SELECTION GUIDE

TINY AVR™

MEGA AVR®

LCD AVR

USB AVR

DVD AVR

RF AVR

SECURE AVR™

FPGA AVR

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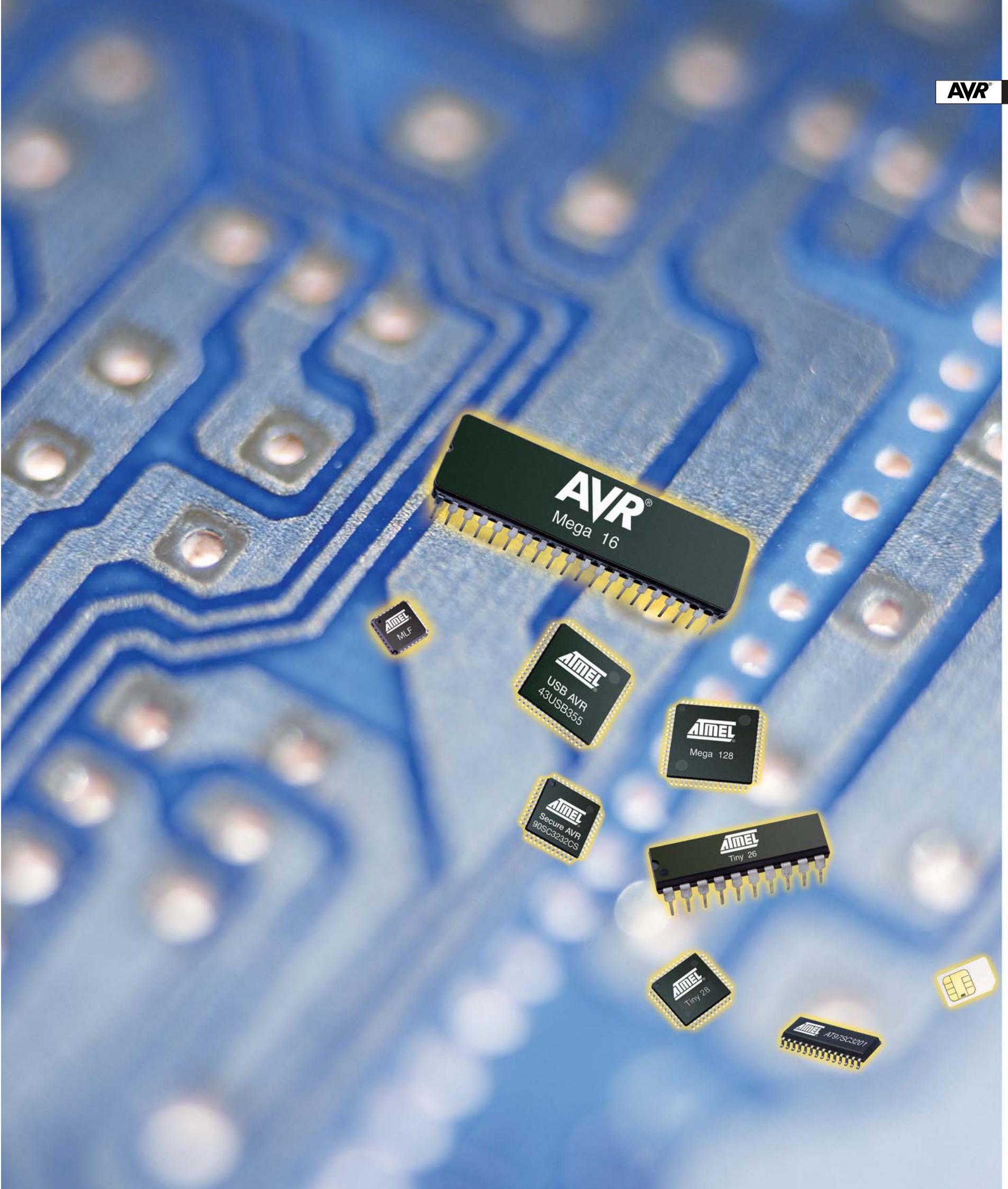
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| Family	Device	Flash (KB)	Mask ROM (KB)	EEPROM (Bytes)	RAM (Bytes)	I/O Pins	SPI	UART	TWI	Hardware Multiplier	JTAG Interface	8-bit Timer	16-bit Timer	10-bit A/D Channels	In-System Prog.(I) Self-Prog.(S)	Vcc (V)	Clock Speed (MHz)	USB Speed	HUB Port	Function Endpoints	LCD Driver	LED Driver	Crypto Engine	Packages (Leads)	Availability
TINY AVR	ATtiny11 [1]	1	–	–	–	6	–	–	–	–	–	1	–	–	–	2.7 - 5.5	0 - 6	–	–	–	–	–	–	8 DIP, SOIC	Now
	ATtiny12 [1]	1	–	64	–	6	–	–	–	–	–	1	–	–	I	1.8 - 5.5	0 - 8	–	–	–	–	–	–	8 DIP, SOIC	Now
	ATtiny13	1	–	64	64	6	–	–	–	–	–	1	–	4	I	1.8 - 5.5	0 - 16	–	–	–	–	–	–	8 DIP, SOIC	Q3-03
	ATtiny15L	1	–	64	–	6	–	–	–	–	–	2	–	4	I	2.7 - 5.5	1.6	–	–	–	–	–	–	8 DIP, SOIC	Now
	ATtiny26	2	–	128	128	16	–	–	–	–	–	2	–	11	I	2.7 - 5.5	0 - 16	–	–	–	–	–	–	20 DIP, SOIC, 32 MLF	Now
	ATtiny28	2	–	–	–	20	–	–	–	–	–	1	–	–	–	1.8 - 5.5	0 - 4	–	–	–	–	–	–	28 DIP, 32 TQFP, MLF	Now
	ATtiny2313	2	–	128	128	18	–	1	–	–	–	1	1	–	I	1.8 - 5.5	0 - 16	–	–	–	–	–	–	20 DIP, SOIC, 32 MLF	Q3-03
	AT90S1200 [2]	1	–	64	–	15	–	–	–	–	–	1	–	–	I	2.7 - 6.0	0 - 12	–	–	–	–	–	–	20 DIP, SOIC, SSOP	Now
	AT90S2313 [2]	2	–	128	128	15	–	1	–	–	–	1	1	–	I	2.7 - 6.0	0 - 10	–	–	–	–	–	–	20 DIP, SOIC	Now
	AT90S2323	2	–	128	128	3	–	–	–	–	–	1	–	–	I	2.7 - 6.0	0 - 10	–	–	–	–	–	–	8 DIP, SOIC	Now
