

EBLOCKS[®]

Zigbee training solution



General information

Zigbee provides a motivating solution for learning about Zigbee wireless area network communications technology, system construction, and project development.

1. Features

- Fully working Zigbee network (4 node) constructed from E-blocks
- Includes Flowcode Professional software
- Full curriculum support
- A great introduction to practical Zigbee implementation
- Includes Zigbee analyser

2. Benefits

- Provides understanding of Zigbee communications and networks

Solution description

This solution can be used to provide a complete 20 hour course in developing wireless area networks based on the Zigbee standard. This will give students who are familiar with microcontrollers an understanding of the programming techniques involved in developing Zigbee wireless communication systems, as well as an understanding of how these systems are developed from scratch. A Zigbee packet analyser is included.

The solution includes four fully working Zigbee nodes based on E-blocks™. All E-blocks boards are fitted with clear acrylic covers which prevent links and chips from being removed. The solution is assembled and tested in the Factory, and is shipped in rugged plastic trays for storage and transport.

A Professional Academic PIC single user licence of Flowcode V6 graphical programming software is provided. Flowcode allows students to understand communications programs and strategies without getting bogged down in the complexity of C or Assembly code. The system can also be used with C and Assembly code (software not provided).

A 50+ page printed and bound manual with student exercises is included. This is also available in electronic form (Word and PDF) along with fully worked examples on CD ROM.

This solution is made available at a discount to the sum of the individual parts.

Learning objectives

This equipment is used to give students a complete understanding of the Zigbee wireless areas network protocol and to give them practical experience on constructing fully operational Zigbee networks.

The manual accompanying the solution gives an introduction to the Zigbee standard and concepts in Zigbee communications and students learn about Zigbee by carrying out a number of exercises using the hardware provided and Flowcode software. The exercises include detailed coverage of:

- Moulding the network
- Adding a node
- Expanding the network
- Reducing power consumption
- Dynamic networks
- Message routing
- Data logging gateway
- A complete modular fire and burglar alarm
- Improving network security

Further information

1. Learning time

Dependant on course structure and options chosen from the teacher's manual. Approximately 15 to 20 hours.

2. Prerequisites

- Some understanding of electronics
- Windows skills
- Some microcontroller programming in C, Assembly or Flowcharts

3. Manual

A 50+ page manual is supplied with this product with a range of suggested student activities and sample files on CD ROM.

4. System requirements

PC with CD ROM drive and Windows XP or greater.

5. Further 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 EB284.

7. Also consider

Mobile phone training solution
CAN bus training solution
USB training solution
Embedded internet training solution
RFID training solution
Bluetooth training solution
FPGA Solution

Solution 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
1	Zigbee solution CD ROM
1	Zigbee solution teachers notes
1	Flowcode V6 Professional Academic PIC single user licence
1	Zigbee USB analyser
2	International power supply with adaptors
1	USB lead
2	E- blocks Sensor interface board
1	E-blocks LED board
1	E-blocks gLCD display board
4	E- blocks Zigbee board
4	E- blocks USB Multiprogrammer board
1	E- blocks Keypad
1	E- blocks Switch board
1	E- blocks USB232 board



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