



mikroC PRO for 8051

PID: MIKROE-1457

mikroC PRO for 8051 is a full-featured C compiler for 8051 devices.

The feature rich environment you can experience today is the result of 15 years of dedicated work and steady progress. The ever-increasing number of hardware and software libraries, intuitive IDE, detailed documentation, a full box of additional tools.

Choose your license

mikroC PRO for 8051 has two licensing options available: the License Code and the USB Dongle License. Just choose the license type in the top right part of the page.

We also offer the Site License, if you run a two-person team, a whole R&D department, or teach a class, the Site License is the best choice. It allows you to own, manage and deploy multiple single licenses.

Your Strong Ally.

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The feature rich environment you can experience today is the result of 15 years of dedicated work and steady progress. The ever-increasing number of hardware and software libraries, intuitive IDE, detailed documentation, a full box of additional tools.

[DOWNLOAD](#)

<https://download.mikroe.com/setups/compilers/mikroc/8051/mikroc-8051-setup-v360.zip>

[ROADMAP](#)

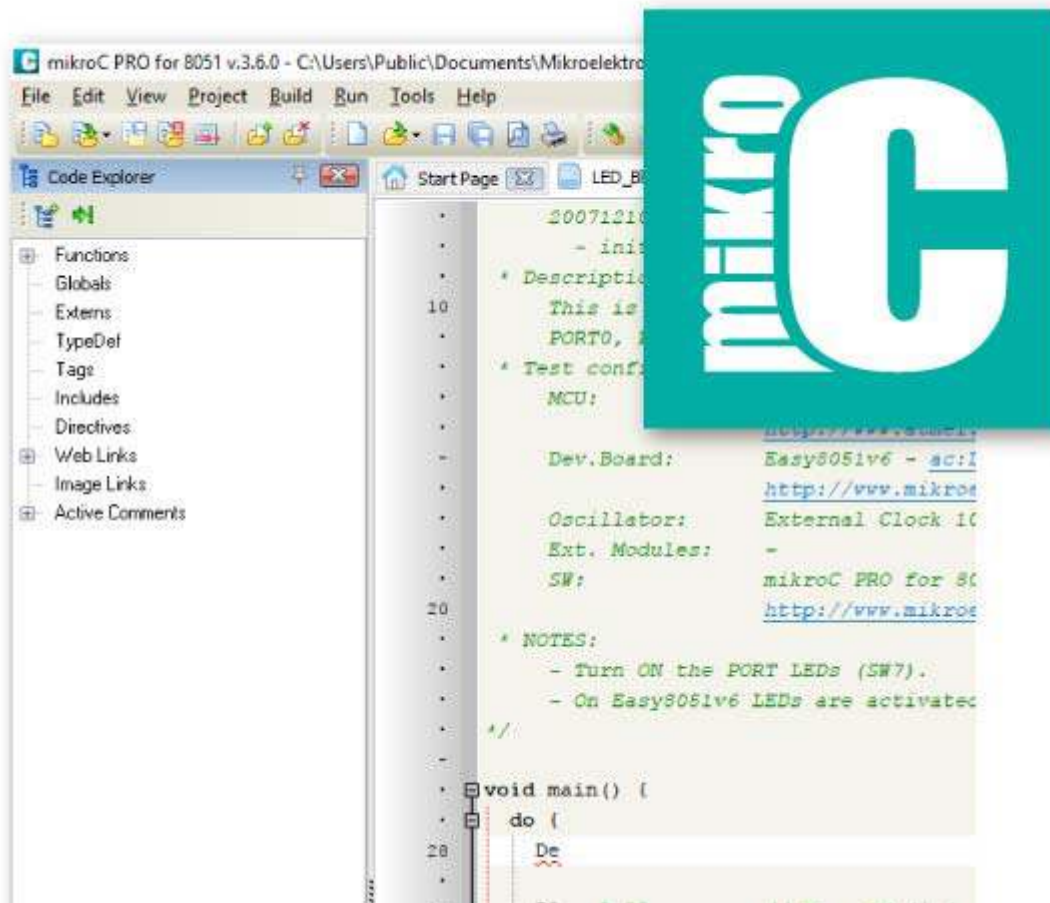
[QUICK START GUIDE](#)

1200 LIBRARY FUNCTIONS

109 CODE EXAMPLES

202 SUPPORTED MCUs

 LIFETIME LICENSE



You will love mikroC!

1-TIME PAYMENT, LIFETIME LICENSE

Pay once and never worry about it again. Once you buy the compiler you are entitled to lifetime free upgrades. Upgrading the compiler takes only a few minutes and a few clicks. We are constantly adding new features to the compiler, you can keep track of what is happening on the Software Roadmap page.

