FLOWCODE

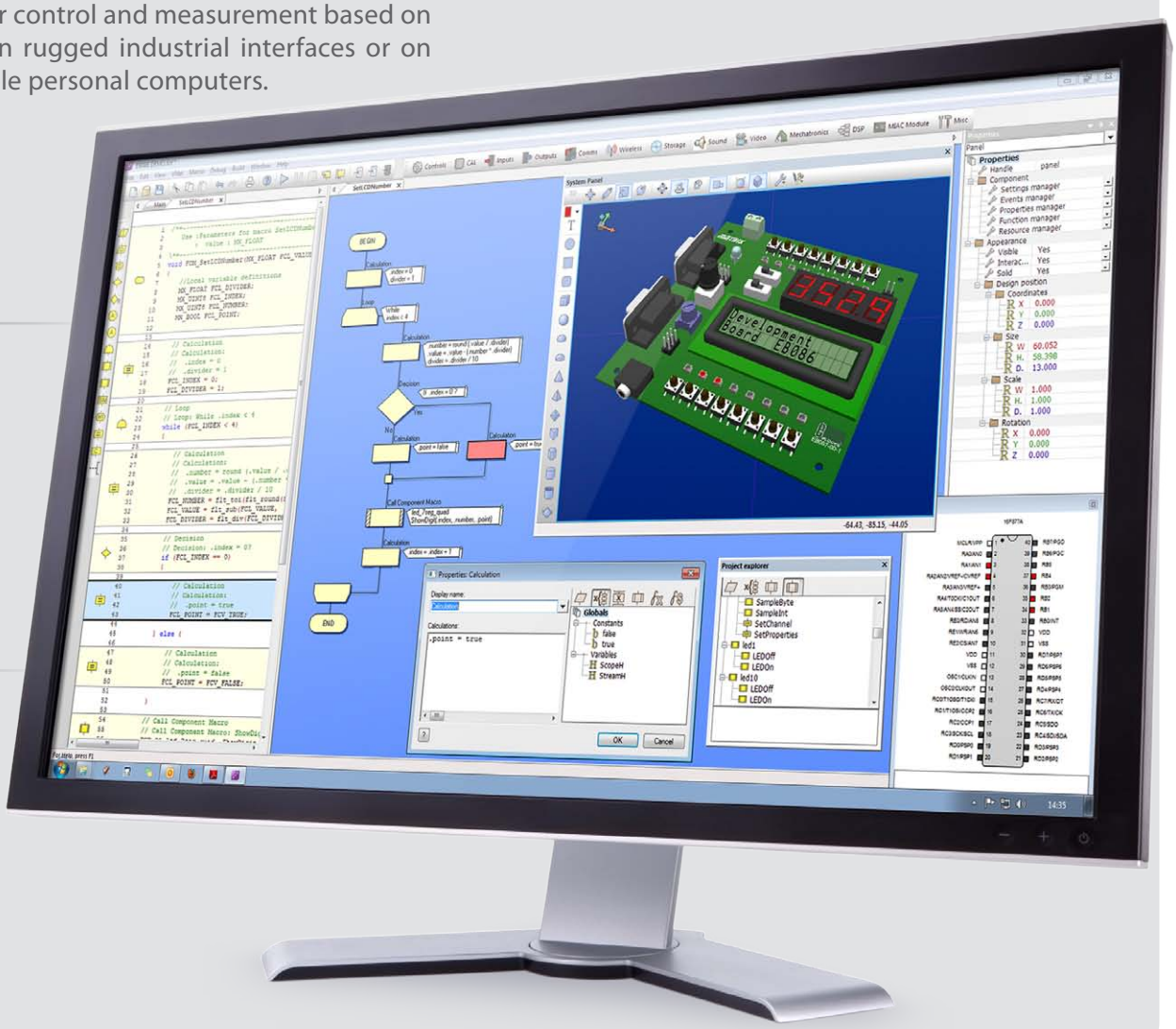
Electronic system design software

MATRIX

WHAT IS FLOWCODE?

Flowcode software allows you to quickly and easily develop complex electronic and electromechanical systems.

Flowcode is one of the world's most advanced environments for electronic and electromechanical system development. Engineers use Flowcode to develop systems for control and measurement based on microcontrollers, on rugged industrial interfaces or on Windows compatible personal computers.



BASED ON FLOWCHARTS - minimal programming experience is required.

FULLY SUPPORTED - with online tutorials, documentation and an active online community.

OPEN ARCHITECTURE - all aspects of Flowcode are fully customisable for your projects.

TRANSFER YOUR DESIGN - easily between Windows, PICmicro, AVR, Arduino and ARM.

PAY ONLY - when you transfer your design to a microcontroller or use the software commercially.

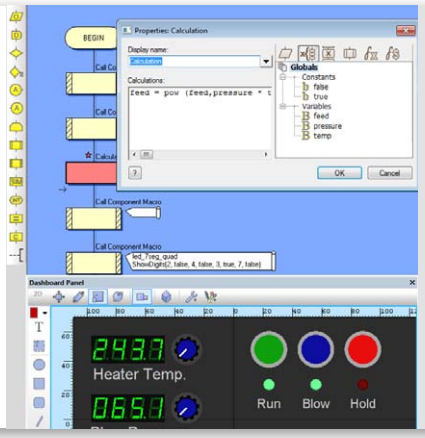
FREE SOFTWARE - for designing control and measurement systems (non-commercial).

HOW DOES FLOWCODE WORK?

1

DESIGN

Develop a model of the electronic system using the System designer and Component library parts. Then design a flow chart to control the system. Dashboard designer allows you to develop a HMI. The component creator allows you to make parts and define electromechanical system movement under test.

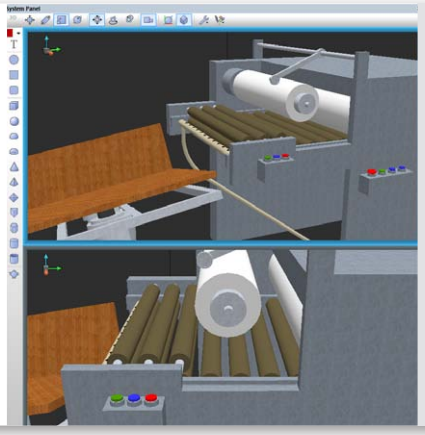


FLOWCHART AND PANEL DESIGN

2

SIMULATE

The simulation engine shows how your system will perform. The 3D engine shows your electromechanical system moving under electronic stimulus. The Dashboard HMI shows real world values. The Application Program Interface allows you to link your embedded system to PC side functions and third party instruments.



3D DESIGN OF THE PROJECT

3

IN-CIRCUIT-TEST

Compile your design to a microcontroller or link it to a PC interface. Step through the program in the chip and on the screen at the same time. Dashboard HMIs will help you monitor your system's performance and the API will allow you to integrate data from third party instruments to your system.

PROTOTYPE OF ELECTRONICS

4

DEPLOY

Once you are happy with your design, reproduce your system for others to use in the field. If you have paid for a full licence you can compile your design to a microcontroller. Manufacture one, or a hundred thousand of your designs. Use the auto documenter to help others understand your project.

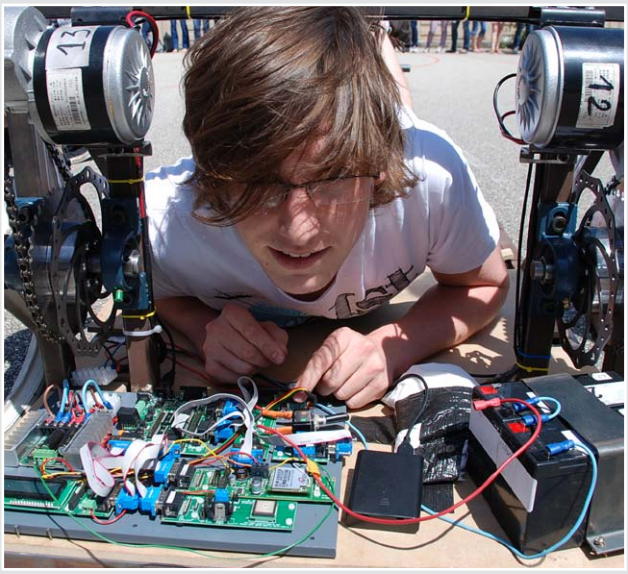
FULLY WORKING SYSTEM

API = Application Programming Interface
HMI = Human Machine Interface

WHO USES FLOWCODE IN EDUCATION?

INSA LYON, FRANCE

The Institution of Applied Science in Lyon is one of the best Technological Higher Education Establishments in Europe, graduating over 800 engineers each year in 12 fields of specialisation. INSA Lyon uses Flowcode to allow students to develop advanced electromechanical projects, including electric vehicles and balancing platforms, which are controlled and monitored by tablets and phones using Bluetooth and Wi-Fi.



