



# ACE25QC640GE

## 64M BIT SPI NOR FLASH

### Description

The ACE25QC640GE is 64M-bit Serial Peripheral Interface (SPI) Flash memory, and supports the Dual/Quad SPI: Serial Clock, Chip Select, Serial Data I/O0 (SI), I/O1 (SO), I/O2 (/WP), and I/O3 (/HOLD). The Dual I/O data is transferred with speed of 100Mbps/s and the Quad I/O & Quad output data is transferred with speed of 200Mbps/s. The device uses a single low voltage power supply, ranging from 2.7 Volt to 3.6 Volt.

Additionally, the device supports JEDEC standard manufacturer and device ID and three 1024bytes Security Registers.

In order to meet environmental requirements, ACE Technology offers 8-pin SOP 150/208mil, 8-pad USON 4x3-mm, 8-pad WSON 5x6-mm, and other special-order packages, please contacts ACE Technology for ordering information.

### Features

- Serial Peripheral Interface
  - Standard SPI: SCLK, /CS, SI, SO, /WP, /HOLD
  - Dual SPI: SCLK, /CS, IO0, IO1, /WP, /HOLD
  - Quad SPI: SCLK, /CS, IO0, IO1, IO2, IO3
- Read
  - Normal Read (Serial): 100MHz clock rate
  - Fast Read (Serial): 120MHz clock rate with 30PF load
  - Dual I/O data transfer up to 240Mbps/S
  - Quad I/O data transfer up to 480Mbps/S
  - Allows XIP (execute in place) Operation: Continuous Read with 8/16/32/64-byte Wrap
- Program
  - Serial-input Page Program up to 256bytes
- Erase
  - Block Erase (64/32 KB)
  - Sector Erase (4 KB)
  - Chip Erase
  - Erase Suspend and Resume
- Program/Erase Speed
  - Page Program time: 0.45ms typical
  - Sector Erase time: 35ms typical
  - Block Erase time: 0.10/0.18s typical
  - Chip Erase time: 22s typical



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- Flexible Architecture
  - Sector of 4K-byte
  - Block of 32/64K-byte
- Low Power Consumption
  - 9mA maximum active current
  - 0.7uA maximum power down current
- Software/Hardware Write Protection
  - 3x1024-Byte Security Registers with OTP Locks
  - Discoverable Parameters (SFDP) register
  - Enable/Disable protection with WP Pin
  - Write protect all/portion of memory via software
  - Top or Bottom, Sector or Block selection
- Single Supply Voltage
  - Full voltage range: 2.7~3.6V
- Temperature Range
  - Commercial (-40°C to 85°C)
  - Industrial (-40°C to 85°C)
  - Industrial (-40°C to 105°C)
  - Industrial (-40°C to 125°C)
- Cycling Endurance/Data Retention
  - Typical 100k Program-Erase cycles on any sector
  - Typical 20-year data retention

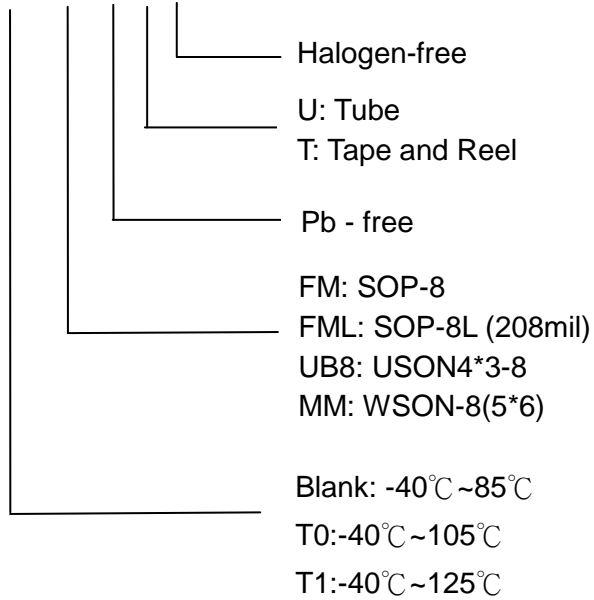


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### Ordering information

ACE25QC640GE XX XXX + X H





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### Notes

ACE does not assume any responsibility for use as critical components in life support devices or systems without the express written approval of the president and general counsel of ACE Technology Co., LTD. As sued herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.