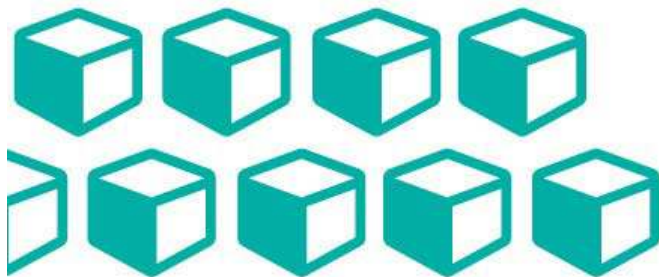
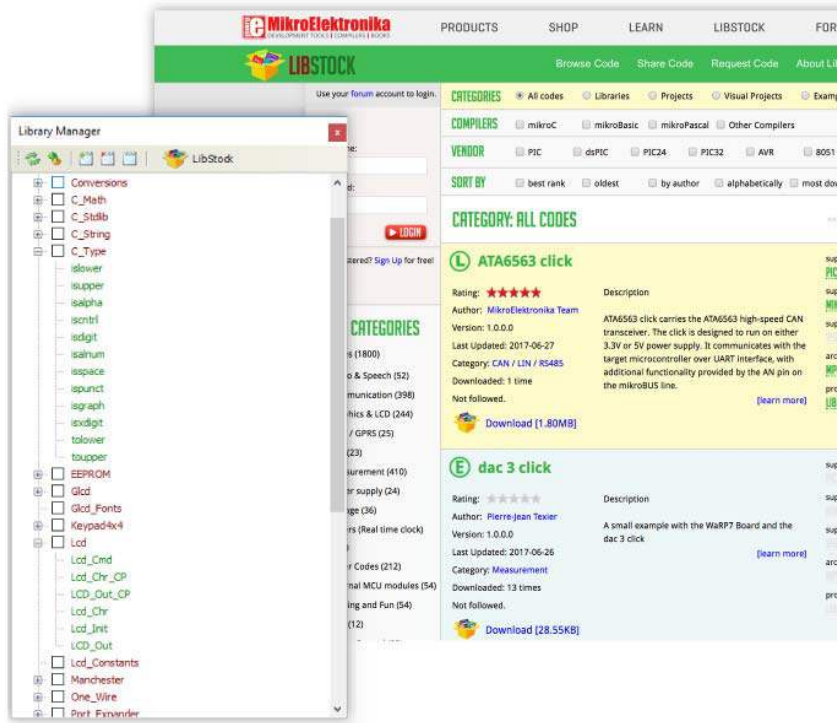
Our support team is always available – you can rely on our help while you are developing. The compiler license guarantees free product lifetime technical support.

1200 LIBRARY FUNCTIONS

mikroC offers a unique mechanism to easily use libraries in your project, just select the libraries you need and they will be instantly available in your code. No need for dozens of #include directives. You can also install and manage third-party libraries using our package manager and library manager.

Simply select the libraries you need for your project, by checking the box. Or press the "Check All" button to include them all. With more than 1200 library functions you'll save time, effort and you'll write better code.

Visit LibStock and download fully functional and working projects, and install them with a single click.



109 EXAMPLES

Every single library that is in our compiler is covered by a working example. More than 109 ready-made working examples, to help you understand how the library works or give you useful code snippets for your project.

202 SUPPORTED MCUs

The mikroC PRO for 8051 currently supports 202 MCUs for 8051 and we are constantly adding new ones.

You can be part of the process by letting us know what microcontroller you wish to see supported next, by using our helpdesk and submitting a ticket.