BELGIAN TECHNICAL SCHOOLS

In the last few years Matrix has worked closely with teachers in the Flemish educational system to develop resources for teaching technology and electronics. In a technology course pupils from the age of 12 are taught robotics using Flowcode in the Flemish language, and the Formula Flowcode robot. Having received a good grounding this knowledge is then built on by using E-blocks with Flowcode at 16+ to understand how electronic systems are developed. Students then build further on this by understanding a course in C programming using the same hardware. So far this program of study has been rolled out to more than 50 schools in Belgium.

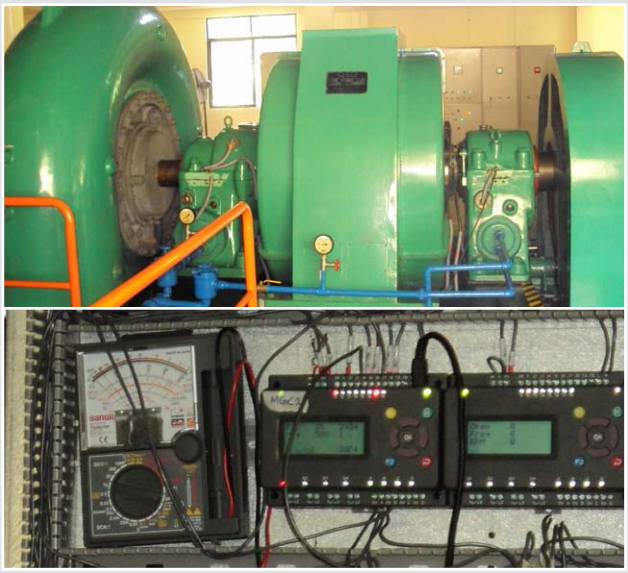
UK ARMED FORCES

The Royal Electrical and Mechanical Engineers at Arborfield in the UK have been using E-blocks and Flowcode since the 'preparation for the Digital Battlefield' directive acknowledged that electronics and computer controlled systems are at the heart of all defence related activities - from the control systems in tanks and planes using CAN bus, to equipment tagging and supply chain management using Radio Frequency Identification (RFID) technology.

WHO USES FLOWCODE IN INDUSTRY?

SARGENT ELECTRICAL LTD

Sargent Electrical Hull, UK, use Flowcode and E-blocks technology to develop advanced wiring looms and control systems for campervans and caravans. Sargent's latest range of habitation systems interface directly into the CAN bus of host vehicle chassis to minimise wiring costs. They use full colour graphical displays to provide customers with advanced habitation system control.



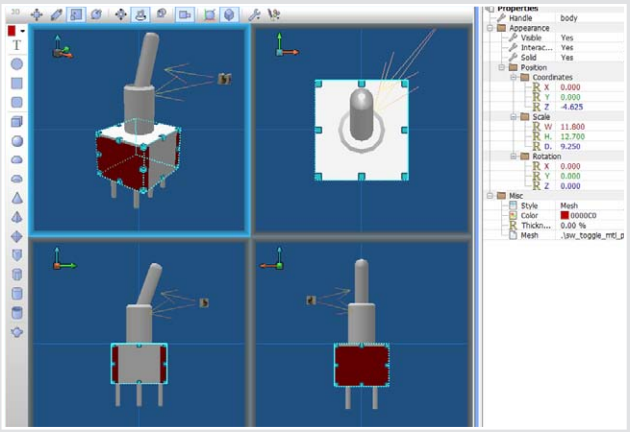
VIDULANKA PLC

Vidulanka PLC in Sri Lanka uses Flowcode and MIAC technology as the main control system for small hydroelectric power stations, which generate up to 800kW. Flowcode is used to generate programs for up to 4 MIACs, interconnected by CAN bus, which together control wicket gates, generator voltage, synchronisation and over voltage trip systems in the generator house and feed data into a Human Machine Interface (HMI) panel for control and monitoring the power station's performance.

NEW IN VERSION 6

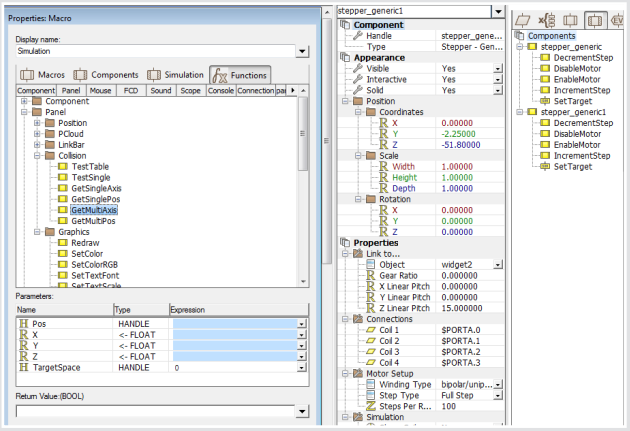
COMPONENT CREATOR

CREATE YOUR OWN COMPONENTS
Now you can design your own electronic components and add them to your component library. You can use simulation API calls to define the electrical behaviour and mechanical behaviour in simulation.



COMPONENT LIBRARY EXPANSION
The component library has been expanded considerably to include many new electronic components and simulation components. Components can be designed and shared on our website.

SYSTEM COMPONENTS
In addition to PCB style components you now have access to panel mounted switches, meters and displays for industrial control.



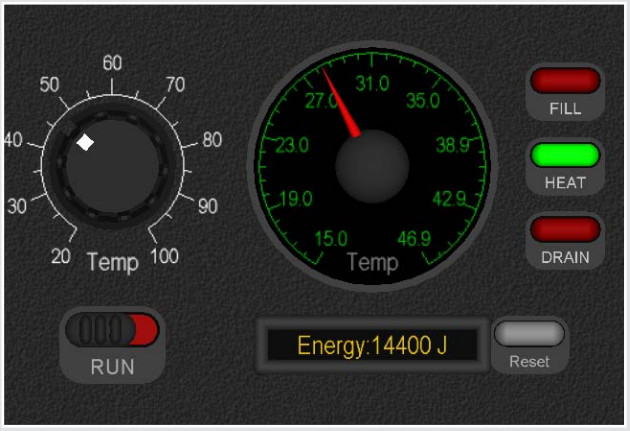
DASHBOARD HMI COMPONENTS
Customise or create Dashboard components like graphs, dials and meters to allow you to monitor how your system is functioning in simulation and In-Circuit Test.

SIMULATION

CLOSE TO REAL TIME SIMULATION
Improvements in simulation speed means that your simulation works close to real time which allows you to verify your design 'live'.

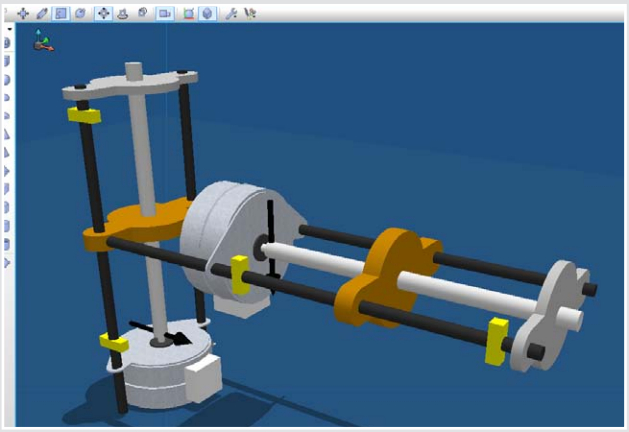
API (Application Programming Interface)
The powerful API allows control of simulation events and components providing a wide range of PC-side functions.

DASHBOARD HMIs
Human Machine Interface components show your system parameters during simulation and In-Circuit-Test using intuitive displays including meters, graphs, oscillograms and tables.



CONSOLES
Use text based consoles to see data passing around your system: perfect for designing systems with digital communications.

NEW IN VERSION 6

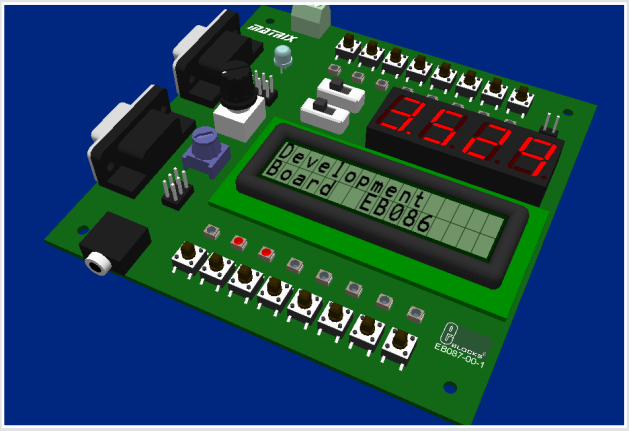


ELECTROMECHANICAL SYSTEM CREATION

Create simulations of your model which move in 3D space under electrical stimulus from a microcontroller and other components in your system. Use 2D dashboard controls to monitor your system in real time.

