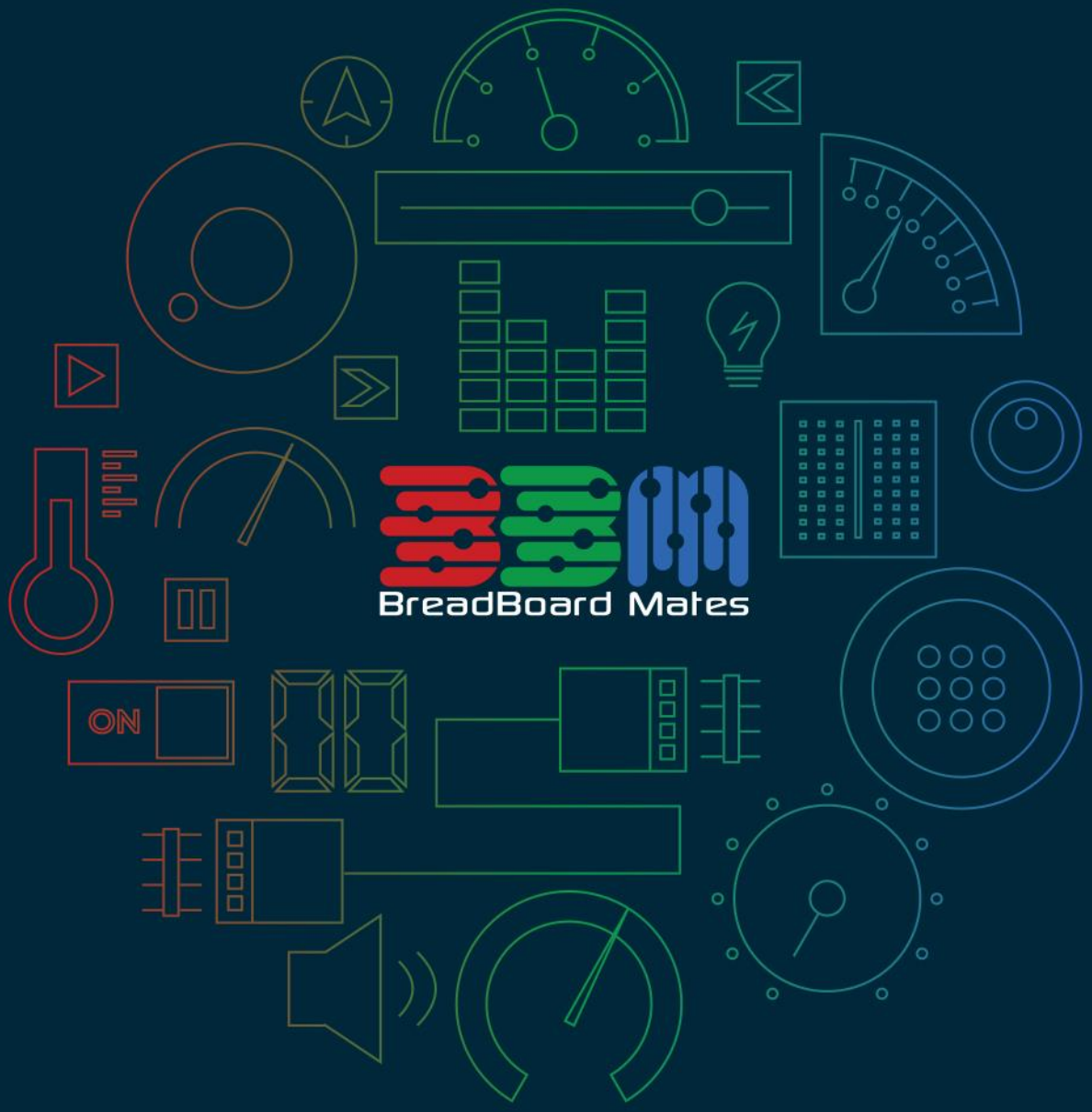


MatesBUS Stand
DATASHEET

Document Revision: 1.0
Document Date: 28/07/2021

Content subject to change at any time, please refer to www.breadboardmates.com for the latest revision.