MICROCHIP

Atmel®



SILICON LABS

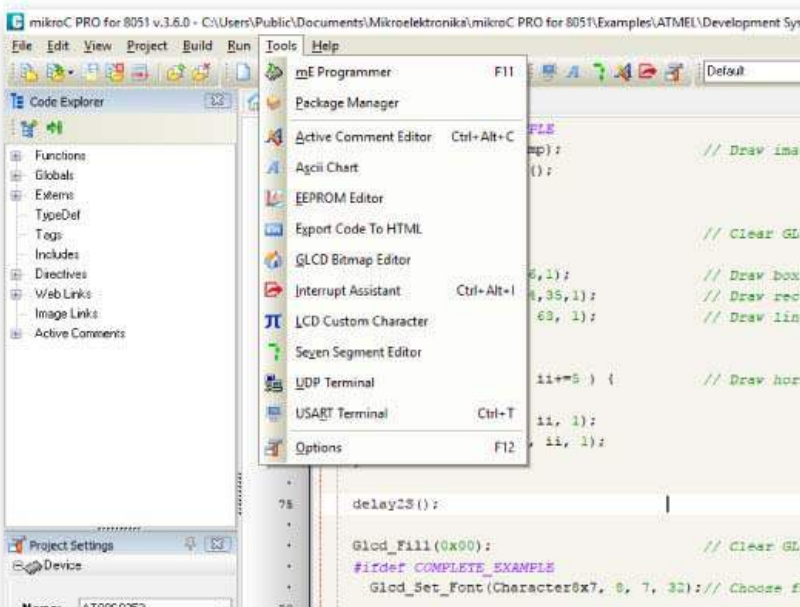
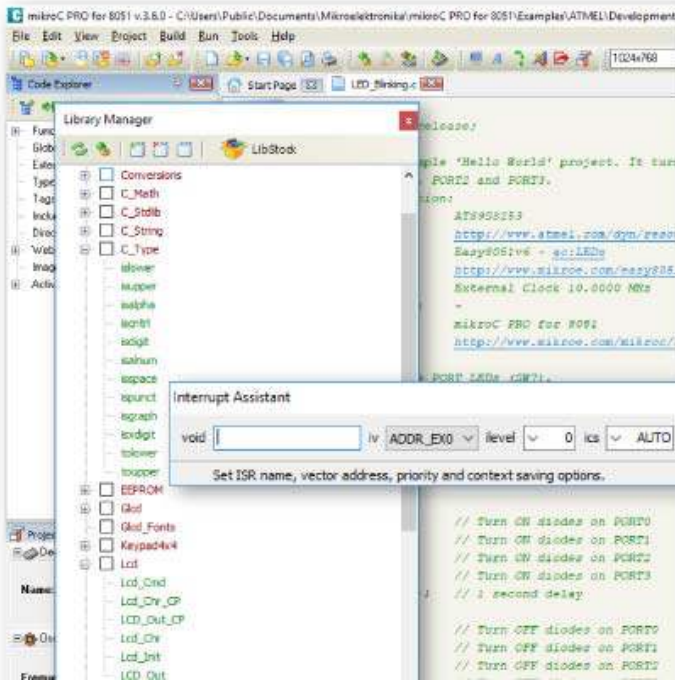
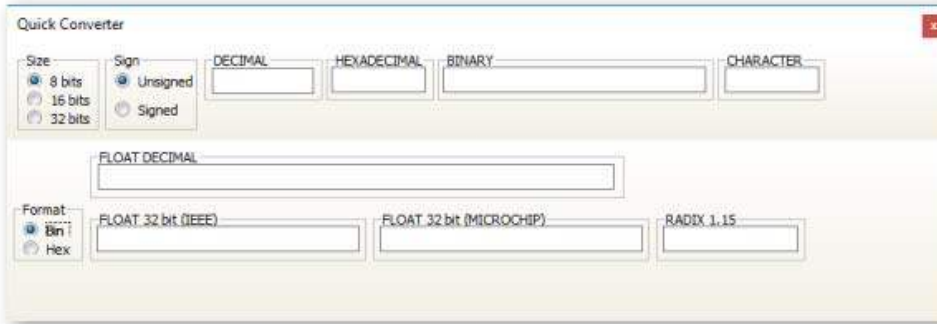
Toolchain	Vendor	Device	Pins	Flash (KB)	RAM (bytes)	Clock (MHz)	mikroICD	Datasheet
8051	Atmel	AT80C5112	48	8	0	33	No	
8051	Atmel	AT80C51SND1C	80	1	2	20	No	
8051	Atmel	AT83C5111	24	4	0	33	No	
8051	Atmel	AT83C5112	24	4	0	33	No	
8051	Atmel	AT83SND1C	80	64	0	20	No	
8051	Atmel	AT87C5111	24	4	0	33	No	
8051	Atmel	AT87C5112	48	8	0	33	No	
8051	Atmel	AT89C2051	20	2	0	24	No	
8051	Atmel	AT89C4051	20	4	0	24	No	
8051	Atmel	AT89C51	40	4	0	24	No	

Showing 1 to 10 of 202 entries

IDE

The ideal environment for you to write, compile, execute, and debug your code. All the tools you could think of, and more, are there. The Library Manager, Interrupt Assistant, Project Explorer, Quick Converter and more.

Click [here](#) to get an in-depth explanation of each part of the IDE.

