Don Addon 35 RGB to STM32 Evaluation Board Whitepaper

Don Addon 35 RGB

General Description

Rev.1.2
2022-03-02

Don Addon 35 RGB applies to below Riverdi HB, IPS 3.5” RGB series:

PRODUCT NAME	DESCRIPTION
RVT35HHTNWN00	HB, IPS, 3.5”, 1000cd/m^2, RGB, No touch panel
RVT35HHTFWN00	HB, IPS, 3.5”, 1000cd/m^2, RGB, No touch panel, Metal frame
RVT35HHTNWC00-B	HB, IPS, 3.5”, 850cd/m^2, RGB, uxTouch, Optical bonding
RVT35HHTNWC00	HB, IPS, 3.5”, 800cd/m^2, RGB, uxTouch, Air bonding
RVT35HHTNWCA0	HB, IPS, 3.5”, 800cd/m^2, RGB, aTouch, Air bonding
RVT35HHTFWCA0	HB, IPS, 3.5”, 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	
1.2	2022-03-02	Updating the product photo	

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3. INTRODUCTION

The aim of this document is to present the general idea and functions of the device presented. Don Addon 35 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

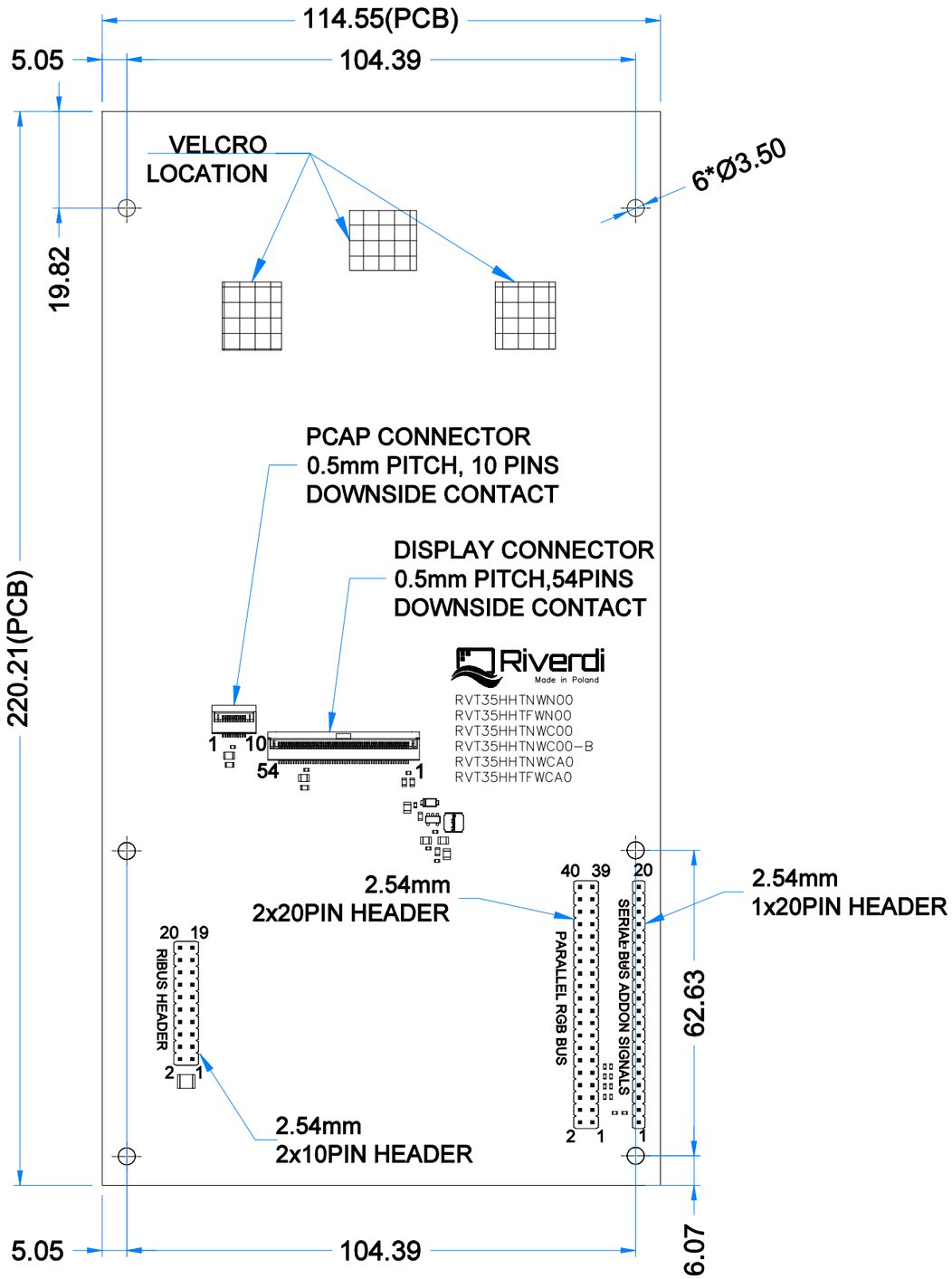
This Don Addon board is the hardware interfacing device that provides the necessary connection between TFT and STM32 Evaluation Board.

