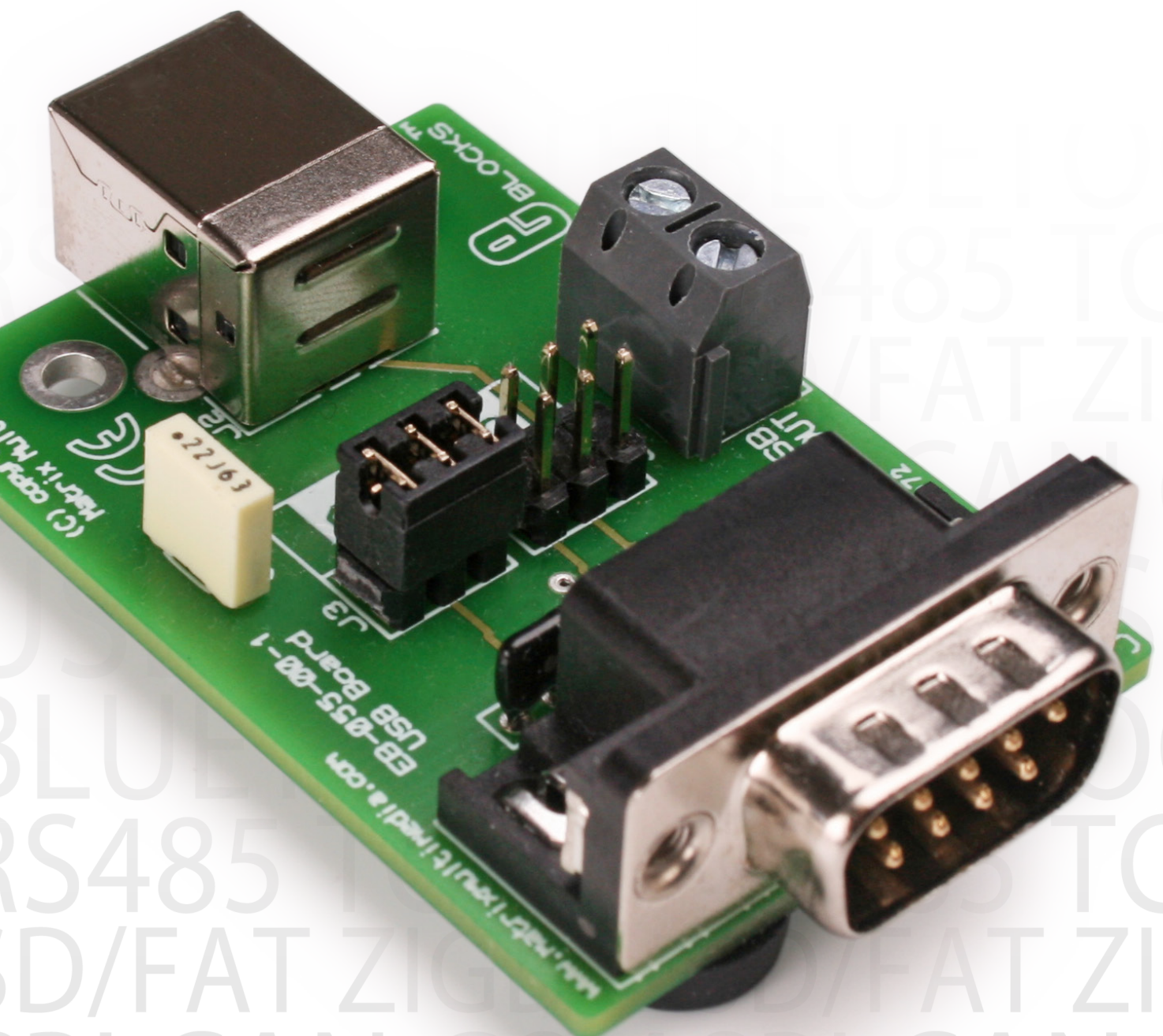


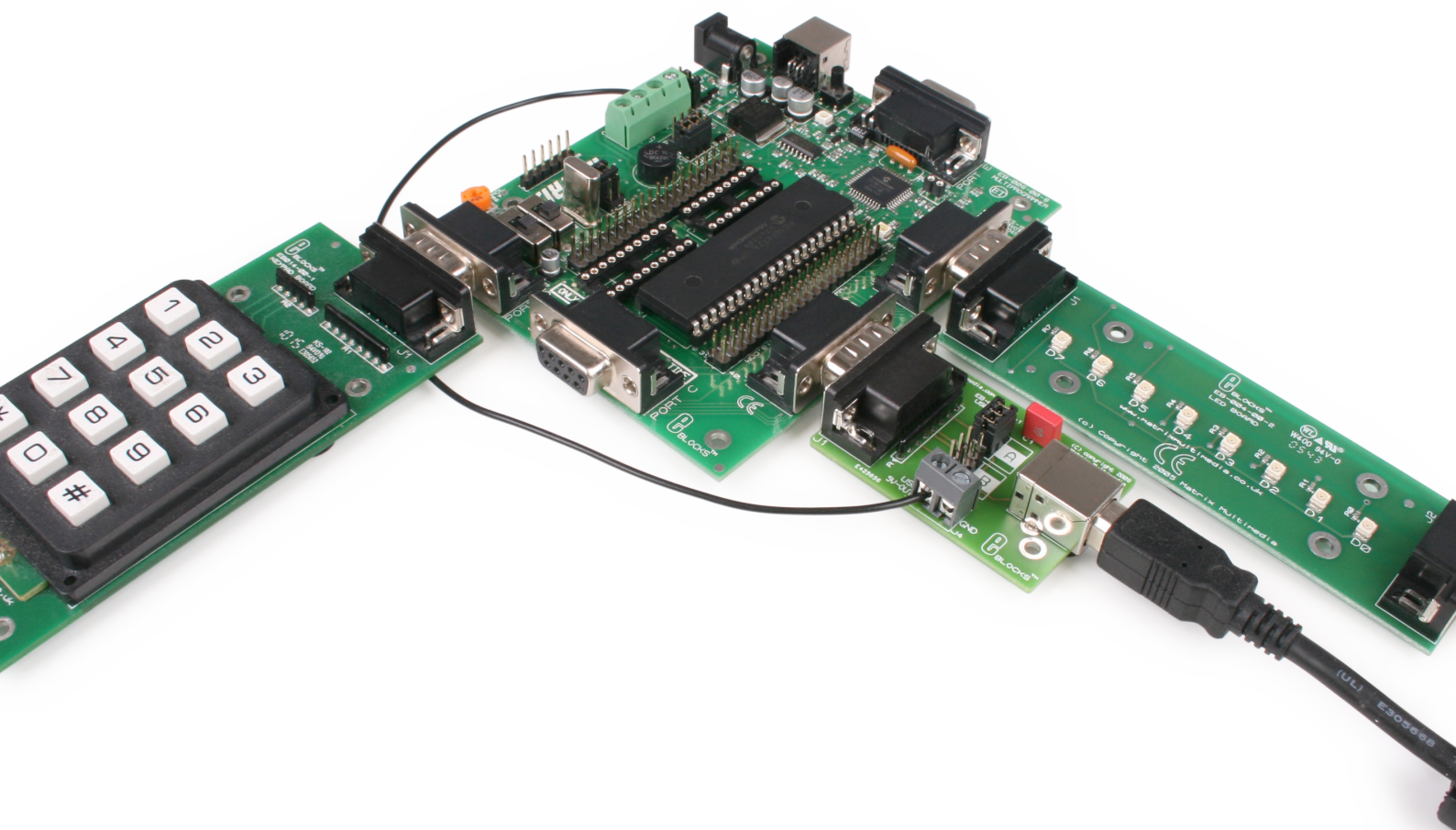
EBLOCKS[®]

USB interface board



Contents

About this document	3
Board layout	3
General information	4
Circuit description	4
Protective cover	5
Circuit diagram	6



About this document

This document concerns the EB055 E-blocks USB interface board.

1. Trademarks and copyright

PIC and PICmicro are registered trademarks of Arizona Microchip Inc. E-blocks is a trademark of Matrix Technology Solutions Ltd.

2. Disclaimer

The information provided within this document is correct at the time of going to press. Matrix TSL reserves the right to change specifications from time to time.