SYSTEM PANEL

Use the system panel to design your own simple 3D model. View your design from different angles whilst it simulates.



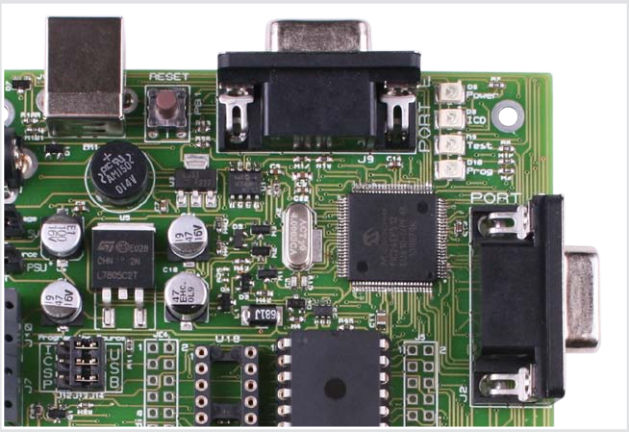
LASER CUTTERS AND 3D PRINTERS

Create low cost parts with laser cutters and 3D printers and see the parts working with your electronics on-screen.

3D DESIGN ENVIRONMENT

Import 3D models and characterise the movement and simulation using API.

MECHANICAL SUPPORT

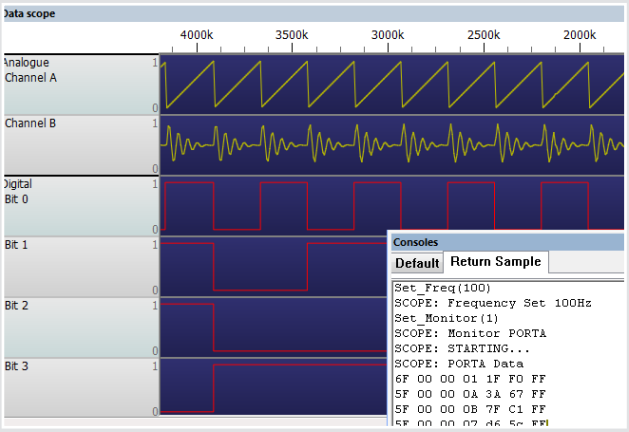


THIRD PARTY INSTRUMENT SUPPORT

Access readings and data from external instruments using DLL support. Display data with dashboard HMIs or third party software.

TIGHT E-BLOCKS INTEGRATION

Use our new EB006 multiprogrammer to monitor every pin on your PICmicro design, and monitor and interpret serial data I/O.



DASHBOARD HMI

Monitor how your system is functioning in simulation and In-Circuit-Test. Use new components like graphs, meters, consoles and scrolling text boxes to verify your design.

SOFTSCOPE AND CONSOLES

Use Softscope and Consoles to see data in waveform or textual formats. Use the API to translate incoming data to hex or ASCII equivalent. Link Softscope and consoles to third party hardware using DLLs to create a full SCADA system.

TEST

OVERVIEW

PROJECT EXPLORER
Instantly see all the ports, macros, variables, constants and components in your project.

COMPONENT TOOL BAR
Choose your electro-mechanical component from our large library of parts; from simple switch to Bluetooth module.

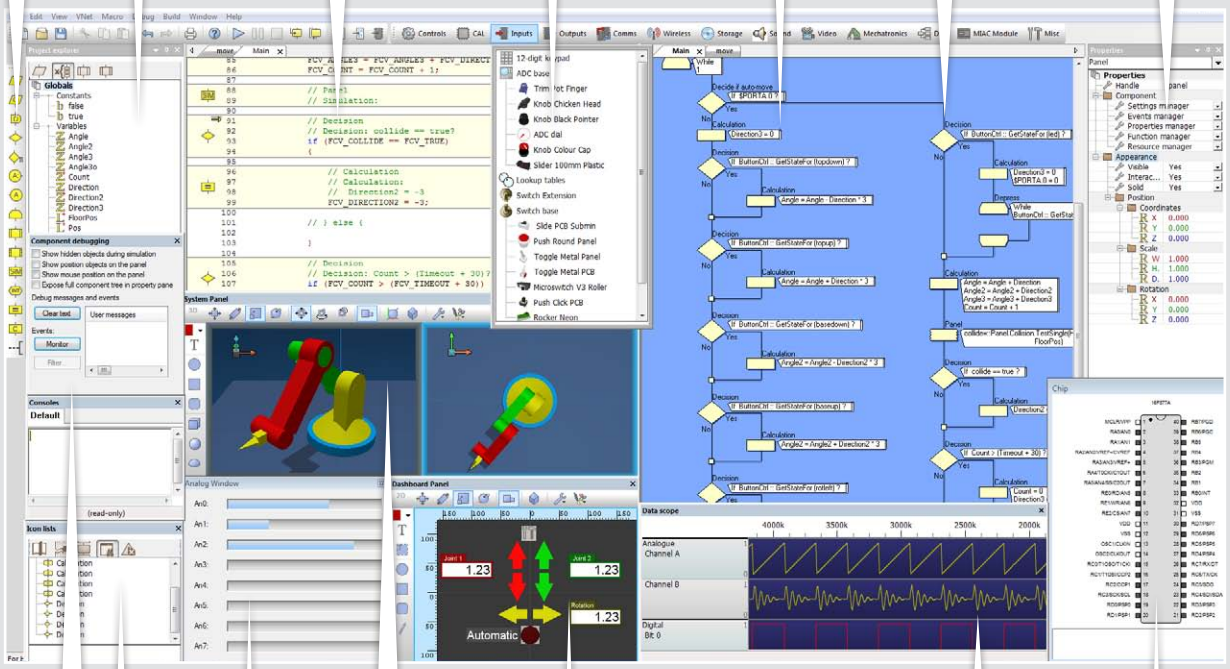
FLOWCHART PROGRAM
Drag, drop and edit standard flow chart icons to create your program. Design flow chart macros that can be called from other icons. Use Flowcode's powerful PC-side language to control, external instruments, and monitor your system.

ICON TOOL BAR
Drag and drop standard flow chart icons onto your flowchart. Click to edit properties for a syntax-correct program.

C CODE PROGRAM
Monitor the C code equivalent of your flow chart; as fast, syntax correct code is generated automatically on a per icon basis.

CONTROL TOOL BAR
Use the standard tool bar for editing your program and also for simulating your program and running In-Circuit-Debug/Test.

PROPERTIES EDITOR
See and edit the properties of all components.



COMPONENT DEBUG
See the API calls in your program and component design.

SYSTEM PANEL
Design your system using the multi-view System panel. Use off-the-shelf electromechanical components or design your own. Import your model from a program like Sketchup or Solidworks.

SCOPE WINDOW
Use the scope window to show time-varying signals in your system. Link the scope to simulation data or real data during In-Circuit-Test.

ICON LIST WINDOW
For search results, error messages, breakpoints and bookmarks.

