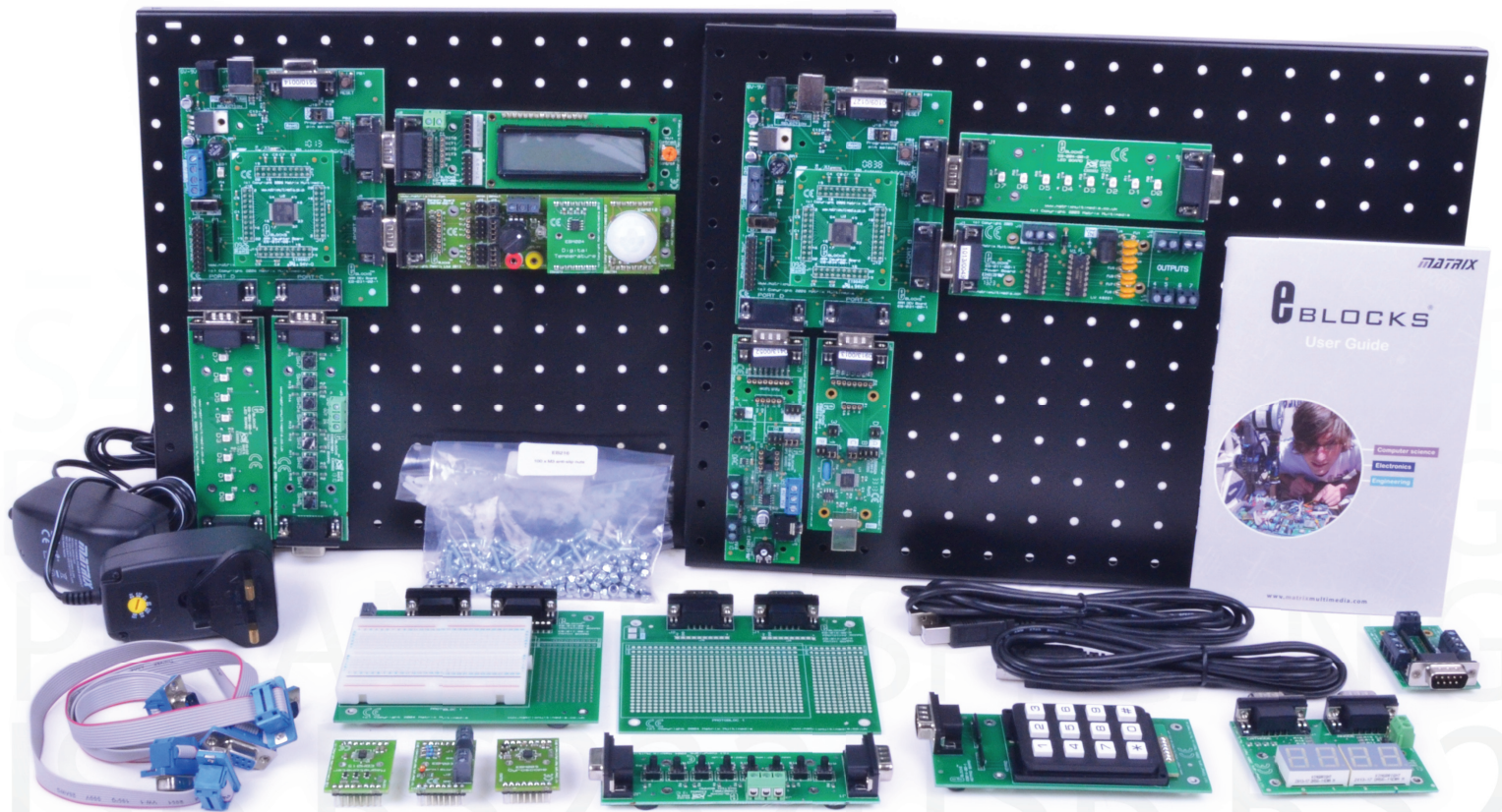# MATRIX

e BLOCKS®

Deluxe ARM starter pack

General information

This board provides a selection of E-blocks™ that can be used for a wide range of applications in microcontroller programming: both for learning and for projects.

