



Contact Card ICs - Standard Products

Part Number	Organization	Voltage	Description	Availability
<b>Serial EEPROMs - 2 Wire</b>				
AT24C01A	128 x 8	2.7 - 5.5V	2-wire, 1K Serial EEPROM	Now
AT24C02	256 x 8	2.7 - 5.5V	2-wire, 2K Serial EEPROM	Now
AT24C04	512 x 8	2.7 - 5.5V	2-wire, 4K Serial EEPROM	Now
AT24C08	1024 x 8	2.7 - 5.5V	2-wire, 8K Serial EEPROM	Now
AT24C16	2048 x 8	2.7 - 5.5V	2-wire, 16K Serial EEPROM	Now
AT24C32	4096 x 8	2.7 - 5.5V	2-wire, 32K Serial EEPROM	Now
AT24C64	8192 x 8	2.7 - 5.5V	2-wire, 64K Serial EEPROM	Now
AT24C128	16384 x 8	2.7 - 5.5V	2-wire, 128K Serial EEPROM	Now
AT24C256	32768 x 8	2.7 - 5.5V	2-wire, 256K Serial EEPROM	Now
AT24C512	65536 x 8	2.7 - 5.5V	2-wire, 512K Serial EEPROM	2Q00
<b>Serial EEPROMs - 3 Wire</b>				
AT93C46	128 x 8 or 64 x 16	4.5 - 5.5V	3-wire, 1K Serial EEPROM	Now
AT93C56	256 x 8 or 128 x 16	2.7 - 3.6V	2-wire, 2K Serial EEPROM	Now
AT93C66	512 x 8 or 256 x 16	4.5 - 5.5V	3-wire, 4K Serial EEPROM	Now
<b>Serial DataFlash®</b>				
AT45D021	1024 x 264 x 8	4.5 - 5.5V	SPI, 2-Mbit, Serial DataFlash	Now
AT45DB021	1024 x 264 x 8	2.7 - 3.6V	SPI, 2-Mbit, Serial DataFlash	Now
AT45D041	2048 x 264 x 8	4.5 - 5.5V	SPI, 4-Mbit, Serial DataFlash	Now
AT45DB041	2048 x 264 x 8	2.7 - 3.6V	SPI, 4-Mbit, Serial DataFlash	Now
<b>Secure Memory ICs with Password</b>				
AT88SC101	1024 x 1	2.7 - 5.5V	1K EEPROM with Password Security, One 1024-bit Zone	Now
AT88SC102	2 (512 x 1)	2.7 - 5.5V	1K EEPROM with Password Security, Two 512-bit Zones	Now
AT88SC1604	4 (4K x 1)	2.7 - 5.5V	16K EEPROM with Password Security, Four 4-Kbit Zones	Now
AT88SC1601	1 (16K x 1)	2.7 - 5.5V	16K EEPROM with Password Security, One 16-Kbit Zone	Now
<b>Secure Memory ICs with Password and Authentication</b>				
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 2-Kbit Zones	Now

Jean Pierre Benhamou: [jbenhamou@atmel.com](mailto:jbenhamou@atmel.com) or Dale Anderson: [danderson@atmel.com](mailto:danderson@atmel.com)

Contactless (RFID) Card ICs

Part Number	EEPROM Memory	Description	Availability
<b>RFID</b>			
AT88RF256-12	256 x 1	125 kHz Read/Write RFID Transponder with Passwords and Locking	1Q00
AT88RF256-13	256 x 1	13.56 MHz ISO 14443 A & B, Read/Write RFID Transponder	2Q00
AT24RF08	8K x 1	Read/Write Multi-tag, Asset Identification Transponder with Serial Interface	Now

Kerry Maletsky: [kmaletsky@atmel.com](mailto:kmaletsky@atmel.com)



## Secure Flash Microcontrollers

Part Number	Flash Bytes	EEPROM Bytes	RAM Bytes	Power Supply	Availability
<b>Microcontrollers</b>					
AT89SC168A	16K	8K	512	2.7 - 5.5V	Now
AT89SC1616A	16K	16K	512	2.7 - 5.5V	Now
AT90SC3232	32K	32K	1.5K	3 - 5V	Now
<b>Cryptocontrollers</b>					
AT90SC1616C	16K	16K	1K	3 - 5V	Now
AT90SC3232C	32K	32K	1K	3 - 5V	Now
AT90SC6464C	64K	64K	2.5K	3 - 5V	Now
*T89C251CF1	256K	0K	4.5K	1.8 - 3 - 5V	3Q00
<b>Development Tools for Secure Microcontrollers and Secure Cryptocontrollers</b>					
AT89SC SDK	AT89SC Smart Card Development Kit (for all AT89SC products)				Now
AT90SC SDK	AT90SC Smart Card Development Kit (for all AT90SC products)				Now

**Benoit Makowka:** [bmakowka@atmel.com](mailto:bmakowka@atmel.com) \***Bernard Bancelin:** [bernard.bancelin@temic-semi.com](mailto:bernard.bancelin@temic-semi.com)

## Secure ROM Microcontrollers

Operating voltage at 5 volts: 4.5 - 5.5V. Operating voltage at 3 volts: 2.7 - 3.3V.

Part Number	ROM/RAM/EEPROM (Bytes)	Description	ROM Code Acceptance
AT05SC1602R	16K/512/2K	8-bit Smart Chip	3Q00
AT05SC1604R	16K/512/4K	8-bit Smart Chip	3Q00
AT05SC3202R	32K/1024/2K	8-bit Smart Chip	3Q00
AT05SC3204R	32K/1024/4K	8-bit Smart Chip	3Q00
AT05SC3208R	32K/1024/8K	8-bit Smart Chip	1Q00
AT05SC3216R	32K/1536/16K	8-bit Smart Chip	3Q00

**Security Features:** All chips have Active Fourth-layer Shields, Hardware DPA/SPA protection, CRC Module and Random Number Generator. All 32K ROM parts also have Hardware DES.

**support@ascic.co.uk or Stewart Gray:** [sgray@atmel.com](mailto:sgray@atmel.com)

*Fax-on-Demand*      *Web Site*  
 North America:      <http://www.atmel.com>  
 1-(800) 292-8635      *e-mail*  
 International:      [literature@atmel.com](mailto:literature@atmel.com)  
                                  *BBS*  
 1-(408) 441-0732      1-(408) 436-4309

### © Atmel Corporation 2000.

Atmel Corporation makes no warranty for the use of its products, other than those expressly contained in the Company's standard warranty which is detailed in Atmel's Terms and Conditions located on the Company's web site. The Company assumes no responsibility for any errors which may appear in this document, reserves the right to change devices or specifications detailed herein at any time without notice, and does not make any commitment to update the information contained herein. No licenses to patents or other intellectual property of Atmel are granted by the Company in connection with the sale of Atmel products, expressly or by implication. Atmel's products are not authorized for use as critical components in life support devices or systems.

Marks bearing ® and/or ™ are registered trademarks and trademarks of Atmel Corporation.  
 Terms and product names in this document may be trademarks of others.



Printed on recycled paper.

0233K - 03/00/7M