PRODUCT GUIDE

October 2000

AT90 Series AVR® (8-bit Microcontrollers)

Part Number	Processor	Description	Availability
AT90S1200	AVR	AVR RISC, In-System Programmable Microcontroller with 1K Byte Flash and 64 Bytes EEPROM, 20-pin PDIP, 20-lead SOIC and 20-lead SSOP Packages	Now
AT90S2313	AVR	AVR RISC, In-System Programmable Microcontroller with 2K Bytes Flash,128 Bytes SRAM, 128 Bytes EEPROM and UART, 20-pin PDIP and 20-lead SOIC Packages	Now
AT90S2323	AVR	AVR RISC, In-System Programmable Microcontroller with 2K Bytes Flash,128 Bytes SRAM and 128 Bytes EEPROM, 8-pin PDIP and 8-lead SOIC Packages	Now
AT90LS2323	AVR	Low-voltage, AVR RISC, In-System Programmable Microcontroller with 2K Bytes Flash, 128 Bytes SRAM and 128 Bytes EEPROM, 8-pin PDIP and 8-lead SOIC Packages	Now
AT90S2343	AVR	AVR RISC, In-System Programmable Microcontroller with 2K Bytes Flash, 128 Bytes SRAM and 128 Bytes EEPROM, 8-pin PDIP and 8-lead SOIC Packages	Now
AT90LS2343	AVR	Low-voltage, AVR RISC, In-System Programmable Microcontroller with 2K Bytes Flash, 128 Bytes SRAM and 128 Bytes EEPROM, 8-pin PDIP and 8-lead SOIC Packages	Now
AT90S4433	AVR	AVR RISC, In-System Programmable Microcontroller with 4K Bytes Flash, 128 Bytes SRAM, 256 Bytes EEPROM, UART, 6 Channel, 10-bit ADC, 28-pin PDIP and 32-lead TQFP Packages	Now
AT90LS4433	AVR	Low-voltage, AVR RISC, In-System Programmable Microcontroller with 4K Bytes Flash, 128 Bytes SRAM, 256 Bytes EEPROM, UART, 6 Channel, 10-bit ADC, 28-pin PDIP and 32-lead TQFP Packages	Now
AT90S8515	AVR	AVR RISC, In-System Programmable Microcontroller with 8K Bytes Flash, 512 Bytes SRAM, 512 Bytes EEPROM, UART, 40-pin PDIP, 44-lead PLCC and 44-lead TQFP Packages	Now
AT90S8535	AVR	AVR RISC, In-System Programmable Microcontroller with 8K Bytes Flash, 512 Bytes SRAM, 512 Bytes EEPROM, UART, 8 Channel, 10-bit ADC, 40-pin PDIP, 44-lead PLCC and 44-lead TQFP Packages	Now
AT90LS8535	AVR	Low-voltage, AVR RISC, In-System Programmable Microcontroller with 8K Bytes Flash 512 Bytes SRAM, 512 Bytes EEPROM, UART, 8 Channel, 10-bit ADC, 40-pin PDIP, 44-lead PLCC and 44-lead TQFP Packages	Now
AT90C8534	AVR	AVR RISC Microcontroller with 8K Bytes Flash, 512 Bytes EEPROM and 256 Bytes SRAM with 6 Channel, 10-bit A/D and 48-lead VQFP Package	Now

ATtiny Series AVR Flash Microcontroller

Part Number	Processor	Description	Availability
ATtiny11	AVR	AVR RISC Microcontroller with 1K Byte Flash Memory, 8-pin PDIP and 8-lead SOIC Packages	Now
ATtiny11L	AVR	2.7-volt, AVR RISC Microcontroller with 1K Byte Flash Memory, 8-pin PDIP and 8-lead SOIC Packages	Now
ATtiny12	AVR	AVR RISC Microcontroller with 1K Byte In-System Programmable Flash Memory, 64 Bytes EEPROM, 8-pin PDIP and 8-lead SOIC Packages	Now
ATtiny12L	AVR	2.7-volt, AVR RISC Microcontroller with 1K Byte In-System Programmable Flash Memory, 64 Bytes EEPROM, 8-pin PDIP and 8-lead SOIC Packages	Now
ATtiny12V	AVR	1.8-volt, AVR RISC Microcontroller with 1K Byte In-System Programmable Flash Memory, 64 Bytes EEPROM, 8-pin PDIP and 8-lead SOIC Packages	1H2001
ATtiny15L	AVR	2.7-volt, AVR RISC Microcontroller with 1K Byte In-System Programmable Flash Memory, 64 Bytes EEPROM, 4 Channel, 10-bit ADC, 8-pin PDIP and 8-lead SOIC Packages	Now
ATtiny28V	AVR	1.8-volt, AVR RISC Microcontroller with 2K Bytes Flash Memory, 28-pin PDIP and 32-lead TQFP Packages	Now
ATtiny28L	AVR	2.7-volt, AVR RISC Microcontroller with 2K Bytes Flash Memory, 28-pin PDIP and 32-lead TQFP Packages	Now

Atmel Corporation • 2325 Orchard Parkway • San Jose, CA 95131
TEL: (408) 441-0311 • FAX: (408) 487-2600

ATmega Series AVR Flash Microcontrollers

Part Number	Processor	Description	Availability
ATmega161	AVR	AVR RISC Microcontroller with 16K Bytes In-System and Self-programming Flash Memory, 512 Bytes EEPROM, 1K Byte SRAM, Dual-UART, Hardware Multiplier, 40-pin PDIP, 44-lead PLCC and 44-lead TQFP Packages	2Q2001
ATmega161L	AVR	2.7-volt, AVR RISC Microcontroller with 16K Bytes In-System and Self-programming Flash Memory, 512 Bytes EEPROM, 1K Byte SRAM, Dual-UART, Hardware Multiplier, 40-pin PDIP, 44-lead PLCC and 44-lead TQFP Packages	2Q2001
ATmega163	AVR	AVR RISC Microcontroller with 16K Bytes In-System and Self-programming Flash Memory, 1K Byte EEPROM, 1K Byte SRAM, UART, 8 Channel, 10-bit ADC, Hardware Multiplier, 40-pin PDIP, 44-lead PLCC and 44-lead TQFP Packages	Now
ATmega163L	AVR	2.7-volt, AVR RISC Microcontroller with 16K Bytes In-System and Self-programming Flash Memory, 1K Byte EEPROM, 1K Byte SRAM, UART, 8 Channel, 10-bit ADC, Hardware Multiplier, 40-pin PDIP, 44-lead PLCC and 44-lead TQFP Packages	Now
ATmega103	AVR	AVR RISC, In-System Programmable Microcontroller with 128K Bytes Flash, 4K Bytes SRAM, 2K Bytes EEPROM, UART, RTC, 8 Channel, 10-bit ADC, 64-lead TQFP Package	Now
ATmega103L	AVR	Low-voltage, AVR RISC, In-System Programmable Microcontroller with 128K Bytes Flash, 4K Bytes SRAM, 2K Bytes EEPROM, UART, RTC, 8 Channel, 10-bit ADC, 64-lead TQFP Package	Now

AT90/ATmega Series AVR Development Tools

Part Number	Description	Availability
ATICE10	In-circuit Emulator for tinyAVR Family	Now
ATICE30	In-circuit Emulator System for megaAVR Family	Now
ATICE200	Low-cost In-circuit Emulator, Supports Same Devices as STK200	Now
ATMCU00100	AT89S/AT90S Flash MCU Starter Kit	Now
ATSTK100	tinyAVR Starter Kit with Programming Support for tinyAVR Parts, Includes IR Transmitter/Receiver and Piezo Sounder	Now
ATSTK200	AT89S/AT90S Flash MCU Starter Kit with A/D Support	Now
ATSTK300	megaAVR™ Starter Kit with Application Builder Software	Now
AT90ICEPRO	In-circuit Emulation System for AVR AT90S Microcontrollers	Now
ATasicICE	In-circuit Emulation System for Embedded AVR Core Development	Now
AT90ADCPOD	AT90ICEPRO Analog Replacement Kit	Now
ATmegaPOD	ATmegaICE Pod Replacement Kit	Now

AT91 Series (16/32-bit Microcontrollers)

Part Number	Processor	Description	Availability
AT91M40800	ARM7TDMI	40 MHz, 8K Bytes SRAM, 3 Timers, 2 USARTs, Watchdog, 4-channel PDC, 100-lead TQFP Package	Now
AT91M63200	ARM7TDMI	25 MHz, 2K Bytes SRAM, 6 Timers, 3 USARTs, MPI, SPI, Watchdog, 8-channel PDC, 176-lead TQFP Package	Now
AT91M43300	ARM7TDMI	25 MHz, 3K Bytes SRAM, 6 Timers, 3 USARTs, MPI, SPI, Watchdog, 8-channel PDC, 144-lead TQFP Package	Now
AT91M42800	ARM7TDMI	33 MHz, 8K Bytes SRAM, 6 Timers, 2 USARTs, 2 SPIs, Watchdog, 8-channel PDC, 100-lead TQFP or 120-lead BGA Package	Now
AT91F40416	ARM7TDMI	25 MHz, 4K Bytes SRAM, 2M Bytes Flash, 3 Timers, 2 USARTs, Watchdog, 4-channel PDC, 120-lead BGA Package	Now
AT91F40816	ARM7TDMI	40 MHz, 8K Bytes SRAM, 2M Bytes Flash, 3 Timers, 2 USARTs, Watchdog, 4-channel PDC, 120-lead Package	Now
AT91FR4081	ARM7TDMI	40 MHz, 8K + 128K Bytes SRAM, 1M Byte Flash, 3 Timers, 2 USARTs, Watchdog, 4-channel PDC, 120-lead BGA Package	Now
AT91R40807	ARM7TDMI	33 MHz, 8K + 128K Bytes SRAM, 3 Timers, 2 USARTs, Watchdog, 4-channel PDC, 100-lead TQFP Package	Now
AT91M40807	ARM7TDMI	33 MHz, 8K Bytes SRAM, 128K Bytes Mask ROM, 3 Timers, 2 USARTs, Watchdog, 4-channel PDC, 100-lead TQFP Package	Now
AT91M55800	ARM7TDMI	33 MHz, 8K Bytes SRAM, Clock Deactivation, Slow, Standby and Power-down Modes	Now

