

Memory Size (Bytes)			I/O Pins	Timer/Counters 8/16-bit	Serial Communication	PWM Channels	A/D	Internal OSC	Clock Speed	ISP	JTAG/Debug-WIRE	VCC	Operating Temp.▲	Package	Digi-Key Part No.	Price Each		
Program	RAM	EEPROM														1	25	100
128K	8K	4K	54	2/4	2 (USART), SPI, TWI	10	8-ch/10-bit	Y	8MHz	Y	JTAG	1.8 - 5.5V	Ind.	64-TQFP 64-QFN	ATMEGA1281V-8AU-ND◆	14.36	10.62	9.49
						8	8-ch/10-bit	Y	16MHz	Y	JTAG	2.7 - 5.5V	Ind.	64-QFN 64-TQFP 64-QFN	AT90USB1286-16MU-ND◆ AT90USB1287-16AU-ND◆ AT90USB1287-16MU-ND◆	13.98 15.05 15.05	9.75 10.50 10.50	8.67 9.34 9.34
			22	1/1	1 (USART), SPI	5	—	Y	16MHz	Y	JTAG	2.7 - 5.5V	Ind.	32-QFN	AT90USB82-16MU-ND◆	3.23	2.33	2.18
															ATMEGA2560-16AU-ND◆ ATMEGA2560-16CU-ND◆ ATMEGA2560V-8AU-ND◆ ATMEGA2560V-8CU-ND◆	16.77 18.17 16.77 18.17	11.70 12.68 11.70 12.68	10.40 11.27 10.40 11.27
256K	8K	4K	86	2/4	4 (USART), SPI, TWI	16	16-ch/10-bit	Y	16MHz	Y	JTAG	4.5 - 5.5V	Ind.	100-TQFP 100-CBGA	ATMEGA2561-16AU-ND◆ ATMEGA2561-16MU-ND◆	16.77 18.17	11.70 12.68	10.40 11.27
														8MHz	Y	JTAG	1.8 - 5.5V	Ind.
			51	2/4	2 (USART), SPI, TWI	10	16-ch/10-bit	Y	16MHz	Y	JTAG	4.5 - 5.5V	Ind.	64-TQFP 64-QFN	ATMEGA2561-16AU-ND◆ ATMEGA2561-16MU-ND◆	15.91 15.91	11.10 11.10	9.87 9.87
															8MHz	Y	JTAG	1.8 - 5.5V

◆ RoHS Compliant ▲ Operating Temperature: Industrial: -40°C ~ 85°C Commercial: 0°C ~ 70°C High: -40°C ~ 125°C Extended: -40°C ~ 105°C ‡ Cut Tape † Tape and Reel

## NEW! AVR® XMEGA High Performance Low Power Flash Microcontrollers



Operating Temperature: Industrial: -40°C ~ 85°C

Memory Size (Bytes)			DMA Channels	I/O Pins	Frequency Max. (MHz)	VCC (V)	16-bit Timers	PWM Channels	SPI	TWI	USART	12-bit A/D Channels	12-bit D/A Channels	Package	Digi-Key Part No.	Price Each		
Flash	EEPROM	SRAM														1	25	100
16K	1K	2K	4	36	32	1.6 - 3.6	5	16	2	2	5	12	2	44-TQFP 44-QFN	ATXMEGA16A4-AU-ND ATXMEGA16A4-MU-ND	4.30 4.30	3.20 3.20	2.80 2.80
														44-TQFP 44-QFN	ATXMEGA32A4-AU-ND ATXMEGA32A4-MU-ND	4.73 4.73	3.52 3.52	3.08 3.08
64K	2K	4K	4	78	32	1.6 - 3.6	8	24	4	4	8	16	4	100-TQFP 100-CBGA	ATXMEGA64A4-AU-ND ATXMEGA64A4-CU-ND	7.53 8.92	5.60 6.64	4.90 5.81
				50	32	1.8 - 3.6	7	22	4	4	7	16	2	64-TQFP 64-QFN	ATXMEGA64A3-AU-ND ATXMEGA64A3-MU-ND	7.10 7.10	5.28 5.28	4.62 4.62
				36	32	1.6 - 3.6	5	16	2	2	5	12	2	44-TQFP 44-QFN	ATXMEGA64A4-AU-ND ATXMEGA64A4-MU-ND	5.38 5.38	4.00 4.00	3.50 3.50
128K	2K	8K	4	78	32	1.6 - 3.6	8	24	4	4	8	16	4	100-TQFP 100-CBGA	ATXMEGA128A1-AU-ND ATXMEGA128A1-CU-ND	8.06 9.46	6.00 7.04	5.25 6.16
				50	32	1.8 - 3.6	7	22	4	4	7	16	2	64-TQFP 64-QFN	ATXMEGA128A3-AU-ND ATXMEGA128A3-MU-ND	7.53 7.53	5.60 5.60	4.90 4.90
				36	32	1.6 - 3.6	5	16	2	2	5	12	2	44-TQFP 44-QFN	ATXMEGA128A4-AU-ND ATXMEGA128A4-MU-ND	6.45 6.45	4.80 4.80	4.20 4.20
192K	2K	16K	4	78	32	1.6 - 3.6	8	24	4	4	8	16	4	100-TQFP 100-CBGA	ATXMEGA192A1-AU-ND ATXMEGA192A1-CU-ND	9.68 11.07	7.20 8.24	6.30 7.21
				4K	16K	4	50	32	1.8 - 3.6	7	22	4	4	7	16	2	64-TQFP 64-QFN	ATXMEGA192A3-AU-ND ATXMEGA192A3-MU-ND
256K	4K	16K	4	78	32	1.6 - 3.6	8	24	4	4	8	16	4	100-TQFP 100-CBGA	ATXMEGA256A1-AU-ND ATXMEGA256A1-CU-ND	10.75 12.15	8.00 9.04	7.00 7.91
				50	32	1.8 - 3.6	7	22	4	4	7	16	2	64-TQFP 64-QFN	ATXMEGA256A3-AU-ND ATXMEGA256A3-MU-ND	9.68 9.68	7.20 7.20	6.30 6.30