	AT90S2343	2	–	128	128	4	–	–	–	–	–	1	–	–	I	2.7 - 6.0	0 - 10	–	–	–	–	–	–	8 DIP, SOIC	Now
MEGA AVR	ATmega48	4	–	256	512	23	2	1	1	Y	–	2	1	8	S	1.8 - 5.5	0 - 16	–	–	–	–	–	–	28 DIP, 32 TQFP, MLF	Q4-03
	ATmega8	8	–	512	1K	23	1	1	1	Y	–	2	1	8	S	2.7 - 5.5	0 - 16	–	–	–	–	–	–	28 DIP, 32 TQFP, MLF	Now
	ATmega88	8	–	512	1K	23	2	1	1	Y	–	2	1	8	S	1.8 - 5.5	0 - 16	–	–	–	–	–	–	28 DIP, 32 TQFP, MLF	Q4-03
	ATmega8515	8	–	512	512	35	1	1	1	Y	–	1	1	–	S	2.7 - 5.5	0 - 16	–	–	–	–	–	–	40 DIP, 44 TQFP, MLF, PLCC	Now
	ATmega8535	8	–	512	512	32	1	1	1	Y	–	2	1	8	S	2.7 - 5.5	0 - 16	–	–	–	–	–	–	40 DIP, 44 TQFP, MLF, PLCC	Now
	ATmega16	16	–	512	1K	32	1	1	1	Y	–	2	1	8	S	2.7 - 5.5	0 - 16	–	–	–	–	–	–	40 DIP, 44 TQFP, MLF	Now
	ATmega162	16	–	512	1K	35	1	2	1	Y	Y	2	1	–	S	1.8 - 5.5	0 - 16							40 DIP, 44 TQFP, MLF	Now
	ATmega168	16	–	512	1K	23	2	1	1	Y	Y	2	1	8	S	1.8 - 5.5	0 - 16	–	–	–	–	–	–	28 DIP, 32 TQFP, MLF	Q4-03
	ATmega32	32	–	1K	2K	32	1	1	1	Y	Y	2	1	8	S	2.7 - 5.5	0 - 16	–	–	–	–	–	–	40 DIP, 44 TQFP, MLF	Now
	ATmega64	64	–	2K	4K	53	1	2	1	Y	Y	2	2	8	S	2.7 - 5.5	0 - 16	–	–	–	–	–	–	64 TQFP, MLF	Now
	ATmega128	128	–	4K	4K	53	1	2	1	Y	Y	2	2	8	S	2.7 - 5.5	0 - 16							64 TQFP, MLF	Now
	ATmega256	256	–	4K	8K	53	1	2	1	Y	Y	2	2	8	S	2.7 - 5.5	0 - 16	–	–	–	–	–	–	64 TQFP, MLF	Q1-04
LCD AVR	ATmega169	16	–	512	1K	54	1	1	1	Y	Y	2	1	8	S	1.8 - 5.5	0 - 16	–	–	–	Y	–	–	64 TQFP, MLF	Now
	ATmega329	32	–	1K	2K	54	1	1	1	Y	Y	2	1	8	S	1.8 - 5.5	0 - 16	–	–	–	Y	–	–	64 TQFP, MLF	Q1-04
USB AVR	AT43USB320A	–	–	–	512	32	1	1	–	–	–	1	1	–	–	4.5 - 5.5	0 - 12	Full	4	3	–	–	–	100 LQFP	Now