AT91 Series Development Tools

Part Number	Description	Availability
AT91EB40	AT91 Evaluation Kit	Now
AT91EB63	AT91M43 and M63 Series Evaluation Kit	Now
AT91MEC01	32M-bit Flash and 16M-bit SRAM Memory Extension Card	Now

AT89 Series (8-bit Microcontrollers)

Part Number	Memory Size	Description	Availability
AT87F51	4K x 8	80C31 Microcontroller with 4K Bytes OTP QuickFlash	Now
AT87F52	8K x 8	80C32 Microcontroller with 8K Bytes OTP QuickFlash	Now
AT87F55WD	20K x 8	80C32 Microcontroller with 20K Bytes OTP QuickFlash	Now
AT87F51RC	32K x 8	80C31 Microcontroller with 32K Bytes OTP QuickFlash	Now
AT89C51	4K x 8	80C31 Microcontroller with 4K Bytes Flash	Now
AT89LV51	4K x 8	2.7-volt, 80C31 Microcontroller with 4K Bytes Flash	Now
AT89C52	8K x 8	80C32 Microcontroller with 8K Bytes Flash	Now
AT89LV52	8K x 8	2.7-volt, 80C32 Microcontroller with 8K Bytes Flash	Now
AT89C1051U	1K x 8	80C31 Microcontroller with 1K Byte Flash, 20-lead Package	Now
AT89C2051	2K x 8	80C31 Microcontroller with 2K Bytes Flash, 20-lead Package	Now
AT89C4051	4K x 8	80C31 Microcontroller with 4K Bytes Flash, 20-lead Package	Now
AT89S8252	8K x 8	In-System Programmable Microcontroller with 8K Bytes Flash and 2K Bytes EEPROM	Now
AT89LS8252	8K x 8	Low-voltage, In-System Programmable Microcontroller with 8K Bytes Flash and 2K Bytes EEPROM	Now
AT89S53	12K x 8	In-System Programmable Microcontroller with 12K Bytes Flash	Now
AT89LS53	12K x 8	Low-voltage, In-System Programmable Microcontroller with 12K Bytes Flash	Now
AT89C55WD	20K x 8	80C32 Microcontroller with 20K Bytes Flash	Now
AT89LV55WD	20K x 8	2.7-volt, 80C32 Microcontroller with 20K Bytes Flash	1H2001
AT89S4D12	128K x 8	80C31 Microcontroller with 4K Bytes Flash Program and 128K Bytes Flash Data Memory	Now

FPGA Serial Configuration EEPROM

Part Number	Memory Size	Description	Availability
Standard Voltage (5.0V)			
AT17C65	65,536 x 1	65K-bit FPGA Configuration EEPROM	Now
AT17C65A	65,536 x 1	65K-bit FPGA Configuration EEPROM, Altera Pinout	Now
AT17C128	131,072 x 1	128K-bit FPGA Configuration EEPROM	Now
AT17C256	262,144 x 1	256K-bit FPGA Configuration EEPROM	Now
AT17C256A	262,144 x 1	256K-bit FPGA Configuration EEPROM, Altera Pinout	Now
AT17C512	524,288 x 1	512K-bit FPGA Configuration EEPROM	Now
AT17C512A	524,288 x 1	512K-bit FPGA Configuration EEPROM, Altera Pinout	Now
AT17C010	1,048,576 x 1	1M-bit FPGA Configuration EEPROM	Now
AT17C010A	1,048,576 x 1	1M-bit FPGA Configuration EEPROM, Altera Pinout	Now
AT17C020	2,097,152 x 1	2M-bit FPGA Configuration EEPROM	Now
AT17C020A	2,097,152 x 1	2M-bit FPGA Configuration EEPROM, Altera Pinout	Now
Low-voltage (3.3V)			
AT17LV65	65,536 x 1	65K-bit FPGA Configuration EEPROM, 3.3-volt	Now
AT17LV65A	65,536 x 1	65K-bit FPGA Configuration EEPROM, 3.3-volt, Altera Pinout	Now
AT17LV128	131,072 x 1	128K-bit FPGA Configuration EEPROM, 3.3-volt	Now
AT17LV256	262,144 x 1	256K-bit FPGA Configuration EEPROM, 3.3-volt	Now
AT17LV256A	262,144 x 1	256K-bit FPGA Configuration EEPROM, 3.3-volt, Altera Pinout	Now
AT17LV512	524,288 x 1	512K-bit FPGA Configuration EEPROM, 3.3-volt	Now
AT17LV512A	524,288 x 1	512K-bit FPGA Configuration EEPROM, 3.3-volt, Altera Pinout	Now
AT17LV010	1,048,576 x 1	1M-bit FPGA Configuration EEPROM, 3.3-volt	Now
AT17LV010A	1,048,576 x 1	1M-bit FPGA Configuration EEPROM, 3.3-volt, Altera Pinout	Now
AT17LV020	2,097,152 x 1	2M-bit FPGA Configuration EEPROM, 3.3-volt	Now
AT17LV020A	2,097,152 x 1	2M-bit FPGA Configuration EEPROM, Altera Pinout	Now

FPSLIC™ – AT94K Series
Field Programmable System-Level Integration Circuits with AVR Core

Part Number	FPGA Gates	FreeRAM™	FPGA I/O	Program/Data SRAM	Availability
Low-voltage (3.3V)					
AT94K10	10K	4,608 Bits	204	20K - 32K Bytes/ 4K - 16K Bytes	2Q2001
AT94K20	20K	8,192 Bits	298	20K - 32K Bytes/ 4K - 16K Bytes	4Q2000
AT94K40	40K	18,432 Bits	384	20K - 32K Bytes/ 4K - 16K Bytes	Now

FPGAs – AT6000

Part Number	Registers	Usable Gates	Frequency	Description	Availability
Standard Voltage (5.0V)					
AT6002	1,024	6K	350 MHz	96 I/O Pins, 5-volt, Very Low Power	Now
AT6003	1,600	9K	350 MHz	120 I/O Pins, 5-volt, Very Low Power	Now
AT6005	3,136	15K	350 MHz	140 I/O Pins, 5-volt, Very Low Power	Now
AT6010	6,400	30K	350 MHz	204 I/O Pins, 5-volt, Very Low Power	Now
Low-voltage (3.3V)					
AT6002LV	1,024	6K	250 MHz	96 I/O Pins, 3.3-volt, Very Low Power	Now
AT6003LV	1,600	9K	250 MHz	120 I/O Pins, 3.3-volt, Very Low Power	Now
AT6005LV	3,136	15K	250 MHz	140 I/O Pins, 3.3-volt, Very Low Power	Now
AT6010LV	6,400	30K	250 MHz	204 I/O Pins, 3.3-volt, Very Low Power	Now

FPGAs – AT40K

Part Number	Registers	Usable Gates	Frequency	RAM	Description	Availability
Standard Voltage (5.0V)						
AT40K05	256	5K - 10K	250 MHz	2,048 Bits	128 I/O Pins, 5-volt, Very Low Power	Now
AT40K10	576	10K - 20K	250 MHz	4,096 Bits	192 I/O Pins, 5-volt, Very Low Power	Now
AT40K20	1,024	20K - 30K	250 MHz	8,192 Bits	256 I/O Pins, 5-volt, Very Low Power	Now
AT40K40	2,304	40K - 50K	250 MHz	18,432 Bits	384 I/O Pins, 5-volt, Very Low Power	Now
Low-voltage (3.3V)						
AT40K05LV	256	5K - 10K	250 MHz	2,048 Bits	128 I/O Pins, 3.3-volt, Very Low Power	Now
AT40K10LV	576	10K - 20K	250 MHz	4,096 Bits	192 I/O Pins, 3.3-volt, Very Low Power	Now
AT40K20LV	1,024	20K - 30K	250 MHz	8,192 Bits	256 I/O Pins, 3.3-volt, Very Low Power	Now
AT40K40LV	2,304	40K - 50K	250 MHz	18,432 Bits	384 I/O Pins, 3.3-volt, Very Low Power	Now
Low-voltage Enhanced Performance (3.3 to 2.5V)						
AT40K05AL	512	5K - 10K	250 MHz	2,048 Bits	128 I/O Pins, 3.3-volt, Very Low Power	4Q2000
AT40K10AL	896	10K - 20K	250 MHz	4,096 Bits	192 I/O Pins, 3.3-volt, Very Low Power	4Q2000
AT40K20AL	1,440	20K - 30K	250 MHz	8,192 Bits	256 I/O Pins, 3.3-volt, Very Low Power	4Q2000
AT40K40AL	2,690	40K - 50K	250 MHz	18,432 Bits	384 I/O Pins, 3.3-volt, Very Low Power	Now
AT40K80AL	5,120	80K - 100K	250 MHz	32,768 Bits	512 I/O Pins, 3.3-volt, Very Low Power	1Q2001
AT40K125AV	7,680	125K - 150K	250 MHz	51,200 Bits	640 I/O Pins, 3.3-volt, Very Low Power	2Q2001

FPGA Design Development Software

FPGA design tools are available across a broad range of CAE tool vendors and PC and workstation platforms. Design methods supported include: schematic capture, logic synthesis (VHDL and Verilog), PLD entry, (ABEL and CUPL), and automatic component generation of hard macros for user-parametrized structured logic (arithmetic elements, counters, registers, encoders, decoders, and other common functions). Refer to current “Programmable Logic and System-Level ICs” Data Book.

CAE Tool Support:

Cadence®, Everest, Exemplar, Mentor Graphics, OrCAD®, Synopsys®, Synario, Synplicity®, Veribest, Verilog®, ViewLogic.

Platform Support:

PC (Windows® 95/98, Windows NT®), Sun® Workstations, HP® Workstations.

ASIC FPSCIC

Atmel can embed 5K - 50K gates of AT40K FPGA into an ASIC. Contact your nearest sales office for more details.