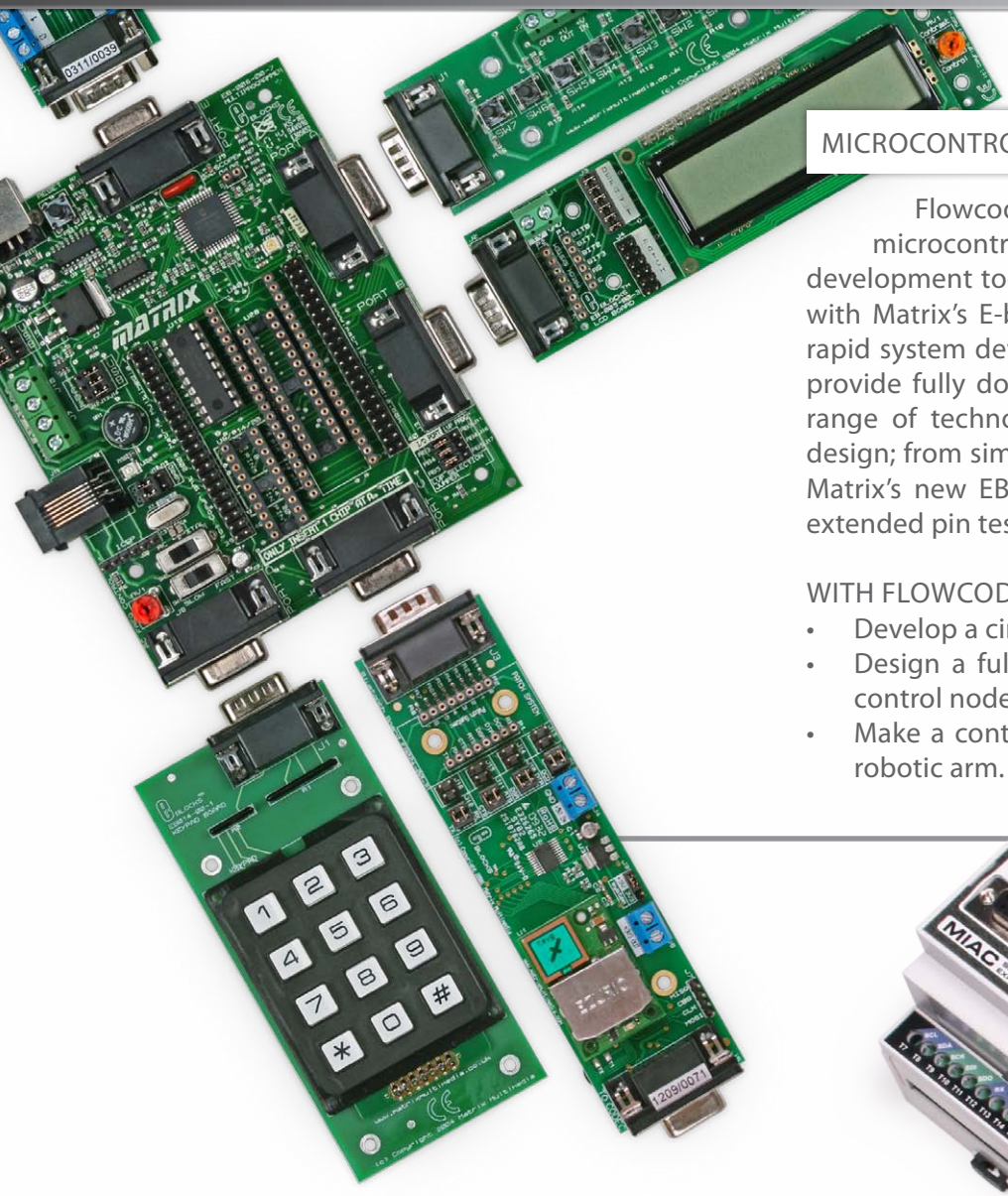
DASHBOARD PANEL
Control and monitor your program in simulation and In-Circuit-Test. Write programs using simulation API commands to show real world equivalents of your data in human-friendly formats.

CHIP
Use the chip window to view and control the status of the inputs and outputs on your chip in simulation and In-Circuit-Test.

ANALOGUE WINDOW
See the state of the Analogue inputs in your design.

FURTHER DETAILS

SUPPORTED HARDWARE



MICROCONTROLLER SYSTEM DESIGN

Flowcode creates hex code for selected microcontrollers and is compatible with third party development tools. Flowcode is very tightly integrated with Matrix's E-blocks boards which snap together for rapid system development. The 60 blocks in the range provide fully documented reference designs of a wide range of technologies you can incorporate into your design; from simple relay circuits to Bluetooth modules. Matrix's new EB006 V9 PIC multiprogrammer includes extended pin test functions.

WITH FLOWCODE NOW YOU CAN:

- Develop a circuit board that controls a wind turbine.
- Design a full vehicle habitation system with many control nodes communicating together.
- Make a control system for a mobile bomb disposal robotic arm.

MACHINE BUILDING

Flowcode includes dedicated control and monitoring routines for Matrix's MIAC range of industrial controllers. MIAC controllers are modular, networkable and scaleable allowing engineers to quickly develop machines and connect them to personal computers, to the internet, to tablet computers, to third party communications systems and more.

WITH FLOWCODE NOW YOU CAN:

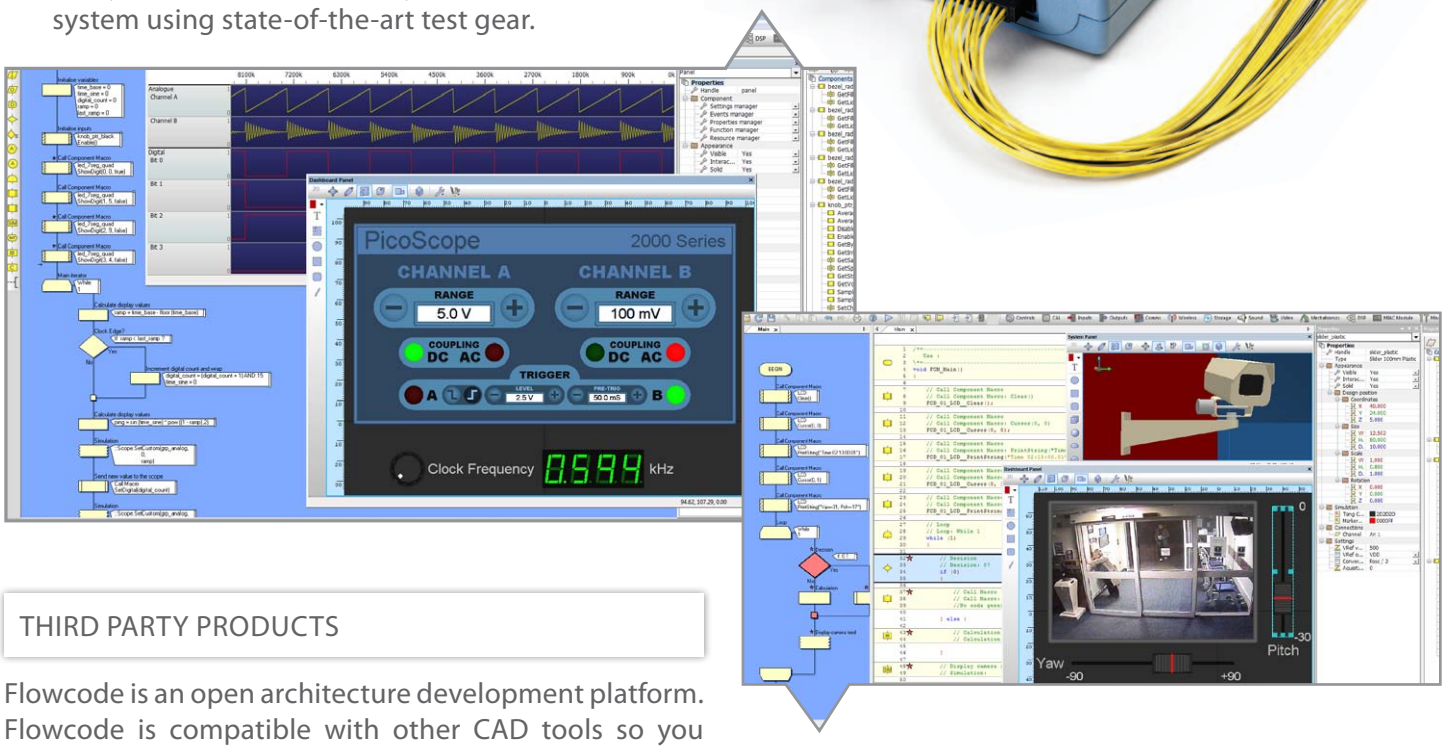
- Control a hydroelectric power station with networked MIAC units and monitor it over the internet.
- Develop a two wheeled balancing robotic platform and see live parameters on a tablet using Bluetooth comms.
- Build a multi-zone central heating system with online monitoring and control.

TEST AND SCADA

Flowcode 6 includes a full API with DLL support. This means that during simulation and In-Circuit-Test mode you can control any third party instrument that provides a DLL and develop a full SCADA system. You can request a sample of data, or you can use third party software to trigger a set of measurements and display the results using third party software.

WITH FLOWCODE NOW YOU CAN:

- Trigger a high specification oscilloscope whilst debugging your microcontroller programme.
- Build a full SCADA test rig, control test parameters, measure and record test results.
- Verify the performance of your electromechanical system using state-of-the-art test gear.



THIRD PARTY PRODUCTS

Flowcode is an open architecture development platform. Flowcode is compatible with other CAD tools so you can import circuit board designs and 3D mechanics. Flowcode produces hex code for microcontrollers which can be used by third party development tools and chip programmers. DLL support means that you can incorporate a wide variety of third party tools into your development system.

