

PARALLEL EEPROM ICs



Atmel®

Summary Benefit:

- Byte-alterable memory
- High-endurance and high-reliability
- Parallel access

Applications

- Direct code execution and high-reliability data storage applications such as telecommunications, avionics, military, etc.

Technologies

Parallel EEPROMs enables stored data to be updated byte-by-byte or by full sector, providing design flexibility. The parallel interface devices offer high-programming endurance and data retention, as well as faster read times than serial Interface protocols. Atmel provides a complete selectiof densities (64-Kbit to 4-Mbit), operating voltages, and device packages.

AT28C256 - Paged Parallel EEPROM 256K (32K x 8)

AT28HC256 - High-Speed Parallel EEPROM 256K (32K x 8)

AT28C64B - Parallel EEPROM 64K (8K x 8) with Page Write and Software Data Protection

AT28HC64B - High-Speed ParallelEEPROM 64K (8K x 8) with Page Write and Software Data Protection

AT28HC64BF - High Speed Parallel EEPROM 64K (8K x 8) with Page Write and Software Data Protection

AT28C010 - Paged Parallel EEPROM 1M (128K x 8)

Mfg. Part No.	Packaging	Memory Size	Frequency	Supply Voltage	Stock No.	Price Each 1-24+
Parallel, 128K x 8bit						
● AT28LV010-20JU	LCC-32	1Mbit	5MHz	3V-3.6V	68T4432	---
● AT28C010-12JU	LCC-32	1Mbit	5MHz	4.5V-5.5V	68T4304	40.43
● AT28C010-15JU	LCC-32	1Mbit	5MHz	4.5V-5.5V	68T4311	40.43
● AT28C010E-12JU	LCC-32	1Mbit	5MHz	4.5V-5.5V	68T4326	---
● AT28LV010-20TU	TSOP-32	1Mbit	5MHz	3V-3.6V	68T4433	---
● AT28C010-12TU	TSOP-32	1Mbit	5MHz	4.5V-5.5V	68T4306	---
● AT28C010E-12TU	TSOP-32	1Mbit	5MHz	4.5V-5.5V	68T4328	---

Parallel, 32K x 8bit						
● AT28C256-15PU	DIP-28	256Kbit	5MHz	4.5V-5.5V	68T4339	8.88
● AT28C256-15JU	LCC-32	256Kbit	5MHz	4.5V-5.5V	68T4337	8.21
● AT28C256E-15JU	LCC-32	256Kbit	5MHz	4.5V-5.5V	68T4353	---
● AT28C256F-15JU	LCC-32	256Kbit	5MHz	4.5V-5.5V	68T4368	---
● AT28HC256-12JU	LCC-32	256Kbit	5MHz	4.5V-5.5V	68T4379	---
● AT28HC256-90JU	LCC-32	256Kbit	5MHz	4.5V-5.5V	68T4389	5.85
● AT28HC256E-90JU	LCC-32	256Kbit	5MHz	4.5V-5.5V	68T4406	8.82
● AT28HC256-70JU	LCC-32	256Kbit	5MHz	4.5V-5.5V	68T4384	10.39
● AT28HC256-90SU	SOIC-28	256Kbit	5MHz	4.5V-5.5V	68T4391	10.66
● AT28BV256-20TU	TSOP-28	256Kbit	5MHz	2.7V-3.6V	68T4297	---
● AT28C256E-15TU	TSOP-28	256Kbit	5MHz	4.5V-5.5V	68T4356	---
● AT28C256F-15TU	TSOP-28	256Kbit	5MHz	4.5V-5.5V	68T4371	---
● AT28HC256-12TU	TSOP-28	256Kbit	5MHz	4.5V-5.5V	68T4382	---
● AT28BV256-20SU	WSOIC-28	256Kbit	5MHz	2.7V-3.6V	68T4296	8.88
● AT28C256-15SU	WSOIC-28	256Kbit	5MHz	4.5V-5.5V	68T4340	---
● AT28HC256-12SU	WSOIC-28	256Kbit	5MHz	4.5V-5.5V	68T4381	8.99
● AT28HC256-70SU	WSOIC-28	256Kbit	5MHz	4.5V-5.5V	68T4385	10.67
● AT28HC256F-90SU	WSOIC-28	256Kbit	5MHz	4.5V-5.5V	68T4419	---

