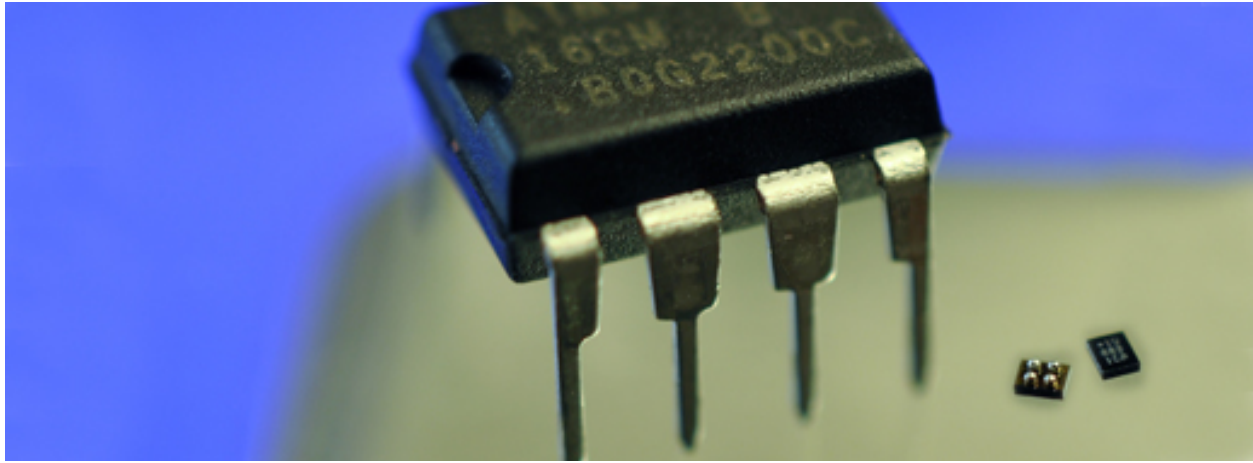


# Serial EEPROM



## The Most Flexible Type of Nonvolatile Memory Devices

Atmel is a leading supplier of Serial EEPROM devices and has shipped over 12 billion devices in the past decade. Because of the ability to alter single bytes of data, Serial EEPROM devices are used to store personal preference and configuration data in a wide spectrum of consumer, automotive, telecommunication, medical, industrial, and PC applications. Atmel offers Serial EEPROM devices in I<sup>2</sup>C, Microwire and SPI compatible protocols. The devices come in a number of industry-standard package types including space saving DFN, VFBGA, SOT23, and WLCSP packages. Atmel Serial EEPROM devices feature low pin count and are optimized for use in automotive and industrial temperature applications where low-power and low-voltage operation are essential.

## Key Features

- **Broad portfolio** — Serial EEPROM devices are offered in 1-Kbit to 1-Mbit densities in I<sup>2</sup>C, Microwire, and SPI compatible protocols available in voltages from 1.7V to 5.5V.
- **Diverse packages options** — The Serial EEPROM devices come in industry standard PDIP, SOIC, and TSSOP package types, as well as space saving DFN, VFBGA, SOT23, and WLCSP packages.
- **High performance** — Atmel Serial EEPROM devices offer low active and standby currents and operate at fast clock frequencies.
- **Easy migration** — Atmel SPI Serial EEPROMs share the same I/O configuration as Atmel's AT25D Serial Flash family, allowing customers to easily upgrade to the advanced, higher density Serial Flash devices.
- **Automotive designs** — Atmel offers automotive-qualified Serial EEPROM devices in environmentally friendly "green" versions designed to withstand broad extended temperature ranges.
- **Customer resources** — Application notes, software drivers, IBIS and Verilog models available to aid customer's application development.

## Serial EEPROM Devices

Device Family	Summary Benefit	Applications	Technologies	Key Parameters
<u>2-Wire (I<sup>2</sup>C™-compatible)</u>	I <sup>2</sup> C compatible	Data storage in applications such as portable consumer products, HDCP, Gaming, Cameras, DIMMs, LCD Monitors, LCD TVs and Monitors, LED TVs and	Low voltage operation	1-kbit to 1-Mbit
	Cascadable up to 8 devices on same bus			Up to 1MHz operation
	Global write protection			As low as 1.7V operation
	Byte/Page writable		Hardware write protection	Fast 5ms built in erase/write cycle
	Simplest protocol		Automotive Grade available	8-lead SOIC and UDFN
	High-endurance and			VFBGA and WLCSP options

high-reliability	Monitors, Wireless LAN, Hearing Aids, Bluetooth, Energy meters, etc
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SPI compatible	
Utilizing individual Chip Selects, multiple devices can reside on the same bus	Data storage in applications such as Mobile Electronics, Wireless LAN, Motherboards and Computer Peripherals, White Goods, Safety and Engine Control Units, Industrial Equipment, etc.
Global write protection	Low voltage operation
Byte/Page writable	Hardware/software array write protection
More Robust protocol	Automotive Grade Available
High-endurance and high-reliability	
<u>SPI</u>	
	1-Kbit to 1-Mbit
	Up to 20MHz operation
	As low as 1.7V operation
	Fast 5ms built in erase/write cycle
	8-lead SOIC and UDFN
	VFBGA and WLCSP options

Microwire compatible	
User selectable memory architecture	Data storage in applications such as portable consumer products ,Camera, Gaming, LCD TV, Motherboards, White Goods, Airbags, Security, DECT/Cordless Phones, etc.
Software Write Protection	Low voltage operation
High-endurance and high-reliability	8-bit or 16-bit word size
<u>3-Wire (Microwire™ compatible)</u>	Automotive Grade Available
	1-Kbit to 16-Kbit
	Up to 2MHz operation
	As low as 1.7V operation
	Fast 5ms built in erase/write cycle
	8-lead SOIC and TSSOP
	VFBGA and WLCSP options

Network connected applications requiring serialization of products and / or MAC / EUI address values such as consumer, gaming, TV's, industrial, white goods, medical, metering communications, and lighting	
Provides unique 48-bit or 64-bit MAC/EUI addresses	Low voltage operation
Provides unique 128-bit serial numbers	Flexible hardware and software write protection
Lowers overall costs and overhead	Industrial-grade products
Simplifies design	
No loss of user EEPROM memory space	
I <sup>2</sup> C-compatible	
<u>MAC/EUI and Serial Number</u>	
	48-bit or 64-bit MAC / EUI addresses supported
	128-bit unique serial number
	1Kb to 8Kb user serial EEPROM memory
	Wide V <sub>cc</sub> range, 1.7V to 5.5V
	Flexible package options: SOIC, DFN, SOT23, TSSOP

**FOR OTHER INFORMATION:**  
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