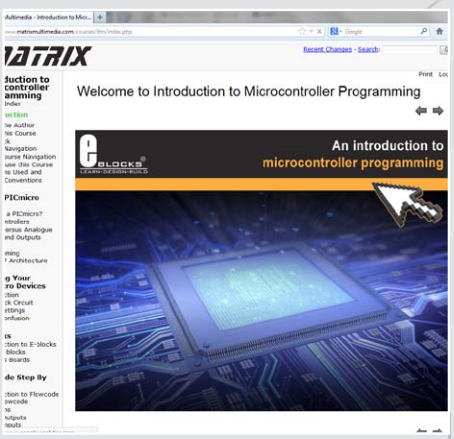
WITH FLOWCODE NOW YOU CAN:

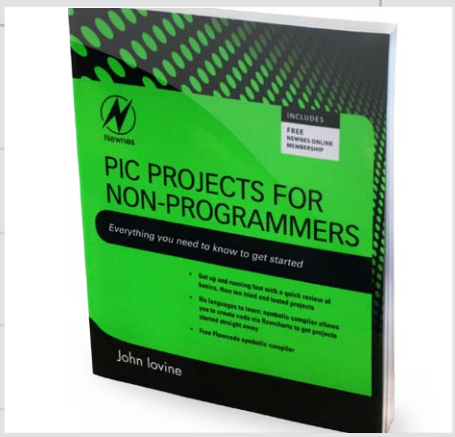
- Use hex generated by Flowcode in any third party microcontroller development system.
- Use third party test gear like Multimeters and PC scopes via Flowcode DLL commands.
- During In-Circuit-Test control a camera via wi-fi to monitor the effects on your remote system.

SCADA = System Control And Data Acquisition

SUPPORT FOR LEARNERS AND TRAINERS

Flowcode 6 is very well supported. Complete beginners will find our free online courses great for covering the basics of developing electronic systems. Experts will find our examples, manuals and hardware module datasheets online invaluable. All users will value the support offered by our engineers, valued contributors, and extended online community.





ONLINE HELP AND VIDEOS

Flowcode 6 connects to an online web help portal, which allows users to quickly gain access to the vast array of resources Matrix have made available online. This includes a full suite of extensive and informative training videos covering many aspects of Flowcode: from beginners' tutorials to advanced tips and tricks.

ONLINE COURSES

On the Matrix website you will find a number of free web based courseware applications which cover not only the Flowcode basics, but also the fundamentals of microcontrollers and how they are used in electronic systems.

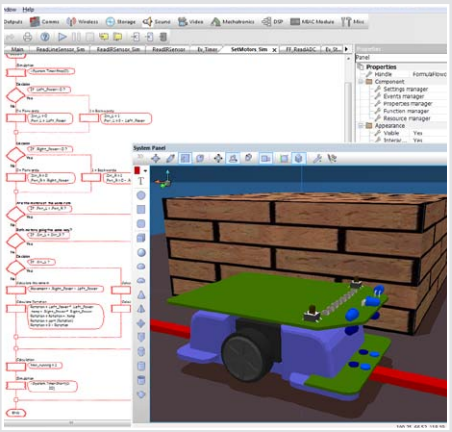
TUTORIAL MANUALS AND BOOKS

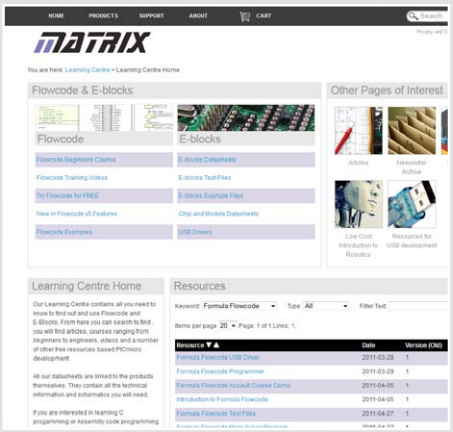
In addition to the free online courses, a number of manuals for advanced topics such as Bluetooth, USB and ZigBee are also available for purchase from the Matrix website.

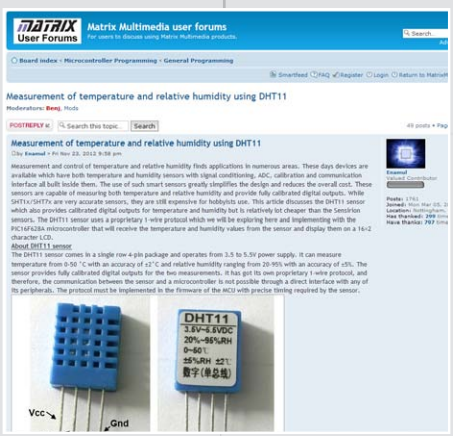
Flowcode is also supported by a range of third party books.

COMMUNITY SUPPORT

There are more than 20,000 Flowcode users in our growing interconnected community. We encourage all users, from students through to industrial engineers in large multinational companies, to ask questions, seek support for projects and share ideas.







EXAMPLE PROJECTS

In addition to the examples we have prepared for Flowcode 6, there are also thousands of user-contributed programs available on our website and on third party websites.

LEARNING CENTRE

Our Learning Centre has more than 700 resources including examples, datasheets, drivers, circuits, articles, videos and software downloads. This amazing resource is free to all registered users.

FORUM AND FAQ CENTRE

If you have questions or technical problems with Flowcode then you will find our community eager to help. All users can view our forum. Only registered users can make posts. Take a look yourself and see how good our support is.

COMPONENTS

Components in Flowcode 6 are modelled on real parts which can be easily be purchased from the internet. If you need components that are not in the standard library you can create your own with the Component Creator software provided.

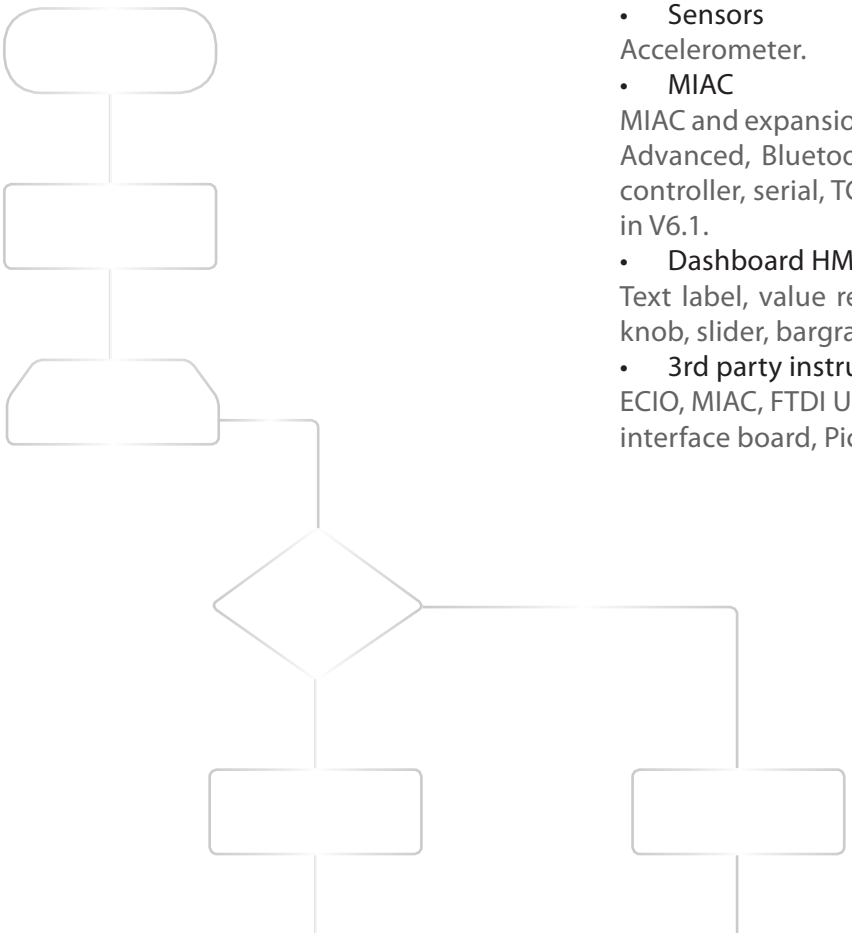
Modules containing the more advanced parts (e.g. communications technology blocks and displays), and their circuit diagrams, are available with our E-blocks rapid prototyping system which are tightly integrated with Flowcode. This means that assembling a circuit diagram and the parts for your project can easily be done from the information provided.

The following parts are shipped with Flowcode 6:

- OS/Processor cores

Windows XP, Vista, 7
PIC10, 12, 16, 18
dsPIC/PIC24/PIC33
Atmel TINY, MEGA
Atmel AT91, SAM7, ARM
Arduino

(See page 18 for a detailed list of supported chips)



- Inputs

3D: Models of real switches, knobs and potentiometers. PCB and panel mounted.
2D: Dashboard control parts in the house style.

- Outputs

3D: LED, LED array, RGB LED, bar graph, single 7-seg display, quad 7-seg display, various monochrome LCDs, various colour graphic LCDs, 3.2" multimedia modules. Dashboard indicator parts in the house style.

- Mechatronics

PWM, servo, stepper, DC motor, solenoid, quadrature encoder, Formula Flowcode robot.