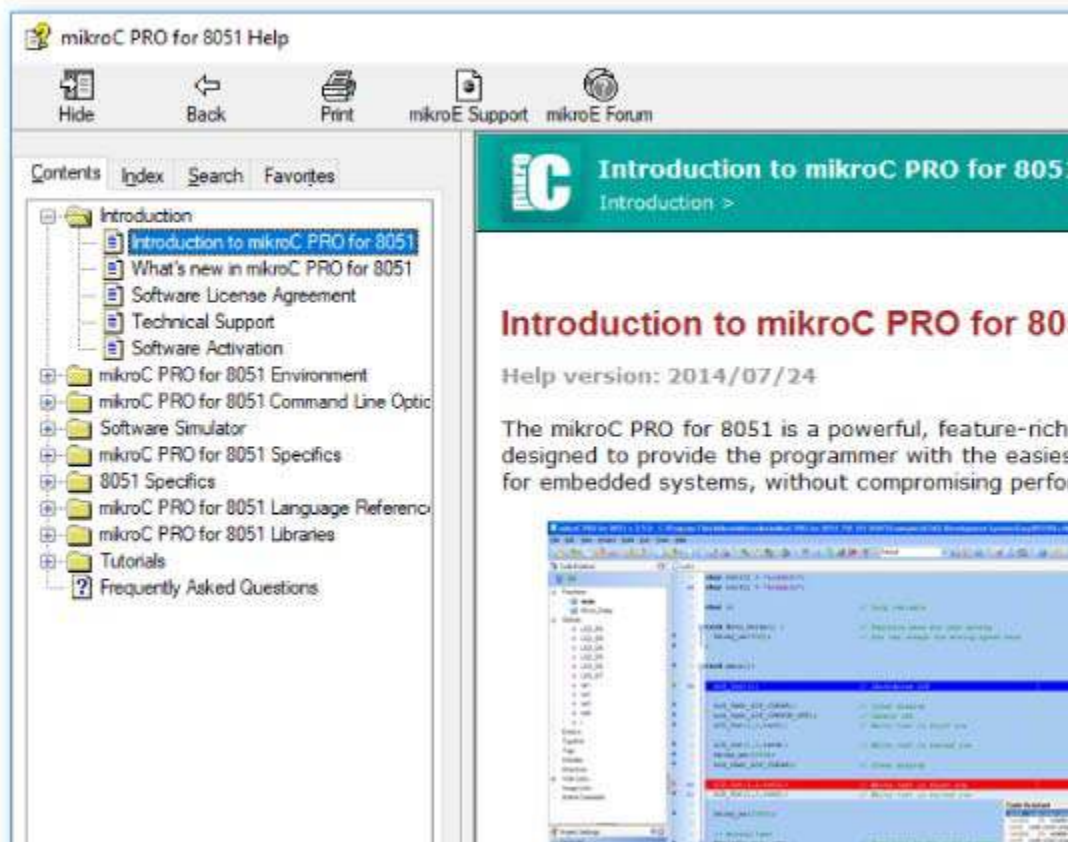


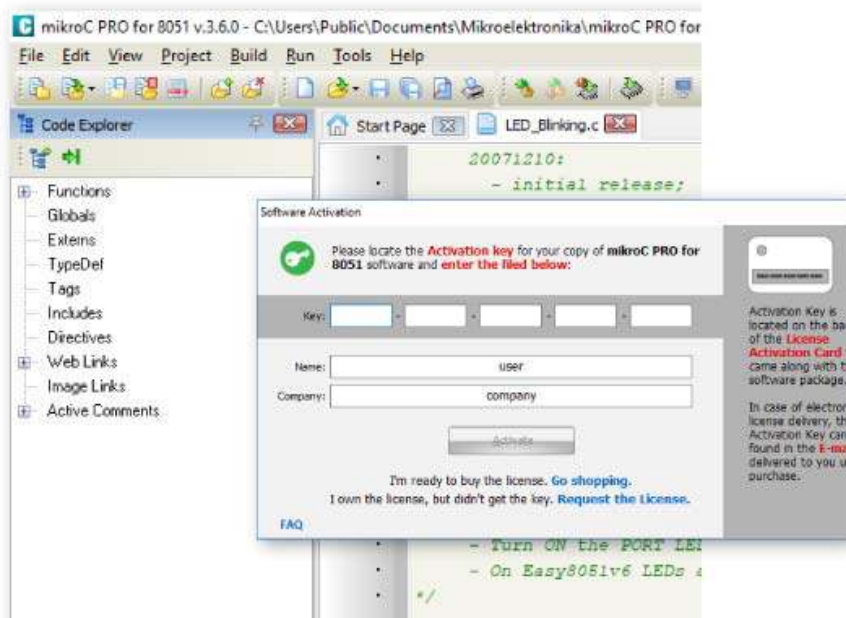
The perfect toolbox

mikroC comes equipped with fully-functional software tools that can boost your efficiency and do the job for you, so you can be more productive in your work: LCD Custom Character Tool, GLCD Bitmap Editor, Seven Segment Editor, UART Terminal, UDP Terminal, HID Terminal, ASCII Chart, Active Comments Editor, Interrupt Assistant, Advanced Statistics and much, much more.

Comprehensive documentation

The help file is the best place to start if you want to get to know the compiler. The easy-to-read format and detailed explanations of every functionality and feature will make you an expert in no time.





Flexible licensing options

LICENSE CODE

Buy the compiler and the License Code will be sent to your inbox instantly. Once you activate the license you can use it on up to two computers.

USB DONGLE

Do you need a portable license, that can be used on multiple computers? USB Dongle license is the perfect solution.