1. Features
* Includes two ARM programming boards
* A selection of peripheral and interface E-block boards
* Metal backplanes and accessories for mounting the E-blocks
* Mains power supply adaptor
* Supplied in rugged storage/transport trays
* Downloadable resources from the Matrix TSL website, including:
* Utility software for downloading compiled code
* Free online course in microcontroller programming

2. Benefits
* Can be used with a wide range of students - from technician to postgraduate
* Can be used across many subjects in Engineering and Computer Science
* Saves a great deal of time in project construction
* Can be combined with our courseware to provide a complete solution to learning ARM programming

Pack description

These deluxe packs are ideal for the more sophisticated learner who needs to learn more than just the basics of microcontroller programming- particularly where communications between one microcontroller and another are an important issue and for this reason they include two device programmer boards.

This kit includes two ARM microcontroller programmers, switch and LED boards, display boards – both quad 7-segment and LCD – prototyping boards and sensor boards. This kit can be extended by adding further items from our range of E-blocks boards and sensors. Once your system is built from E-blocks you can mount it on the metal backplanes supplied with the kit.

The resulting system can then be screwed down – for those who require a permanently built system to work from – or can be easily dismantled ready for subsequent projects and investigations.

The E-blocks leads and accessories are shipped in rugged plastic trays which are convenient for storage and transport between labs.

The ARM device used is the Atmel AT91SAM 7 based on the ARM 7 core. This is a 32 bit flash RISC device (programmed by USB) with an internal 32 bit multiplier and many internal peripherals including USART, SPI, TWI and SSC serial communication, 10-bit ADC, USB and PWM outputs.

The ARM microcontroller is mounted on a small daughter board which makes it suitable for project work.

Further information

1. **Learning time**
Not applicable: learning time is dictated by the course used with E-blocks. Flowcode , Assembly or C

2. **Prerequisites**
Some programming in Windows
or em-bedded environment.

3. **Manual**
An E-blocks user's guide is available electronically.

4. **System requirements**
PC with CD ROM drive and Windows XP or later.

5. **Futher information**
A separate datasheet is available for each of the E-blocks boards included in the pack. Please see our web site for details.

6. **Order code**
The order code for this product is EB7859.

7. **Also consider**
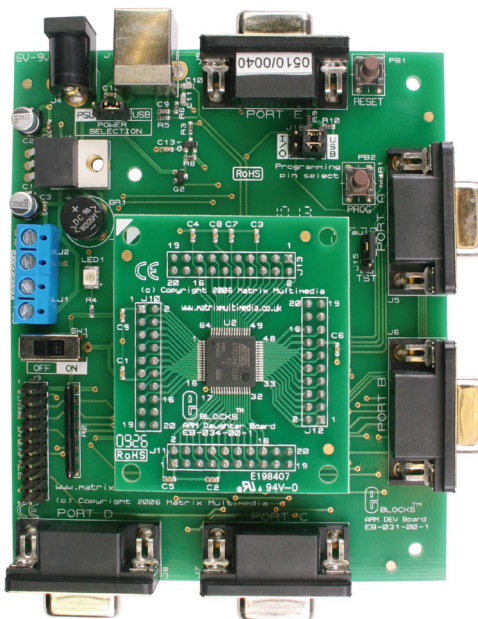Courses in Flowcode, C and Assembly code programming.
Deluxe starter packs
Solutions and trainer packs
Flowcode and Chip pack

Pack Contents

The table gives a list of the major items of the pack contents.
Datasheets on any individual item are available
from the resource section of the Matrix TSL website www.matrixtsl.com

Qty	Description
2	Metal backplane and accessories
1	E-blocks terminal board
2	E-blocks LED board
1	E-blocks LCD board
2	E-blocks push-to-make switch board
1	E-blocks Dual 7-segment display
1	E-blocks power board
1	E-blocks SPI bus D/A and memory board
1	E-blocks Keypad board
1	E-blocks Prototype board
1	E-blocks patch board kit
1	E-blocks USB 232 board
1	E-blocks sensors mother board
2	ARM baseboard and daughter board
1	Thermistor sensor module
1	Digital temperature sensor module
1	Gyroscope sensor module
1	Passive infrared (PIR) sensor module
1	Magnetometer sensor module
2	Power supply
2	USB lead

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MATRIX