- Media devices

Audio, video, MIDI, speech.

- Communications

CAN, CAN2, I2C master, I2C slave, LIN master, LIN slave, RS232, RS485, SPI, TCP/IP, web server, MIDI, USB HID, USB serial, USB slave.

- Wireless

CAN, CAN2, I2C master, I2C slave, LIN master, LIN slave, RS232, RS485, SPI, TCP/IP, web server, GPS, MIDI, USB HID, USB serial, USB slave, RF, RC5, IrDA, One wire, wifi.

- Storage

FAT16 and 32, internal EEPROM, lookup tables.

- DSP

System, Kalman filter, output, inverse FFT, frequency generator, filter, FFT, control, level, scale, input, delay and sum.

- Sensors

Accelerometer.

- MIAC

MIAC and expansion models including: MIAC slave, Basic, Advanced, Bluetooth, GPS, GSM, ZigBee router, ZigBee controller, serial, TCP/IP, RS232/485. Expansion modules in V6.1.

- Dashboard HMI controls

Text label, value reactor, switches and buttons, control knob, slider, bargraph meter, 'analogue' style meter.

- 3rd party instruments with DLL

ECIO, MIAC, FTDI UM232R, FTDI, UM245R, Velleman 8805 interface board, Picoscope 200 series.

PARTNERSHIP PROGRAMMES

ELECTRONIC COMPONENT SUPPLIERS

We plan to have a large electromechanical component library to allow Flowcode users to make the best designs possible in as short a time as possible. If you are a manufacturer of electronic components and want to help our customers use your parts in their designs then our applications engineering team will give you a free version of Flowcode and will support you in the process of developing Flowcode components.

TEST EQUIPMENT MANUFACTURERS

If you manufacture test equipment then we can help you design an interface inside Flowcode to integrate your equipment into the Flowcode environment. This will allow all Flowcode users to easily incorporate your equipment into their test rigs and to more easily use your equipment as part of the design process. You can take advantage of the fact that Flowcode will be distributed free of charge to all users as a SCADA development system.

PRODUCT DEVELOPERS

If you are developing products that make use of Flowcode at the point of customer use, or which in any way promotes Flowcode to your customers, then we can support you with publicity and applications support.

SALES PARTNERS

If you believe that you can help us to promote and sell Flowcode to your customer base then we would love to hear from you. We can offer you support for training, a good discount from the retail price of Flowcode so you can make a profit from your promotional activities, and technical support so you, in turn, can support your customers.

PARTNERS RECEIVE

- Free version of Flowcode
- Free software updates of Flowcode
- Applications support
- Publicity on our newsletter and on our website
- Publicity on our forums
- Inclusion of components into our online component library for use by all customers.

LANGUAGE SUPPORT

At launch in September 2013 the following languages will be supported:


ENGLISH


GERMAN


FRENCH

Within a few months of launch it is our intention to support the following languages:


FINNISH


GREEK


HUNGARIAN


ITALIAN


JAPANESE


DUTCH


PORTUGUESE


ROMANIAN


SPANISH

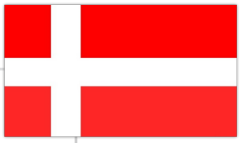

SWEDISH


THAI


VIETNAMESE

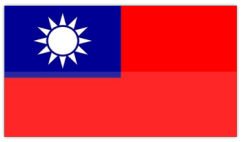

POLISH


RUSSIAN


DANISH


KOREAN


SLOVENE


TAIWANESE


MANDARIN


TURKISH

Flowcode 6 will be available in around 20 languages, with all characters and non-Latin fonts fully supported. Whilst English is the default language of engineers internationally, having software in your language allows you to concentrate on developing your programs, increasing your creativity and productivity.

Note that only the GUI and help file will be translated. All documentation on the new Flowcode API will remain in English.

GUI = Graphical User Interface

LICENSING VERSIONS AND UPGRADES

FREE VERSION
This well featured version allows you to verify that Flowcode will provide the functions you need and is also suitable for ongoing use with personal computers. It will continue to provide limited functionality with Matrix hardware devices like the Matrix Formula Flowcode robot, MIAC and ECIO. After 30 days it will lose its ability to compile to microcontrollers.

CHIP PACK VERSION
Chip pack versions of Flowcode are available for each of the microcontroller chip types supported. When bought alone they give limited functionality for each chip type as detailed in the Feature list in the Flowcode datasheet. When used in conjunction with a professional or multiuser education license, the chip pack unlocks the full Flowcode features for the chip type. Note that a multi chip version of Flowcode 6 is much cheaper than a multi chip version of Flowcode 5.

PROFESSIONAL VERSION
The Professional version includes all functions, components, and is licensed for commercial use. Discounts for multi-user ('Enterprise') versions are available.

ACADEMIC VERSIONS
A reduced cost Academic version of Flowcode is available and it provides the same functionality as the Professional version. Academic multi-user versions (10 user, 50 user) are also available. These are for sale only to educational schools, colleges and universities.

UPGRADING LICENCES
Upgrades from one type of licence (e.g. Chip pack to Pro) to another are simply the price difference.

FLOWCODE 5 TO FLOWCODE 6 UPGRADE
Upgrades from Flowcode 5 to Flowcode 6 will be charged at 50% of the Flowcode 6 price.

FLOWCODE 4 TO FLOWCODE 6 UPGRADE
Upgrades from Flowcode 4 to Flowcode 6 will be charged at 70% of the version 6 price.

CROSSGRADE
Chip pack and Professional users simply buy the Chip pack to get compilation rights for a new family of microcontrollers.

UPGRADE PROCEDURE
Please contact Matrix Multimedia or one of our dealers with your old serial number which is found in the Help > About section of your existing copy of Flowcode.

BUYING ONLINE
Available from Matrix and all authorised dealers.

ACTIVATION
Each product will need activation with a code issued by Matrix. An internet connection is required for this.

UPGRADE RIGHTS
Upgrade rights do not apply to all versions of Flowcode. If your version of Flowcode has been included free of charge with MIAC or other hardware systems then upgrade rights might not apply.

ANNUAL STUDENT RENTAL
This is not available for Flowcode 6.

	Feature	Version				
		Free - first 30 days	Free - post 30 days	Chip pack only	Professional	Academic
1	**General**	✗	✗	✗	✓	✓
	Commercial Use	✗	✗	✗	✓	✓
	Unrestricted Functionality	✗	✗	✗	✓	✓
	Product Support	✗	✗	✗	✓	✓
	Networkable	✗	✗	✗	✗	✓
2	**Control and measurement system design**	✓	✓	✓	✓	✓
	Import 3D objects and characterise for movement	✓	✓	✓	✓	✓
	Create 3D objects and characterise for movement	✓	✓	✓	✓	✓
	Create 'physical' and electronic components	✓	✓	✓	✓	✓
	Develop flowcharts for control and monitoring	✓	✓	✓	✓	✓
	Unlimited use of API	✓	✓	✓	✓	✓
	Unlimited programme size	✓	✓	✓	✓	✓
	Develop Dashboard HMI controls	✓	✓	✓	✓	✓
	Simulate electromechanical systems	✓	✓	✓	✓	✓
	Control third party hardware using DLLs	✓	✓	✓	✓	✓
	Deploy your program on a PC	✓	✓	✓	✓	✓
	Auto-document your program	✓	✓	✓	✓	✓
	Export and save your designs	✓	✓	✓	✓	✓
	Develop programs for MIAC controlled by PC	✓	✓	✓	✓	✓
	Download programs to MIAC and disconnect PC	✓	✓	✓	✓	✓
	Download programs to Formula Flowcode	✓	✓	✓	✓	✓
3	**Compile to chip**	✓	✗	✓	✓	✓
4	**Electronic component restrictions**	✓	✗	✗	✓	✓
	Input / output components	✓	✓	✓	✓	✓
	Wired communications	✓	✗	✗	✓	✓
	Wireless communications	✓	✗	✗	✓	✓
	Peripheral	✓	✗	✗	✓	✓
	Mechatronics	✓	✗	✗	✓	✓
	MIAC expansion modules	✓	✗	✗	✓	✓
	DSP	✓	✗	✗	✓	✓
5	**Plug-in development / integration**	✓	✓	✓	✓	✓
6	**Debug and hardware analysis tools**	✓	✗	✓	✓	✓
	In-Circuit-Test	✓	✗	✗	✓	✓
	Third party instruments	✓	✓	✓	✓	✓
	Consoles	✓	✗	✗	✓	✓
	Softscope	✓	✗	✗	✓	✓
7	**Co**					✓

