Riverdi

Don Addon 5 RGB

General Description

Rev.1.1
2022-01-14

Don Addon 50 RGB applies to below Riverdi HB, IPS 5.0" RGB series:

PRODUCT NAME	DESCRIPTION
RVT50HQTNWN00	HB, IPS, 5.0", 1000cd/m^2, RGB, No touch panel
RVT50HQTFWN00	HB, IPS, 5.0", 1000cd/m^2, RGB, No touch panel, Metal frame
RVT50HQTNWC00-B	HB, IPS, 5.0", 850cd/m^2, RGB, uxTouch, Optical bonding
RVT50HQTNWC00	HB, IPS, 5.0", 800cd/m^2, RGB, uxTouch, Air bonding
RVT50HQTNWCA0	HB, IPS, 5.0", 800cd/m^2, RGB, aTouch, Air bonding
RVT50HQTFWCA0	HB, IPS, 5.0", 800cd/m^2, RGB, aTouch, Air bonding, Metal frame

1. REVISION RECORD

REV NO.	REV DATE	CONTENTS	REMARKS
1.0	2021-10-25	Initial Release	
1.1	2022-01-14	Updating the product photos	

2. CONTENTS

3. INTRODUCTION

The aim of this document is to present the general idea and functions of the device presented. Don Addon 5 RGB is a hardware connection between Riverdi STM32 Evaluation Board and the TFT display, turning three separate items into one working unit.
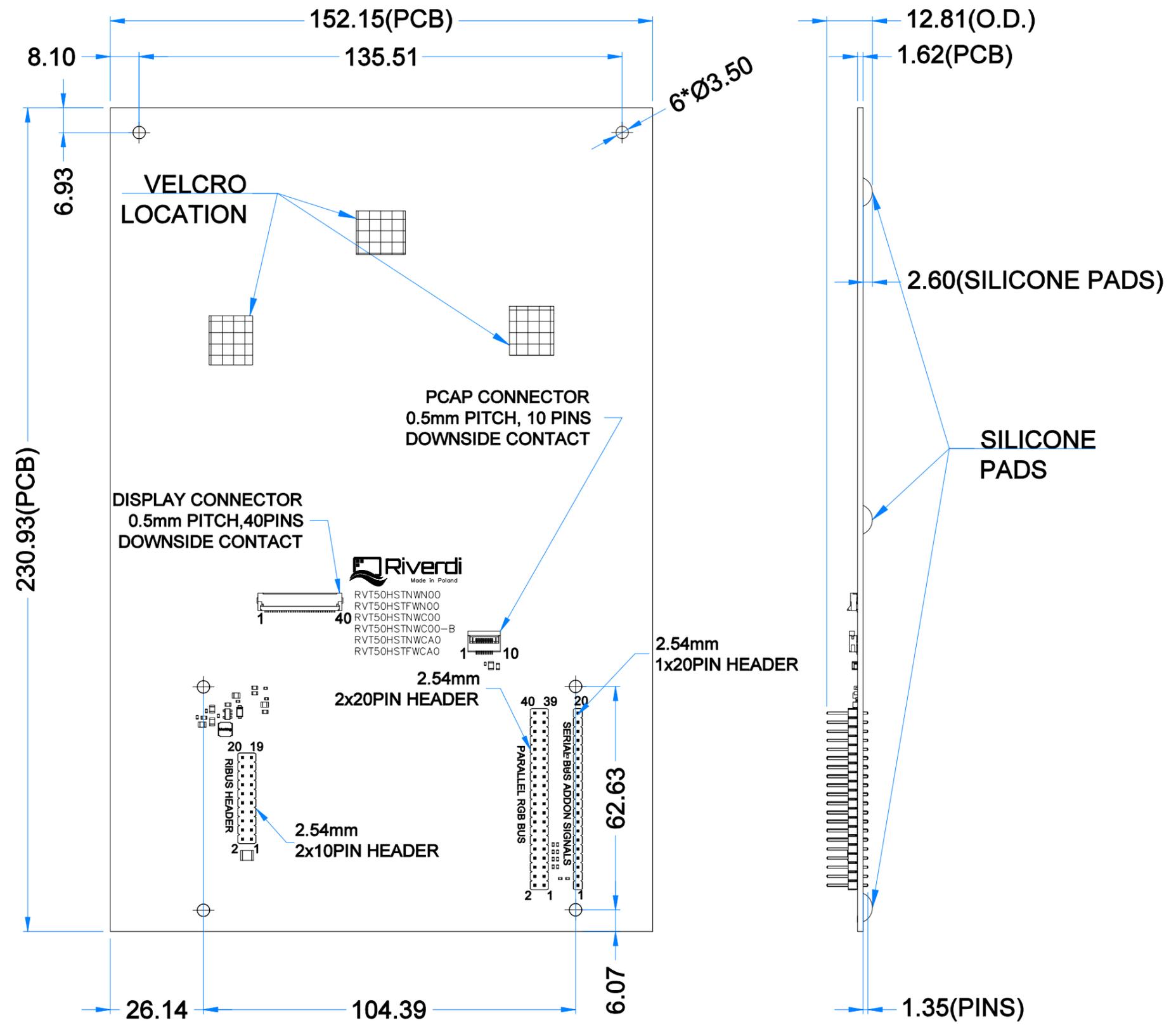
4. GENERAL DESCRIPTION

This Don Addon board is the hardware interfacing device that provides the necessary connection between TFT and STM32 Evaluation Board.