3. Testing this product

It is advisable to test the product upon receiving it to ensure it works correctly. Matrix provides test procedures

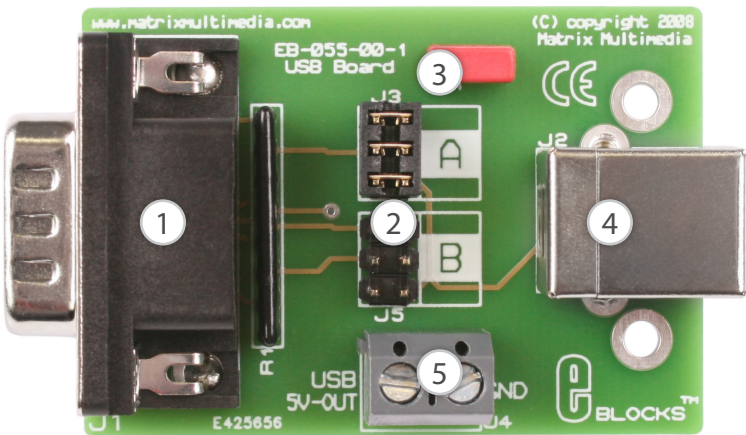
for all E-blocks, which can be found in the Support section of the website.

4. Product support

If you require support for this product then please visit the Matrix website, which contains many learning resources for the E-blocks series. On our website you will find:

- How to get started with E-blocks - if you are new to E-blocks and wish to learn how to use them from the beginning there are resources available to help.
- Relevant software and hardware that allow you to use your E-blocks product better.
- Example files and programs.
- Ways to get technical support for your product, either via the forums or by contacting us directly.

Board layout



1. 9-way downstream D-type connector
2. Chip selection system
3. USB voltage stabilisation
4. USB type B port
5. Supply terminals (5V and Ground)

General guide for chip selection system.

Jumper settings	Example device	USB pins		
		D+	D-	VUSB
A	18F2455	5	4	3
B	18F14K50	7	6	2

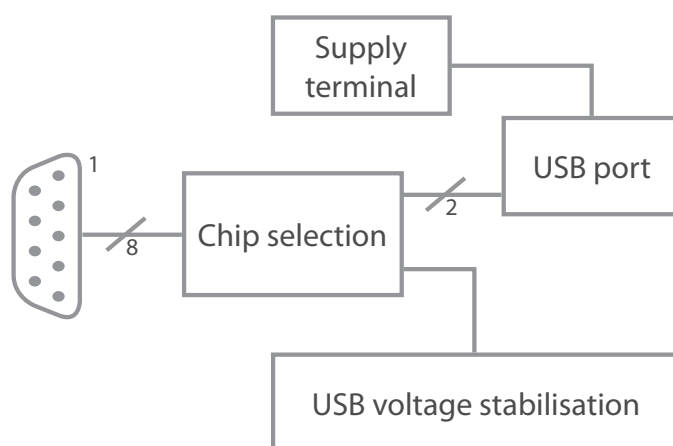
General information

This E-block allows investigation of USB connectivity. This board can be used to provide connectivity between a USB enabled PIC microcontroller and a computer. The board is also capable of forwarding the 5V supply provided by the USB host to allow you to power your applications via USB.

A set of jumper links are available which allow the USB E-block to easily be set for all USB enabled PICmicro® microcontroller compatible devices.

Flowcode components and example files that make this device easier to use are available as part of the USBpack download included with Flowcode.

1. Features
 - E-blocks compatible
 - Adds USB connectivity to your projects
 - Compatible with all USB enabled PICmicro devices
 - Capable of supplying power to your E-blocks system
 - Flowcode components and examples available



Circuit description

The EB055 USB interface board circuit can be observed on page 6. It contains all the hardware required to connect the USB enabled PIC microcontroller to your computer via USB.

1. Jumper selection

The product has been designed to enable you to use this device with all of the USB enabled PICmicro devices. This is achieved by identifying the PICmicro® microcontroller. Then by selecting the corresponding jumper setting on the USB board. This will configure the board with the correct pin-out for that particular device. The following table illustrates the correct jumper settings.

Jumper settings	Compatible devices
A	18F2450, 18F2455, 18F2458, 18F2550, 18F2553, 18F4450, 18F4455, 18F4458, 18F4550, 18F4553
B	18F13K50, 18F14K50

Table 1. Jumper settings for chip selection.

2. Supply terminals

The voltage supply terminals on the EB055 USB E-block are designed for outputting voltage only.  You should never connect the +V from a powered system to the screw terminal on the USB E-block. If you wish to power devices from the USB E-block then you can do so by first ensuring that the EB006 / HP488 board is not powered and then connecting a wire from the USB 5V out screw terminal on the EB055 to the +V on the EB006 / HP488 board. Alternatively you can power your own 5V circuitry directly from the screw terminal. Be careful not to draw more than 250mA from the USB supply as the test hex file limits the USB supply current to 250mA. The EB006 / HP488 boards should run fine at approximately 60mA.

