

parallel Flash



Parallel Flash Memory - W29GL Family

Winbond's W29GL family of 3-Volt Page-Mode Parallel Flash memories are offered in densities from 32Mb to 256Mb and support industry standard interfaces, architectures and packages. They are drop-in replacements to the popular "x29GL" products available in the industry, with no firmware change. The W29GL family also offers faster program and erase times, which can improve production throughput and enable faster firmware updates. Winbond's Parallel Flash products are ideal for a wide variety of applications requiring the higher performance of a parallel bus width and page mode operation.

W29GL Page Mode Parallel Flash Family

- 32Mb to 256Mb densities
- Compatible with Industry Standard x29GL products
- 2.7V to 3.6V operation; also supports V_{IO} at 1.8V
- x8/x16 data bus configuration
- 70/90ns read access time, 25ns page mode access time
- Provides many sector protection mechanisms
 - o Offers additional security of code/data

Package Options

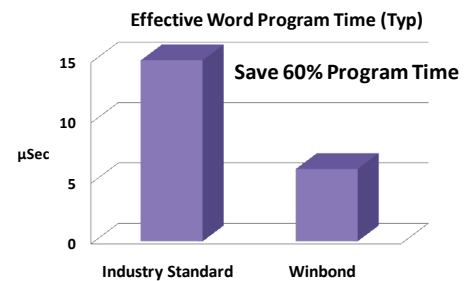
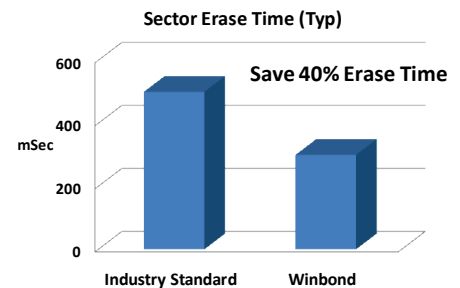
- Industry standard packages for 32Mb & 64Mb densities
 - o 48-pin TSOP (Top/Bottom Boot)
 - o 48-ball TFBGA (Top/Bottom Boot)
 - o 56-pin TSOP (High/Low Sector protect)
 - o 64-ball LFBGA (Top/Bottom Boot, High/Low Sector protect)
- Industry standard packages for 128Mb & 256Mb densities
 - o 56-pin TSOP (High/Low Sector protect)
 - o 64-ball LFBGA (High/Low Sector protect)

Special Features

- Drop-in replacement of Industry Standard x29GL
 - o No firmware change needed
- Saves 40% erase time and 60% program time
 - o Improves production throughput
 - o Faster firmware updates

Wide Range of Applications

- Networking, Set-Top-Box, DSL and Cable modems
- Wireless routers, Digital TV, Industrial, Automotive
- PC peripherals, Printer, Mobile phones, Cameras and more



Winbond also offers a complete family of Serial Flash products ranging from 1Mb through 128Mb in SPI, Dual-SPI, Quad-SPI and QPI versions.

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Winbond Parallel Flash Memory Selection Guide ^{1,2,3}

Density	Winbond Part #	Secure Sectors		Speed (ns)	Page Access (ns)	Package ⁴	Sample Availability
		Boot/Uniform Sectors	Sector Location				
32M-bit	W29GL032CT7S	Top Boot	Top two sectors	70	25	TSOP48	Now
	W29GL032CT7A	Top Boot	Top two sectors	70	25	TFBGA48	Now
	W29GL032CT7B	Top Boot	Top two sectors	70	25	LFBGA64 ⁵	Now
	W29GL032CB7S	Bottom Boot	Bottom two sectors	70	25	TSOP48	Now
	W29GL032CB7A	Bottom Boot	Bottom two sectors	70	25	TFBGA48	Now
	W29GL032CB7B	Bottom Boot	Bottom two sectors	70	25	LFBGA64 ⁵	Now
	W29GL032CH7T	Uniform Sector	High Sector	70	25	TSOP56 ⁵	Now
	W29GL032CH7B	Uniform Sector	High Sector	70	25	LFBGA64 ⁵	Now
	W29GL032CL7T	Uniform Sector	Low Sector	70	25	TSOP56 ⁵	Now
	W29GL032CL7B	Uniform Sector	Low Sector	70	25	LFBGA64 ⁵	Now
64M-bit	W29GL064CT7S	Top Boot	Top two sectors	70	25	TSOP48	Now
	W29GL064CT7A	Top Boot	Top two sectors	70	25	TFBGA48	Now
	W29GL064CT7B	Top Boot	Top two sectors	70	25	LFBGA64	Now
	W29GL064CB7S	Bottom Boot	Bottom two sectors	70	25	TSOP48	Now
	W29GL064CB7A	Bottom Boot	Bottom two sectors	70	25	TFBGA48	Now
	W29GL064CB7B	Bottom Boot	Bottom two sectors	70	25	LFBGA64	Now
	W29GL064CH7T	Uniform Sector	High Sector	70	25	TSOP56	Now
	W29GL064CH7B	Uniform Sector	High Sector	70	25	LFBGA64	Now
	W29GL064CL7T	Uniform Sector	Low Sector	70	25	TSOP56	Now
	W29GL064CL7B	Uniform Sector	Low Sector	70	25	LFBGA64	Now
128M-bit	W29GL128CH9T	Uniform Sector	High Sector	90	25	TSOP56	Now
	W29GL128CH9B	Uniform Sector	High Sector	90	25	LFBGA64	Now
	W29GL128CL9T	Uniform Sector	Low Sector	90	25	TSOP56	Now
	W29GL128CL9B	Uniform Sector	Low Sector	90	25	LFBGA64	Now
256M-bit	W29GL256CH9T	Uniform Sector	High Sector	90	25	TSOP56	Q2-2013
	W29GL256CH9B	Uniform Sector	High Sector	90	25	LFBGA64	Q2-2013
	W29GL256CL9T	Uniform Sector	Low Sector	90	25	TSOP56	Q2-2013
	W29GL256CL9B	Uniform Sector	Low Sector	90	25	LFBGA64	Q2-2013

1. All parts operate from 2.7V to 3.6V over the Industrial temperature range (-40C to +85C). 2. See data sheet for additional technical information. 3. Subject to change without notice. 4. "Green" and RoHS compliant packaging. KGD Wafer also available. S=TSOP48(12x20mm), T=TSOP56(14x20mm), B=LFBGA64(11x13mm), A=TFBGA48(6x8mm). 5. Contact Winbond for availability of these LFBGA64 & TSOP56 packages.



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