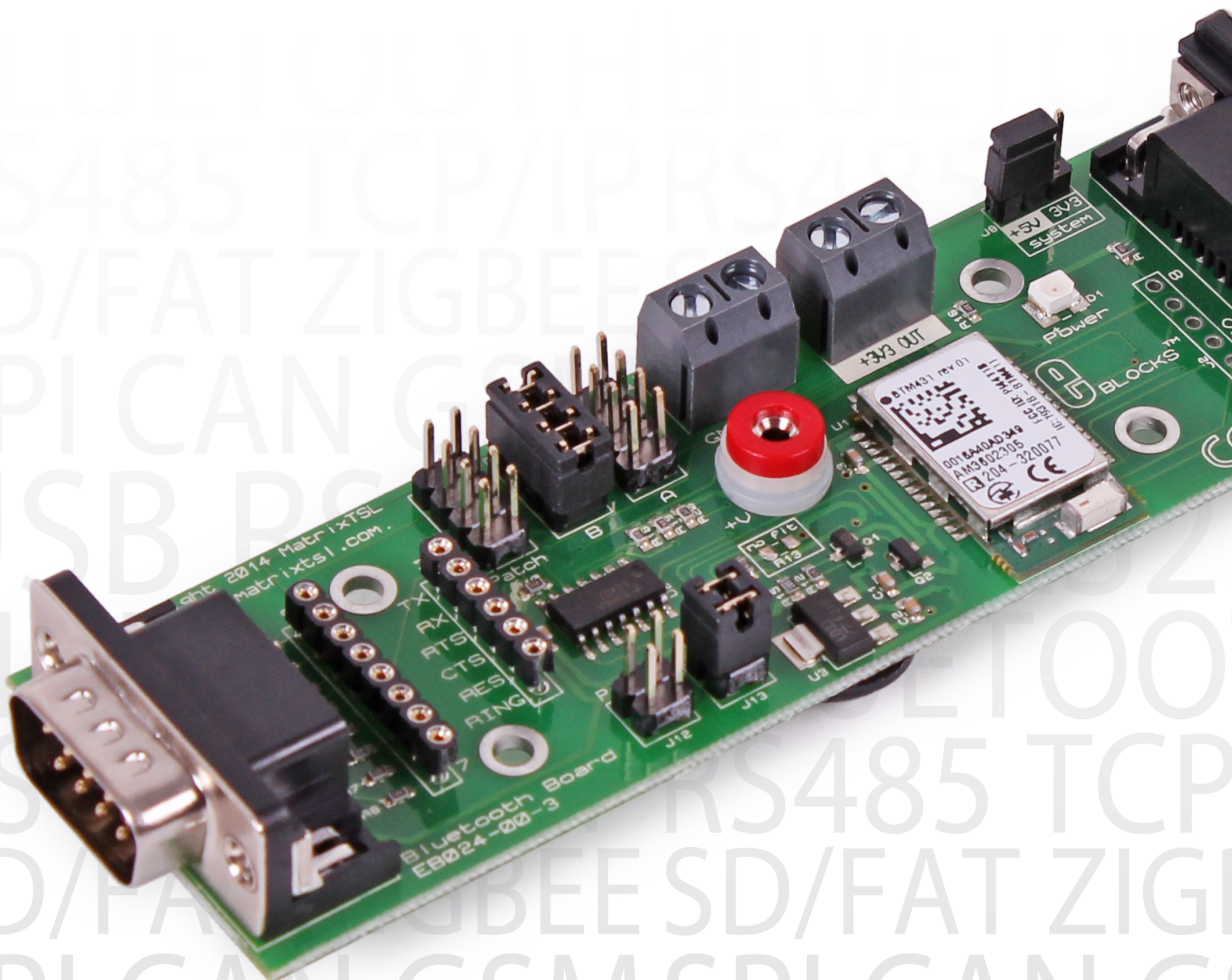


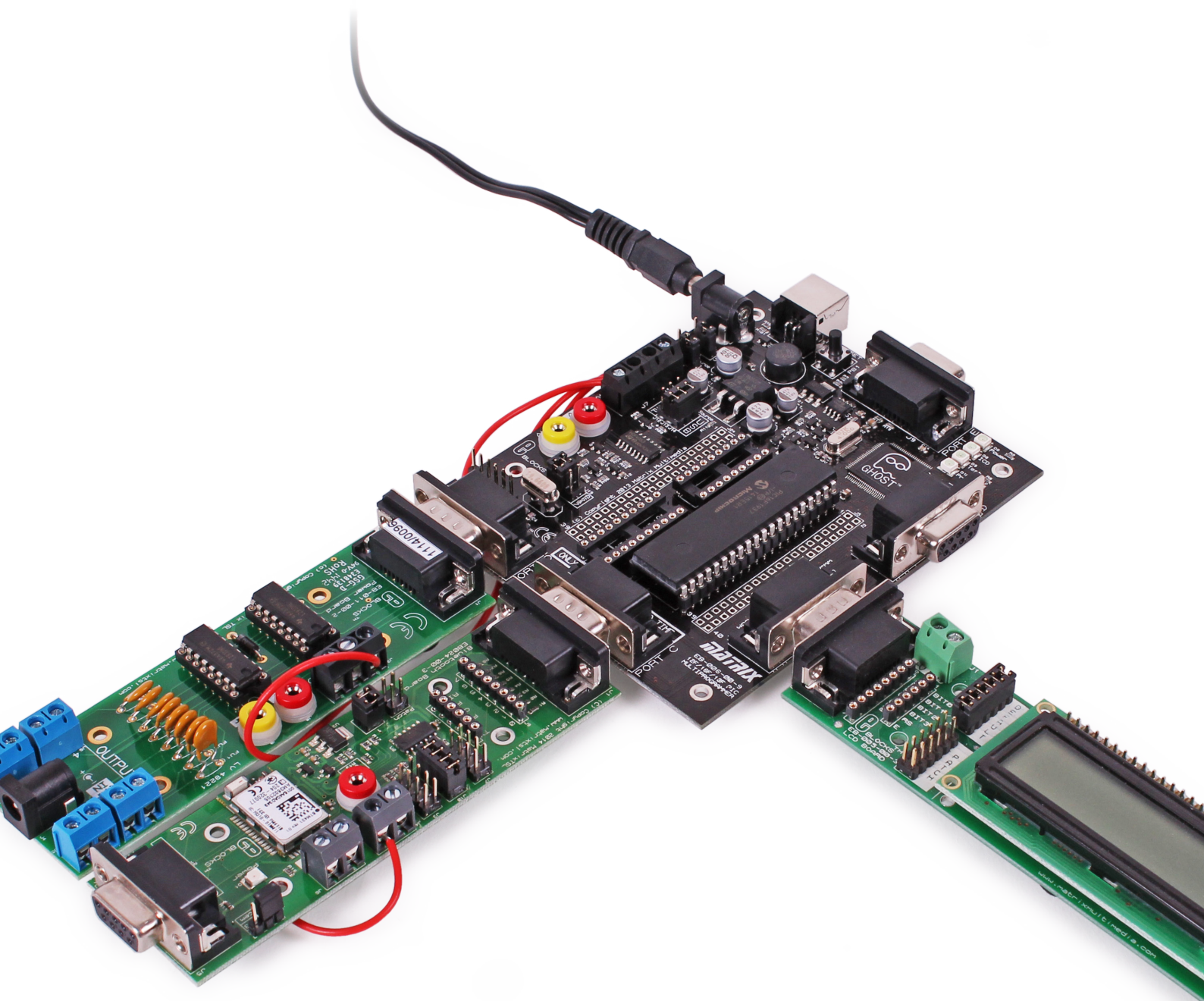
EBLOCKS[®]

Bluetooth board



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About this document