Because of the rich offer of TFT modules from Riverdi and the necessity to ensure seamless cooperation between different TFT modules and ONE type of STM32 Evaluation Board, there must be different, customized versions of Don Addon board, to make it possible to use many modules differing in size, signal connectors and mechanical builds, together with ONE universal controller – STM32 Evaluation Board.
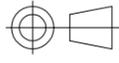
One of the purposes for building Don Addon board was to put developers' world in order.

Another one was to prepare and demonstrate the working TFT modules at various presentations and exhibitions.

152.15(PCB)

135.51

8.10

6*Ø3.50

6.93

12.81(O.D.)

1.62(PCB)

VELCRO
LOCATION

2.60(SILICONE PADS)

230.93(PCB)

PCAP CONNECTOR
0.5mm PITCH, 10 PINS
DOWNSIDE CONTACT

SILICONE
PADS

DISPLAY CONNECTOR
0.5mm PITCH,40PINS
DOWNSIDE CONTACT

Riverdi
Made in Poland

RVT50HSTNWN00
RVT50HSTFWN00
RVT50HSTNWC00
RVT50HSTNWC00-B
RVT50HSTNWCA0
RVT50HSTFWCA0

1   40

1   10

2.54mm
1x20PIN HEADER

2.54mm
2x20PIN HEADER

40 39   20

PARALLEL RGB BUS

SERIAL BUS ADDON SIGNALS

62.63

RIBUS HEADER

20 19

2.54mm
2x10PIN HEADER

2   1

2   1   1

6.07

26.14

104.39

1.35(PINS)

6. MECHANICAL FUNCTIONS

1. The Don Addon 5 RGB is a stable mechanical base for three components:
- STM32 Evaluation Board
- Riverdi HB, IPS 5.0" RGB TFT display
- Don Addon 5 RGB itself

Mechanical stability of the above devices fixed together protects delicate TFT connectors against breaking, tearing off and wearing out due to frequent connecting and disconnecting.

2. The Don Addon board is designed in a way that allows the use of all three components in horizontal and vertical positions.

The horizontal position is particularly useful during development. It gives a secure access to STM32 Evaluation Board measuring terminals and other circuitry points desired by a developer.

The vertical position allows for hanging the entire working unit on a vertical post for exhibiting purposes and for drawing visitors' attention.

A TFT module is fastened to the Don Addon board with velcro tapes in four places: close to the module's corners. Using velcro tapes between the Don Addon board and the TFT ensures:

- Relatively high fastening strength that makes sure the TFT connectors are safe from mechanical damage in both positions (horizontal and vertical),
- Relative ease of changing the TFT modules whenever necessary.

The picture below shows all three listed components separately, before being assembled into one unit:
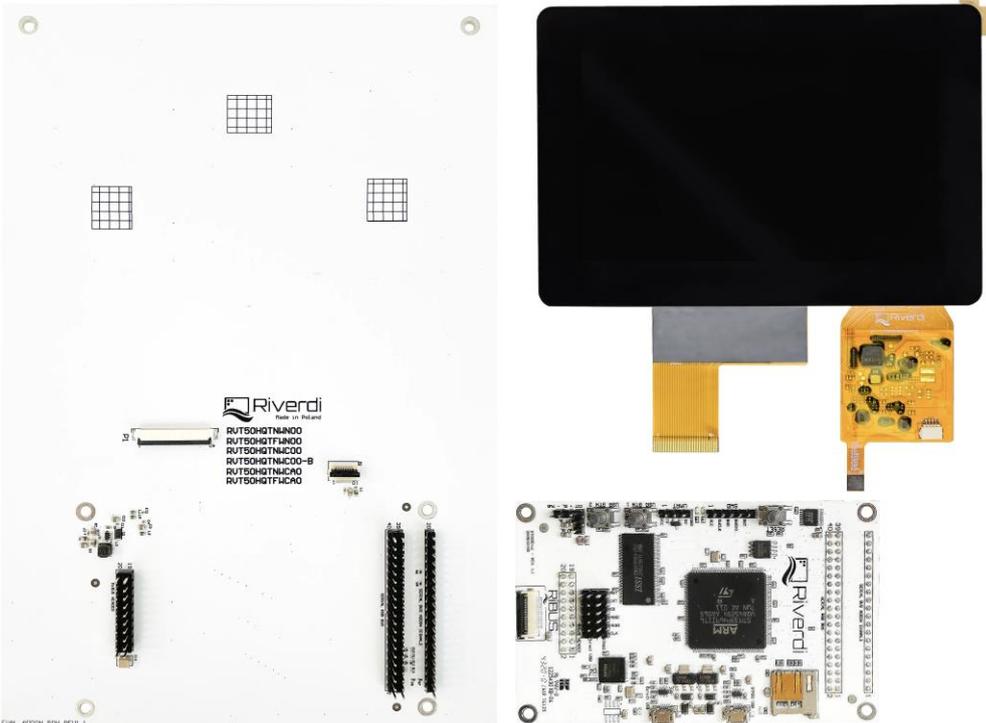
The picture below shows the same three components assembled and connected into one device:

7. ELECTRICAL FUNCTIONS

1. The Don Addon board generates all the voltages necessary for the TFT display to operate properly.
2. The Don Addon board generates the power necessary for backlight in the TFT module to operate properly.

8. HOW TO USE

Please refer to the User Manual of the STM32 Evaluation board on how to use the assembled unit.

User Manual Download Link: https://riverdi.com/product/stm32-evaluation-board/

9. SUMMARY

If this document has made you interested in knowing more about Riverdi products, please visit Riverdi website: *https://riverdi.com/*

10. LEGAL INFORMATION

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