1.2V Serial NOR Flash

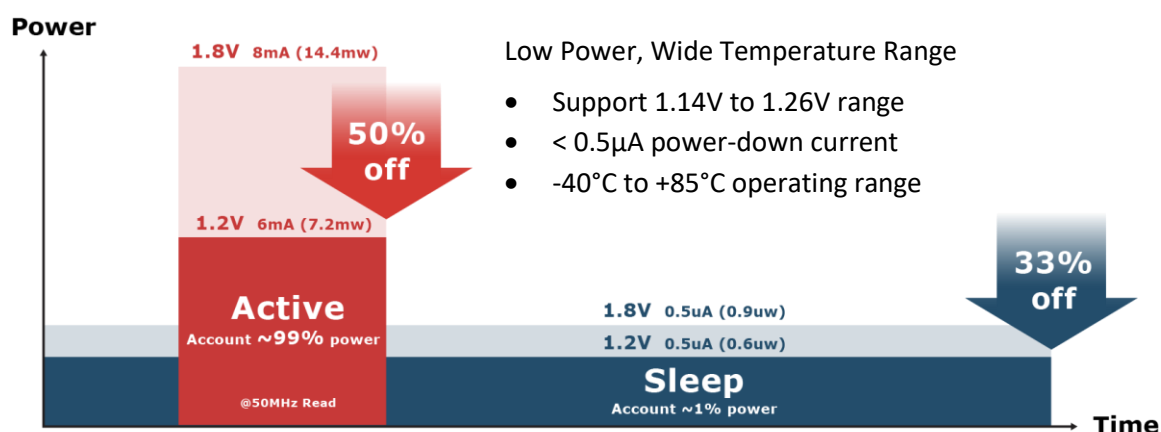## SpiFlash® Memories with SPI, Dual-SPI, Quad-SPI

Winbond's W25Q-NE series 1.2V Multi-I/O Serial NOR Flash memories, ranging in densities from 8Mb to 2Gb, featuring small packages and low power consumption, are offered in Dual SPI, Dual I/O, Quad I/O, and QPI versions, which offer even higher performance transfer rates up to 133MB/s.

Advanced processes enable more applications to migrate to lower Vcc levels. Removing the 1.8V I/O bank can be more cost-effective for some application suppliers. For specific application ICs, especially those related to AI computing, 1.2V is the only choice.
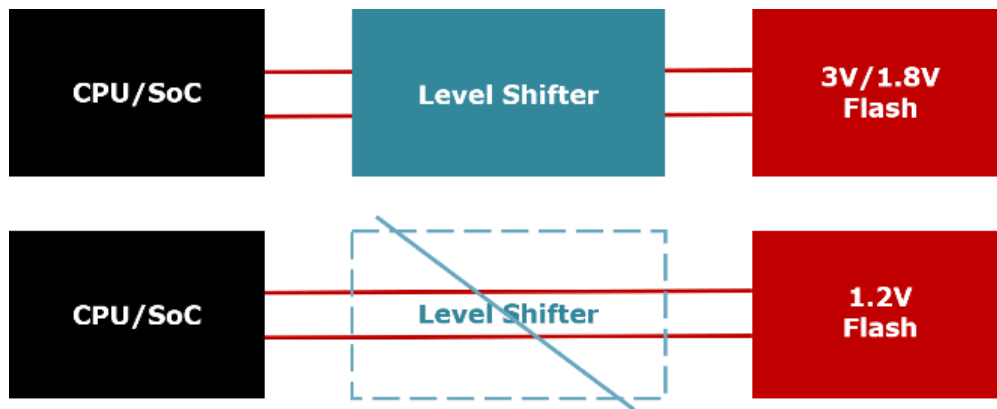
Voltage	Density	Part Number	Package
1.14V - 1.26V	2Gb	W25Q02NE	SOP16 300mil, WSON8 8x6mm, TFBGA24 (5x5)
	1Gb	W25Q01NE	SOP16 300mil, WSON8 8x6mm, TFBGA24 (5x5)
	512 Mb	W25Q51NE	SOP16 300mil, WSON8 8x6mm, TFBGA24 (5x5)
	256 Mb	W25Q25NE	SOP16 300mil, WSON8 8x6mm, WSON8 6x5mm, WLCSP
	128 Mb	W25Q12NE	SOP8 208mil, WSON8 6x5mm, XSON8 4x4mm, WLCSP
	64 Mb	W25Q64NE	SOP8 208mil, WSON8 6x5mm, XSON8 4x4mm, WLCSP
	32 Mb	W25Q32NE	SOP8 150mil, SOP8 208mil, USON8 4x3mm, WLCSP
	16 Mb	W25Q16NE	SOP8 150mil, SOP8 208mil, XSON8 2x3mm, WLCSP
	8 Mb	W25Q81NE	SOP8 150mil, XSON8 2x3mm, WLCSP

* See data sheet for further technical information. This is subject to change without notice.

Features

Low Power, Wide Temperature Range

- Support 1.14V to 1.26V range
- < 0.5µA power-down current
- -40°C to +85°C operating range

Optimize Circuit & Cost

Easy to Adopt

- Backward compatible command set
  - No software / firmware change required
  - Voltage change only
- Small package for portable device
  - SOP8, WLCSP, SON8, Known Good Die

Advanced Features

- BUSY function[1]
- Built-in ECC[1]
- Continuous and Read Command Bypass mode
- One Time Programmable (OTP)
- Individual block protect[1]

Note: 1. 512Mb – 2Gb support.

Wide Range of Applications

- AI server
- Notebook
- Desktop computer
- OLED
- GPU accelerator
- Smartphone