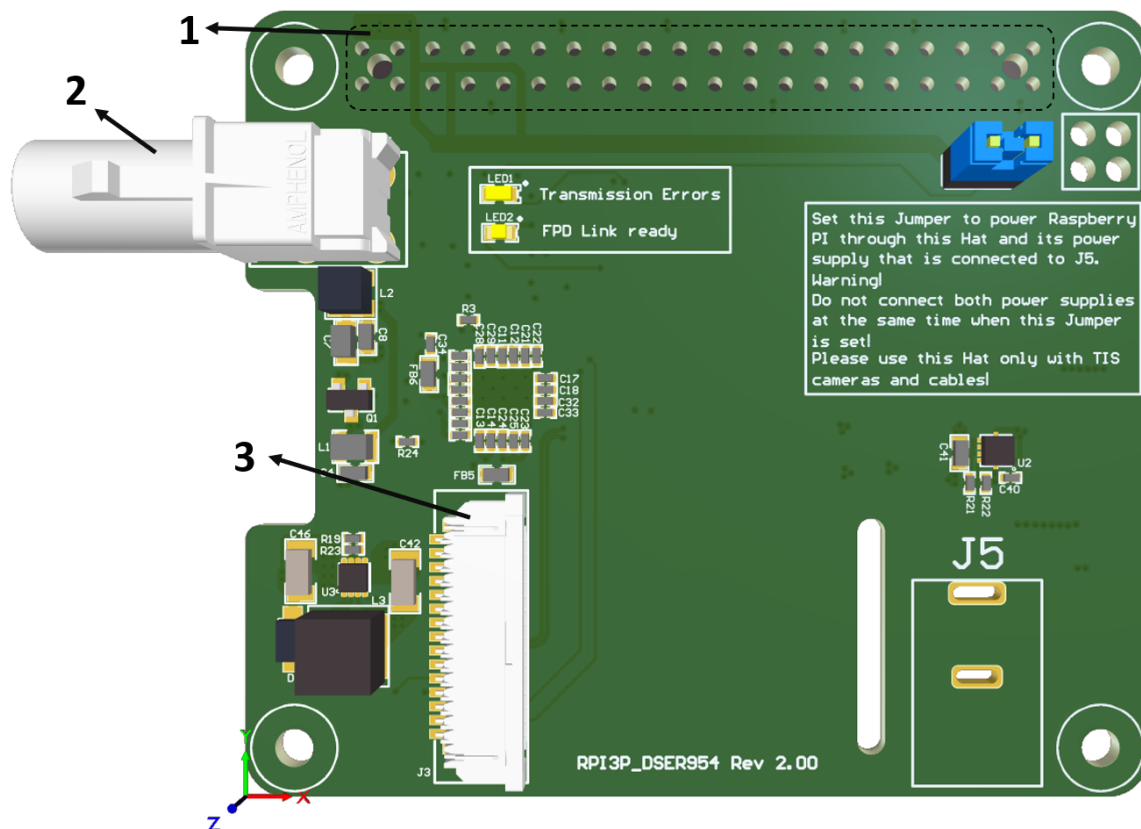
The dimensions of MDSER-FPD-1CH board are shown below:





## 2.1 Connector Description

The following diagram shows the position and function of the connectors on the MDSER-FPD-1CH board:



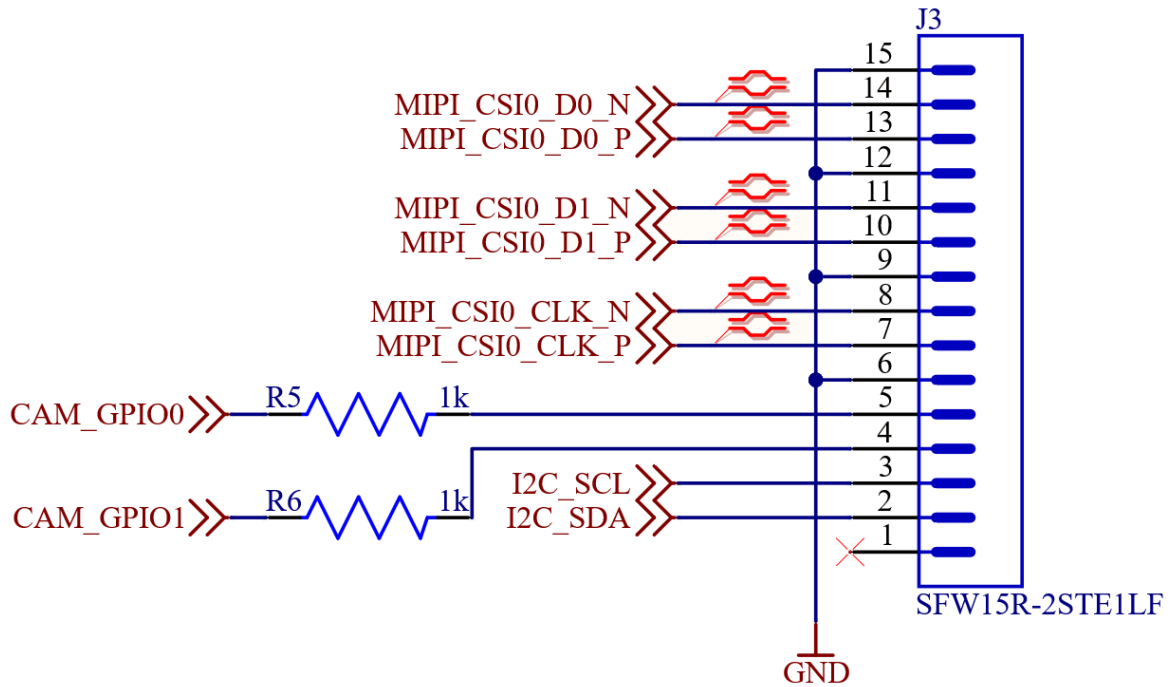
No.	Name	Description
1	J2	Header for 40-pin connector from embedded system
2	J1	FAKRA connector male code Z 50 Ohm for FPD-Link III
3	J3	Connector for embedded system sensor interface (contacts on top)

Please note: this board provides a phantom power supply of +27V at the FAKRA connector J1. If this board is not used in combination with a product from The Imaging Source, please ensure that the 3rd party serializer board can withstand this high voltage.



## 2.2 FPC Connector J3 on the MSER-FPD-1CH Board

The sensor interface connector J3 has the following pinout:



The CAM\_GPIOs and I2C-bus signals have the I/O voltage of 3.3V.



## 2.3 I/O Signals on DS90UB954-Q1

The connected I/O signals on the deserializer chip DS90UB954-Q1 (Texas Instruments) are listed in the following table:

Pin	Name	Dir	Description
28 (GPIO0)	CAM_GPIO0	I/O	Unused GPIO0 signal from sensor interface J3
27 (GPIO1)	CAM_GPIO1	I/O	Unused GPIO1 signal from sensor interface J3
26 (GPIO2)	PWR_ON	O	Coax power for FPD-Link III enable, active high
25 (GPIO3)	NC	---	---
10 (GPIO4)	NC	---	---
9 (GPIO5)	NC	---	---
8 (GPIO6)	NC	---	---



## 2.4 On-board LEDs

There are two status-LEDs on the MDSER board:

Name	Color	Description
LED1	Red	FPD-Link III transmission errors
LED2	Green	FPD-Link III connection has been established





## MDSER-FPD-1CH 2.00

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All weights and dimensions are approximate. Unless otherwise specified, the lenses shown in the context of cameras are not shipped with these cameras.

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