

Features

- Memory array: 128Kbit EEPROM-compatible non-volatile serial memory
- Multiple supply voltages for minimum power consumption
 - V_{DDC} : 1.0V +/- 3%
 - V_{DDIO} : 1.65V - 2.75V
 - V_{DDW} : 4.0V +/- 10%
- Serial peripheral interface (SPI) compatible
 - Supports SPI modes 0 and 3
- 1.0 MHz maximum clock rate
- Flexible Programming
 - Byte/Page Program (1 to 32 Bytes)
 - Page size: 32 Bytes
- Ultra Low Energy Word Write
 - 32 bit Word Write consuming 50 nJ
- Low power consumption
 - 10 μ A active Read current @ 500 kbit/s (Typical)
 - 10 μ A active Write current @ 10 kbit/s (Typical)
 - 35 nA Ultra-Deep Power-Down current
- Auto Ultra-Deep Power-Down
 - Device can enter Ultra-Deep Power-Down automatically after finishing a Write operation
- Self-timed write cycles
- Hardware reset
- 8-lead SOIC package
- RoHS-compliant and halogen-free packaging
- Data Retention: 10 years
- Based on Adesto's proprietary CBRAM[®] technology

Description

The Adesto[®] RM3005 is a 128Kbit, serial memory device that utilizes Adesto's CBRAM[®] resistive technology.

The memory device is optimized for low power operation offering lowest available power for data-transfer, power-down, and writing. In order to efficiently optimize power consumption, the device makes use of three supplies, V_{DDW} , V_{DDC} , and V_{DDIO} . Read power is supplied from the V_{DDC} and the device consumes less than 10 μ W at 500Kbit/s. To further reduce data-transfer power, the device supports IO voltages in the range of 1.65 to 2.75V.

The RM3005 is accessed through a 4-wire SPI interface consisting of a Serial Data Input (SDI), Serial Data Output (SDO), Serial Clock (SCK), and Chip Select (\overline{CS}). The maximum clock (SCK) frequency in read mode is 1.0MHz.