Table of Contents

Document Revision History

Revision Number	Date	Description
0.1	07/07/2021	Initial Draft
0.2	19/07/2021	Formatting Update
1.0	28/07/2021	Initial Public Release

Hardware Revision History

Revision Number	Date	Description
1.0	08/03/2021	Initial Revision
1.1	03/05/2021	MatesBUS Header footprint modification to PCB

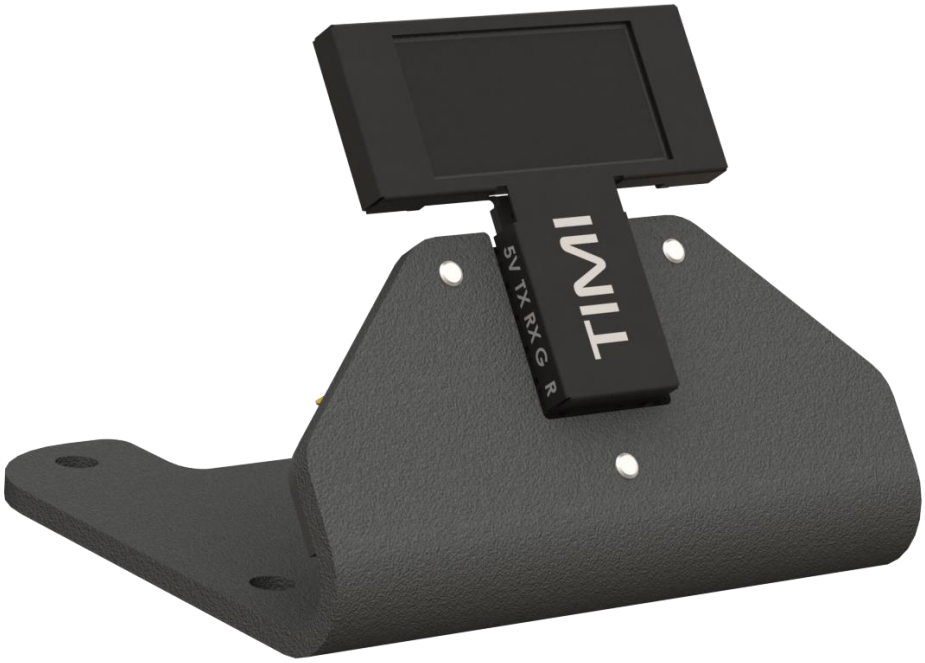
About Breadboard Mates

Breadboard Mates (aka BBM) is an Australian start-up company and was established in 2020 with the aim to bring breadboard friendly display products to the market, cutting down the time and components required to develop or experiment with electronics.

Hobbyist to Professional, BBM products can be utilised for development or education or anything in between. Development of projects / applications is made incredibly easy with the help of the revolutionary Mates Studio IDE.

The Mates Studio IDE is unlike any other, it offers 4 different programming methods with interchangeable pages and widgets, and helps speed up development for stand alone, host driven or PC tethered applications.

Breadboard Mates is constantly working on new product ideas, so keep a watch on the breadboardmates.com website for new product releases.



TIMI-96 connected to the MatesBUS Stand.
(TIMI-96 is not included with the stand)

Note: Production Stands will be branded with BBM Logo on the front.

Product Description

BBM-MatesBUS-Stand (ref. MatesBUS Stand) is an aluminium stand with integrated PCB designed to provide a base platform for MatesBUS based products such as TIMI-96, for development or showcasing.

Product Features

The MatesBUS Stand offers a simple connection for a MatesBUS compatible device, such as the TIMI-96, and eases development by propping the MatesBus compatible device up on an angle (35 degrees off vertical), aiding development when the device is situated on a desk or bench.