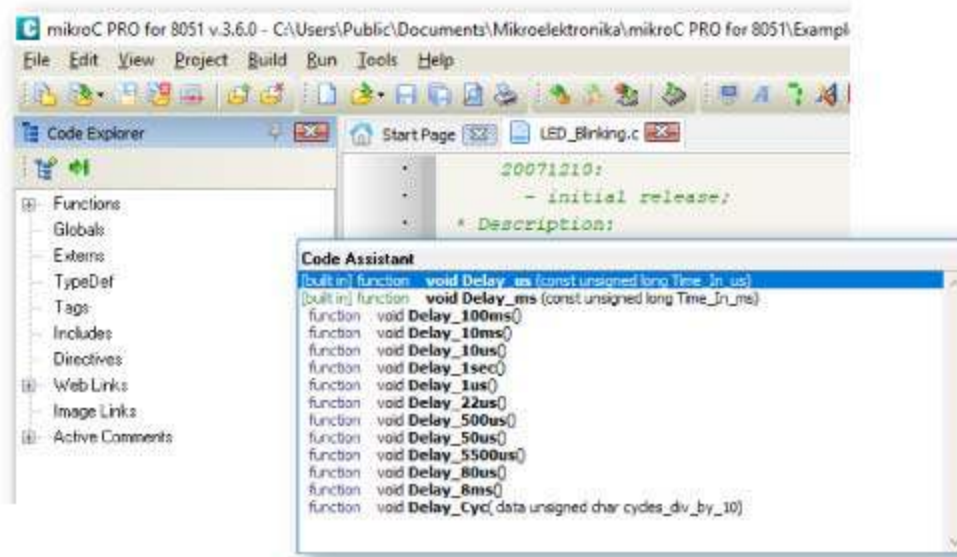
Start developing out of the box!

mikroLab - essential tools for the efficient developer

Code, compile, program, and debug – all in one environment. Choose the development board, and you'll soon see that the rest of the tools are perfectly arranged around it.

mikroLab contains everything a developer needs to explore the possibilities of the microcontroller architectures we offer: a development board (with integrated programmer and debugger), the compiler license, an assortment of accessories, and as a bonus, a free license for one of our GUI design tools (either Visual TFT or Visual GLCD).

IDE



Code Assistant

Control-space is probably the most widely used shortcut among programmers. Why? Because it initiates Code Assistant - programmer's first aid kit. No one needs to memorize function names.

Focus on your code, and let the syntax write itself correctly. Write function calls with one click of your keyboard. **Code assistant in mikroC PRO for AVR** also suggests correct names of constants, URLs, Active comments and variables, so you have it all covered. You don't ever have to get another Syntax error message.

Active Comments

We have developed Active Comments - a unique feature of mikroC PRO for AVR. Any comment can become your multimedia event hook.

Add images, files and URLs to any active comment and assign events as you like.

Right Mouse Click can open browser with URL, Mouse Over can display the image, and Double Click can open a specified file.

You can add:

- Images
- Files
- URLs

The screenshot shows the mikroC PRO IDE interface. The main window displays a project file with the following content:

```
Project name:
  GLCD_Test (Demonstration of the GLCD library routines)
Copyright:
  (c) Mikroelektronika, 2009.
Revision History:
  20071210:
    - initial release;
Description:
  This is a simple demonstration of the GLCD library routines:
  - Init and Clear (pattern fill)
  - Image display
  - Basic geometry - lines, circles, boxes and rectangles
  - Text display and handling
Test configuration:
MCU:
  AT89C8052
Dev.Board:
Oscillator:
Ext. Modules:
SW:
NOTES:
  - Turn on GLCD
Iterations:
Init code char truct
Mod module connections
: GLCD_DataPort at P0;
: GLCD_CS1 at P0_0_bit;
: pinout ...
```

An "Active Comments Editor" dialog box is open over the text. It shows the selected comment "GLCD" and its properties:

- Attributes:
 - Url: None
 - Image: easy_8051_gcd_128x...
 - File: None
- Events:
 - OnLeftClick + Alt: None
 - OnRightClick: None
 - OnDoubleClick: None
 - OnMouseOver: PreviewImage
- Misc:
 - Add Image To Project
 - Add File To Project

The dialog also includes "New", "Rename", and "Delete" buttons for the active comment, and "Save" and "Cancel" buttons at the bottom.

The screenshot shows the mikroC PRO IDE interface with the "Code Explorer" on the left and the "LED_Blinking.c" file open in the main editor. The code in the editor includes:

```
20071210:
  - initial release;
Description:
  This is a simple 'Hello World' project. It
  PORT0, PORT1, PORT2 and PORT3.
Test configuration:
```

An "Interrupt Assistant" dialog box is open over the code. It contains the following fields and options:

- void [] iv ADDR_END level 0 is AUTO OK
- Set ISR name, vector address, priority and context saving options.

Interrupt Assistant

The compiler also includes the Interrupt Assistant, that can help you in configuring interrupts.

You can launch it from the drop-down menu Tools > Interrupt Assistant.

