



PICE-52 In-Circuit Emulator

8051 Emulator

Modular style hardware offers complete emulation for most of the 8051 MCU's. Modular design provides easy expandability and upgrades while reducing initial investment costs. Package includes:

- CodeMaster-52
- MCA-51 macro assembler
- PDS-52 software debugger/simulator
- PICE-52 in-circuit emulator



All tools are fully integrated and controllable through the CodeMaster-52 IDE. Optionally bundled with best third-party compilers, this comprehensive toolset provides all development software and hardware, including source code editing, project management, debugging, and support for "burning" compiled code into a target microcontroller or memory devices. By selecting unique CodeMaster-52 configurations, you can choose a custom development toolset, creating an environment that fits your needs and budget.

- Real-time emulation up to 80 MHz in 12-, 6-, 4- and 2-clock modes
- 2.0 to 5.0V 8051 derivatives are supported
- Connects to a PC USB or serial port
- Up to 2M bytes program memory & 512K data memory (64K + 64K by default)
- Memory banking - up to 32 banks by 64K
- Memory mapping between the ICE and target with 256 bytes resolution
- Up to 1M true hardware breakpoints at Program and Xdata memory
- Breakpoints on access to on-chip data memories
- 4 complex breakpoints / triggers
- Up to 64K frame deep by 128 bit wide trace buffer
- Precisely programmable clock generator
- 48-bit on-board timer
- Shadow RAM provides RAM real-time access without disturbing emulation
- "On-the-fly" access to memory, breakpoints, tracer, and timer
- Memory coverage feature allows locating "dead" code
- Precisely controlled voltage regulator supplies the emulation MCU on the ICE pod
- 8 probe inputs and 4 trigger outputs
- IDE includes an editor, macro assembler and software simulator
- Can be driven from Keil uVision, IAR Embedded Workbench and Raisonance RIDE
- Source-level debugging for all popular C compilers and assemblers

JEM-52

8051 Emulator and Programmer

Features:

- Supports debugging and programming 8051 microcontrollers with on-chip debug interfaces: Atmel (AT89LP) and Micronas HVC
- PC hosted via a USB port
- Automatically programs flash memory when debugging
- Smart programming algorithm reduces flash memory write time and protects the MCU memory against premature wearing out
- Supports operations with external program and data memory devices
- Supports real-time and single step program execution
- Four hardware breakpoints
- Stack Overflow and Stack Underflow breakpoints (not available for all targets)
- Watchdog Timer breakpoint
- Enables access to all target microcontroller resources when halted at a breakpoint
- JTAG clock frequency up to 4 MHz
- Software switchable Internal/External clock modes
- Built-in programmable frequency synthesizer generates internal clocks in the range of 8 kHz to 100 MHz (not available for all targets)
- Software tracer records and displays preprogrammed set of parameters when emulation is halted on a breakpoint or after a step
- Requires no external power adapter - powers from a standard PC USB port
- Featured with an embedded regulator powering the target with a programmable voltage - 1V to 5V/350 mA or supplies the target with a fixed voltage
- JTAG I/O lines tolerate target input/output signals in the 1 to 5.5V range
- Conveniently controllable from CodeMaster-52 integrated development environment
- The software set includes a C-like script language for hardware testing and device programming
- Dimensions - 4" x 2-1/2" x 1" (100 x 70 x 25 mm)



For a list of accessories and prices, please see our web site at www.bipom.com



PICE-SE

A full package includes MCA-SE macro assembler, PDS-SE software debugger/simulator, MCC-SE C compiler and PICE-SE in-circuit emulator integrated under control of the IDE. This toolset provides a complete development cycle, from editing source texts to getting debugged code.