PLDs

Part Number	Packages	Speeds	Description	Availability
5-volt Electrically Erasable				
ATF16V8B	20-pin	10 - 15 ns	8 FFs, 8 I/O Pins, Standard-power	Now
ATF16V8BQ(L)	20-pin	10 - 15 ns	8 FFs, 8 I/O Pins, Quarter-power, Low-power	Now
ATF16V8C	20-pin	5 - 7.5 ns	8 FFs, 8 I/O Pins, Standard-power	Now
ATF16V8CZ	20-pin	12 - 15 ns	8 FFs, 8 I/O Pins, Zero-power	Now
ATF20V8B	24-, 28-pin	7.5 - 15 ns	8 FFs, 8 I/O Pins, Standard-power	Now
ATF20V8BQ(L)	24-, 28-pin	10 - 15 ns	8 FFs, 8 I/O Pins, Quarter-power, Low-power	Now
ATF20V8C	24-, 28-pin	5 - 7 ns	8 FFs, 8 I/O Pins, Standard-power	4Q2000
ATF20V8CZ	24-, 28-pin	12 - 15 ns	8 FFs, 8 I/O Pins, Zero-power	4Q2000
ATF20V8CQ(Z)	24-, 28-pin	10 - 15 ns	8 FFs, 8 I/O Pins, Quarter-power, Zero-power	4Q2000
ATF22V10B	24-, 28-pin	15 - 15 ns	10 FFs, 10 I/O Pins, Standard-power	Now
ATF22V10BQ(L)	24-, 28-pin	15 - 15 ns	10 FFs, 10 I/O Pins, Quarter-power, Low-power	Now
ATF22V10C	24-, 28-pin	5 - 15 ns	10 FFs, 10 I/O Pins, Standard-power	Now
ATF22V10CQ(Z)	24-, 28-pin	15 - 20 ns	10 FFs, 10 I/O Pins, Quarter-power, Zero-power	Now
ATF22V10CZ	24-, 28-pin	12 - 15 ns	10 FFs, 10 I/O Pins, Zero-power	Now
ATF750C(L)	24-, 28-pin	7.5 - 15 ns	20 FFs, 10 I/O Pins, Standard and Low-power	Now
ATF750LVC(L)	24-, 48-pin	12 - 25 ns	20 FFs, 10 I/O Pins, 3-volt and 3-volt Low-power	Now
ATF2500C(L)	40-, 44-pin	20 - 25 ns	48 FFs, 24 I/O Pins, Standard and Low-power	4Q2000
ATF2500CQ(L)	40-, 44-pin	20 - 25 ns	48 FFs, 24 I/O Pins, Quarter-power, Low-power	4Q2000
ATF1500A(L)	44-pin	7.5 - 25 ns	32 Macrocell, Standard and Low-power	Now
ATF1502AS(L)	44-pin	7.5 - 25 ns	32 Macrocell with ISP, Standard and Low-power	Now
ATF1504AS(L)	44-, 68-, 84-, 100-pin	7.5 - 25 ns	64 Macrocell with ISP, Standard and Low-power	Now
ATF1508AS(L)	84-, 100-, 160-pin	7.5 - 25 ns	128 Macrocell with ISP, Standard and Low-power	Now
ATF1516AS(L)	160-, 192-, 208-pin	7.5 - 25 ns	256 Macrocell with ISP, Standard and Low-power	4Q2000
Low-voltage (3.3V) Electrically Erasable				
ATF16LV8C	20-pin	10 - 15 ns	8 FFs, 8 I/O Pins, Low-voltage	Now
ATF16LV8CZ	20-pin	15 - 25 ns	8 FFs, 8 I/O Pins, Low-voltage, Zero-power	TBA
AT22LV10(L)	24-, 28-pin	20 - 30 ns	10 FFs, 10 I/O Pins, Low-voltage and Low-power (EPROM-based)	Now
ATF1500ABV	44-pin	12 - 15 ns	32 FFs, 32 I/O Pins, Low-voltage	Now
ATF1502ASV	44-pin	15 ns	32 FFs, 32 I/O Pins, Low-voltage	Now
ATF1502ASVL	44-pin	25 ns	32 FFs, 32 I/O Pins, Low-voltage and Low-power	Now
ATF1504ASV(L)	44-, 68-, 84-, 100-pin	12 - 25 ns	64 Macrocells with ISP, 3-volt and Low-power	Now
ATF1508ASV(L)	84-, 100-, 160-pin	12 - 25 ns	128 Macrocells with ISP, 3-volt and Low-power	Now
ATF22LV10C	24-, 28-pin	10 - 15 ns	10 FFs, 10 I/O Pins, Low-voltage	Now
ATF22LV10CZ	24-, 28-pin	25 ns	10 FFs, 10 I/O Pins, Low-voltage, Zero-power	Now
ATF22LV10CQZ	24-, 28-pin	30 ns	10 FFs, 10 I/O Pins, Low-voltage, Quarter-power, Zero-power	Now
5-volt EPROM-based				
ATV750B(L)	24-, 28-pin	7.5 - 25 ns	20 FFs, 10 I/O Pins, Standard and Low-power	Now
ATV2500B(L)	44-pin	12 - 20 ns	48 FFs, 24 I/O Pins, Standard and Low-power	Now
ATV2500BQ(L)	40-, 44-pin	20 - 25 ns	48 FFs, 24 I/O Pins, Quarter-power, Low-power	Now

PLD Tools – Software and Hardware

Part Number	Description	Availability
ATDS1100PC	Atmel – Synario Entry (Includes ABEL, Schematic Entry, Simulation)	Now
ATDS1120PC	Atmel – Synario Verilog Simulation	Now
ATDS1130PC	Atmel – Synario VHDL Synthesis	Now
ATDS1140PC	Atmel – Synario VHDL Simulation	Now
ATDS1150VPC	Atmel – ISP Kit (3V or 5V)	Now
ATDS1160VPC	Atmel – ISP Programming Board (3V or 5V)	Now
ATDS1161PC	Atmel – 44-lead PLCC Adaptor Board	Now
ATDS1162PC	Atmel – 44-lead TQFP Adaptor Board	Now
ATDS1163PC	Atmel – 68-lead PLCC Adaptor Board	Now
ATDS1164PC	Atmel – 100-lead PQFP Adaptor Board	Now
ATDS1165PC	Atmel – 100-lead TQFP Adaptor Board	Now
ATDS1166PC	Atmel – 160-lead PQFP Adaptor Board	Now

Gate Arrays/Embedded Arrays

Device Name	Gates	Pins	Description	Availability
ATL18 Series	15M	Up to 1400	0.18-micron CMOS Gate Array/Embedded Array, 1.8-volt Operation, 30 Versions with Various Pin and Gate Counts, Memory, Megacells	2H2000
ATL25 Series	Up to 6.9M	Up to 976	0.25-micron CMOS Gate Array/Embedded Array, 1.0 to 2.5-volt Operation, 23 Versions with Various Pin and Gate Counts, Memory, Megacells	Now
ATL25/E^2 Series	Up to 6.9M	Up to 976	0.25-micron CMOS Embedded Array Combining Logic and EEPROM Memory, 2.5-volt Operation, Various Gate Counts, Megacells and Memory Configuration. Up to 4M-bit EEPROM Memory	1H2001
ATL25/Flash Series	Up to 6.9M	Up to 976	0.25-micron CMOS Embedded Array Combining CMOS Logic and Flash Memory, 2.5-volt Operation. Various Gate Counts, Megacells and Memory Configuration. Up to 64M-bit Flash Memory	2H2000
ATL35 Series	Up to 2.7M	Up to 976	0.35-micron CMOS Gate Array/Embedded Array, 1.0-volt to 3.3-volt Operation, 23 Versions with Various Pin and Gate Counts, Memory, Megacells	Now
ATL35/E^2 Series	Up to 2.7M	Up to 976	0.35-micron Embedded Array combining CMOS Logic and EEPROM Memory, 2.5-volt Operation, Various Gate Counts, Megacells, and Memory Configurations. Up to 1M-bit EEPROM Memory	Now
ATL35/Flash Series	Up to 2.7M	Up to 976	0.35-micron Embedded Array Combining CMOS Logic and Flash Memory, 2.0 and 3.3-volt Operation, Various Gate Counts, Megacells and Memory Configurations. Up to 32M-bit Flash Memory	Now
ATL50/E^2 Series	Up to 1.9M	Up to 684	0.5-micron Embedded Array Combining CMOS Logic with EEPROM Memory, 2.0 and 3.3-volt Operation, Various Gate Counts, Megacells and Memory Configurations. Up to 256K-bit EEPROM Memory	Now
ATLS60 Series	Up to 88K	Up to 256	0.6-micron CMOS Gate Array/Embedded Array, 3.3-volt and 5.0-volt Operation, Staggered Row Bond Pads, 8 Versions with Various Pin and Gate Counts, Memory, Megacells	Now
ATL60 Series	Up to 590K	Up to 480	0.6-micron CMOS Gate Array/Embedded Array, 3.3-volt and 5.0-volt Operation, 16 Versions with Various Pin and Gate Counts, Memory, Megacells	Now
Megacells			ARM920T, ARM946E-S, ARM7TDMI, AVR (8-bit RISC) 80C51, TeakDSPCore®, OakDSPCore®, LodeDSPCore™, Ethernet MAC, USB Cores, PCI Cores, 1394 (Firewire), FPGA, CAN, Plus Others	Now
Analog Cells			10T/100 Ethernet PHY, CODEC, ADC, DAC, Comparator, PLL, Oscillator, Bandgap Reference, Voltage Regulator	Now
Memory			Flash, EEPROM, SRAM, ROM, Dual-port SRAM, FIFO and CAM	Now
I/O Interfaces			CMOS, TTL, LVDS, PCI, USB, SCSI, LVD SCSI, PLL	Now