### ATAVRFBKIT Ballast Demo Kit



The ATAVRFBKIT is a Dimmable Fluorescent Ballast kit which is used to demonstrate the ability of the AT90PWM2 to control all the main functions of a DALI Fluorescent Ballast. C code is provided to speed-up development time.

ATAVRFBKIT-ND ..... \$199.00

### NEW! ATAVRDB101 Display Module



The DB101 is a display module including a 128x64 pixel graphical LCD with RGB backlight. The menu system can be operated via a joystick. This lets the user display system information, adjust the backlight, operate in VT100 terminal mode, play sounds and music, and much more.

ATAVRDB101-ND ..... \$79.00

### ATAVRMC100 BLDC Motor Control



The ATAVRMC100 BLDC motor control kit includes an evaluation board, a 3-phase BLDC motor and demonstration software. Fully featured driver board for BLDC motors with hardware over-current detection. Interface for sensor and sensorless BLDC, sensor and sensorless software included. Onboard AT90PWM3 AVR microcontroller. Header connectors for external driver inputs. Onboard LIN transceiver ATA6661.

ATAVRMC100-ND ..... \$199.00

### NEW! ATAVRUSBRF01 Quick Start



The ATAVRUSBRF01 is based on Atmel AT90USB162 microcontroller, which allows connection to PC through USB and nRF24L01 transceiver from Nordic VLSI. The kit contains two identical AVR USB RF modules. They can connect to two different USB ports to establish wireless communication and evaluate the solution.

ATAVRUSBRF01-ND ..... \$69.00

### ATAVRMC200 AC Induction Motor Control



The ATAVRMC200 is an evaluation kit dedicated to AC induction motor control. The kit includes an evaluation board and demonstration software. It allows users to quickly evaluate the capability of the AT90PWM3 AVR microcontroller to control a three phase asynchronous induction motor.

ATAVRMC200-ND ..... \$299.00

### NEW! ATAVRONEKIT Debugger/Programmer



The AVR® ONE! is a powerful development tool for on-chip debugging and programming of all AVR32 devices. In the future, AVR® ONE! will also support all AVR 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 AVR32 Studio 2 and newer.

ATAVRONEKIT-ND ..... \$599.00

### Adapters

The AVR® ICE50 is a top-of-the-line development tool for complete in-circuit emulation of most AVR 8-bit RISC microcontrollers. The ICE50 and the AVR Studio4 user interface give the user complete control of the internal resources of the microcontroller, helping to reduce development time by making debugging easier.

Description	Digi-Key Part No.	Price Each
ICE50 Extension Memory Card	ATICE50MEM-ND	246.05
Replacement POD for ICE40, ICE50	ATICE50POD-ND	465.50
Probe with Flex Cables	ATICE50PROBE-ND	81.13
Personality Adapter for ATmega169	ATADAP169_TOP-ND	199.50
Personality Adapter for ATmega8	ATADAPMEGA8-ND	41.23
Personality Adapter for ATmega32	ATADAPMEGA32-ND	41.23
Personality Adapter for ATmega162	ATADAPMEGA162-ND	41.23
Personality Adapter for ATtiny2313	ATADAPT2313-ND	41.23
Personality Adapter for ATtiny13	ATADAPTINY13-ND	41.23
Personality Adapter for ATtiny26	ATADAPTINY26-ND	41.23
ICE50 Adapter Test	ATADAPTEST-ND	41.23

Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

More Product Available Online: [www.digkey.com](http://www.digkey.com)

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