Features:

- Real-time, non-intrusive emulation of the RSC-4x microcontrollers: RSC4128 and RSC464 (available now), and others in future
- Uses standard RSC-4x MCU for emulation up to Fmax (30 MHz for RSC4128)
- Up to 128K Bytes of program memory. Actual memory size depends on the particular target microcontroller
- Up to 1M Bytes of data memory. Actual memory size depends on the particular target microcontroller
- Up to 128K true hardware breakpoints at code memory address access
- Up to 1M true hardware breakpoints at data memory and SFR access for read, write or read/write operations
- Four complex breakpoints and triggers
- 16K frames x 128-bit real-time tracer with programmable filters
- Several modes of trace recording: Synchronous, Forward, Reverse and Dynamic
- "On-the-fly" access to code memory, shadow memory, breakpoints, tracer and timer
- 48-bit timer provides timing and clock frequency measurement with 0.1% accuracy



- Software programmable clock generator - from 1 KHz to max. frequency with 0.5% accuracy
- Programmable regulator precisely auto-adjusts to target's voltage level and allows operation at 1.2 V to 5.5 V settable with +/-20 mV accuracy
- 8 probe inputs and 4 trigger outputs
- High-speed host link via 115 KBPS serial PC port opto-isolated for extra protection
- Palm size 3-1/2" x 2-1/2" x 2" (95 x 65 x 50 mm), "sandwich-style" emulator header enclosed into a light plastic or metal case
- Source level debugging and project-level support for the MCA-SE macro assembler and MCC-SE C compiler - editing, compiling, debugging in one development IDE (Project-SE)
- Embedded C-like script language for automated testing and custom commands

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PICE-196

One-stop 80196 Tool Shop

Modular style hardware offers complete emulation for most of the 80C196 MCU's. Modular design provides easy expandability and upgrades while reducing initial investment costs. A full package includes:

- MCA-96 macro assembler
- MCC-96 C compiler
- PDS-96 software debugger/simulator
- PICE-196 in-circuit emulator



- Real-time non-intrusive emulation for 80C196 microcontrollers up to 25 MHz
- Supports Intel 8xC196KB/KC/KD/KR/KT/NT/CB/MC/MD/MH derivatives
- Supports the UT80C196KD microcontroller with some restrictions
- Up to 256K Bytes of program memory (64K in basic configuration)
- Up to 256K Bytes of data memory (64K in basic configuration)
- Up to 512K true hardware breakpoints
- Four complex breakpoints and triggers
- Up to 64K frames x 64 bit real-time tracer (16K x 64 in basic configuration)
- Transparent on-the-fly access to code memory, shadow memory, breakpoint processor, tracer and timer
- 48-bit timer: Timing and clock Frequency measurement with 0.1% accuracy
- Embedded programmable Ready and Buswidth signal generators
- 8 probe inputs and 4 trigger outputs
- High-speed host link via 115 KBPS serial port
- Optoisolation for extra protection
- Precisely centered "sandwich"-style design based on the PICE-196 main board, changeable POD's and adapters
- Tiny tool - 3" x 3" x 2" (75 x 75 x 50 mm) that plugs directly to target socket
- Windows® 2000/NT/Vista/7/8 hosted Project-96 IDE includes all the tools necessary for full development cycle - from editing source code to "burning" a target '196 device or an EPROM chip
- Project IDE includes editor, project manager and MCA-96 macro assembler
- (Optional) MCC-96 C compiler and PDS-96 software Simulator debugger
- Source-level debugging for C compilers and Assemblers
- Project support and source-level debugging for the MCC-96 C compiler and MCA-96 macro assembler
- Embedded C-like script language for automated testing and custom commands

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PICE-MC

High-End Microchip PIC® Emulator

A full Project-MC package includes the PASM-MC macro assembler, PDS-MC software debugger/simulator and PICE-MC in-circuit emulator integrated under control of the project IDE. This toolset provides a complete development cycle, from editing source texts, to getting debugged code, and "burning" it into a target microcontroller or a memory device. You can select only those tools you need and order the configuration that fits your needs and your budget.