Parallel, 8K x 8bit						
● AT28C64B-15PU	DIP-28	64Kbit	5MHz	4.5V-5.5V	68T4374	4.20
● AT28BV64B-20JU	LCC-32	64Kbit	5MHz	2.7V-3.6V	68T4298	3.93
● AT28C64B-15JU	LCC-32	64Kbit	5MHz	4.5V-5.5V	68T4373	3.97
● AT28HC64B-70JU	LCC-32	64Kbit	5MHz	4.5V-5.5V	68T4424	---
● AT28HC64BF-12JU	LCC-32	64Kbit	5MHz	4.5V-5.5V	68T4430	1.61
● AT28BV64B-20TU	TSOP-28	64Kbit	5MHz	2.7V-3.6V	68T4300	---
● AT28HC64B-90TU	TSOP-28	64Kbit	5MHz	4.5V-5.5V	68T4429	---
● AT28C64B-15TU	TSOP-28	64Kbit	5MHz	4.5V-5.5V	68T4376	---
● AT28HC64B-12SU	WSOIC-28	64Kbit	5MHz	4.5V-5.5V	68T4423	---
● AT28HC64B-70SU	WSOIC-28	64Kbit	5MHz	4.5V-5.5V	68T4425	---
● AT28C64B-15SU	WSOIC-28	64Kbit	5MHz	4.5V-5.5V	68T4375	4.17
● AT28HC64BF-12SU	WSOIC-32	64Kbit	5MHz	4.5V-5.5V	68T4431	---

PIM_197983

ONE TIME PROGRAMMABLE (OTP) EPROM ICs



Atmel®

Summary Benefit

- One-time programmable for excellent firmware and data protection
- Parallel access

Applications

- Direct code execution applications such as networking, instrumentation, telecommunications, industrial control, automotive, etc.

Technologies

One-Time Programmable Memory. Atmel offers 5V, 3V and Battery-Voltage™ (2.7V) EPROMs for a variety of applications. Atmel has one of the broadest range of one-time programmable (OTP) EPROMs, with densities ranging from 256-Kbits to 8-Mbits, speeds as fast as 45ns, and package options that including PDIP, PLCC, SOIC, TSOP, and TSSOP.

Key Features:

- Lower power — The Atmel innovative design techniques provide fast speeds that rival 5V devices while retaining the low power consumption of a 3V power supply.

- Low power
- High-speed
- Rapid programming algorithm

Key Parameters

- 256-Kbit to 8-Mbit
- As fast as 45ns
- 2.7V and 5V versions
- PDIP, PLCC, SOIC, and TSOP packages

ONE TIME PROGRAMMABLE (OTP) EPROM ICs (CONT.)

- Standard packages — The devices are available in industry-standard JEDEC-approved OTP plastic PLCC, TSOP, and VSOP packages.

- Two-line control — All devices feature two-line control (CE, OE) to give designers the flexibility to prevent bus contention.

- Additional features — The AT27Cxxx and AT27LVxxx series both have additional features to ensure high quality and efficient product use, including Rapid Programming Algorithm and Integrated Product Identification Code.