Parameter Assistant

Many functions. Even more parameters. Was it word, or byte? You don't have to scroll through Help file.

Just hit CTRL+SHIFT+SPACE and function parameters will be listed for you.

```
glcd_Init(); // initialize GLCD
glcd_Fill(0x00); // Clear GLCD

while(1) {
#ifdef COMPLETE_EXAMPLE
    Glcd_Image(truck_bmp); // Draw image
    delay2S(); delay2S();
#endif

    Glcd_Fill(0x00);

    Glcd_Box(62,40,124,56,1); // Draw box
    Glcd_Rectangle(5,5,84,35,1); // Draw rectangle
    Glcd_Line(0, 0, 127, 63, 1); // Draw line
    delay2S();

    for(ii = 5; ii < 60; ii+=5 ) { // Draw horizontal and vertical lines
```

```
        Glcd_Box(62,40,124,56,1); // Draw box
        Glcd_Rectangle(5,5,84,35,1); // Draw rectangle
        Glcd_Line(0, 0, 127, 63, 1); // Draw line
        delay2S();
    }

    for(ii = 5; ii < 60; ii+=5 ) { // Draw horizontal and vertical lines
        Delay_ms(250);
        Glcd_V_Line(2, 54, ii, 1);
        Glcd_H_Line(2, 120, ii, 1);
    }

#ifdef COMPLETE_EXAMPLE
    Glcd_Set_Font(Character8x7, 8, 7, 32); // Choose font, see __Lib_GLCDFonts.c
    Glcd_Write_Text("mikroE", 1, 7, 2); // Write string
#endif
}
```

Code Folding

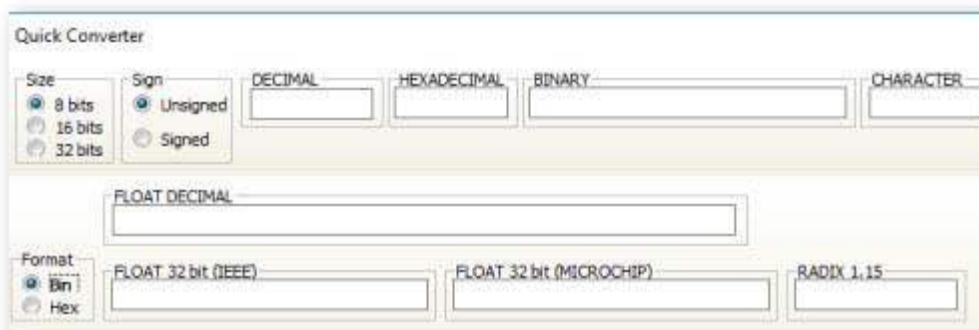
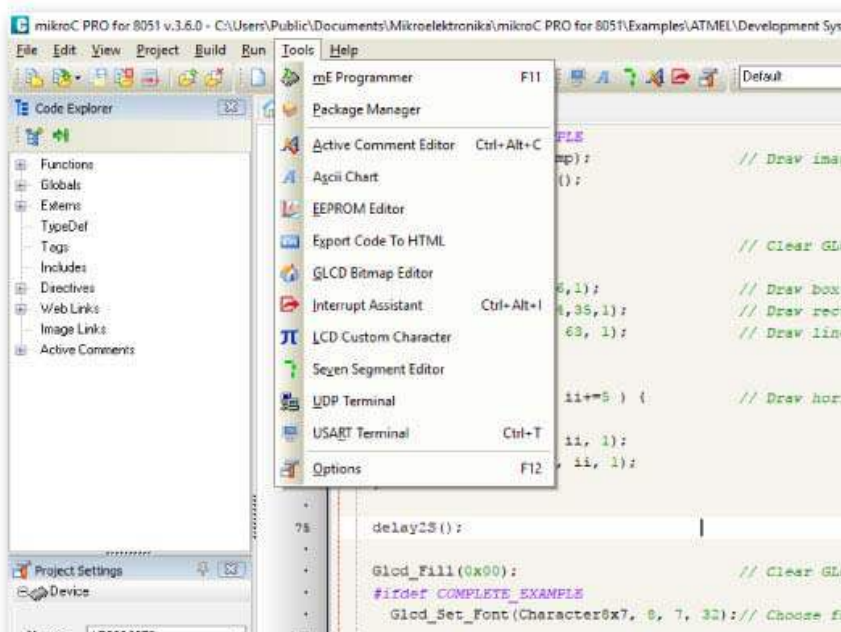
When your code overgrows the size of your screen, it's always better to fold those completed blocks, and work in a clearer surrounding.

This way you can always see the big picture.

Built-in tools

What's the point of a compiler if you have to do all the hard work yourself. mikroC PRO for AVR offers you several most useful integrated tools that will help you get the job done with minimum effort.