3. 3.3V operation

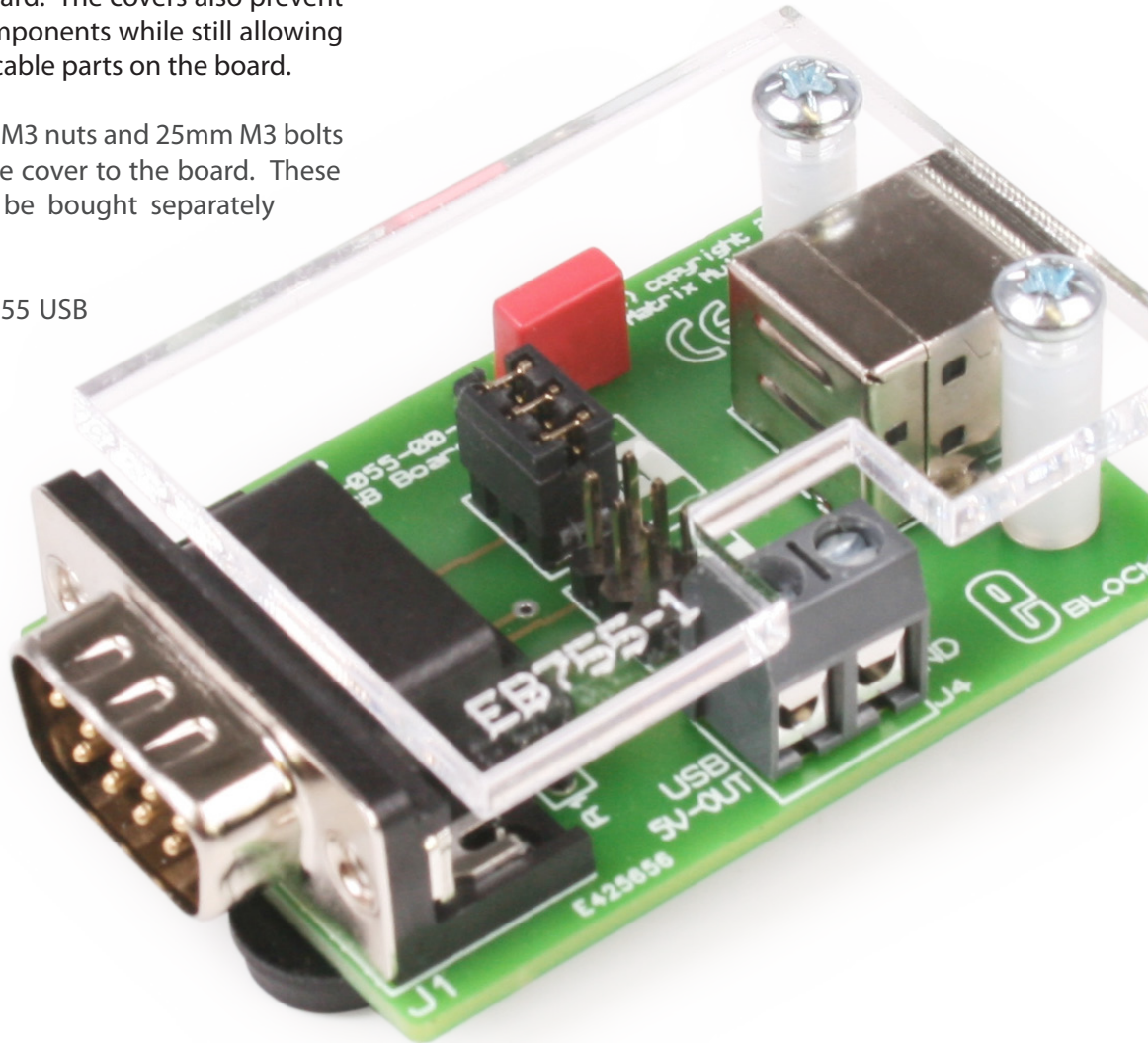
This board is fully compatible with 3.3V systems. The USB V+ and V- signals are 3.3V as standard. However, be aware that the USB supply voltage available on the EB055 screw terminals is always 5V.

Protective cover

Most of the boards in the E-blocks range can be fitted with a plastic cover as an optional extra. These covers are there to protect your E-blocks board therefore extending the life of the board. The covers also prevent the removal of external components while still allowing for the adjustment of applicable parts on the board.

12mm M3 spacers, anti-slip M3 nuts and 25mm M3 bolts can be used to attach the cover to the board. These are not included but can be bought separately from our website.