	AT43USB325E	–	–	16K	512	43	–	–	–	–	–	1	1	–	–	4.5 - 5.5	0 - 12	Full	2	4	–	4	–	64 LQFP	Now
	AT43USB325M	–	16	–	512	43	–	–	–	–	–	1	1	–	–	4.5 - 5.5	0 - 12	Full	2	4	–	4	–	64 LQFP	Now
	AT43USB326	–	16	–	512	32	–	–	–	–	–	2	–	–	–	4.5 - 5.5	0 - 12	Full	2	3	–	4	–	48 LQFP	Now
	AT43USB351M	–	24	–	1K	19	1	–	–	–	–	1	1	12	–	4.5 - 5.5	–	Low-Full	–	5	–	–	–	48 LQFP	Now
	AT43USB353M	–	24	–	1K	15	–	–	–	–	–	1	1	12	–	4.5 - 5.5	0 - 24	Full	2	4	–	–	–	48 LQFP	Now
	AT43USB355E	–	–	24K	1K	27	1	–	–	–	–	1	1	12	–	4.5 - 5.5	0 - 12	Full	2	4	–	–	–	64 LQFP	Now
	AT43USB355M	–	24	–	1K	27	1	–	–	–	–	1	1	12	–	4.5 - 5.5	0 - 12	Full	–	–	–	–	–	64 LQFP	Now
	AT76C711	–	–	–	8K	42	1	2	–	–	–	1	1	–	–	3.0 - 3.6	0 - 24	Full	–	6	–	–	–	64 TQFP, BGA	Now
DVD AVR	AT78C1501	–	–	–	–	24	–	–	–	–	–	–	–	–	–	3.0 - 3.6	0 - 40	–	–	–	–	–	–	208 LQFP	Now
	AT78C1502	–	–	–	12K	24	–	1	–	Y	–	–	–	1	–	3.0 - 3.6	0 - 40	–	–	–	–	–	–	128 LQFP	Now
RF AVR	AT86RF401	2	–	128	128	6	–	–	–	–	Y	–	–	–	I	2.0 - 5.0	11 - 19	–	–	–	–	–	–	20 TSSOP	Now
SECURE AVR	AT90SC19236R	–	192	36K	4K	NA	–	–	1	–	–	–	2	–	–	2.7 - 5.5	NA	–	–	–	–	–	–	Die, Module, 44 LQFP	Q3-03
	AT90SC19264RC	–	192	64K	6K	NA	–	–	1	–	–	–	2	–	–	2.7 - 5.5	NA	–	–	–	–	–	Y	Die, Module, 44 LQFP	Now
	AT90SC25672R	–	256	72K	6K	NA	–	–	1	–	–	–	2	–	–	2.7 - 5.5	NA	–	–	–	–	–	–	Die, Module, 44 LQFP	Now
	AT90SC320856	8	32	56K	1.5K	NA	–	–	1	–	–	–	1	–	–	2.7 - 5.5	NA	–	–	–	–	–	–	Die, Module, 44 LQFP	Now
	AT90SC3232CS	32	–	32K	3K	NA	1	–	1	Y	–	–	2	–	–	2.7 - 5.5	NA	–	–	–	–	–	Y	Die, Module, 44 LQFP	Now
	AT90SC4816R	–	48	16K	1.5K	NA	–	–	–	–	–	–	1	–	–	2.7 - 5.5	NA	–	–	–	–	–	–	Die, Module, 44 LQFP	Now
