

# iC5000

## The Universal On-Chip Analyzer & Trace

iSYSTEM offers the iC5000, a powerful, yet affordable tool solution for embedded software debugging based on industry-standard JTAG or BDM based communication with the target application. The iC5000 is a universal multi-functional development and test tool, supporting a wide range of microcontrollers by means of simple cable adaptation and software license (IP).

Debug and trace licenses are available for many different microcontroller families. Check the iSYSTEM web site for the latest list of supported architectures and technologies.

The iC5000 consists of a base module including USB2.0 and ETH100 interface to connect to the host PC. On top of the base module the debug/trace module and an optional I/O module are attached.

The development system supports real-time access, program trace and data trace. The iC5000 is driven by winIDEA, an easy-to-use integrated development environment and debugger. The iC5000 incorporates major innovation in a new compact package. For devices which include on-chip trace functionality, the iC5000 also accesses these

functions and winIDEA displays and interprets the appropriate results.

In addition to providing complete, high-performance development, debugging and test features, the iC5000 additionally offers high-speed flash programming.

The winIDEA software operates under all popular versions of Windows, including Windows 7. It integrates seamlessly with a large variety of C/C++ compilers. Interfaces to CASE and Test tools as well as Real-Time-Operating-Systems are also available.

### On-Chip Debug Features

- JTAG / SWD / BDM Debug Interface (Debug Levels 1.8 ...5V)
- Multicore Support
- Maximum CPU Frequency supported
- Non intrusive
- Unlimited Software Breakpoints in RAM or Flash
- On-Chip Hardware Breakpoints
- High and Low Level Debugging
- High-Speed Flash Programming

### Supported On-Chip Trace Features:

#### ARM

- Program / Data Trace (ETM)\*
- Data Watchpoint Trace (DWT)\*
- Instrumentation Trace (ITM)\*
- AHB Trace (HTM)\*

#### Power Architecture

- Nexus\*

#### Coldfire V2/3/4

- BDM / Trace\*

#### S12(X)/S08/Coldfire V1

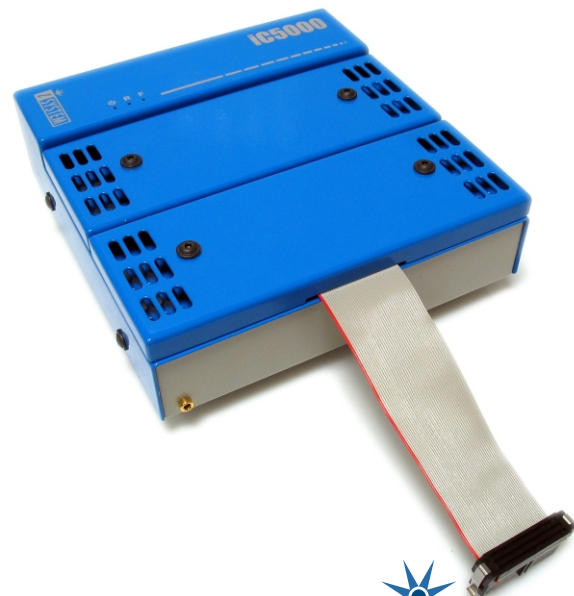
- BDM (On-Chip Trace Buffer)

#### TriCore/XC2000

- JTAG/DAP (On-Chip Trace Buffer)\*

### Trace Features

- 256MB Trace Memory
- 10 ns time stamp
- Endless Trace / Profiling / Coverage with  
`Upload while sampling` \*
- Code Coverage with Statement and Decision Analysis \*
- 8 trace data channels