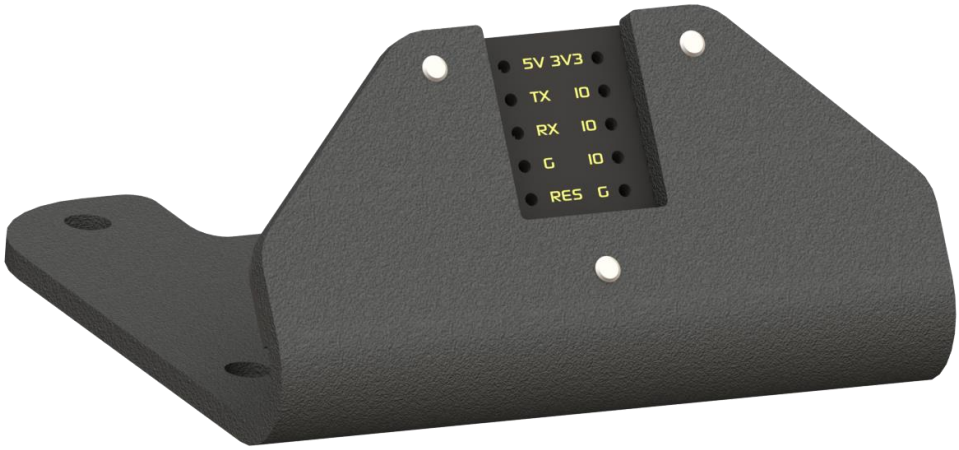
The MatesBUS Stand breaks out the 10 signals found on the MatesBUS interface, into 2 separate 5-pin headers, one out of each side of the stand itself. This allows easy connections to the BBM Programmer for programming the connected module (such as the TIMI-96). The headers are also easy to attach jumper wires to other devices or a Host, which can then be situated on a Breadboard or direct, somewhere beside or behind the stand itself.

Hardware Detail

The MatesBUS Stand utilises the BBM MatesBus, which is a unique interface pinout designed to be simple and easy to use.

The MatesBus is made up of 2 rows of 5 pins, 0.1” (2.54mm) pitch, spaced 0.3” (7.62mm) apart, ideal for direct plug into a breadboard, or compatible adaptor or development board.

On the base of the MatesBUS stand are 4 mounting holes, which can be used to fasten the stand down as required.



Hardware Interfaces

The MatesBUS Stand offers up connections to all 10 of the MatesBUS interface, to 2 different 5-way connectors, one out each side of the stand. There are no electronics as such on the board, it is simply a breakout, so the pins found are a mirror of the MatesBUS pins themselves.

System Pins

+5V (Device Supply Voltage)
MatesBUS supply voltage pin. This pin supplies the MatesBUS with 5VDC from the 5V side header (H4)

GND (Module Ground)
Device ground pin. One GND pin is found on each H3 and H4 side headers.

TX (Serial UART Transmit - MatesBUS)
TX of the MatesBUS connects to RX of the Host board (or BBM Programmer), this is the 3.3V Asynchronous Serial UART Transmit for communications between the device connected to the MatesBUS headers and the Host. Connects to the TX on the side Header H4.