This document concerns the EB024 E-blocks Bluetooth 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

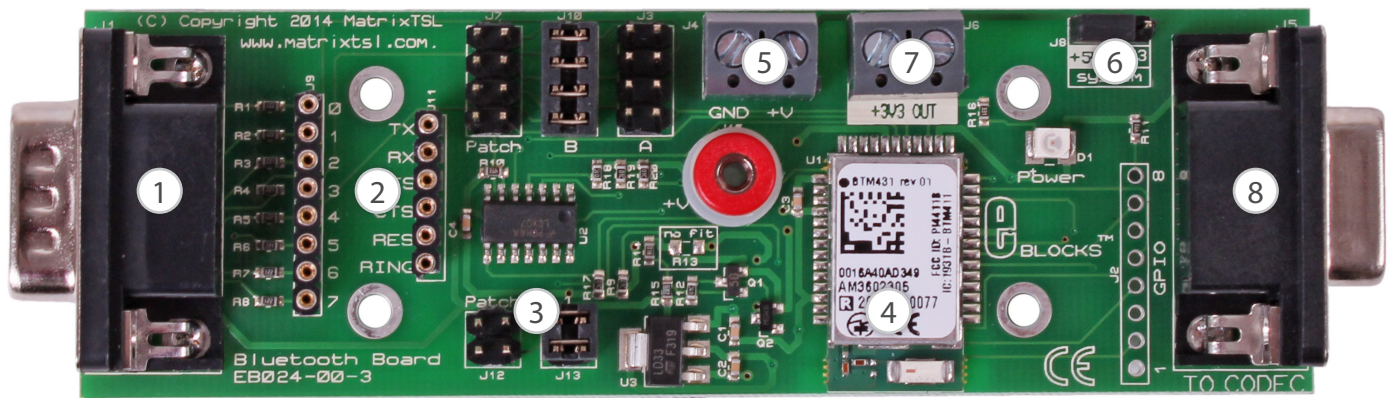
for all E-blocks, which can be found in the Support section of the website.

