NON-VOLATILE MEMORY | DUAL / QUAD

AT25xx Series

Universal memory with expandable feature set

Universal memory with expandable feature set

Universally compatible, expandable, rich feature set

Universal memory
Our dual and quad serial flash devices offer industry standard features and architecture, making them easy to use in any existing design

JEDEC standard support
Device ID, manufacturers code, SFDP, and JEDEC reset

Standard SPI, Dual SPI, Quad SPI, QPI

Single voltage
Cost optimized solutions for 1.8V and 3.0V operation

User OTP
User OTP register can be used for key assignment, device identification, etc.

Page / block erase
256Byte page erase and block erase of 4, 32, and 64KBytes

Sector / block protect
To prevent data loss or over writing, sectors and blocks can be locked

Expandable feature set
Ready to upgrade your design? Select members of our AT25xx series offer a wealth of advanced features that can transform your design. Start with a universal solution and then incorporate exciting new options as your product line grows.

Higher MCU efficiency
Let your microcontroller (MCU) focus on other activities or sleep during programming cycles. Active IRQ (interrupt) notifies the MCU when programming is complete.

Lower power
Reduced power consumption and ultra-deep sleep modes help reduce overall system power.

Battery health monitoring
Programmable battery circuitry monitors the health of the battery and can be used to detect low battery voltage as well as low remaining charge.

Wide VCC
Battery voltage can change based on internal chemistry and temperature. Our devices offer the ability to operate over a wide range of voltages, making it easy to utilize any battery to its fullest capability, while reducing system cost and simplifying circuit design by removing additional power regulators.

Additional scratch pad memory
Flexible control means that the internal SRAM buffer is not just used to program the flash array; instead it can be used as system scratch pad memory.

Fast program on power fail
With one command the contents of the SRAM buffer can be programmed into the flash array, saving valuable time during a power fail.

RENESAS

APPLICATIONS

- Industrial IoT
- Building automation
- Wearables
- Consumer devices
- Data logging
- OTA intensive applications
- Smart applicances
- Remote controls
- Network systems

Universally compatible, expandable, rich feature set

Our AT25xx series of devices offer drop in compatibility with industry standard devices as well as the ability to enhance your application with additional features. Transform your design by taking advantage of Adesto's deep experience in memory, and extensive systems knowledge.

AT25xx Series Density Guide

Density	1.8V			3.0V		Wide VCC			
	DL	SL	QL	QF	SF	DF	DN	XE	XV
256Kbit						•	•		
512Kbit						•	•	•	
1Mbit						•	•	•	
2Mbit						•		•	•
4Mbit					•	•		•	•
8Mbit	•				•			•	
16Mbit	•				•			•	
32Mbit		•	•		•			•	
64Mbit		•	•	•	•				
128Mbit		•	•		•				

Technical Specifications

- Single or wide VCC voltage supply
- Low power
- Ultra-deep power down
- Full chip erase
- Flexible, optimized erase architecture for code and data storage applications
- Program and erase suspend / resume
- Active IRQ
- Interface:
  - Single SPI
  - Dual SPI
  - Quad SPI
  - QPI
- Hardware and software write protection
- OTP security register
- Serial flash discoverable parameters (SFDP)
- Hardware and software reset
- Data retention >20 years
- Endurance >100,000 program / erase cycles
- JEDEC standard manufacturer and device ID
- Temperature range options:
  - 40°C to +85°C (all devices)
  - 40°C to +105°C (select devices)
  - 40°C to +125°C (contact Adesto)
- Pb / Halide-free / RoHS compliant