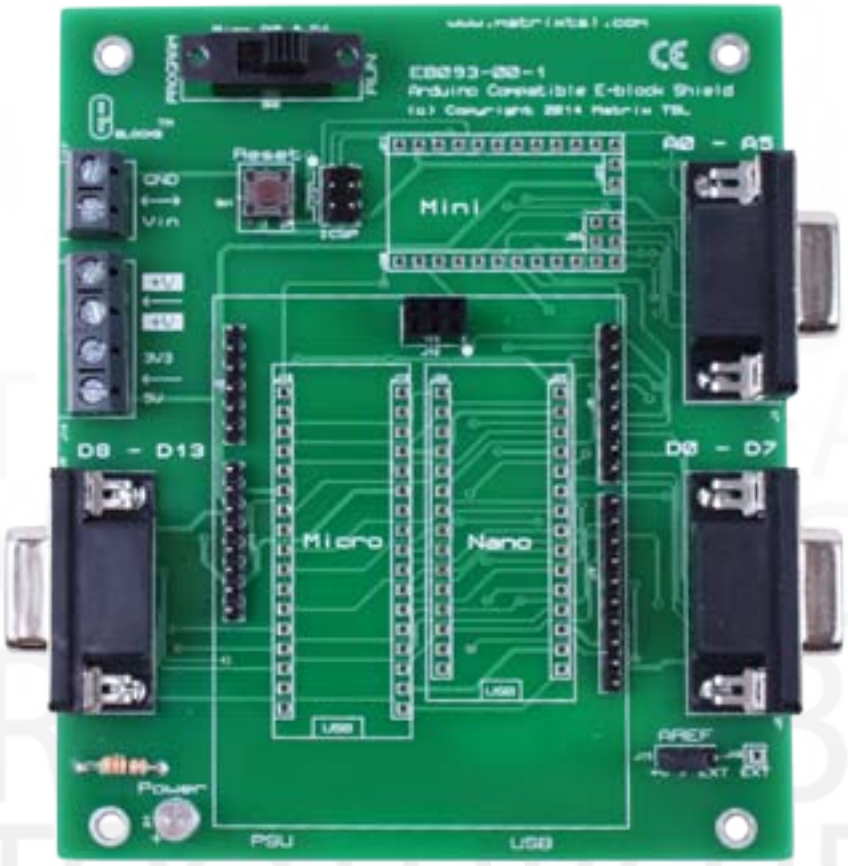
MATRIX

eBLOCKS®

Arduino Compatible Shield



General information

This document concerns the E-blocks Arduino Shield code EB093 version 1.

The order code for this product is EB093.

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

If you require support for this product then please visit the Matrix website. The website 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 to help you learn.

Relevant software and hardware that allow you to use your E-blocks products better.

Example files and programs.

Ways to get technical support on your product, either via the forums or contact directly.

Circuit description

The Arduino Shield is part of the E-blocks range of circuit boards. The board allows you to connect a standard Arduino module into an E-blocks system. The D-type connectors provide a bus system that enables 'clean' access to all I/O lines. This allows you to use standard E-blocks with the Arduino upstream microcontroller architecture. All the standard signals from the Arduino board are brought across onto the Shield board including the reset switch, power LED, microcontroller VCC, analogue reference, ICSP header and screw terminals to allow for easy connection with the voltage regulators on the Arduino board.

Further information

1. Features

- E-blocks compatible
- Protects your Arduino upstream board
- Brings out all the standard Arduino functionality
- Arduino programmable via USB or ICSP connections
- 5V and 3V3 Voltage compatible
- Supports Arduino compatible platforms

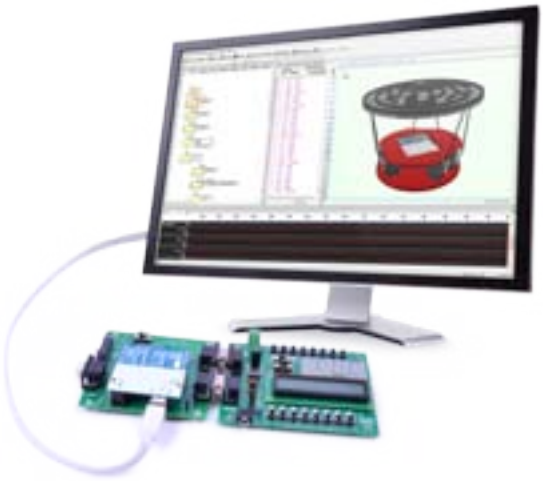
The circuit board consists of a set of SIL headers which are designed to fit into the SIL sockets provided on the Arduino board. A similar DIL socket is provided to allow the ICSP DIL header on the Arduino board to be bussed across onto another ICSP header allowing ICSP based programming without having to remove the Arduino from the E-blocks shield.

The AREF jumper allows the Arduino's analogue positive reference voltage to either be connected to the microcontrollers VCC which is marked +V or to another input voltage which can be supplied via the pad marked EXT.

This board is compatible with 3.3V systems.

Board layout

1) Arduino Uno / Leonardo socket
2) Arduino Micro socket
3) Arduino Nano socket
4) Arduino Mini socket
5) Power LED
6) Downstream E-blocks Port – A0 to A5
7) Downstream E-blocks Port – D0 to D7
8) Downstream E-blocks Port – D8 to D13
9) Power Supply Connections
10) 5V, 3V3 and VCC Connections
11) Reset Switch
12) ICSP Header
13) Analogue VREF



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