	AT90SC4816RS	–	48	16K	1.5K	NA	–	–	–	–	–	–	1	–	–	2.7 - 5.5	NA	–	–	–	–	–	–	Die, Module, 44 LQFP	Q4-03
	AT90SC6404R	–	64	4K	2K	NA	–	–	–	–	–	–	2	–	–	2.7 - 5.5	NA	–	–	–	–	–	–	Die, Module, 44 LQFP	Q3-03
	AT90SC6432R	–	64	32K	2K	NA	–	–	–	–	–	–	1	–	–	2.7 - 5.5	NA	–	–	–	–	–	–	Die, Module, 44 LQFP	Now
	AT90SC6464C	64	–	64K	3K	NA	–	–	1	–	–	–	2	–	–	2.7 - 5.5	NA	–	–	–	–	–	Y	Die, Module, 44 LQFP	Now
	AT90SC6464C-USB	64	–	64K	3K	NA	–	–	1	–	–	–	2	–	–	2.7 - 5.5	NA	Full	–	4	–	–	Y	Die, Module, 44 LQFP	Now
	AT90SC9608RC	–	96	8K	3K	NA	–	–	1	Y	–	–	2	–	–	2.7 - 5.5	NA	–	–	–	–	–	Y	Die, Module, 44 LQFP	Q3-03
	AT90SC9616RC	–	96	16K	3K	NA	–	–	1	Y	–	–	2	–	–	2.7 - 5.5	NA	–	–	–	–	–	Y	Die, Module, 44 LQFP	Now
	AT90SC9636RC	–	96	36K	3K	NA	–	–	1	Y	–	–	2	–	–	2.7 - 5.5	NA	–	–	–	–	–	Y	Die, Module, 44 LQFP	Q3-03
	AT97SC3201	–	32	32K	2K	12	–	–	–	–	–	–	2	–	–	3.0 - 3.6	0 - 33	–	–	–	–	–	Y	28 TSSOP	Now
FPGA AVR	AT94K05AL	4-16	–	–	4K-16K	96	–	2	1	Y	Y	2	1	–	I	1.6 - 3.6	0 - 25	–	–	–	–	–	–	88 PLCC, 100/144/208 QFP	Now
	AT94K10AL	20-32	–	–	4K-16K	192	–	2	1	Y	Y	2	1	–	I	1.6 - 3.6	0 - 25	–	–	–	–	–	Y	88 PLCC, 100/144/208 QFP	Now
	AT94K40AL	20-32	–	–	4K-16K	384	–	2	1	Y	Y	2	1	–	I	1.6 - 3.6	0 - 25	–	–	–	–	–	–	88 PLCC, 100/144/208 QFP	Now
	AT94S05AL	4-16	–	256	4K-16K	96	–	2	1	Y	Y	2	1	–	I	3.0 - 3.6	0 - 25	–	–	–	–	–	–	256 CABGA	Now
	AT94S10AL	20-32	–	512	4K-16K	144	–	2	1	Y	Y	2	1	–	I	3.0 - 3.6	0 - 25	–	–	–	–	–	–	256 CABGA	Now
	AT94S405AL	20-32	–	1K	4K-16K	288	–	2	1	Y	Y	2	1	–	I	3.0 - 3.6	0 - 25	–	–	–	–	–	–	256 CABGA	Now