Cell-based ICs

Part Number	Description	Availability
ATC18	0.18-micron 4/6-layer Metal CMOS, 1.8-volt to 0.9-volt Operation	Now
ATC18/Flash	0.18-micron 4/6-layer Metal CMOS with Embedded Flash, 1.8-volt to 0.9-volt Operation	1H2001
ATC20	0.21-micron 3/5-layer Metal CMOS, 1.95-volt to 1.65-volt Operation	Now
ATC25	0.25-micron 3/5-layer Metal CMOS, 2.5-volt to 0.9-volt Operation, Digital, Memory, MCU/DSP Cores, Peripherals, Analog, Macrocells	Now
ATC25/Flash	0.25-micron 3/5-layer Metal CMOS with Embedded Flash, 2.5-volt to 0.9-volt Operation	Now
ATC35	0.35-micron 3/5-layer Metal CMOS, 3.3-volt to 1.8-volt Operation, Digital, Memory, MCU/DSP Cores, Peripherals, Analog, Macrocells	Now
ATC35/E^2	0.35-micron 3/5-layer Metal CMOS with Embedded EEPROM, 3.3-volt to 1.8-volt Operation	Now
ATC35/Flash	0.35-micron 3/5-layer Metal CMOS with Embedded Flash, 3.3-volt to 1.8-volt Operation	Now
Memory Blocks	RAM, Dual-port RAM, ROM, Flash, EEPROM	Now
MCU/DSP Cores	ARM920T, ARM946E-S, ARM7TDMI (ARM® Thumb®), AVR, OakDSPCore, TeakDSPCore, mAgic Modular VLIW Computation Core	Now
ARM7TDMI-compatible 32-bit Peripherals	Bus Interface, Arbiter, Advanced Memory Controller, Cache Memory, AMBA™ Bridge, Advanced Interrupt Controller, Real-time Clock, Watchdog Timer, USART, Timer Counter, Serial Peripheral Interface	Now
AVR-compatible 8-bit Peripherals	Real-time Clock, Serial Peripheral Interface, Timer Counter, UART	Now
Analog Cells	A/D, D/A, OpAmp, Comp, PLL, Oscillator	Now
Macrocells	AT40K FPGA, AT8032, AT14818, AT16450, PCI, SPI, USB, CAN 2B, Ethernet MAC, I^2C, Codec	Now

High-reliability Mixed Signal ASIC

Part number	Description	Availability
TSME4 Alliance	0.8 µm 2ML/2Poly + EEPROM, 1400 Gates/mm^2 Digital Cells, Up to 4K-bit EEPROM, Enhanced 0,8 µm CMOS Mixed Signal ASIC	Now

Storage Products

Part Number	Description	Package	Availability
Hard Disk Drive			
AT78C1000	Hard Disk Drive Manager (HDDM/Servo System)	128-lead TQFP	Now
AT78C1001 (Core)	HDDM Core	Not Applicable	Now
Digital Versatile Disk			
AT78C1501	DVD/CD Interface Controller Ultra DMA 33 MB/s	208-lead TQFP	4Q2000
AT78C1502	DVD/CD Servo Controller	128-lead TQFP	4Q2000
AT78C1503	DVD/CD Read Channel 160-M-bits	100-lead TQFP	Sampling
AT78C1504	DVD/CD Laser Power Controller	48-lead TQFP	Sampling
AT78C1505	DVD/CD Read Pre-Amp	48-lead TQFP	Now

Wireless

Part Number	Description	Package	Availability
AT76C5020T144	802.11B (FAST-VNET) 11-Mbit/second MAC with Integrated ARM with PCMCIA Interface	144-lead TQFP	Now
AT76C5030T128	802.11B (FAST-VNET) 11-Mbit/second MAC with Integrated ARM with USB Interface	128-lead PQFP	Now
AT76C5100Q128	802.11 Access Point (VNET-B) 802.11/802.3	128-lead PQFP	Now
AT76C55P0T176	Bluetooth Baseband and MAC (0.35 microns)	176-lead TQFP	Now
AT76C555-EK-ATML	Bluetooth Short Range Wireless Connectivity (10m Distance), Eval. Kit, Atmel RF	–	4Q2000
AT76C901	IP Telephony Chip (Voice-Over-IP) for Business Telephones (Wireless Over 802.11)	TBD	1Q2001

ASIC for ISM

Part Number	Description	Package	Availability
TRX01 Family	400 to 950 MHz ISM Band, Up to 50K-bits/second Data Rate, FSK Modulation, Single Chip Transceiver for Wireless Applications Optimized for Licence Free in ISM Band	48-lead TQFP	Now

Wireline

Part Number	Description	Package	Availability
AT76C910	IP Telephony Chip (Voice-Over-IP) for Business Telephones (Includes Two 10/100 MACs)	TBD	2Q2001

Multimedia and Digital Broadcasting

Part Number	Description	Package	Availability
AT76C301	H.324 Video Conferencing H.263, G.723 Compliant (0.5 microns)	IP Core Only	Now
AT76C302	H.324, H.320, H.323 Video Conferencing H.22X, H.24X, H.263, G.723 Compliant	IP Core Only	4Q2000
AT76C202	24-bit DSP for Decoding AC-3, Pro-Logic, MPEG-2 and MPEG-1, Layer 1 and 2 Encoding/Decoding for Super VCD Applications	100-lead TQFP	Now
AT76C351	MPEG-2 Video/Audio Decoder (Ikones™)	IP Core Only	Now
AT76C110-0C280	Digital Camera Single Chip	280-lead Flex BGA	Now
AT76C401	Dual-mode CMOS Integrated Imager	48-lead CLCC	4Q2000
AT76C402	Integrated CMOS Image Processor	TBD	4Q2000
AT76C651	Integrated DVB-Compliant QAM Demodulator	100-lead TQFP	Now
AT76C651B	Integrated DVB-Compliant QAM Demodulator with Integrated ADC	100-lead TQFP	Now
AT76C711	USB to UART Bridge/Controller (Integrated AVR)	64-lead TQFP	Now

Digital Telephone

Part Number	Description	Package	Availability
AT75C120	Digital Telephone Answering Device	80-lead PQFP	Now
AT75C310	Smart Internet Appliance Processor	160-lead PQFP	Now
AT75C801	Tetrapol Baseband Integrated Circuit	256-lead BGA	Now

USB Hubs and Device Controllers

Part Number	Description	Availability
AT43301	Low-cost USB Hub Controller, 24-lead SOIC or 32-lead LQFP	Now
AT43312A	Full Function USB Hub Controller, 32-pin PDIP, 32-lead SOIC or 32-lead LQFP	Now
AT43320A	AVR Microcontroller with USB Hub and Embedded Function Controller, 100-lead LQFP	Now
AT43USB321	AVR Microcontroller with USB Hub, Embedded Function Controller and 16K of ROM	Now
AT43USB324	USB Keyboard Controller with Embedded 2 Port Hub, 48-lead LQFP or 48-pin PDIP	4Q2000

Evaluation Kits Available for the Following Products (For Prequalified Customers)

Family Name	Part Number	Description	Availability
Multimedia	AT76C110-EK	Kit Includes: Main Board with 16-Mbit Flash and 256K SRAM; Daughter Board, CCD Head Board, One Flash Card Daughter Board, Null Modem Serial Cable, Power Supply Cable	Now
Multimedia	AT76C202-EK	Kit Includes: Board Power Supply	Now
Wireless	AT76C502-EK	Kit Includes: Two 11-Mbit PCMCIA Cards, Firmware, Drivers, Manual (Intersil Radio)	Now
Wireless	AT76C503-EK	Kit Includes: Two 11-Mbit USB Dongle Cards, Firmware, Drivers, Manual (Intersil Radio)	Now
Wireless	AT76C510-EK	Kit Includes: Bridge (Integrated) Access PT Board, Firmware, Software, User's Manual (Intersil Radio)	Now
	AT76C551-EK-SILI	Kit Includes: 2 PCMCIA Cards, Firmware, Drivers, Manual (Siliconwave Radio)	4Q2000
	AT76C551-EK-ATML	Kit Includes: 2 PCMCIA Cards, Firmware, Drivers, Manual (Atmel Radio)	4Q2000

Note: Evaluation Kits Not for Sale – Evaluation Demo Only.

Development Kits Available for the Following Products (For Prequalified Customers)

Family Name	Part Number	Description	Availability
Wireless	AT76C502-DK	Kit Includes: Development Board, Firmware Drivers, Firmware Documentation, Macless Card	Now
Wireless	AT76C503-DK	Kit Includes: Development Board, Firmware Drivers, Firmware Documentation, Macless Card	Now
Wireless	AT76C510-DK	Kit Includes: Bridge Board, Development on the Object Code, API's for Firmware, Macless Card	Now
Wireless	AT76C711-DK	Kit Includes: Board, Firmware, Drivers, Schematics, Demo Software, Manual	Now

Note: Other development tools may be available. For more information, please contact the Multimedia and Communications Group at (919) 462-6542.

Smart Card ICs – Serial Memory

Part Number	Organization	Voltage	Description	Availability
Serial EEPROMs (2-wire)				
AT24C01ASC	128 x 8	2.7 - 5.5V	2-wire, 1K-bit Serial EEPROM	Now
AT24C02SC	256 x 8	2.7 - 5.5V	2-wire, 2K-bit Serial EEPROM	Now
AT24C04SC	512 x 8	2.7 - 5.5V	2-wire, 4K-bit Serial EEPROM	Now
AT24C08SC	1,024 x 8	2.7 - 5.5V	2-wire, 8K-bit Serial EEPROM	Now
AT24C16SC	2,048 x 8	2.7 - 5.5V	2-wire, 16K-bit Serial EEPROM	Now
AT24C32SC	4,096 x 8	2.7 - 5.5V	2-wire, 32K-bit Serial EEPROM	Now
AT24C64SC	8,192 x 8	2.7 - 5.5V	2-wire, 64K-bit Serial EEPROM	Now
AT24C128SC	16,384 x 8	2.7 - 5.5V	2-wire, 128K-bit Serial EEPROM	Now
AT24C256SC	32,768 x 8	2.7 - 5.5V	2-wire, 256K-bit Serial EEPROM	Now
AT24C512SC	65,536 x 8	2.7 - 5.5V	2-wire, 512K-bit Serial EEPROM	Now
Serial EEPROMs (3-wire)				
AT93C46SC	128 x 8 / 64 x 16	2.7 - 5.5V	3-wire, 1K-bit Serial EEPROM	Now
AT93C56SC	256 x 8 / 128 x 16	2.7 - 5.5V	3-wire, 2K-bit Serial EEPROM	Now
AT93C66SC	512 x 8 / 256 x 16	2.7 - 5.5V	3-wire, 4K-bit Serial EEPROM	Now
Serial DataFlash®				
AT45DB021SC	1,024 x 264 x 8	2.7 - 3.6V	SPI, 2M-bit, Serial DataFlash	4Q2000
AT45DB041SC	2,048 x 264 x 8	2.7 - 3.6V	SPI, 4M-bit, Serial DataFlash	4Q2000