- Real-time, non-intrusive emulation of 12/16/17/18 series PIC®'s
- Uses bond-out chips from Microchip for accurate emulation up to 40 MHz
- Up to 128K Bytes of program memory
- Up to 128K Bytes of external data memory
- Up to 128K of true hardware breakpoints on code memory address access
- Up to 256K of true hardware breakpoints on access to external data memory (128K read, 128K write)
- Up to 8K of true hardware breakpoints on access to internal data memory (4K read, 4K write)
- Four complex breakpoints and triggers
- 16K frames x 128-bit real-time tracer with programmable filters and forward, reverse and dynamical modes of trace recording
- Transparent on-the-fly access to code memory, shadow memory, breakpoint processor, tracer and timer
- 48-bit timer: Timing and clock frequency measurement with 0.1% accuracy
- Precisely programmable clock generator - from 5KHz to 40 MHz with 0.5% accuracy
- 8 probe inputs and 4 trigger outputs
- High speed host link via 115 KBPS opto-isolated serial port
- Precisely centered "sandwich"- style design. Based on the universal MR1 main board, changeable POD's and adapters for DIP, PLCC, QFP, SO and other packages
- Tiny tool - 3-1/2" x 2-1/2" x 2" (95 x 65 x 50 mm)
- Windows 2000/NT/Vista/7/8 hosted Project-MC IDE includes all the tools necessary for a full development cycle from editing source code to "burning" a target PIC® or an EPROM device
- Project IDE includes an editor, a project manager, the PASM-MC macro assembler, and optionally PDS-MC software debugger/simulator
- Source-level debugging for C compilers and assemblers from Microchip (MPLAB-C), Hi-Tech, IAR Systems, Byte Craft, CCS
- Project-level support for the Hi-Tech C compiler and embedded PASM-MC micro assembler
- Embedded C-like script language for automated testing and custom commands



AT91SAM-ICE

SAM-ICE is a USB-based JTAG emulator designed for Atmel® AT91 ARM cores. SAM-ICE has a 20-pin standard ARM JTAG connector.

- Any ARM7/ARM9/Cortex™-M3 Atmel core supported, including Thumb™ mode
- Serial Wire Debug (SWD) support
- Serial Wire Viewer (SWV) support
- J-Link compatible mode
- RDI compliant
- Download speeds up to 720KByte/second
- Maximum JTAG speed up to 12 MHz
- Auto speed recognition
- All JTAG signals can be monitored, target voltage can be measured
- USB and 20-pin flat cables included
- J-Link server (connects to SAM-ICE via TCP/IP)
- GDB Server included
- USB 2.0, full speed, powered from USB



ATJTAGICE2

The AVR® JTAGICE mkII from Atmel® is a powerful development tool for On-chip Debugging of all AVR™ 8-bit RISC MCU's and AVR32™ 32-bit DSP/MCU's with IEEE 1149.1 compliant JTAG interface.

- **8-bit AVR™:** The JTAGICE mkII also supports devices with debugWIRE Interface.
- **32-bit AVR32™:** The JTAGICE mkII is supported by the AVR32 Studio.



ATAVRONEKIT

The AVR® ONE! is a powerful development tool for on-chip debugging and programming of all AVR32™ and AVR™ XMEGA devices. Supported debug interfaces are JTAG (IEEE 1149.1), debugWire, PDI and the Nexus (IEEE-ISTO 5001(TM)-2003) auxiliary interface for high-speed trace. Supported programming interfaces are ISP, JTAG and PDI. Interfaces with AVR Studio and AVR32 Studio.



ATAVRDRAGON

The AVR Dragon sets a new standard for low cost development tools. AVR Dragon supports all programming modes of the AVR™ device family. It also includes complete emulation support for devices with up to 32KB Flash Memory. A prototyping area allows simple programming and debugging. The AVR Dragon is USB powered and is capable of powering an external target.



Programming Interfaces

- In-System Programming
- High Voltage Serial Programming
- Parallel Programming
- JTAG Programming

Emulation Interfaces

- JTAG
- debugWIRE