TARGET SPECIFICATION

PICmicro version

10F200 (high tech only), 10F202 (high tech only), 10F204 (high tech only), 10F206 (high tech only), 10F220 (high tech only), 10F222 (high tech only), 12C508 (high tech only), 12C508A (high tech only), 12C509 (high tech only), 12C509A (high tech only), 12C671, 12C672, 12CE518 (high tech only), 12CE519 (high tech only), 12CE673, 12CE674, 12F1822, 12F1840, 12F508 (high tech only), 12F509 (high tech only), 12F510 (high tech only), 12F609, 12F615, 12F617, 12F629, 12F635, 12F675, 12F683, 12HV609, 12HV615, 12LF1840, RF12F675F, RF12F675H, RF12F675K, 16C716, 16C717, 16C72, 16C72A, 16C73, 16C73A, 16C73B, 16C74, 16C74A, 16C74B, 16C76, 16C77, 16C770, 16C771, 16C773, 16C774, 16C84, 16CR72, 16CR83, 16CR84, 16F1823, 16F1824, 16F1825, 16F1826, 16F1827, 16F1828, 16F1829, 16F1847, 16F1933, 16F1934, 16F1936, 16F1937, 16F1938, 16F1939, 16F1946, 16F1947, 16F505 (high tech only), 16F506 (high tech only), 16F610, 16F616, 16F627, 16F627A, 16F628, 16F628A, 16F630, 16F631, 16F636, 16F639, 16F648A, 16F676, 16F677, 16F684, 16F685, 16F687, 16F688, 16F689, 16F690, 16F707, 16F716, 16F72, 16F722, 16F723, 16F724, 16F726, 16F727, 16F73, 16F737, 16F74, 16F747, 16F76, 16F767, 16F77, 16F777, 16F785, 16F818, 16F819, 16F83, 16F84, 16F84A, 16F87, 16F870, 16F871, 16F872, 16F873, 16F873A, 16F874, 16F874A, 16F876, 16F876A, 16F877, 16F877A, 16F88, 16F882, 16F883, 16F884, 16F886, 16F887, 16F913, 16F914, 16F916, 16F917, 16F946, 16LF1824, 16LF1825, 16LF1828, 16LF1829, 16LF1847, 16LF1902, 16LF1903, 16LF1933, 16LF1934, 16LF1936, 16LF1937, 16LF1938, 16LF1939, 16LF1946, 16LF1947, 16LF707, 18F1220, 18F1230, 18F1320, 18F1330, 18F13K22, 18F13K50, 18F14K22, 18F14K50, 18F2220, 18F2221, 18F2320, 18F2321, 18F2331, 18F23K20, 18F23K22, 18F2410, 18F242, 18F2420, 18F2423, 18F2431, 18F2439, 18F2450, 18F2455, 18F2458, 18F248, 18F2480, 18F24J10, 18F24J11, 18F24J50, 18F24K20, 18F24K22, 18F2510, 18F2515, 18F252, 18F2520, 18F2523, 18F2525, 18F2539, 18F2550, 18F2553, 18F258, 18F2580, 18F2585, 18F25J10, 18F25J11, 18F25J50, 18F25K20, 18F25K22, 18F25K80, 18F2610, 18F2620, 18F2680, 18F2682, 18F2685, 18F26J11, 18F26J13, 18F26J50, 18F26J53, 18F26K20, 18F26K22, 18F26K80, 18F27J13, 18F27J53, 18F4220, 18F4221, 18F4320, 18F4321, 18F4331, 18F43K20, 18F43K22, 18F4410, 18F442, 18F4420, 18F4423, 18F4431, 18F4439, 18F4450, 18F4455, 18F4458, 18F448, 18F4480, 18F44J10, 18F44J11, 18F44J50, 18F44K20, 18F44K22, 18F4510, 18F4515, 18F452, 18F4520, 18F4523, 18F4525, 18F4539, 18F4550, 18F4553, 18F458, 18F4580, 18F4585, 18F45J10, 18F45J11, 18F45J50, 18F45K20, 18F45K22, 18F45K80, 18F4610, 18F4620, 18F4680, 18F4682, 18F4685, 18F46J11, 18F46J13, 18F46J50, 18F46J53, 18F46K20, 18F46K22, 18F46K80, 18F47J13, 18F47J53, 18F6310, 18F6390, 18F6410, 18F6490, 18F6520, 18F6527, 18F6585, 18F65J10, 18F65J15, 18F65J50, 18F65K22, 18F65K80, 18F6620, 18F6622, 18F6627, 18F6680, 18F66J10, 18F66J11, 18F66J15, 18F66J16, 18F66J50, 18F66J55, 18F66J60, 18F66J65, 18F66J90, 18F66J93, 18F66K22, 18F66K80, 18F6720, 18F6722, 18F67J10, 18F67J11, 18F67J50, 18F67J60, 18F67J90, 18F67J93, 18F67K22, 18F8310, 18F8390, 18F8410, 18F8490, 18F8520, 18F8527, 18F8585, 18F85J10, 18F85J15, 18F85J50, 18F85K22, 18F8620, 18F8622, 18F8627, 18F8680, 18F86J10, 18F86J11, 18F86J15, 18F86J16, 18F86J50, 18F86J55, 18F86J60, 18F86J65, 18F86J90, 18F86J93, 18F86K22, 18F8720, 18F8722, 18F87J10, 18F87J11, 18F87J50, 18F87J60, 18F87J90, 18F87J93, 18F87K22, 18F96J60, 18F96J65, 18F97J60, 18LF13K50, 18LF14K50, 18LF25K80, 18LF26J13, 18LF26J53, 18LF26K80, 18LF27J13, 18LF27J53, 18LF45K80, 18LF46J13, 18LF46J53, 18LF46K80, 18LF47J13, 18LF47J53, 18LF65K80, 18LF66K80

ECIO-28, ECIO-40, Formula Flowcode Buggy, Locktronics PIC, MCHP_FSUSB, MIAC System, MIAC, PIC18_STARTERKIT_E14

AVR/Arduino version

Arduino BT 168, Arduino BT 328, Arduino Duemilanove 168, Arduino Duemilanove 328P, Arduino Ethernet, Arduino Fio, Arduino Leonardo, Arduino LilyPad 168, Arduino LilyPad 328, Arduino Mega 1280, Arduino Mega 2560, Arduino Mega ADK 2560, Arduino Mini, Arduino Nano 168, Arduino Nano 328, Arduino Pro 168 3V3, Arduino Pro 168 5V, Arduino Pro 328 3V3, Arduino Pro 328 5V, Arduino Pro Mini 3V3, Arduino Pro Mini 5V, Arduino Serial, Arduino Uno PDIP, Arduino Uno SMD, , AT90CAN128, AT90CAN32, AT90CAN64, AT90PWM1, AT90PWM2, AT90PWM216, AT90PWM2B, AT90PWM3, AT90PWM316, AT90PWM3B, AT90PWM81, AT90S2313, AT90S2323, AT90S2333, AT90S2343, AT90S4414, AT90S4433, AT90S4434, AT90S8515, AT90S8535, AT90USB1286, AT90USB1287, AT90USB162, AT90USB646, AT90USB647, AT90USB82, , ATMEGA103, ATMEGA128, ATMEGA1280, ATMEGA1281, ATMEGA1284P, ATMEGA16, ATMEGA161, ATMEGA162, ATMEGA163, ATMEGA164, ATMEGA164P, ATMEGA165, ATMEGA165P, ATMEGA168, ATMEGA168P, ATMEGA169, ATMEGA169P, ATMEGA16M1, ATMEGA16U2, ATMEGA16U4, ATMEGA2560, ATMEGA2561, ATMEGA32, ATMEGA323, ATMEGA324, ATMEGA324P, ATMEGA325, ATMEGA3250, ATMEGA3250P, ATMEGA325P, ATMEGA328, ATMEGA328P, ATMEGA329, ATMEGA3290, ATMEGA3290P, ATMEGA329P, ATMEGA32C1, ATMEGA32M1, ATMEGA32U2, ATMEGA32U4, ATMEGA32U6, ATMEGA406, ATMEGA48, ATMEGA48P, ATMEGA64, ATMEGA640, ATMEGA644, ATMEGA644P, ATMEGA645, ATMEGA6450, ATMEGA6450P, ATMEGA645P, ATMEGA649, ATMEGA6490, ATMEGA6490P, ATMEGA649P, ATMEGA64C1, ATMEGA64M1, ATMEGA8, ATMEGA8515, ATMEGA8535, ATMEGA88, ATMEGA88P, ATMEGA8U2, , ATTINY13, ATTINY167, ATTINY22, ATTINY2313, ATTINY24, ATTINY25, ATTINY26, ATTINY261, ATTINY4313, ATTINY44, ATTINY45, ATTINY461, ATTINY48, ATTINY84, ATTINY85, ATTINY861, ATTINY87, ATTINY88, , ATXMEGA128A1, ATXMEGA128A3, ATXMEGA128D3, ATXMEGA16A4, ATXMEGA16D4, ATXMEGA192A3, ATXMEGA192D3, ATXMEGA256A3, ATXMEGA256A3B, ATXMEGA256D3, ATXMEGA32A4, ATXMEGA32D4, ATXMEGA64A1, ATXMEGA64A3, ATXMEGA64D3

