Software

The FLEX boards are accompanied by:

ERIKA Enterprise *for Microchip dsPIC® DSC*

A small, efficient, and modular open source real-time kernel for embedded applications.

Main features:

- *Full support for the Microchip C30 compiler, the MPLAB IDE debugging environment, and the Microchip ICD2 debugger*
- *Full support for dsPIC (R) DSC series 30 and 33, and PIC24*
- *Complete software support for FLEX boards and daughter boards*
- *Support for the 802.15.4 (ZigBee) wireless communication*

Scilab/Scicos

An Open Source development flow for the design, simulation and automatic code generation of control systems.

Main features:

- *Design of a control system in Scilab/Scicos (more than 100 blocks available!)*
- *Simulation and tuning of the control system in Scicos*
- *Single-click code generation for Erika Enterprise for FLEX*
- *Automatic flashing of the FLEX board*
- *Integration in the Scicos HIL support using the FLEX USB/wireless connection*

Join the FLEX community!

Many Companies and Universities around the world are using FLEX boards. A growing number of freely available- demos, application notes, and ready to compile applications, permit the users to put FLEX directly in use.
www.evidence.eu.com/community

To buy your FLEX contact our official distributors at www.evidence.eu.com/store

Manufacturer Catalogue

Product code	PRODUCT NAME
FLEX001	KIT, DSPIC FLEX LIGHT BASE BOARD
FLEX003	KIT, DSPIC FLEX FULL FEATURE BOARD
FLEX100	DAUGHTER BOARD, FLEX THRUHOLE
FLEX101	DAUGHTER BOARD, MULTIBUS BASE
FLEX102	MODULE, MULTIBUS, ETHERNET
FLEX103	MODULE, MULTIBUS, RS232
FLEX104	MODULE, MULTIBUS, RS485
FLEX105	MODULE, MULTIBUS, RS422
FLEX106	MODULE, MULTIBUS, CAN
FLEX107	MODULE, MULTIBUS, SPI
FLEX108	MODULE, MULTIBUS, SERIAL TTL
FLEX109	DAUGHTER BOARD, FLEX DEMO

The FLEX platform is a result of synergistic effort of two Italian companies working in the field of embedded systems: Evidence Srl and Embedded Solutions Srl. These two companies combined their respective skills on real-time systems and electronic boards development to create this complete and easy-to-use compact solution for creating complex applications based on the Microchip dsPIC® DSC micro-controller.

For more information

on the FLEX Board please visit our web sites:

www.evidence.eu.com
www.es-online.it

Evidence *It's time for real-time solutions.*

ES EMBEDDED SOLUTIONS

Studiocurious

Image courtesy of www.sparkfun.com

FLEX

Fast track suite for learning embedded systems

Learn embedded systems on a fast track basis

FLEX boards enable easy and fast development of embedded applications for the Microchip dsPIC® DSC micro-controller.
The modular architecture provided by FLEX allows compounding of number of boards, to achieve the desired application with different features on one single device.
FLEX boards are smaller in dimension, they are equipped with resettable safety fuses, and currently they can be directly programmed using the standard microchip debug connector. Programming using the USB port would be made available very soon. The easily expandable hardware, combined with widely available software applications, makes FLEX ideal for Schools and Universities for fast track education.
FLEX can be readily used for quickly developing applications in the field of electronics, mecatronics, robotics, control engineering, simulation, etc.

FAST TRACK SUITE

Hardware
- *FLEX Full Base Board*
- *FLEX Demo Daughter Board*

Free Software
- *ERIKA Enterprise real-time kernel*
- *Scilab/Scicos simulation and code generation tool*

Support
- *Ready to run demos with source code*
- *Application notes*
- *User Forums*

ADVANTAGES OF USING FLEX IN AN EDUCATIONAL ENVIRONMENT
- *2.54 mm pitch that is ideal for hand made prototypes*
- *Switching power supply and resettable fuses resistant to improper input power sources*
- *Small form factor that is ideal for small robots and demonstrators*
- *USB connection for data exchange, logging, and calibration with PCs*
- *Demo applications for using sensors, accelerometers, Zigbee, A/D, PWM, serial, Ethernet, CAN, etc.*

Recognized Microchip Third-Party Tool Provider

FLEX Boards are RoHs compliant

Hardware

FLEX Base Boards

FLEX Full and FLEX Light

The FLEX Base Boards are designed to export all the connections of a standard Microchip dsPIC® DSC microcontroller. The boards have standard 2.54mm pitch connections, for easy piggybanking of FLEX or home-made daughter boards.

The FLEX Base Boards are available in two versions- FLEX Full and FLEX Light. The connectors of both the versions are fully compatible and an application developed in one version can be easily moved on to the other with fewer or no modifications.

	FLEX FULL	FLEX LIGHT
Microchip dsPIC® DSC microcontroller dsPIC33FJ256MC710	●	●
Microchip PIC18® PIC18F2550 microcontroller for USB connection (and Programming using the USB port would be made available very soon)	●	
ICD2 in-circuit program connector	●	●
USB connector for communication	●	
Set of LEDs for monitoring the board functioning status	●	●
Set of connectors for Daughter boards piggybacking	●	●
Power supply connectors	●	●
Power supply circuitry with resettable fuses	●	●
Simplified power supply (7-12V)		●
Extra-robust switching power supply (9-36V)	●	

Flex Full
Product code:
FLEX003

Flex Light
Product code:
FLEX001

FLEX Daughter Boards

FLEX Daughter Boards contain specialized features that can be added on top of a FLEX Base Board to obtain complex devices for various applications.

Demo Board

The Demo Board adds-on a lot of commonly used features, which makes it a suitable candidate for educational purposes.

Main features:
- *2 DAC outputs*
- *3-axis accelerometer*
- *Direct support for an encoder*
- *Set of 4 Push buttons, 8 LEDs, 16x2 LCD*
- *Buzzer*
- *Potentiometer*
- *Thermal and light sensors*
- *InfraRed receiver and transmitter*
- *ZigBee connector*
- *Multibus UART expansion slot*

With the direct support of the Scilab code generator, applications can be entirely generated without writing any C code!

Scilab

Demo Board
Product code:
FLEX109

Multibus Board

The Multibus board is a daughter board on which various modules can be mounted to simplify communication between peripherals integrated in the Microchip dsPIC® DSC. Multibus Boards are available with Ethernet, RS232, RS485, RS422, TTL, CAN, and SPI modules.

Thru Hole Prototyping Board

The Thru Hole Prototyping Board has several common pinholes of standard 2.54mm, 1.27mm, 5.08mm patterns, that allows development of small, homemade, custom circuits, which can be transparently interfaced with the FLEX Base Boards.

Custom Daughter Boards

FLEX boards can be extended using Custom Daughter Boards to accommodate number of additional functionalities e.g. sensors, network connections, actuators, etc. Custom Daughter Boards are made per order.