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. D-type E-blocks connector - to programmer board
2. Patch system
3. Connection jumpers
4. BTM431 Bluetooth module
5. Power in screw terminals - +V volts and ground for EB024 power supply

6. Operating voltage selector - 3.3V/5V +V selector
7. Power out screw terminal - for powering CODEC board and other peripherals
8. D-type E-blocks connector - to CODEC board

General information

This E-blocks board contains a Laird BTM431 module which adds Bluetooth functionality to your E-blocks system. The class 2 Bluetooth module has a transmit power of 4dBm which should give a 32 foot transmission range at a data transfer rate of 100Kbps. The module is addressed and programmed using the serial AT command protocol, with an AT command superset, and can be interfaced to any microcontroller with a UART facility. The module is capable of supporting a range of Bluetooth protocols including LAP, Data, and the headset profile. A compatible E-blocks CODEC board for establishing headset audio transfer is available.

Flowcode macros to support the use of this board are available.

1. Features
 - E-blocks compatible
 - Low cost
 - Provides a Bluetooth interface for all your projects
 - I²C interface
 - 32 foot / 10 meter range
 - Supports most Bluetooth protocols

Circuit description

Max 3002 Chip. Converts the 5V I/O from the PICmicro mutliprogrammer in to 3.3V for the Codec board.

U1 Blui connector. Connects the Blui V2 Bluetooth module to the circuit board.

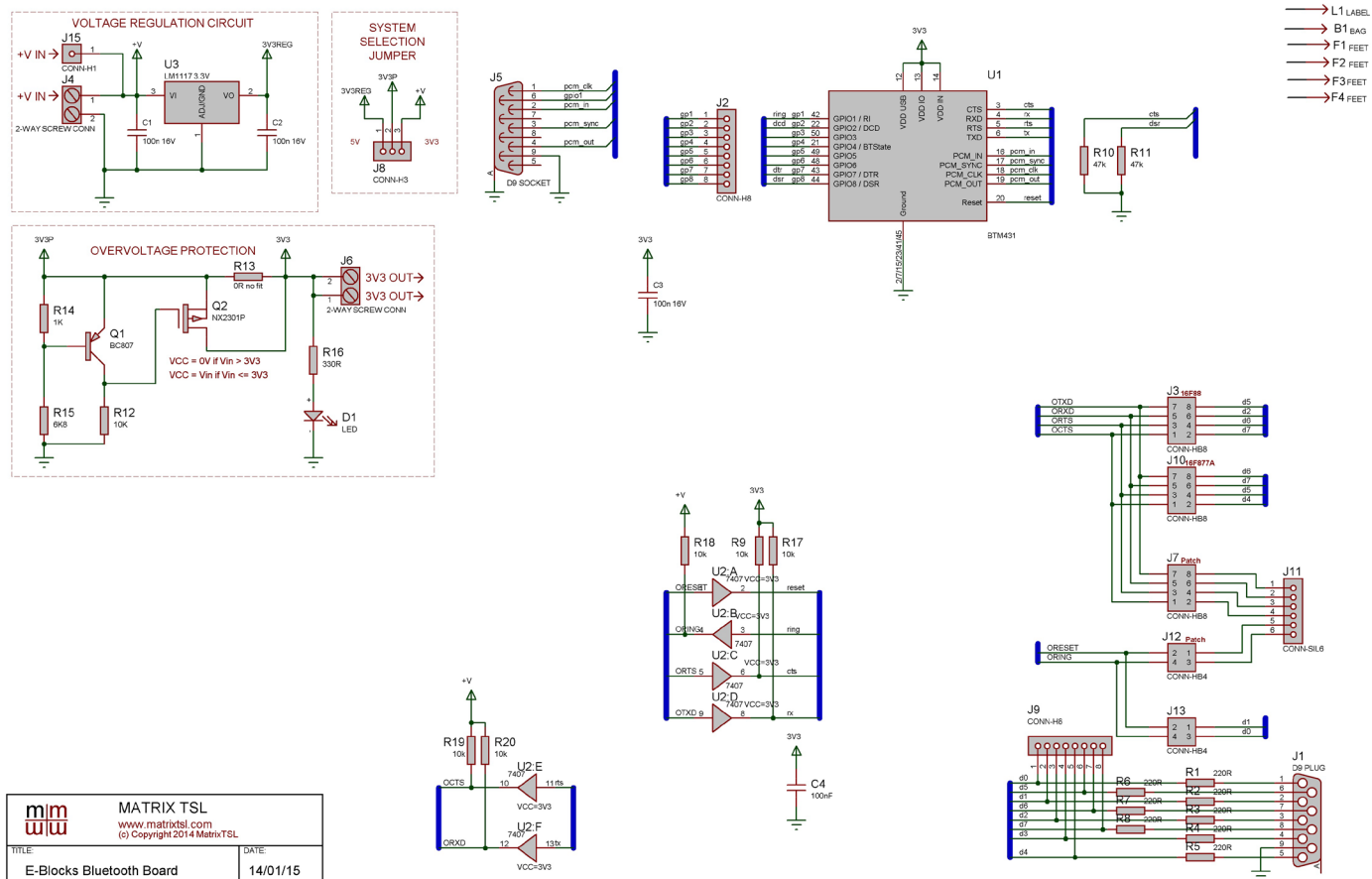
Protective cover

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 attached the cover to the board. These are not included but can be bought separately from our website.

The order code for the EB024 Bluetooth board is EB724.

Circuit diagram





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