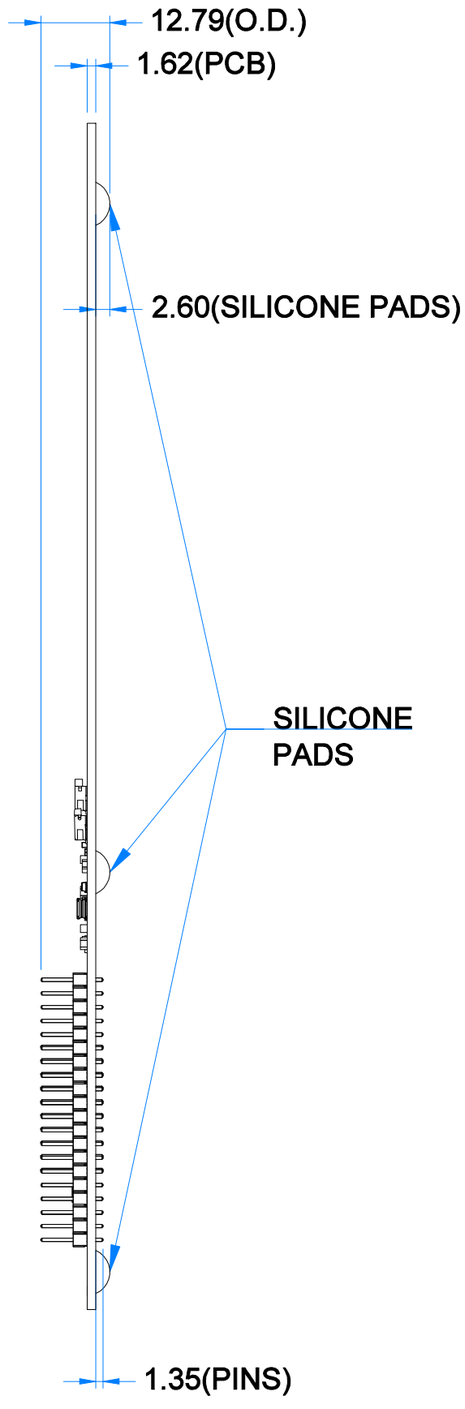
Because of the rich offer of TFT modules from Riverdi and the necessity to ensure seamless cooperation between different TFT modules and ONE type of STM32 Evaluation Board, there must be different, customized versions of Don Addon boards, to make it possible to use many modules differing in size, signal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

One of the purposes for building Don Addons was to put developers' world in order.

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

Revision:	Changes:	Date:
1.0	Initial Case	2021.11.09





GENERAL NOTES:
1. WITHOUT INDIVIDUAL TOLERANCE: ±0.3mm
2. RoHS3 COMPLIANT

PN: DON ADDON 35 RGB Rev.1.0			
SN:			
DRAWN: M.Natywa	2021.11.09	1:1.14	
CHECKED:		[mm]	
APPR:		ISO A3	P. 1 of 1

6. MECHANICAL FUNCTIONS

1. The Don Addon 35RGB is a stable mechanical base for three components:

- STM32 Evaluation Board
- Riverdi HB, IPS 3.5” RGB TFT display
- Don Addon 35 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 35RGB 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 3 places. 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.

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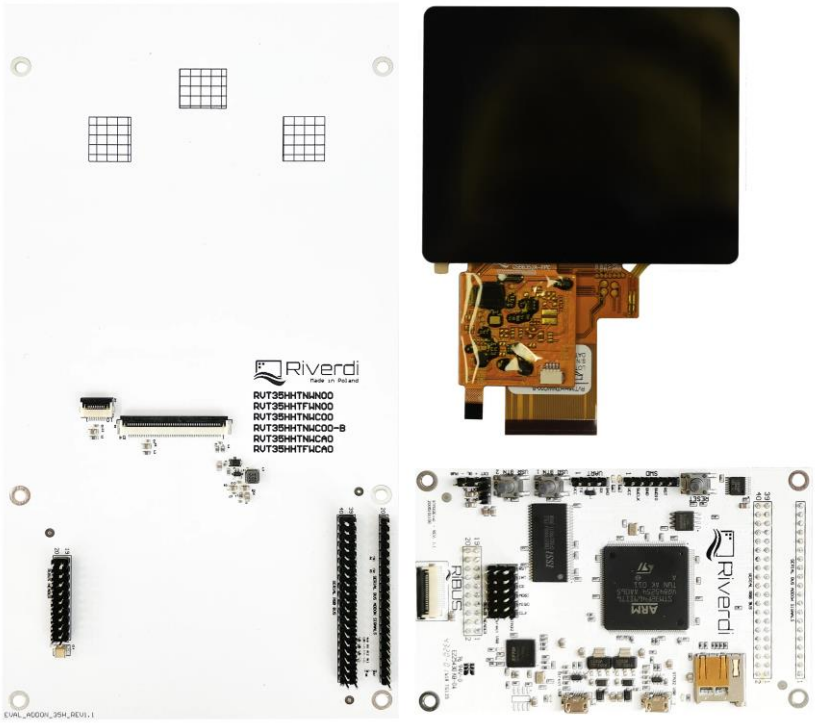
The picture below shows all three listed components separately, before being assembled into one unit:



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.

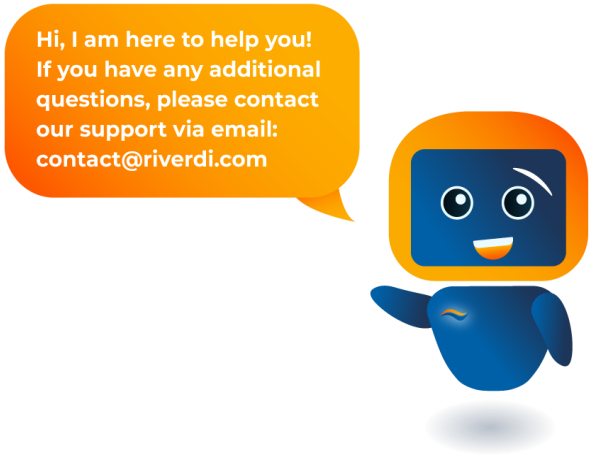
8. HOW TO USE

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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