dsPIC/PIC24 version

24EP32GP202, 24EP32GP203, 24EP32GP204, 24EP32MC202, 24EP32MC203, 24EP32MC204, 24EP64GP202, 24EP64GP203, 24EP64GP204, 24EP64GP206, 24EP64MC202, 24EP64MC203, 24EP64MC204, 24EP64MC206, 24EP128GP202, 24EP128GP204, 24EP128GP206, 24EP128MC202, 24EP128MC204, 24EP128MC206, 24EP256GP202, 24EP256GP204, 24EP256GP206, 24EP256GU810, 24EP256GU814, 24EP256MC202, 24EP256MC204, 24EP256MC206, 24EP512GP806, 24EP512GU810, 24EP512GU814, 24F08KA101, 24F08KA102, 24F16KA101, 24F16KA102, 24F16KA301, 24F16KA302, 24F16KA304, 24F32KA301, 24F32KA302, 24F32KA304, 24FJ16GA002, 24FJ16GA004, 24FJ32GA002, 24FJ32GA004, 24FJ32GA102, 24FJ32GA104, 24FJ32GB002, 24FJ32GB004, 24FJ48GA002, 24FJ48GA004, 24FJ64GA002, 24FJ64GA004, 24FJ64GA006, 24FJ64GA008, 24FJ64GA010, 24FJ64GA102, 24FJ64GA104, 24FJ64GB002, 24FJ64GB004, 24FJ64GB106, 24FJ64GB108, 24FJ64GB110, 24FJ96GA006, 24FJ96GA008, 24FJ96GA010, 24FJ128DA106, 24FJ128DA110, 24FJ128DA206, 24FJ128DA210, 24FJ128GA006, 24FJ128GA008, 24FJ128GA010, 24FJ128GA106, 24FJ128GA108, 24FJ128GA110, 24FJ128GB106, 24FJ128GB108, 24FJ128GB110, 24FJ128GB206, 24FJ128GB210, 24FJ192GA106, 24FJ192GA108, 24FJ192GA110, 24FJ192GB106, 24FJ192GB108, 24FJ192GB110, 24FJ256DA106, 24FJ256DA110, 24FJ256DA206, 24FJ256DA210, 24FJ256GA106, 24FJ256GA108, 24FJ256GA110, 24FJ256GB106, 24FJ256GB108, 24FJ256GB110, 24FJ256GB206, 24FJ256GB210, 24HJ12GP201, 24HJ12GP202, 24HJ16GP304, 24HJ32GP202, 24HJ32GP204, 24HJ32GP302, 24HJ32GP304, 24HJ64GP202, 24HJ64GP204, 24HJ64GP206, 24HJ64GP206A, 24HJ64GP210, 24HJ64GP210A, 24HJ64GP502, 24HJ64GP504, 24HJ64GP506, 24HJ64GP506A, 24HJ64GP510, 24HJ64GP510A, 24HJ64GP802, 24HJ64GP804, 24HJ128GP202, 24HJ128GP204, 24HJ128GP206, 24HJ128GP206A, 24HJ128GP210, 24HJ128GP210A, 24HJ128GP306, 24HJ128GP306A, 24HJ128GP310, 24HJ128GP310A, 24HJ128GP502, 24HJ128GP504, 24HJ128GP506, 24HJ128GP506A, 24HJ128GP510, 24HJ128GP510A, 24HJ128GP802, 24HJ128GP804, 24HJ256GP206, 24HJ256GP206A, 24HJ256GP210, 24HJ256GP210A, 24HJ256GP610, 24HJ256GP610A, STARTERKIT_24FJ256GB106, EXPLORER16_24FJ64GA004, EXPLORER16_24FJ128GA010, 30F1010, 30F2010, 30F2011, 30F2012, 30F2020, 30F2023, 30F3010, 30F3011, 30F3012, 30F3013, 30F3014, 30F4011, 30F4012, 30F4013, 30F5011, 30F5013, 30F5015, 30F5016, 30F6010, 30F6010A, 30F6011, 30F6011A, 30F6012, 30F6012A, 30F6013, 30F6013A, 30F6014, 30F6014A, 30F6015, 33EP32GP502, 33EP32GP503, 33EP32GP504, 33EP32MC202, 33EP32MC203, 33EP32MC204, 33EP32MC502, 33EP32MC503, 33EP32MC504, 33EP64GP502, 33EP64GP503, 33EP64GP504, 33EP64GP506, 33EP64MC202, 33EP64MC203, 33EP64MC204, 33EP64MC206, 33EP64MC502, 33EP64MC503, 33EP64MC504, 33EP64MC506, 33EP128GP502, 33EP128GP504, 33EP128GP506, 33EP128MC202, 33EP128MC204, 33EP128MC206, 33EP128MC502, 33EP128MC504, 33EP128MC506, 33EP256GP502, 33EP256GP504, 33EP256GP506, 33EP256MC202, 33EP256MC204, 33EP256MC206, 33EP256MC502, 33EP256MC504, 33EP256MC506, 33EP256MU806, 33EP256MU810, 33EP256MU814, 33EP512GP806, 33EP512MC806, 33EP512MU810, 33EP512MU814, 33FJ06GS101, 33FJ06GS102, 33FJ06GS202, 33FJ12GP201, 33FJ12GP202, 33FJ12MC201, 33FJ12MC202, 33FJ16GP304, 33FJ16GS402, 33FJ16GS404, 33FJ16GS502, 33FJ16GS504, 33FJ16MC304, 33FJ32GP202, 33FJ32GP204, 33FJ32GP302, 33FJ32GP304, 33FJ32GS406, 33FJ32GS606, 33FJ32GS608, 33FJ32GS610, 33FJ32MC202, 33FJ32MC204, 33FJ32MC302, 33FJ32MC304, 33FJ64GP202, 33FJ64GP204, 33FJ64GP206, 33FJ64GP206A, 33FJ64GP306, 33FJ64GP306A, 33FJ64GP310, 33FJ64GP310A, 33FJ64GP706, 33FJ64GP706A, 33FJ64GP708, 33FJ64GP708A, 33FJ64GP710, 33FJ64GP710A, 33FJ64GP802, 33FJ64GP804, 33FJ64GS406, 33FJ64GS606, 33FJ64GS608, 33FJ64GS610, 33FJ64MC202, 33FJ64MC204, 33FJ64MC506, 33FJ64MC506A, 33FJ64MC508, 33FJ64MC508A, 33FJ64MC510, 33FJ64MC510A, 33FJ64MC706, 33FJ64MC706A, 33FJ64MC710, 33FJ64MC710A, 33FJ64MC802, 33FJ64MC804, 33FJ128GP202, 33FJ128GP204, 33FJ128GP206, 33FJ128GP206A, 33FJ128GP306, 33FJ128GP306A, 33FJ128GP310, 33FJ128GP310A, 33FJ128GP706, 33FJ128GP706A, 33FJ128GP708, 33FJ128GP708A, 33FJ128GP710, 33FJ128GP710A, 33FJ128GP802, 33FJ128GP804, 33FJ128MC202, 33FJ128MC204, 33FJ128MC506, 33FJ128MC506A, 33FJ128MC510, 33FJ128MC510A, 33FJ128MC706, 33FJ128MC706A, 33FJ128MC708, 33FJ128MC708A, 33FJ128MC710, 33FJ128MC710A, 33FJ128MC802, 33FJ128MC804, 33FJ256GP506, 33FJ256GP506A, 33FJ256GP510, 33FJ256GP510A, 33FJ256GP710, 33FJ256GP710A, 33FJ256MC510, 33FJ256MC510A, 33FJ256MC710, 33FJ256MC710A, EXPLORER16_33FJ256GP710

Plus the following FCDs for Microchip specific boards:,
EXPLORER16_24FJ128GA010, EXPLORER16_24FJ64GA004, EXPLORER16_33FJ256GP710, STARTERKIT_24FJ256GB106,

ARM version

AT91SAM7S128, AT91SAM7S16, AT91SAM7S161, AT91SAM7S256, AT91SAM7S32, AT91SAM7S321, AT91SAM7S512, AT91SAM7S64, AT91SAM7S64_EK, AT91SAM7SE256, AT91SAM7SE32, AT91SAM7SE512, EB031, ECIOARM

PC with Windows XP, Vista, 7

- Recommended: 2GHz+ processor, 1GB RAM, 700MB disk space and open GL 1.1+

Note that microcontroller compatibility changes on a frequent basis. If you have specific microcontroller requirements then please contact your dealer.