- Active Comment Editor
- ASCII chart
- Export Code To HTML Tool
- GLCD Bitmap Editor
- Interrupt Assistant
- LCD Custom Character
- Seven Segment Editor
- UDP Terminal
- USART Terminal



Quick Converter

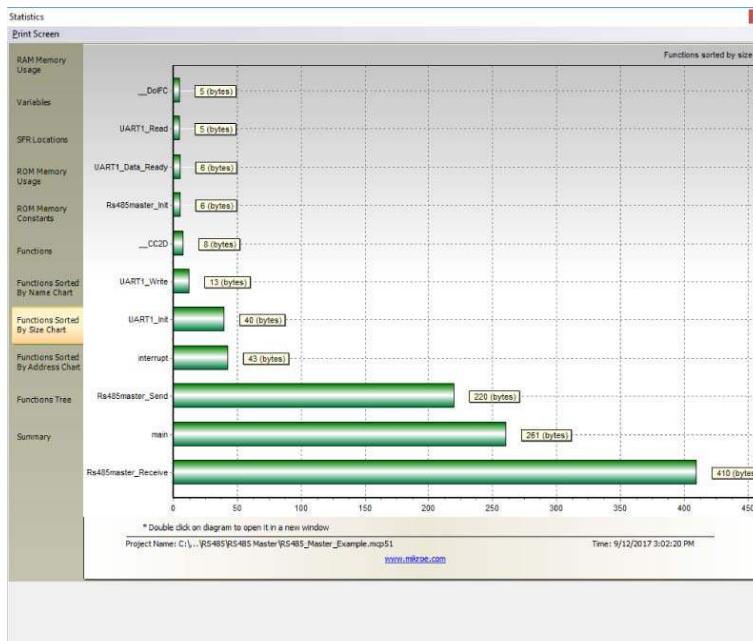
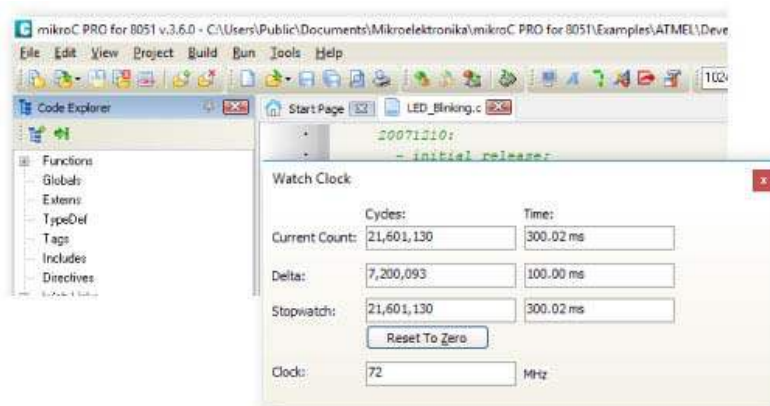
Your fast pocket converter of binary, float, HEX and Radix 1.15 formats into formats you need in your code.

It even displays ASCII values of your bytes.

Software Simulator

If you want to go through your code and monitor the values of your variables searching for bugs and errors, Software Simulator is the best way to do so.

Software simulator supports all debugging modes as hardware debugger, but instead of executing the code on real hardware, it simulates code flow on your PC. Using Watch Clock you can precisely measure the code execution time in microseconds or in clock cycles.



Advanced Statistics

After you build your project, you can always look under the hood with mikroC's Advanced Statistics. It is a powerful tool that visually describes most important information about your project.

Take a look at your variables, arrays and constants and know how much memory your program consumes. See which function calls which in the functions tree window. See how big are your functions and how are they linked in memory, which is especially important if you want to write your own bootloader applications.

mikroC, mikroBasic, mikroPascal for 8051

Further details will be revealed as the project develops.

- Release date: unspecified
- IDE build: v6.3.0
- cmd line build: v6.3.0

Make sure you have the latest version of the 8051 compilers while you wait for the new one.

License owners are entitled to a lifetime of free upgrades.

Compiler Changelog

Version 3.6.0

IDE reinvented

Just update your compiler and you will feel like getting into a shiny new car. There are over 35 new features, and 110 improvements.

New microcontrollers

We have supported 17 new C8051F3XX and C8051F5XX microcontrollers from Silicon Labs©.

New Licensing Options

New Activation and Registration keys are quick and elegant solution for unlocking the Demo limit and registering your license.

Live Update Service

Waiting is over. With newly integrated Live Update tool you can receive new features and improvements instantly!

