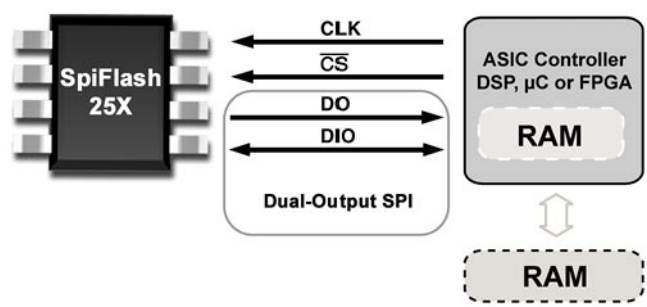




The World's Highest Performance Serial Flash Memories

Introducing the 25X Series SpiFlash® Memories from Winbond

Winbond's 25X SpiFlash® Memories feature the popular Serial Peripheral Interface (SPI), densities from 1M to 64M-bit, small erasable sectors and the industry's highest performance. The 25X SpiFlash devices operate up to 75MHz and are the first to support "dual-output SPI" to achieve transfer rates equivalent to using a 150MHz clock. This is two to three times the performance of other Serial Flash memories. Fast transfer rates mean controllers can quickly boot when downloading code to RAM or even execute code directly from the SPI interface.



25X SpiFlash Memory Features

- 1M-bit to 64M-bit densities
- Uniform 4KB sectors, 64KB blocks
- SPI interface with Dual Outputs
- Top and Bottom Write protection
- Space Saving SOIC packages

Highest Performance

- Up to 75MHz clock
- 150MHz equivalent clock with dual-output SPI
- 2- 3 times performance of other Serial Flash
- Faster boot-up or execute directly from SPI

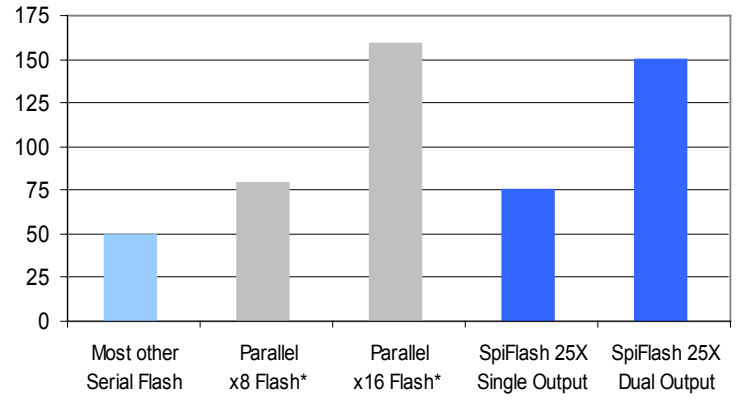
Serial Code and Data Storage

- For ASIC Controllers, DSPs, FPGAs that download code to RAM or execute from SPI
- For µC and DSP with SPI that store voice or data

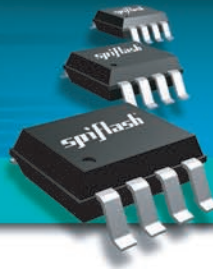
Applications

- DVD/CD drives, DVD Recorders, Desktop and Notebook PCs, Hard Drives, WLAN, DSL, LCD Monitors, Flat Panel TV, Printers, Set-top, MP3, DAB, DECT, FPGAs and more

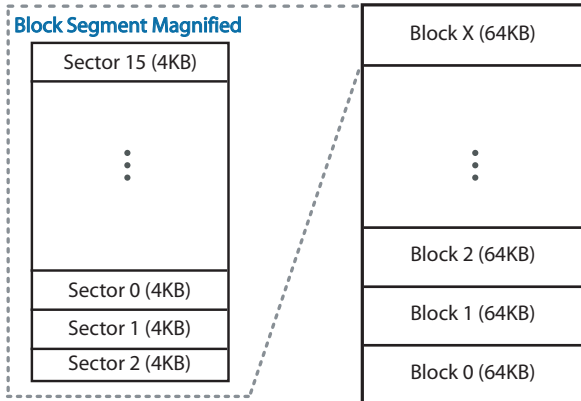
Equivalent Bit Clock Frequency (MHz)



* 100ns instruction, 70nS access



25X Block and Sector Diagram



The 25X SpiFlash family feature small 4K-byte erasable sectors and 64K-byte erasable blocks through the entire array allowing for efficient memory usage. Both top and bottom write protection are supported and the instruction set is superset compatible with standard 25P series Serial Flash memories.

Housed in space saving SOIC packaging, SpiFlash memories offer a pin, space and cost efficient alternative to ordinary Parallel Flash memories. SpiFlash memories are ideal for a wide variety of applications including: DVD/CD drives, DVD Recorders, Desktop and Notebook PCs, Hard Drives, WLAN, DSL, LCD Monitors, Flat Panel TV, Printers, Set-top, MP3, DAB, DECT, FPGAs and more.

Winbond 25X Series SpiFlash Memory Reference Chart*

Winbond Part Number	Density	Organization	Program Pages	Erasable Sectors	Erasable Blocks	Clock Freq.	Package ²	Availability ³
W25X10VSNIG	1M-bit	128KB x 1	512	4KB x 32	64KB x 2	75MHz	SOIC 8 150mil	Q2-06
W25X20VSNIG	2M-bit	256KB x 1	1,024	4KB x 64	64KB x 4	75MHz	SOIC 8 150mil	Q2-06
W25X40VSNIG	4M-bit	512KB x 1	2,048	4KB x 128	64KB x 8	75MHz	SOIC 8 150mil	Now
W25X40VSSIG	4M-bit	512KB x 1	2,048	4KB x 128	64KB x 8	75MHz	SOIC 8 208mil	Now
W25X80VSSIG	8M-bit	1MB x 1	4,096	4KB x 256	64KB x 16	75MHz	SOIC 8 208mil	Now
W25X16VSSIG	16M-bit	2MB x 1	8,192	4KB x 512	64KB x 32	75MHz	SOIC 8 208mil	Q3-06
W25X16VFIG	16M-bit	2MB x 1	8,192	4KB x 512	64KB x 32	75MHz	SOIC 16 300mil	Q3-06
W25X32VSSIG	32M-bit	4MB x 1	16,384	4KB x 1024	64KB x 64	75MHz	SOIC 8 208mil	Q4-06
W25X32VFIG	32M-bit	4MB x 1	16,384	4KB x 1024	64KB x 64	75MHz	SOIC 16 300mil	Q4-06
W25X64VFIG	64M-bit	8MB x 1	32,768	4KB x 2048	64KB x 128	75MHz	SOIC 16 300mil	Q1-07



¹ All SpiFlash memories support 2.7V to 3.6V supply operation, -40 to +85 C temperature. "Green" RoHS compliant packaging.

² Contact Winbond for availability of Die, WSON and DIP packaging. ³ Sample availability



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