

# iC3000

## The complete Development Tool Solution for NEC 78K0R

iSYSTEM offers a complete tool solution for embedded systems design and test for NEC 78K0R family:

Two different levels of development systems are available - On-Chip Emulator and In-Circuit Emulator. Both system are based on iSYSTEM's iC3000 ActiveEmulator and winIDEA, iSYSTEM's Integrated Development Environment and Debugger.

The On-Chip Emulator is the entry level development system with full debug and flash programming support for 78K0R. For

this purpose the iC3000 ActiveEmulator is equipped with an iCard interface for 78K0R.

The In-Circuit Emulator is a full-blown high-performance development system. The iC3000 ActiveEmulator is connected to the ActiveGT POD for 78K0R. The system supports stand-alone operation without the target and complete In-Circuit Emulation (ICE) at the target system, where the 78K0R micro controller is replaced by the ActiveGT POD with a target solder adapter.

Full ICE-Debug functions are supported with complete bus trace, performance analysis and coverage.

The iC3000 ActiveEmulator connects to the host PC by USB or Ethernet interfaces for fast communication with the IDE, winIDEA.

winIDEA runs on Windows NT/2000/XP/Vista and Windows 7 as host operating system platforms.

All popular C/C++ compilers for 78K0R can be integrated into winIDEA.

### iC3000 with ActiveGT POD In-Circuit Emulation Features

- Based on NEC FPGA technology
- 1 MB Overlay Emulation Memory
- Unlimited Execution Breakpoints
- Access Breakpoints
- Real-Time Access
- Fail-safe Exceptions
- Peripheral Stop
- Full Speed non-intrusive In-Circuit Emulation
- HLL Debugging (ASM/C/C++)
- Call Stack, SFR Window, Memory Window
- 1 GB Trace Buffer
- 10 ns Time Stamp
- Advanced Trace Trigger & Qualifier
- Long Lasting Profiling
- Endless Code Coverage
- Statement and Decision Coverage
- AUX Card with 16 inputs



iC3000 ActiveEmulator with  
ActiveGT POD for 78K0R



**iSYSTEM**

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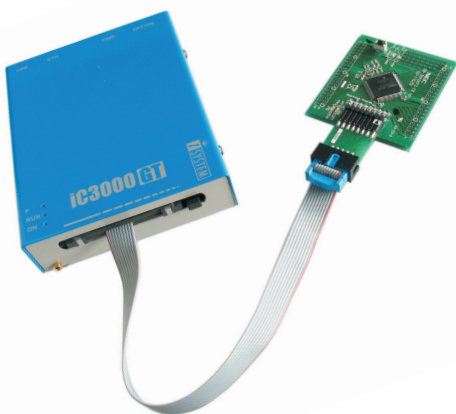
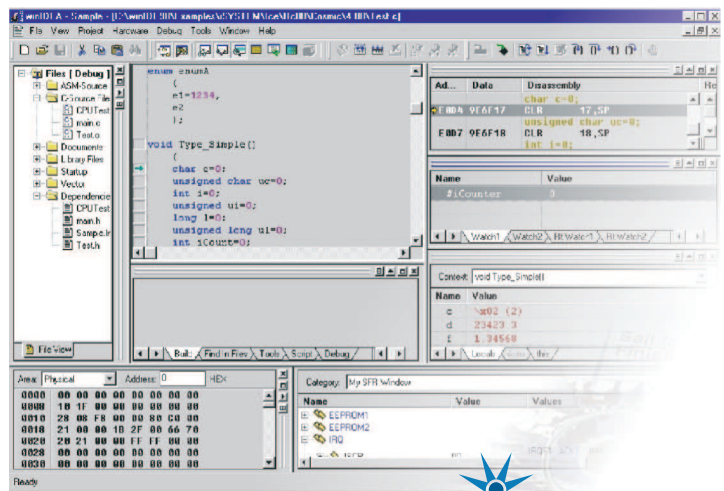
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winIDEA is a powerful Integrated Development Environment, which provides all the necessary tools for writing and debugging code in a single program. It consists of a project manager, multi-file source editor, build manager and high level source debugger. 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 comes with an open API called isystem.connect.

It's an interprocess interface which allows a third party application to remotely control winIDEA with minimal complexity. The client application makes use of the isystem.connect port through a DLL providing the communication interfaces. An automation server extends the functionality provided by this interface. It is designed to provide access to winIDEA functionality from an assortment of different programming languages and technologies. The automation server is implemented in C++ and ATL (advanced template library), it is small and fast with no unnecessary overhead. It has been tested to work with Visual Basic, ASP pages, VBScript, and Jscript.



iC3000 ActiveEmulator with  
iCard for 78K0R and Target

### iC3000

#### On-Chip Emulator Features

- On-Chip Debug Support for 78K0R Processor
- Serial single or two wire interface
- HW Breakpoint
- Access Breakpoint
- Unlimited Software Breakpoints
- Fast Download and Flash Programming
- CPU Voltage Range supported
- Maximum CPU Frequency supported
- Call Stack