Smart Card ICs – Secure Memory

Part Number	Organization	Voltage	Description	Availability
Secure Memory ICs with Password				
AT88SC101	1,024 x 1	2.7 - 5.5V	1K EEPROM with Password Security, One 1,024-bit Zone	Now
AT88SC102	2 (512 x 1)	2.7 - 5.5V	1K EEPROM with Password Security, Two 512-bit Zone	Now
AT88SC1604	4 (4K x 1)	2.7 - 5.5V	16K EEPROM with Password Security, Four 4-Kbit Zone	Now
AT88SC1601	1 (16K x 1)	2.7 - 5.5V	16K EEPROM with Password Security, One 16-Kbit Zone	Now
Secure Memory ICs with Password and Authentication				
AT88SC153	3 (512 x 1)	2.7 - 5.5V	1.5K EEPROM with Authentication, Three 512-bit Zones	Now
AT88SC1608	8 (2K x 1)	2.7 - 5.5V	16K EEPROM with Authentication, Eight 2K-bit Zones	Now

Secure ICs for Smart Cards – Microcontrollers

Part Number	Flash	EEPROM	RAM	T = 0 Hardware	Power Supply	Availability
AT90SC3232	32K Bytes	32K Bytes	1.5K Bytes	No	3.0 - 5.0V	Now

Secure ICs for Smart Cards – Cryptocontrollers

Part Number	Program Memory	User Memory Flash/EEPROM	RAM	Power Supply	Crypto Engine	RF Interface	Availability
AT90SC1616C	16K Flash	16K Bytes	1K Bytes	3.0 - 5.0V	Yes	No	Now
AT90SC3232C	32K Flash	32K Bytes	1K Bytes	3.0 - 5.0V	Yes	No	Now
AT90SC6464C	64K Flash	64K Bytes	2.5K Bytes	3.0 - 5.0V	Yes	No	Now
AT90SC6464C-USB	64K Flash	64K Bytes	3K Bytes	3.0 - 5.0V	Yes	No	4Q2000
AT90SC12864C	128K Flash	64K Bytes	3K Bytes	3.0 - 5.0V	Yes	No	4Q2000

Development Tools for Secure Flash Microcontrollers

Part Number	Description	Availability
AT90SC SDK	AT90SC Smart Card Development Kit (For all AT90SC Products)	Now

Secure ICs for Smart Cards – Contactless (RFID)

Part Number	EEPROM Memory	Features	Availability
AT88RF256-12	256 x 1	125 kHz Read/Write RFID Transponder with Passwords and Data Locking	Now
AT88RF256-13	256 x 1	13.56 MHz ISO 14443 A+B, Read/Write RFID Transponder	Now
AT24RF08C	1K x 8	Read/Write Multi-tag, Asset Identification Transponder with Serial Interface	Now
AT88RF001	10 x 32	13.56 MHz RFID External Memory Interface Chip	Samples

Secure ROM Microcontrollers for Smart Card Applications

Part Number	ROM/RAM/EEPROM (Bytes)	Description	ROM Code Acceptance
Operating Voltage: 5V ± 10% or 3V ± 10%			
AT05SC4616R	46K/1,536/16K	8-bit Smart Chip with DES, RNG and CRC Modules	Now
AT05SC3208R	32K/1,024/8K	8-bit Smart Chip with DES, RNG and CRC Modules	Now

Notes:
1. **Security Features:** All products have “out-of-bounds” detectors, hardware DPA/SPA protection, Cyclic Redundancy Check (CRC) Module and Random Number Generator.
2. A full family of products based on the AT05SC family core, including dual-interface devices, is under development. Contact your local Atmel Sales Office for further information.

Development Tools for Secure ROM Microcontrollers

Part Number	Description	Available
AT05SCEM3R	Smart Card Emulation Module for all AT05SCXXXXR Devices in the AT05SC Family	Now
AT05SC4616RSIM	Software Simulator for the AT05SC4616R (Based on HIWARE’s HI-WAVE Products)	Now
AT05SC3208RSIM	Software Simulator for the AT05SC3208R (Based on HIWARE’s HI-WAVE Products)	Now
AT05SCSPB	Serial Peripheral Board for Use with all AT05SC Family Software Simulators	Now

Note: Hardware emulation modules and software simulators will be available for all Secure ROM Microcontrollers in the AT05SC family.

FingerChip™

Part Number	Power Consumption	Description	Evaluation Board	Availability
FCD4A14C	20 mW at 3.3V	500 dpi, 0.4 mm x 14.0 mm Digital Fingerprint Linear Sensor, 2240 Pixels (8 x 280) Image Array, Digital Output (On-chip ADC) Package	"Sweepee" Fingerprint Identification USB Scanner	Now
FCD4A14CB	20 mW at 3.3V	2240 Pixels (8 x 280) Image Array, Digital Output (On-chip ADC), 0.4 mm x 14.0 mm Chip-on-board Package		Now

40 MHz Linescan Cameras

Part Number	Rate Line/Sec	Description	Availability
TH78CA13	38000	Digital RS422 Output, ±5V/+15V Power Supplies, High-speed 8/12-bit Linescan Cameras, 1024 x 2048 Pixels (1024 Active Pixels)	Now
TH78CB13	38000	Analog Output, ±5V/+15V Power Supplies, High-speed Analog Linescan Cameras, 1024 x 2048 Pixels (1024 Active Pixels)	Now
TH78CD13	38000	Digital RS644 Output, ±5V/+15V Power Supplies, High-speed 8/12-bit Linescan Cameras, 1024 x 2048 Pixels (1024 Active Pixels)	Now
TH78CA14	19000	Digital RS422 Output, ±5V/+15V Power Supplies, High-speed 8/12-bit Linescan Cameras, 1024 x 2048 Pixels (2048 Active Pixels)	Now
TH78CB14	19000	Analog Output, ±5V/+15V Power Supplies, High-speed Analog Linescan Cameras, 1024 x 2048 Pixels (2048 Active Pixels)	Now
TH78CD14	19000	Digital RS644 Output, ±5V/+15V Power Supplies, High-speed 8/12-bit Linescan Cameras, 1024x 2048 Pixels (2048 Active Pixels)	Now
TH78CA15	9500	Digital RS422 Output, ±5V/+15V Power Supplies, High-speed 8/12-bit Linescan Cameras, 4096 Pixels (4096 Active Pixels)	Now
TH78CD15	9500	Digital RS644 Output, ±5V/+15V Power Supplies, High-speed 8/12-bit Linescan Cameras, 4096 Pixels (4096 Active Pixels)	Now
TH78CE13	38000	Digital RS422 Output, +24V Power Supply, High-speed 8/12-bit Linescan Cameras, 1024 x 2048 Pixels (1024 Active Pixels)	Now
TH78CF13	38000	Analog Output, +24V Power Supply, High-speed Analog Linescan Cameras, 1024 x 2048 Pixels (1024 Active Pixels)	Now
TH78CH13	38000	Digital RS644 Output, +24V Power Supply, High-speed 8/12-bit Linescan Cameras, 1024 x 2048 Pixels (1024 Active Pixels)	Now
TH78CE14	19000	Digital RS422 Output, +24V Power Supply, High-speed 8/12bit linescan cameras, 1024x2048 pixels (2048 Active Pixels)	Now
TH78CF14	19000	Analog Output, +24V Power Supply, High-speed Analog Linescan Cameras, 1024 x 2048 Pixels (2048 Active Pixels)	Now
TH78CH14	19000	Digital RS644 Output, +24V Power Supply, High-speed 8/12-bit Linescan Cameras, 1024 x 2048 Pixels (2048 Active Pixels)	Now
TH78CE15	9500	Digital RS644 Output, +24V Power Supply, High-speed 8/12-bit Linescan Cameras, 4096 Pixels (4096 Active Pixels)	Now
TH78CH15	9500	Digital RS644 Output, +24V Power Supply, High-speed 8/12-bit Linescan Cameras, 4096 Pixels (4096 Active Pixels)	Now

Full Frame Cameras

Part Number	Frames/Sec	Description	Availability
Camelia 1.6M	10.0	1.6 Megapixel Digital Camera, 12-bit Output, 1536 x 1024 Pixels	Now
Camelia Color 1.6M	10.0	1.6 Megapixel Digital Color Camera, 3 x 12-bit Output, 1536 x 1024 Pixels	Now
Camelia 2.5M	3.0	2.5 Megapixel Digital Camera, 12-bit Output, 1840 x 1360 Pixels	Now
Camelia Color 2.5M	3.0	2.5 Megapixel Digital Color Camera, 3 x 12-bit Output, 1840 x 1360 Pixels	Now
Camelia 4M	4.3	4 Megapixel Digital Camera, 12-bit Output, 2048 x 2048 Pixels	Now
Camelia Color 4M	4.3	4 Megapixel Digital Color Camera, 3 x 12-bit Output, 2048 x 2048 Pixels	Now
Camelia 8M	2.7	8 Megapixel Digital Camera, 12-bit Output, 3500 x 2300 Pixels	Now
Camelia Color 8M	2.7	8 Megapixel Digital Color Camera, 3 x 12-bit Output, 3500 x 2300 Pixels	Now

CCD Linear Arrays

Part Number	Description	Antiblooming	Availability
TH7802A	1024 Pixels, 13 x 13 Pixel Size, 6000 MHz Dynamic Range, 2 MHz Maximum Data Rate, 1 Output	No	Now
TH7803A	1728 Pixels, 10 x 13 Pixel Size, 6000 MHz Dynamic Range, 2 MHz Maximum Data Rate, 1 Output	No	Now
TH7804A	1024 Pixels, 13 x 13 Pixel Size, 6000 MHz Dynamic Range, 20 MHz Maximum Data Rate, 2 Outputs	No	Now
TH7811A	1728 Pixels, 13 x 13 Pixel Size, 6000 MHz Dynamic Range, 2 MHz Maximum Data Rate, 1 Output	Yes	Now
TH7813A	1024 Pixels, 10 x 10 Pixel Size, 6600 MHz Dynamic Range, 50 MHz Maximum Data Rate, 2 Outputs	Yes	Now
TH7814A	2048 Pixels, 10 x 10 Pixel Size, 6600 MHz Dynamic Range, 50 MHz Maximum Data Rate, 2 Outputs	Yes	Now
TH7815A	4096 Pixels, 10 x 10 Pixel Size, 5300 MHz Dynamic Range, 50 MHz Maximum Data Rate, 2 Outputs	Yes	Now
TH7821D	3 x 8640 Pixels, 7 x 9.8 Pixel Size, 15000 MHz Dynamic Range, 5 MHz Maximum Data Rate, 3 Outputs	Yes	Now
TH7834C	12000 Pixels, 6.5 x 6.5 Pixel Size, 10000 MHz Dynamic Range, 20 MHz Maximum Data Rate, 4 Outputs	Yes	Now
TH7841A	2048 Pixels, 13 x 11 Pixel Size, 6000 MHz Dynamic Range, 20 MHz Maximum Data Rate, 2 Outputs	No	Now