Notes: 1: The ATtiny11 and ATtiny12 will be replaced by the ATtiny13 as soon as it's available.

2: The AT90S1200 and AT90S2313 will be replaced by the ATtiny2313 as soon as it's available.

AVR STUDIO

- Integrated Development Environment for TINY/MEGA/LCD AVR
- User Interface for Atmel Starter Kits, Programmers and Emulators
- C and Assembly Source Level Debugging
- Supports Third-party Compilers
- Maintains Project Information
- Available from http://www.atmel.com

STK500

- Supports all Current TINY/MEGA/LCD AVR Devices
- Interfaces with AVR Studio
- Push Buttons, LEDs and RS-232
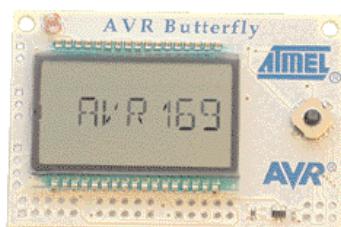
JTAGICE

- Supports AVR Devices with JTAG Interface
- Real Time Emulation in Actual Silicon
    - Debug the Device at the Target Level
    - Communicates Directly to the Device through a 4-pin JTAG Interface
- Supports: Program Breakpoints, Data Breakpoints, Full I/O View and Watch, and Full Execution Control
- Uses AVR Studio as Emulator Human Interface

ICE50

- Emulates all Peripherals, Both Digital and Analog
- Supports all Instructions and Peripherals Real Time
- All Configuration Done from AVR Studio
- Unlimited Number of Breakpoints
- Source Level Debugging
- Supports the Newest Members of TINY/MEGA/LCD AVR Families
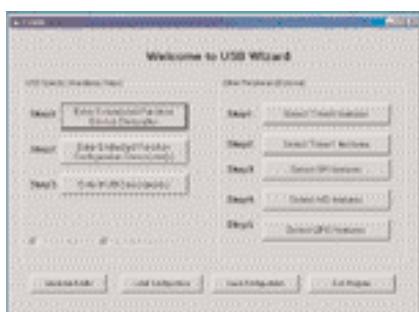
AVR BUTTERFLY

- Reference Design Based on LCD AVR
- Low Power Design Methodologies
- Features
    - SPI, USART and USI Communication
    - Programming Interfaces: Boot Sector, JTAG, ISP
    - Light and Temperature Sensors
    - Piezo Element for Sound Generation
    - Joystick Control Element
- Collateral Available from Atmel Web Site

AT43DK320A/325/326/355

- Reference Design Board Based on AT43USB Devices
- In-System Programming Capability
- Hardware Design Documentation
- USB 2.0 Compliant Firmware Library
- Sample Application Code

USB Wizard

- Windows®-based GUI Tool for Software Generation
- Easily Generate AT43USBxxx Source Code
- USB Application and Device Configuration without Programming
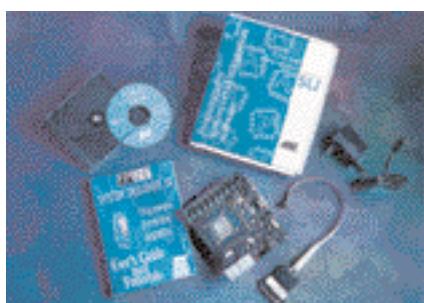
ATAK4015744

- Smart RF MicroTransmitter Evaluation Kit
- US & European Frequency Band Kits Available
- Supported by AVR Studio 4
- Kit Including Receiver

ATV2-90SC

- Voyager: Single Emulation Platform for AT90SC Secure Microcontrollers
- Support all Secure Microcontroller Devices

STK94

- AT94K40 FPSLIC & Configurator
- Push Buttons, LEDs, RS-232 & Alpha-Numeric Displays
- System Designer Tool with Four-month License