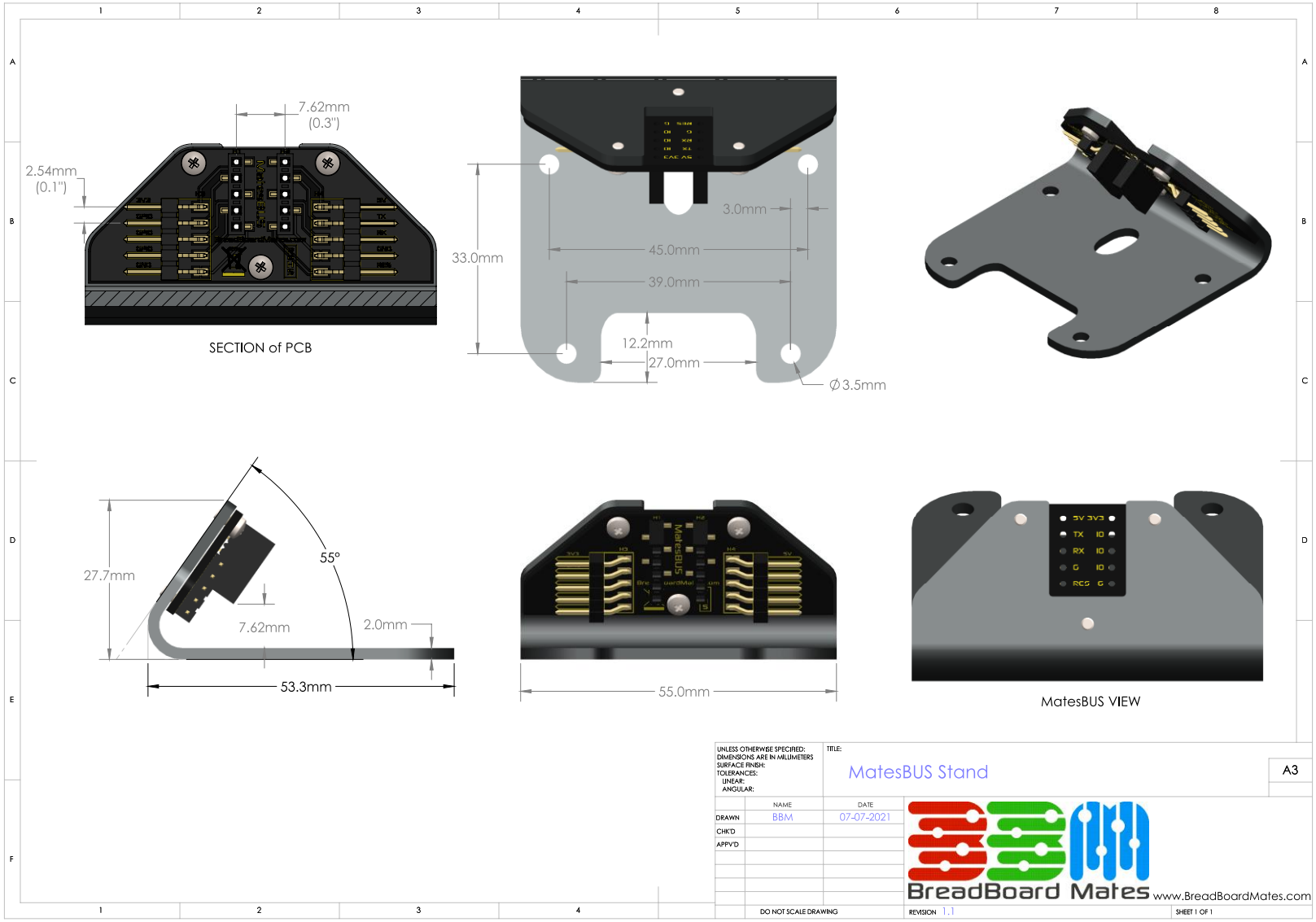
RX (Serial UART Receive - MatesBUS)
RX of the MatesBUS connects to TX of the Host board (or BBM Programmer), this is the 3.3V Asynchronous Serial UART Receive for communications between the device connected to the MatesBUS headers and the Host. Connects to the RX on the side Header H4.

RESET (MatesBUS Reset)
This pin is primarily connected to the BBM-Programmer, for programming the connected MatesBUS device, such as the TIMI-96. It can also be connected to a Host, making it possible for the Host to initiate a reset of the MatesBUS device as required. This pin is found on the side Header H4.