CCD Area Arrays: Frame Transfer Image Sensors

Part Number	TV Standard	Description	Antiblooming	Availability
TH7852A	CCIR	1/2" Image Format, 4:3 Image Ratio, 2 x 144 Lines, 208 Pixels per Line, 3000 MHz Dynamic Range, 8 MHz Maximum Data Rate, 1 Output	Yes	Now
TH7868B	CCIR	2/3" Image Format, 4:3 Image Ratio, 2 x 288 Lines, 768 Pixels per Line, 4500 MHz Dynamic Range, 15 MHz Maximum Data Rate, 2 Outputs	Yes	Now
TH7871B	HDTV	1" Image Format, 16:9 Image Ratio, 2 x 576 Lines, 1260 Pixels per Line, 1500 MHz Dynamic Range, 24 MHz Maximum Data Rate, 2 Outputs	Yes	Now
TH7887A	Progressive	1:1 Image Ratio, 1024 Lines, 1024 Pixels per Line, 10000 MHz Dynamic Range, 20 MHz Maximum Data Rate, 4 Outputs	Yes	Now
TH7888A	Progressive	1:1 Image Ratio, 1024 Lines, 1024 Pixels per Line, 1000 MHz Dynamic Range, 20 MHz Maximum Data Rate, 1 or 2 Outputs	Yes	Now
TH7890M	Progressive	1:1 Image Ratio, 512 Pixels per Line, 7 MHz Maximum Data Rate, 1 Output, 12-bit Dynamic Range	No	Now
TH7891M	Progressive	1:1 Image Ratio, 1024 Pixels per Line, 6 MHz Maximum Data Rate, 1 Output, 12-bit Dynamic Range	No	Now

CCD Area Arrays: Full Frame Image Sensors

Part Number	Number of Pixels	Availability
TH7895M-H	512 x 512 Pixels, 19 x 19 mm^2 Pixel Size, 9V µJ/cm^2 Responsitivity with BG38 Filter, 2 x 15 MHz Maximum Data Rate	Now
TH7895M-L	512 x 512 Pixels, 19 x 19 mm^2 Pixel Size, 9V µJ/cm2 Responsitivity with BG38 Filter, 2 x 15 MHz Maximum Data Rate	Now
TH7899M	2048 x 2048 Pixels, 14 x 14 mm^2 Pixel Size, 8.5V µJ/cm^2, 4 x 20 MHz Maximum Data Rate	Now

Analog Digital Converters

Part Number	Description	Evaluation Board	Availability
JTS8388B	8-bit Resolution, 1000 Msps Sampling Rate, 2000 MHz Input Bandwidth, 1 GSPS 8-bit A/D Converter Delivered in Die Form	TSEV8388B	Now
TS8388B	8-bit Resolution, 1000 Msps Sampling Rate, 1500 MHz Input Bandwidth, 1 GSPS 8-bit A/D Converter in 68-lead CQFP Package	TSEV8388B	Now
TS8388BG	8-bit Resolution, 1000 Msps Sampling Rate, 1800 MHz Input Bandwidth, 1 GSPS A/D Converter in 72-ball CBGA Package	TSEV8388BG	Now

DMUX

Part Number	Description	Evaluation Board	Availability
TS81102G0	8 to 10-bit Resolution, 2000 Msps Maximum Input Sampling Rate, 1:8/1:4 Speed Ratio, ±5V Power Supply, 8 to 10-bit 2 GSPS 1:8/1:4 DEMUX	TSEV81102G0TP	Now

High-reliability Microprocessors

Part Number	Family	Description	Availability
EF4442	ARINC	ARINC 429 Multichannel Buffer Receiver (RTA), 28-pin DIL and 28-pin DIP Packages	Now
TS68C429A	ARINC	CMOS ARINC 429 Multichannel Receiver/Transmitter, 84-pin PGA and 132-lead CQFP Packages	Now
TS68020	32-bit CISC	HCMOS 32-bit Virtual Memory Microprocessors, 114-pin PGA and 132-lead CQFP Packages	Now
TS68040	32-bit CISC	Third-generation 32-bit Microprocessor, 179-pin PGA and 196-lead CQFP Packages	Now
TS68882	32-bit CISC	CMOS Enhanced Floating-point Coprocessor, 68-pin PGA and 68-lead CQFP Packages	Now
TSPC603E	32-bit RISC	PowerPC 603e RISC Microprocessor 100 and 133 MHz, 240-lead CQFP and 255-ball CBGA Packages + Inverted Leads	Now
JTSPC603E	32-bit RISC	PowerPC 603e Microprocessor Dice	Now
TSPC603R	32-bit RISC	PowerPC 603e RISC Microprocessor 166, 200 and 300 MHz, 255-ball CBGA, 200-lead CQFP and/or MQUAD Packages	Now
TSPC106A	32-bit RISC	PCI Bus Bridge/Memory Controller, 66 and 83 MHz, 303-ball CBGA and 303-ball CI-CBGA with Solder Column Interposer (SCI) Packages	Now
TSPC107A	32-bit RISC	PCI Bridge/Memory Controller, 66, 83 and 100 MHz, 303-ball PBGA Package	4Q2000
TSPC740A/750A	32-bit RISC	RISC Microprocessor 200 and 266 MHz, 255-ball CBGA (for 740A) and 360-ball CBGA (for 750A) and CI-CBGA with Solder Column Interposer (SCI) Packages	Now
TSPC745B/755B	32-bit RISC	RISC Microprocessor 300 and 400 MHz, 255-ball PBGA (for 745B) and 360-ball PBGA (for 755B) Packages	4Q2000
TSPC7400	32-bit RISC	RISC Microprocessor with Alvitec 350 and 400, 360-ball CBGA Package	4Q2000
TSPC8240		Integrated Processor, 352-ball PBGA Package	4Q2000

High-reliability MCU and Clock Drivers

Part Number	Family	Description	Availability
TS68HC811E2	MCU	8-bit Microcontroller, 48-pin DIL and 52-lead CQFP Packages	Now
TS68302	MCU	Integrated Multiprotocol Processor (IMP), 132-pin PGA and 132-lead CQFP Packages	Now
TS68332	MCU	High-performance 32-bit Integrated Microcontroller, 132-pin PGA and 132-lead CQFP Packages	Now
TS68EN360	MCU	32-bit QUAD Integrated Communication Controller, 241-pin PGA and 240-lead CQFP Packages	Now
TSPC860MH	MCU	32-bit QUAD Integrated Communication Controller PowerQUICC, 357-ball PBGA Package	Now
TSPC860SR	MCU	PowerQUICC Communication Controller 66 MHz, ATM Support, 357-ball PBGA Package	Now
TS8260	MCU	PowerQUICC Integrated PowerPC Processor, 480-ball TBGA Package	Now
TS88915T	Clock Drivers	Low Skew CMOS PLL Clock Driver 3-state 70 and 100 MHz Versions, 29-pin PGA and 28-lead LDCC Packages	Now
TSPC932	Clock Drivers	Low-voltage PLL Clock Driver, 32-lead TQFP Package	Now

DataFlash®

Part Number	Speed	Density	Description	Availability
Battery-Voltage **(2.7 to 3.6V)**				
AT45DB011	13 MHz	1M-bit	2.7-volt Only Serial-interface Flash with One 264-byte SRAM Buffer	Now
AT45DB021A	13 MHz	2M-bit	Use AT45DB021B for New Designs	–
AT45DB021B	15 MHz	2M-bit	2.7-volt Only Serial-interface Flash with Two 264-byte SRAM Buffers	4Q2000
AT45DB041A	13 MHz	4M-bit	Use AT45DB041B for New Designs	–
AT45DB041B	15 MHz	4M-bit	2.7-volt Only Serial-interface Flash with Two 264-byte SRAM Buffers	4Q2000
AT45DB081A	13 MHz	8M-bit	2.7-volt Only Serial-interface Flash with Two 264-byte SRAM Buffers	Now
AT45DB161	13 MHz	16M-bit	2.7-volt Only Serial-interface Flash with Two 528-byte SRAM Buffers	Now
AT45DB321	13 MHz	32M-bit	2.7-volt Only Serial interface Flash with Two 528-byte SRAM Buffers	Now
AT45DB642	25 MHz	64M-bit	2.7-volt Only Dual-interface Flash with Two 1,056-byte SRAM Buffers	4Q2000
Standard Voltage (5.0V)				
AT45D011	15 MHz	1M-bit	Use AT45DB011 for New Designs	Now
AT45D021A	15 MHz	2M-bit	Use AT45DB021B for New Designs	–
AT45D041A	15 MHz	4M-bit	Use AT45DB041B for New Designs	–
AT45D081A	15 MHz	8M-bit	Use AT45DB081A for New Designs	Now
AT45D161	15 MHz	16M-bit	Use AT45DB161 for New Designs	Now