\* If provided on the microcontroller

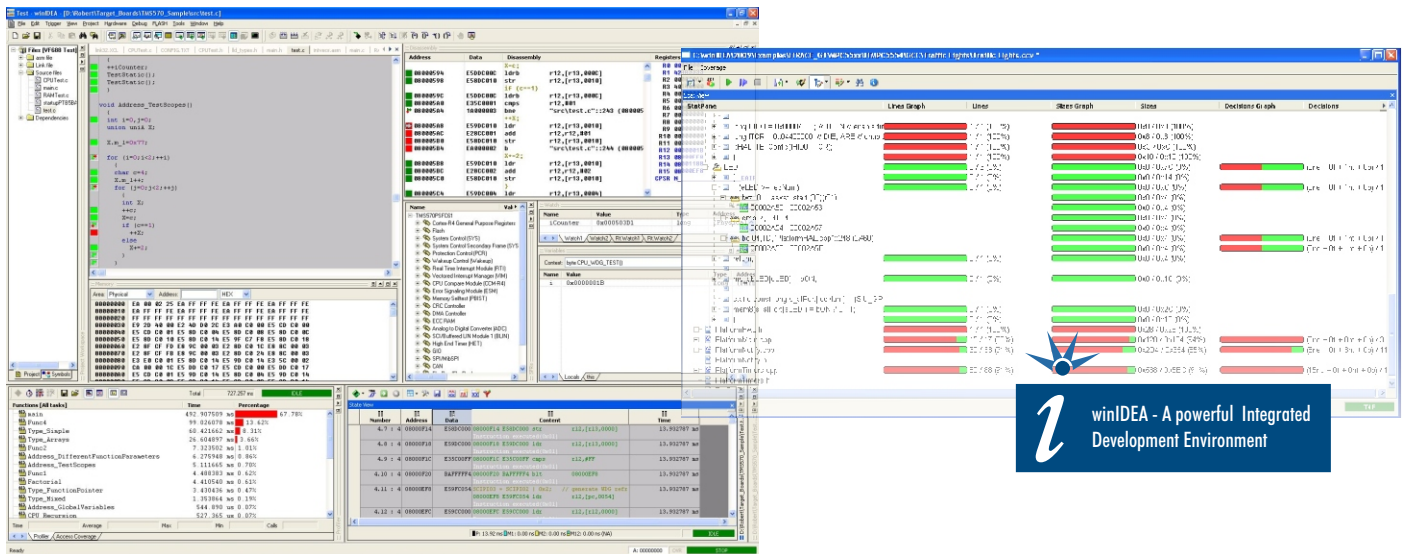
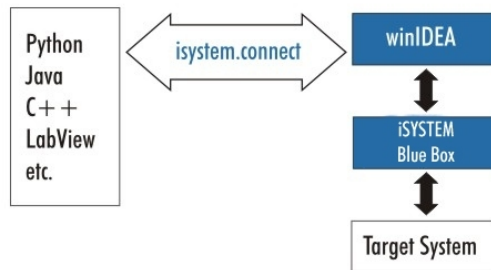
# iC5000

## The Universal On-Chip Analyzer

winIDEA is a powerful Integrated Development Environment, which provides all the necessary tools for writing, debugging and testing code. It consists of a project manager, multi-file source editor, build manager and high level source debugger. The build manager is highly configurable and allows integration of any third party command line driven compiler toolset. winIDEA offers workgroup source control support for projects where several developers work on the same project code.

winIDEA provides an open interface called *isystem.connect*, which allows third party applications to control winIDEA, the debugger, the CPU and the rest of the embedded unit. The interface has been designed to be easily useable from a wide assortment of programming languages and technologies. Beside the native C++ and the ubiquitous automation interface, many compact interfaces and adapters are supplied, making the access trivial using languages like C++, Java and C#, scripting languages like Python, Perl and VBScript and specialized applications such as LabVIEW.

winIDEA distribution itself includes *isystem.connect* based tools such as *GDB Server*, *XCP Server*, and applications used to synchronize multiple debuggers, capture, process and graphically display data, etc.



### Supported MCU families:

- ARM7
- ARM9
- Cortex
- XScale
- S08
- S12(X) (S12/XGATE)
- Coldfire V1
- Coldfire V2/V3/V4
- Power Architecture (MPC/eTPU)
- TriCore (Tricore/PCP)
- XC2000

### Additional I/O-Hardware:

- The I/O module is an optional add-on which provides:
- monitoring and tracing of auxiliary digital and analog signals
  - generation of digital and analog stimulus
  - system port for multiple emulator synchronization
  - attachment of external measurement tools (oscilloscopes, analyzers)

Please check with iSYSTEM for the latest MCU list.