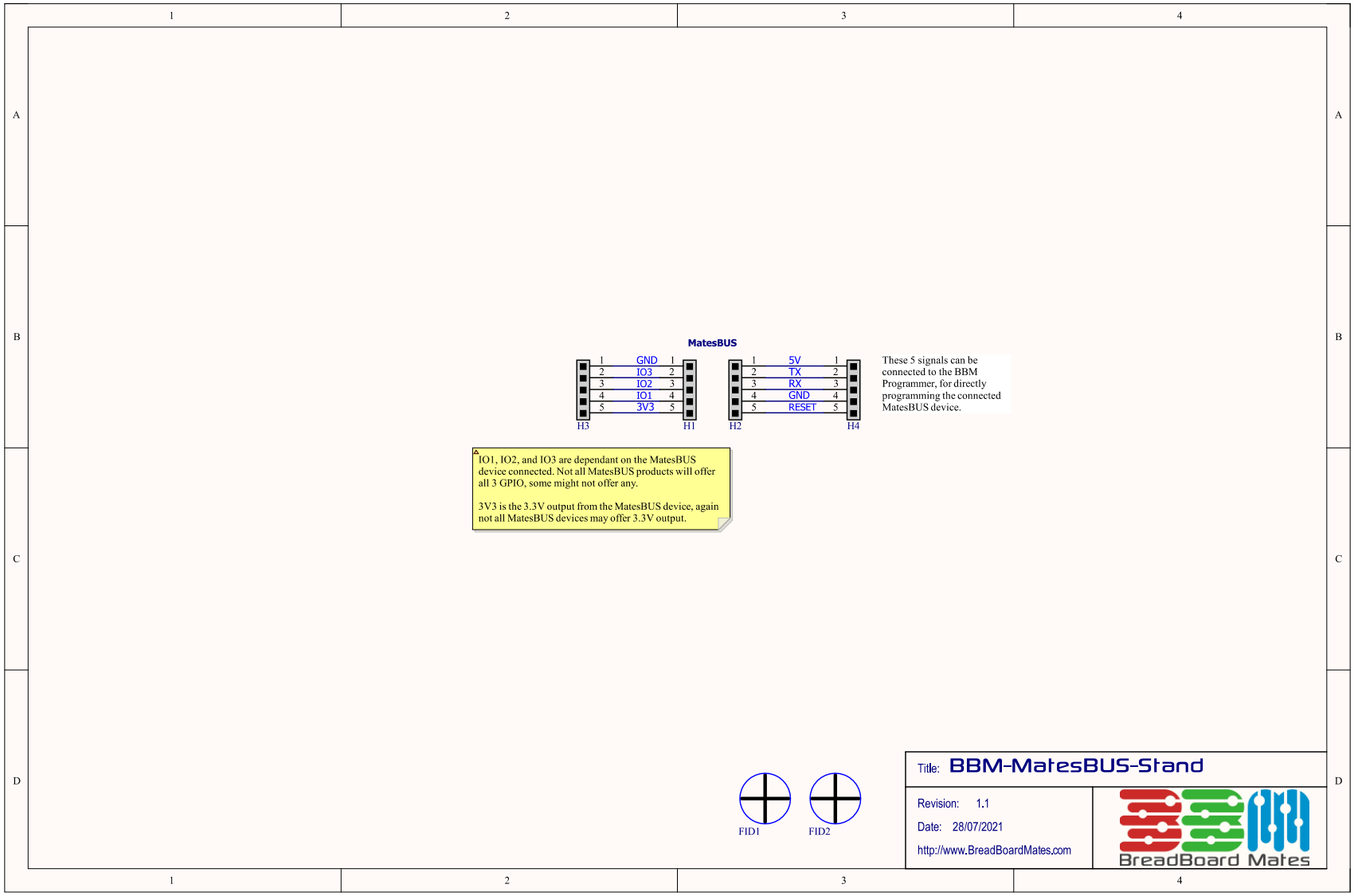
3V3 (3.3V Output)
This pin is the 3.3V output (where applicable) from the connected MatesBUS product (such as the TIMI-96), and offers 3.3V output for the User to power sensors etc. The availability and capability of this pin is purely dependant on what MatesBUS device is connected to the stand.

GPIO (GPIO Pins)
These GPIO pins are break-outs of the GPIO pins found on the connected MatesBUS product. The naming is left simply as GPIO, as the naming of the GPIO could change depending on what MatesBUS device is connected. Please refer to the MatesBUS product datasheet that is connected to determine the GPIO availability or capability. Not all GPIO pins may be used.

Hardware Drawing



Hardware Schematic



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