Flash

Part Number	Organization	Speeds	Description	Availability
Battery-Voltage **(2.7 to 3.6V Single-voltage Read and Write)**				
AT29BV010A	128K x 8	200 - 250 ns	1M-bit, 2.7-volt Small Sectored Flash	Now
AT29BV020	256K x 8	250 ns	2M-bit, 2.7-volt Small Sectored Flash	Now
AT29BV040A	512K x 8	250 ns	4M-bit, 2.7-volt Small Sectored Flash	Now
AT49BV512	64K x 8	90 - 120 ns	512K-bit, 2.7-volt Boot Flash	Now
AT49BV001(N)(T)	128K x 8	70 - 90 ns	1M-bit, 2.7-volt Parametric Flash (No Reset, Top Boot)	Now
AT49BV002(N)(T)	256K x 8	90 - 120 ns	2M-bit, 2.7-volt Parametric Flash (No Reset, Top Boot)	Now
AT49BV2048A	128K x 16 / 256K x 8	90 - 120 ns	2M-bit, 2.7-volt Parametric Flash	Now
AT49BV040	512K x 8	70 - 90 ns	4M-bit, 2.7-volt Boot Flash	Now
AT49BV4096A	256K x 16 / 512K x 8	90 - 120 ns	4M-bit, 2.7-volt Parametric Flash	Now
AT49BV008A(T)	1M x 8	110 ns	8M-bit, 2.7-volt Parametric Flash	Now
AT49BV8192A(T)	512K x 16 / 1M x 8	110 ns	8M-bit, 2.7-volt Parametric Flash (Top Boot)	Now
AT49BV1604(T)	1M x 16	110 ns	16M-bit, 2.7-volt Sectored/Concurrent Flash (Top Boot)	Now
AT49BV160(T)/161(T)	1M x 16 / 2M x 8	90 - 110 ns	16M-bit, 3-volt Sectored/Concurrent Flash (Top Boot)	Now
AT49BV1614(T)	1M x 16 / 2M x 8	110 ns	16M-bit, 2.7-volt Sectored/Concurrent Flash (Top Boot)	Now
AT49BV320(T)/321(T)	2M x 16	90 ns	32M-bit, 2.7-volt Sectored (Top Boot)	Now
Low-voltage (3.0 to 3.6V Single-voltage Read and Write)				
AT29LV256	32K x 8	150 - 250 ns	256K-bit, 3-volt Small Sectored Flash	Now
AT29LV512	64K x 8	150 - 250 ns	512K-bit, 3-volt Small Sectored Flash	Now
AT29LV010A	128K x 8	150 - 250 ns	1M-bit, 3-volt Small Sectored Flash	Now
AT29LV1024	64K x 16	150 - 250 ns	1M-bit, 3-volt Small Sectored Flash	Now
AT29LV020	256K x 8	200 - 250 ns	2M-bit, 3-volt Small Sectored Flash	Now
AT29LV040A	512K x 8	200 - 250 ns	4M-bit, 3-volt Small Sectored Flash	Now
AT49LV001(N)(T)	128K x 8	70 - 120 ns	1M-bit, 3-volt Parametric Flash (No Reset, Top Boot)	Now

Flash (Continued)

Part Number	Organization	Speeds	Description	Availability
AT49LV002(N)(T)	256K x 8	70 - 120 ns	2M-bit, 3-volt Parametric Flash (No Reset, Top Boot)	Now
AT49LV2048A	128K x 16 / 256 x 8	70 ns	2M-bit, 3-volt Parametric Flash	Now
AT49LV040	512K x 8	90 - 200 ns	4M-bit, 3-volt Boot Flash	Now
AT49LV4096A	256K x 16 / 512K x 8	70 ns	4M-bit, 3-volt Parametric Flash	Now
AT49LV8192A(T)	512K x 16 / 1M x 8	70 ns	8M-bit, 3-volt Flash (Top Boot)	Now
AT49LV1604(T)	1M x 16	90 ns	16M-bit, 3.0-volt Sectored/Concurrent Flash (Top Boot)	Now
AT49LV1614(T)	1M x 16 / 2M x 8	90 ns	16M-bit, 3.0-volt Sectored/Concurrent Flash (Top Boot)	Now
Standard Voltage (4.5 to 5.5V Single-voltage Read and Write)				
AT29C256	32K x 8	70 - 120 ns	256K-bit, 5-volt Small Sectored Flash	Now
AT29C257	32K x 8	70 - 120 ns	256K-bit, 5-volt Small Sectored Flash	Now
AT29C512	64K x 8	70 - 120 ns	512K-bit, 5-volt Small Sectored Flash	Now
AT29C010A	128K x 8	70 - 120 ns	1M-bit, 5-volt Small Sectored Flash	Now
AT29C1024	64K x 16	70 - 120 ns	1M-bit, 5-volt Small Sectored Flash	Now
AT29C020	256K x 8	90 - 120 ns	2M-bit, 5-volt Small Sectored Flash	Now
AT29C040A	512K x 8	100 - 150 ns	4M-bit, 5-volt Small Sectored Flash	Now
AT49F512	64K x 8	70 - 90 ns	512K-bit, 5-volt Boot Flash	Now
AT49F001(N)(T)	128K x 8	55 - 90 ns	1M-bit, 5-volt Parametric Flash (No Reset, Top Boot)	Now
AT49F1024	64K x 16	45 - 70 ns	1M-bit, 5-volt Boot Flash	Now
AT49F1025	64K x 16	45 - 70 ns	1M-bit, 5-volt Boot Flash	Now
AT49F002(N)(T)	256K x 8	55 - 90 ns	2M-bit, 5-volt Parametric Flash (No Reset, Top Boot)	Now
AT49F2048A	128K x 16 / 256K x 8	70 - 40 ns	2M-bit, 5-volt Parametric Flash	Now
AT49F040(T)	512K x 8	55 - 90 ns	4M-bit, 5-volt Boot Flash (Top Boot)	Now
AT49F4096A	256K x 16 / 512K x 8	70 - 90 ns	4M-bit, 5-volt Parametric Flash	Now
AT49F008A(T)	1M x 8	90 -120 ns	8M-bit, 5-volt Boot Flash (Top Boot)	Now
AT49F8192A(T)	512K x 16 / 1M x 8	90 - 120 ns	8M-bit, 5-volt Flash (Top Boot)	Now

Serial EEPROMs

Part Number	Organization	V_{CC}	Description	Availability
AT24C01	128 x 8	1.8, 2.5, 2.7, 5.0V	1K-bit, 2-wire Bus Serial EEPROM, Non-Cascadable	Now
AT24C21	128 x 8	2.5V	1K-bit, 2-wire Bus Serial EEPROM, Dual-mode, Plug and Play Operation	Now
AT24C01A	128 x 8	1.8, 2.5, 2.7, 5.0V	1K-bit, 2-wire Bus Serial EEPROM with Full Hardware Write Protection	Now
AT24C02	256 x 8	1.8, 2.5, 2.7, 5.0V	2K-bit, 2-wire Bus Serial EEPROM with Full Hardware Write Protection	Now
AT24C02A	256 x 8	1.8, 2.5, 2.7, 5.0V	2K-bit, 2-wire Bus Serial EEPROM with Half Hardware Write Protection	Now
AT34C02	256 x 8	1.8, 2.7, 5.0V	2K-bit, 2-wire Serial EEPROM with Software Write Protection	Now
AT24C04	512 x 8	1.8, 2.5, 2.7, 5.0V	4K-bit, 2-wire Bus Serial EEPROM with Full Hardware Write Protection	Now
AT24C04A	512 x 8	1.8, 2.5, 2.7, 5.0V	4K-bit, 2-wire Bus Serial EEPROM with Half Hardware Write Protection	Now
AT24C08	1K x 8	1.8, 2.5, 2.7, 5.0V	8K-bit, 2-wire Bus Serial EEPROM	Now
AT24C08A	1K x 8	1.8, 2.5, 2.7, 5.0V	8K-bit, 2-wire Bus Serial EEPROM with Full Hardware Write Protection	Now
AT24C16	2K x 8	1.8, 2.5, 2.7, 5.0V	16K-bit, 2-wire Bus Serial EEPROM with Half Hardware Write Protection	Now
AT24C164	2K x 8	1.8, 2.5, 2.7, 5.0V	16K-bit, 2-wire Bus Serial EEPROM with Cascadable Feature	Now
AT24C32	4K x 8	1.8, 2.5, 2.7, 5.0V	32K-bit, 2-wire Bus Serial EEPROM with Cascadable Feature	Now
AT24C64	8K x 8	1.8, 2.5, 2.7, 5.0V	64K-bit, 2-wire Bus Serial EEPROM with Cascadable Feature	Now
AT24C128	16K x 8	1.8, 2.7, 5.0V	128K-bit, 2-wire Bus Serial EEPROM with Cascadable Feature	Now
AT24CS128	16K x 8	1.8, 2.7, 5.0V	128K-bit, 2-wire Bus Serial EEPROM with Cascadable Feature and Permanent Software Write Protect	Now
AT24C256	32K x 8	1.8, 2.7, 5.0V	256K-bit, 2-wire Bus Serial EEPROM with Cascadable Feature	Now
AT24CS256	32K x 8	1.8, 2.7, 5.0V	256K-bit, 2-wire Bus Serial EEPROM with Cascadable Feature and Permanent Software Write Protect	Now
AT24C512	64K x 8	1.8, 2.7, 5.0V	512K-bit, 2-wire Bus Serial EEPROM with Cascadable Feature	Now
AT24C1024	128K x 8	1.8, 2.7V	1M-bit, 2-wire Serial EEPROM with Cascadable Feature	4Q2000
AT25010	128 x 8	2.7, 5.0V	1K-bit, SPI Bus Serial EEPROM, SPI Mode 0 and 3	Now
AT25020	256 x 8	2.7, 5.0V	2K-bit, SPI Bus Serial EEPROM, SPI Mode 0 and 3	Now
AT25040	512 x 8	2.7, 5.0V	4K-bit, SPI Bus Serial EEPROM, SPI Mode 0 and 3	Now
AT25080	1K x 8	2.7, 5.0V	8K-bit, SPI Bus Serial EEPROM, SPI Mode 0 and 3	Now
AT25160	2K x 8	2.7, 5.0V	16K-bit, SPI Bus Serial EEPROM, SPI Mode 0 and 3	Now
AT25320	4K x 8	2.7, 5.0V	32K-bit, SPI Bus Serial EEPROM, SPI Mode 0 and 3	Now
AT25640	8K x 8	1.8, 2.7, 5.0V	64K-bit, SPI Bus Serial EEPROM, SPI Mode 0 and 3	Now
AT25128	16K x 8	1.8, 2.7, 5.0V	128K-bit, SPI Bus Serial EEPROM, SPI Mode 0 and 3	Now
AT25256	32K x 8	1.8, 2.7, 5.0V	256K-bit, SPI Bus Serial EEPROM, SPI Mode 0 and 3	Now
AT25HP256	32K x 8	1.8, 2.7, 5.0V	256K-bit, SPI Bus Serial EEPROM, High-speed, Page-write Only, SPI Mode 0 and 3	Now
AT25HP512	64K x 8	1.8, 2.7, 5.0V	512K-bit, SPI Bus Serial EEPROM, High-speed, Page-write Only, SPI Mode 0 and 3	Now
AT25P1024	128K x 8	2.7, 5.0V	1M-bit, SPI Bus Serial EEPROM, Page-write Only, SPI Mode 0 and 3	Now
AT25F1024	128K x 8	2.7 - 3.6V	1M-bit, SPI Bus Serial Flash, High-speed, SPI Mode 0 and 3	4Q2000
AT93C46	64 x 16 / 128 x 8	1.8, 2.5, 2.7, 5.0V	1K-bit, 3-wire Bus Serial EEPROM	Now
AT93C46A	64 x 16	2.5, 2.7, 5.0V	1K-bit, 3-wire Bus Serial EEPROM	Now
AT93C46C	64 x 16	2.5, 2.7, 5.0V	1K-bit, 3-wire Bus Serial EEPROM with Schmitt Trigger Inputs	Now
AT93C56	128 x 16 / 256 x 8	2.5, 2.7, 5.0V	2K-bit, 3-wire Bus Serial EEPROM	Now
AT93C66	256 x 16 / 512 x 8	1.8, 2.5, 2.7, 5.0V	4K-bit, 3-wire Bus Serial EEPROM	Now
AT93C86	1024 x 16 / 2048 x 8	2.7, 5.0V	16K-bit, 3-wire Bus Serial EEPROM with Sequential Read and Schmitt Trigger Inputs	Now