***AT27BV010:** 1-Mb (128K x 8) Unregulated Battery-Voltage OTP EPROM

AT27BV1024: 1-Mb (64K x 16) Unregulated Battery-Voltage High-Speed OTP EPROM

AT27BV256: 256-K (32K x 8) Unregulated Battery-Voltage High-Speed OTP EPROM

***AT27C010:** 1-Mb (128K x 8) OTP EPROM; **AT27C020:** 2-Mb (256K x 8) OTP EPROM

AT27C040: 4-Mb (512K x 8) OTP EPROM; **AT27C080:** 8-Mb (1Mb x 8) OTP EPROM

AT27C1024: 1-Mb (64K x 16) OTP EPROM; **AT27C2048:** 2-Mb (128K x 16) OTP EPROM

AT27C256R: 256-K (32K x 8) OTP EPROM; **AT27C4096:** 4-Mb (256K x 16) OTP EPROM

AT27C512R: 512-K (64K x 8) OTP EPROM

Mfg. Part No.	Packaging	Memory Size	Access Time	Supply Voltage	Stock No.	Price Each 1-9+
● AT27BV010-90JU	LCC-32	1Mbit	90ns	2.7V-3.6V	68T4257	---
● AT27BV256-70JU	LCC-32	256Kbit	70ns	2.7V-3.6V	68T4259	---
● AT27LV010A-70JU	LCC-32	1Mbit	70ns	3V-3.6V	68T4290	---
● AT27LV020A-12JU	LCC-32	2Mbit	120ns	3V-3.6V	68T4291	---
● AT27LV256A-90JU	LCC-32	256Kbit	90ns	3V-3.6V	68T4293	---
● AT27LV512A-90JU	LCC-32	512Kbit	90ns	3V-3.6V	68T4294	---
● AT27LV010A-70JU	LCC-32	1Mbit	45ns	4.5V-5.5V	68T4260	---
● AT27C1024-45JU	LCC-44	1Mbit	45ns	4.5V-5.5V	68T4273	---
● AT27C1024-45PU	DIP-40	1Mbit	45ns	4.5V-5.5V	68T4274	---
● AT27C010-70JU	LCC-32	1Mbit	70ns	4.5V-5.5V	68T4261	2.64
● AT27C010-70PU	DIP-32	1Mbit	70ns	4.5V-5.5V	68T4262	2.82
● AT27C1024-70JU	LCC-44	1Mbit	70ns	4.5V-5.5V	68T4275	---
● AT27C1024-70PU	DIP-40	1Mbit	70ns	4.5V-5.5V	68T4276	3.45
● AT27C020-55JU	LCC-32	2Mbit	55ns	4.5V-5.5V	68T4263	2.78
● AT27C020-55PU	DIP-32	2Mbit	55ns	4.5V-5.5V	68T4264	---
● AT27C2048-55JU	LCC-44	2Mbit	55ns	4.5V-5.5V	68T4277	4.38
● AT27C020-90JU	LCC-32	2Mbit	90ns	4.5V-5.5V	68T4265	1.87
● AT27C020-90PU	DIP-32	2Mbit	90ns	4.5V-5.5V	68T4266	3.46
● AT27C2048-90JU	LCC-44	2Mbit	90ns	4.5V-5.5V	68T4278	---
● AT27C4096-55JU	LCC-44	4Mbit	55ns	4.5V-5.5V	68T4283	6.88
● AT27C040-70JU	LCC-32	4Mbit	70ns	4.5V-5.5V	68T4267	4.61
● AT27C040-70PU	DIP-32	4Mbit	70ns	4.5V-5.5V	68T4268	5.06
● AT27C040-90JU	LCC-32	4Mbit	90ns	4.5V-5.5V	68T4269	---
● AT27C040-90PU	DIP-32	4Mbit	90ns	4.5V-5.5V	68T4270	5.02
● AT27C4096-90JU	LCC-44	4Mbit	90ns	4.5V-5.5V	68T4284	---
● AT27C4096-90PU	DIP-40	4Mbit	90ns	4.5V-5.5V	68T4285	4.02
● AT27C080-90PU	DIP-32	8Mbit	90ns	4.5V-5.5V	68T4272	10.90
● AT27C256R-45JU	LCC-32	256Kbit	45ns	4.5V-5.5V	68T4279	---
● AT27C256R-45PU	DIP-28	256Kbit	45ns	4.5V-5.5V	68T4280	2.11
● AT27C256R-70JU	LCC-32	256Kbit	70ns	4.5V-5.5V	68T4281	1.92
● AT27C256R-70PU	DIP-28	256Kbit	70ns	4.5V-5.5V	68T4282	2.26
● AT27C512R-45JU	LCC-32	512Kbit	45ns	4.5V-5.5V	68T4286	---
● AT27C512R-45PU	DIP-28	512Kbit	45ns	4.5V-5.5V	68T4287	2.33
● AT27C512R-70JU	LCC-32	512Kbit	70ns	4.5V-5.5V	68T4288	2.14
● AT27C512R-70PU	DIP-28	512Kbit	70ns	4.5V-5.5V	68T4289	2.27

PIM_197988

I2C™ COMPATIBLE SERIAL EEPROMS



MICROCHIP

Advantages

- Standby current less than 1 uAmp and industry's lowest operating current. (low power)
- Erase / Write endurance levels exceeding 1 million cycles and over 200 years Data retention.
- Low-voltage / high-frequency support with 400 KHz I2C devices at 1.7 volts.
- Small package leader with the 2K I2C device in the 5-lead SC70, 3-lead SOT-23 on the new UNI/O bus,

a 128 Kbit I2C device in the 2x3 DFN, WLSCP as well as 64 Kbit I2C device in the SOT-23.

- Ensure highest quality by testing all devices 3 times before shipping.
- Die and wafer support available.
- Industry's shortest lead times, excellent delivery
- Excellent Engineering, Customer and tools support.

Microchip's **Serial EEPROM** products are compatible with four serial bus types and support densities that range from 128 bits up to 1 Mbits. These bus types include the standard two wire I2C, three-wire Microwire, four wire SPI and the new single I/O, UNI/O® bus.

As Microchip's EEPROMs are compatible with the de facto industry standards, they can be used as drop-in replacements for competitor devices in most cases. By supporting a wide operating voltage range from 1.7 volts up to 5.5 volts and a wide temperature range from -40°C to 125°C almost all applications are supported. Microchip has been at the forefront of Serial EEPROM innovation - Along with ensuring highest quality products, today we offer a new family of single I/O UNI/O® EEPROM devices, the lowest voltage EEPROMs at 1.5V, the fastest bus speed on the SPI at 20 MHz and provide the industry's lowest operating current which ensures lower power consumption. Microchip also recently launched a family of MAC address chips each of which are pre-programmed with unique EUI-48™ and EUI-64™ node addresses.

Mfg. Part No.	Packaging	Memory Size	Frequency	Supply Voltage	Stock No.	Price Each 1-24+
I2C						
● 24LC025-I/SN	SOIC-8	2Kbit	400kHz	2.5V-5.5V	92C7099	---
● 24C00/SN	SOIC-8	128bit	400kHz	4.5V-5.5V	96K4059	---

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