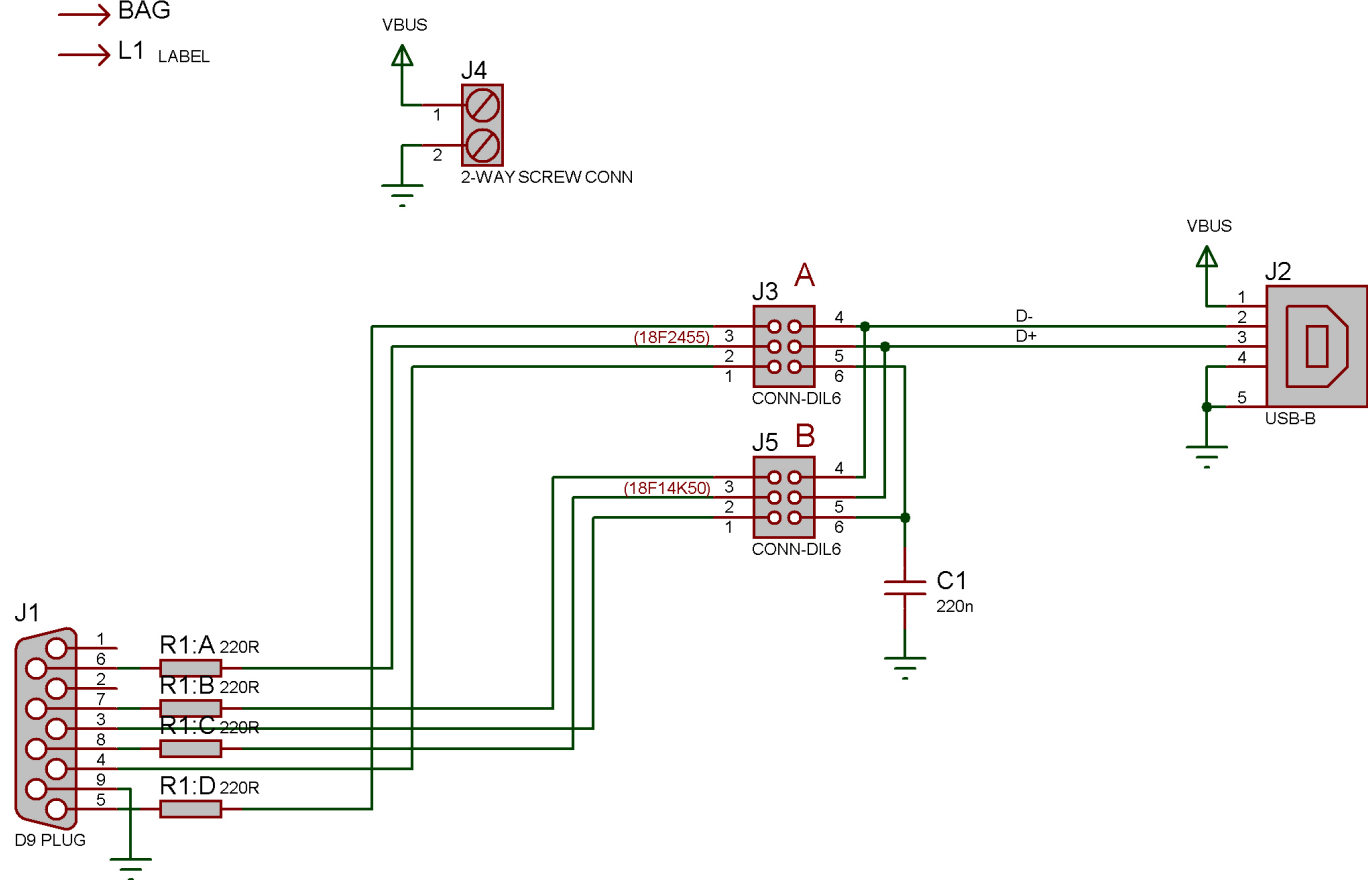
The order code for the EB055 USB interface board is EB755.



Circuit diagram

THIS SYSTEM INCLUDES:-

- F1 FEET
- F2 FEET
- F3 FEET
- BAG
- L1 LABEL





Matrix Technology Solutions Ltd.
The Factory
33 Gibbet Street
Halifax, HX1 5BA, UK

t: +44 (0)1422 252380
e: sales@matrixtsl.com

www.matrixtsl.com

EB055-30-1