Parallel EEPROMs

Part Number	Organization	Speeds	Description	Availability
High-speed				
AT28HC64B	8K x 8	70 - 120 ns	64K-bit EEPROM with 64-byte Page and Software Data Protection	Now
AT28HC256	32K x 8	70 - 120 ns	256K-bit EEPROM with 64-byte Page and Software Data Protection	Now
AT28HC256E	32K x 8	70 - 120 ns	256K-bit EEPROM with Extended Endurance	Now
AT28HC256F	32K x 8	70 - 120 ns	256K-bit EEPROM with Fast Write	Now
Battery-Voltage **(2.7 to 3.6V)**				
AT28LV010	128K x 8	200 - 250 ns	1M-bit EEPROM with 128-byte Page and Software Data Protection, 3.0-volt	Now
AT28BV64B	8K x 8	200 - 250 ns	64K-bit EEPROM with 64-byte Page and Software Data Protection, 2.7-volt	Now
AT28BV256	32K x 8	200 - 250 ns	256K-bit EEPROM with 64-byte Page and Software Data Protection, 2.7-volt	Now
Standard Voltage (5.0V)				
AT28C16	2K x 8	150 ns	16K-bit EEPROM	Now
AT28C16E	2K x 8	150 ns	16K-bit EEPROM with Extended Endurance and Fast Write	Now
AT28C17	2K x 8	150 ns	16K-bit EEPROM with Ready/Busy	Now
AT28C17E	2K x 8	150 ns	16K-bit EEPROM with Ready/Busy and Extended Endurance and Fast Write	Now
AT28C64	8K x 8	120 - 250 ns	64K-bit EEPROM (Use AT28C64B for New Designs)	Now
AT28C64E	8K x 8	120 - 250 ns	64K-bit EEPROM with Extended Endurance and Fast Write (Use AT28C64B for New Designs)	Now
AT28C64X	8K x 8	120 - 250 ns	64K-bit EEPROM without Ready/Busy (Use AT28C64B for New Designs)	Now
AT28C64B	8K x 8	150 - 250 ns	64K-bit EEPROM with 64-byte Page and Software Data Protection	Now
AT28C256	32K x 8	150 - 250 ns	256K-bit EEPROM with 64-byte Page and Software Data Protection	Now
AT28C256E	32K x 8	150 - 250 ns	256K-bit EEPROM with Extended Endurance	Now
AT28C256F	32K x 8	150 - 250 ns	256K-bit EEPROM with Fast Write	Now
AT28C010	128K x 8	120 - 250 ns	1M-bit EEPROM with 128-byte Page and Software Data Protection	Now
AT28C010E	128K x 8	120 - 250 ns	1M-bit EEPROM with 128-byte Page and Extended Endurance and Software Data Protection	Now
AT28C040	512K x 8	200 - 250 ns	4M-bit EEPROM with 256-byte Page and Software Data Protection	Now

Parallel EEPROM Die Product*

Part Number	V_{CC}	Device T_{AA}	Package Configuration
AT28BV64B-W	2.7 - 3.6V	250 ns	Die
AT28BV64B-DWF	2.7 - 3.6V	250 ns	Wafer
AT28BV256-W	2.7 - 3.6V	250 ns	Die
AT28BV256-DWF	2.7 - 3.6V	250 ns	Wafer
AT28LV010-W	3.0 - 3.6V	250 ns	Die
AT28LV010-DWF	3.0 - 3.6V	250 ns	Wafer
AT28C64B-W	4.5 - 5.5V	200 ns	Die
AT28C64B-DWF	4.5 - 5.5V	200 ns	Wafer
AT28HC64B-W	4.5 - 5.5V	120 ns	Die
AT28HC64B-DWF	4.5 - 5.5V	120 ns	Wafer
AT28C256-W	4.5 - 5.5V	200 ns	Die
AT28C256-DWF	4.5 - 5.5V	200 ns	Wafer
AT28HC256-W	4.5 - 5.5V	120 ns	Die
AT28HC256-DWF	4.5 - 5.5V	120 ns	Wafer
AT28C010-W	4.5 - 5.5V	200 ns	Die
AT28C010-DWF	4.5 - 5.5V	200 ns	Wafer

*Performance is guaranteed over commercial temperature range as standard product.

EPROMs

Part Number	Organization	Speeds	Description	Availability
Battery-Voltage™ **(2.7 to 3.6V)**				
AT27BV256	32K x 8	70 - 150 ns	256K-bit, 2.7-volt to 3.6-volt EPROM	Now
AT27BV512	64K x 8	70 - 150 ns	512K-bit, 2.7-volt to 3.6-volt EPROM	Now
AT27BV010	128K x 8	90 - 150 ns	1M-bit, 2.7-volt to 3.6-volt EPROM	Now
AT27BV1024	64K x 16	90 - 150 ns	1M-bit, 2.7-volt to 3.6-volt EPROM	Now
AT27BV020	256K x 8	90 - 150 ns	2M-bit, 2.7-volt to 3.6-volt EPROM	Now
AT27BV040	512K x 8	120 - 150 ns	4M-bit, 2.7-volt to 3.6-volt EPROM	Now
AT27BV4096	256K x 16	120 - 150 ns	4M-bit, 2.7-volt to 3.6-volt EPROM	Now
Low-voltage (3.0 to 3.6V)				
AT27LV256A	32K x 8	55 - 150 ns	256K-bit, 3-volt EPROM	Now
AT27LV512A	64K x 8	70 - 150 ns	512K-bit, 3-volt EPROM	Now
AT27LV520	64K x 8	70 - 90 ns	512K-bit, Latched 3-volt EPROM	Now
AT27LV010A	128K x 8	70 - 150 ns	1M-bit, 3-volt EPROM	Now
AT27LV020A	256K x 8	90 - 150 ns	2M-bit, 3-volt EPROM	Now
AT27LV040A	512K x 8	90 - 150 ns	4M-bit, 3-volt EPROM	Now
Standard Voltage (5.0V)				
AT27C256R	32K x 8	45 - 150 ns	256K-bit, 5-volt EPROM	Now
AT27C512R	64K x 8	45 - 150 ns	512K-bit, 5-volt EPROM	Now
AT27C516	32K x 16	45 - 100 ns	512K-bit, 5-volt EPROM	Now
AT27C010(L)	128K x 8	45 - 150 ns	1M-bit, 5-volt EPROM Standard and Low-power	Now
AT27C1024	64K x 16	45 - 150 ns	1M-bit, 5-volt EPROM	Now
AT27C020	256K x 8	55 - 150 ns	2M-bit, 5-volt EPROM	Now
AT27C2048	128K x 16	55 - 150 ns	2M-bit, 5-volt EPROM	Now
AT27C040	512K x 8	70 - 150 ns	4M-bit, 5-volt EPROM	Now
AT27C4096	256K x 16	55 - 150 ns	4M-bit, 5-volt EPROM	Now
AT27C080	1M x 8	90 - 150 ns	8M-bit, 5-volt EPROM	Now
Automotive Grade (-40°C to +125°C)				
AT27C256R	32K x 8	70 - 150 ns	256K-bit, 5-volt EPROM	Now
AT27C512R	64K x 8	70 - 150 ns	512K-bit, 5-volt EPROM	Now
AT27C010	128K x 8	90 - 150 ns	1M-bit, 5-volt EPROM	Now
AT27C1024	64K x 16	90 - 150 ns	1M-bit, 5-volt EPROM	Now
AT27C020	256K x 8	90 - 150 ns	2M-bit, 5-volt EPROM	Now

Atmel Headquarters

Corporate Headquarters
2325 Orchard Parkway
San Jose, CA 95131
TEL (408) 441-0311
FAX (408) 487-2600

Europe
Atmel SarL
Route des Arsenaux 41
Casa Postale 80
CH-1705 Fribourg
Switzerland
TEL (41) 26-426-5555
FAX (41) 26-426-5500

Asia
Atmel Asia, Ltd.
Room 1219
Chinachem Golden Plaza
77 Mody Road Tsimhatsui
East Kowloon
Hong Kong
TEL (852) 2721-9778
FAX (852) 2722-1369

Japan
Atmel Japan K.K.
9F, Tonetsu Shinkawa Bldg.
1-24-8 Shinkawa
Chuo-ku, Tokyo 104-0033
Japan
TEL (81) 3-3523-3551
FAX (81) 3-3523-7581

Atmel Operations

Atmel Colorado Springs
1150 E. Cheyenne Mtn. Blvd.
Colorado Springs, CO 80906
TEL (719) 576-3300
FAX (719) 540-1759

Atmel Rousset
Zone Industrielle
13106 Rousset Cedex
France
TEL (33) 4-4253-6000
FAX (33) 4-4253-6001

Atmel Smart Card ICs
Scottish Enterprise Technology Park
East Kilbride, Scotland G75 0QR
TEL (44) 1355-803-000
FAX (44) 1355-242-743

Atmel Grenoble
Avenue de Rochepleine
BP 123
38521 Saint-Egreve Cedex
France
FAX (33) 4-7658-3000
FAX (33) 4-7658-3480

Fax-on-Demand
North America:
1-(800) 292-8635
International:
1-(408) 441-0732

e-mail
literature@atmel.com

Web Site
http://www.atmel.com

BBS
1-(408) 436-4309

0031W–10/00/35M