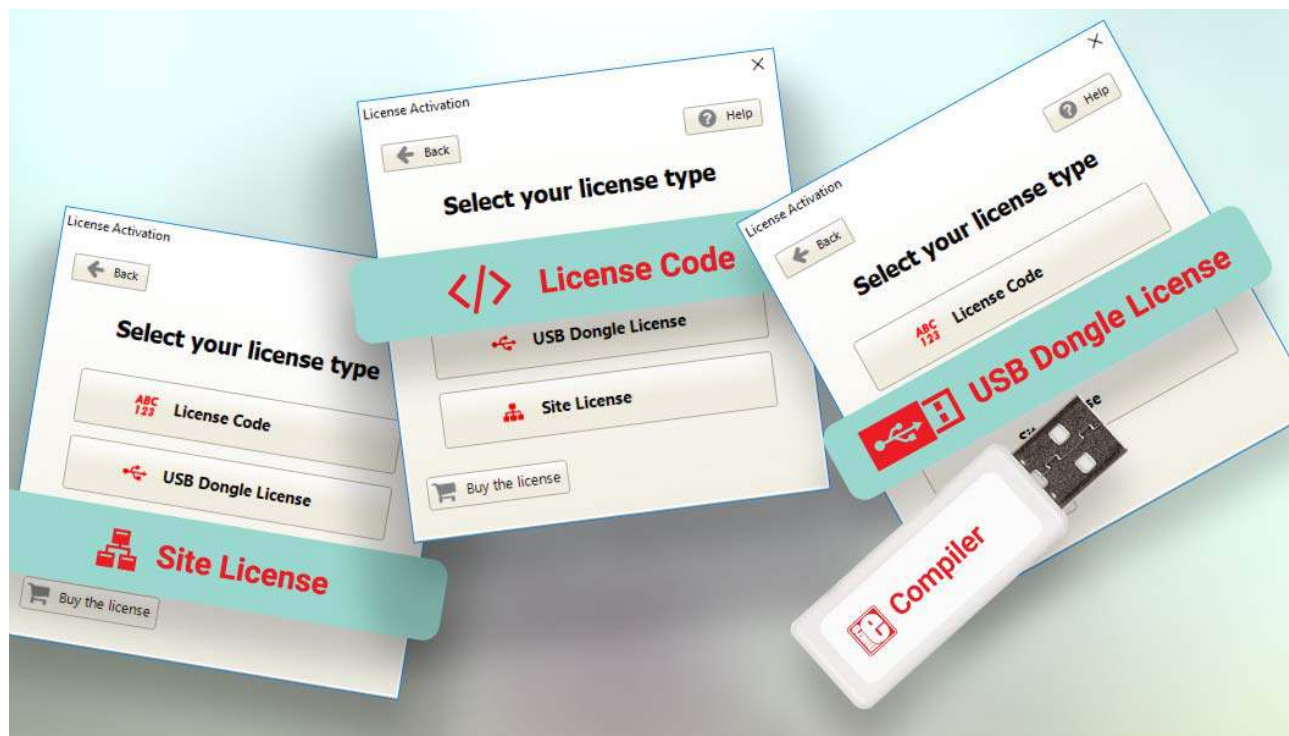
[DOWNLOAD](#)

Version 3.5.0

Version 2.2

Version 1.1

Version 0.92 beta



License Code

Choose this licensing option if you want to **activate your compiler license in seconds**. You can use it on up to two computers. We will send you the Registration code as soon as you purchase the compiler, which you will use to request the Activation code. That is the whole process - your compiler license is activated. It's the quick and straightforward licensing option for this fast-paced world. Learn more.

USB Dongle License

Plug the **USB Dongle** into your computer and activate the license. Use your compiler license anywhere. If you are looking for a portable license that can be used on different computers the USB Dongle license is what you need. The USB Dongle contains a single license, it registers the compiler while it's connected. So, carry it anywhere with you. You will not be tied to one computer or one office.

Learn more.

HOW TO ACTIVATE YOUR COMPILER

Site License



Site Licenses for MikroElektronika Compilers

The regular licensing model for MikroElektronika software works best for individual users. If you run a two-person team, a whole R&D department, or teach a class, the Site License is a better solution. It allows you to own, manage and deploy multiple single licenses, with some major benefits:

Affordable: Instead of buying multiple licenses at regular price, we will quote a special discounted price. **Schools and universities will get the best deals.**

Flexible: With the Site license, individual licenses are not tied to individual computers/users. In other words, you don't have to buy a compiler license for each person who will use it. The number of licenses you own only defines how many compiler copies can be in active use at the same time. You control who has access.

Here's How It Works

1. Once you purchase a given number of compilers, we will send you the installation for the Site License Manager (available for Windows and Linux). It's an application that runs a server from your computer.
2. Enter the Site License activation key in the License Manager application
3. To give members of your team/class access, simply share IP address and/or PORT number of the Site License server (visible from within the application)
4. To activate their compiler, members of your class/team connect to the server by entering the IP address and PORT number you gave them.
5. Once an individual user finishes his work session, the user slot becomes available again

Site License Inquiry

Name

Email

Message

Clicking on Submit will open a Support Ticket which will be assigned to the person who can best deal with the issue in question. You will immediately receive an automated response message and will be able to monitor communication thread through our Support Center.