Winbond is proud to introduce its QspiNAND flash memory products, offering a winning combination of affordability and reliability for embedded designers. Our QspiNAND flash memory products are available in 512Mb, 1Gb, 2Gb, and 4Gb densities, all featuring the Quad SPI interface. These products are designed to cater to your storage needs, especially when dealing with NOR flash systems exceeding 512Mb densities.

Why Choose Winbond's QspiNAND Products?

Winbond's W25N QspiNAND Flash series is designed with a standard SPI interface and a bus width of x1/x2/x4. With densities ranging from 512Mb to 4Gb and an operating voltage of either 1.8V or 3.3V, QspiNAND Flash memory can be a cost-effective option for densities of 512Mb and above when assessing the cost per bit in comparison to high density NOR Flash. Winbond's QspiNAND is available in packages up to 80% smaller than ONFI NAND which helps save costs and PCB space. These savings extend beyond just PCB costs and encompass various aspects of your production process. For those seeking a dependable and budget-friendly memory solution, Winbond's QspiNAND products are the ideal choice. Not only do they offer cost-efficiency, but they also boast faster program and erase times, enhancing your overall system performance.

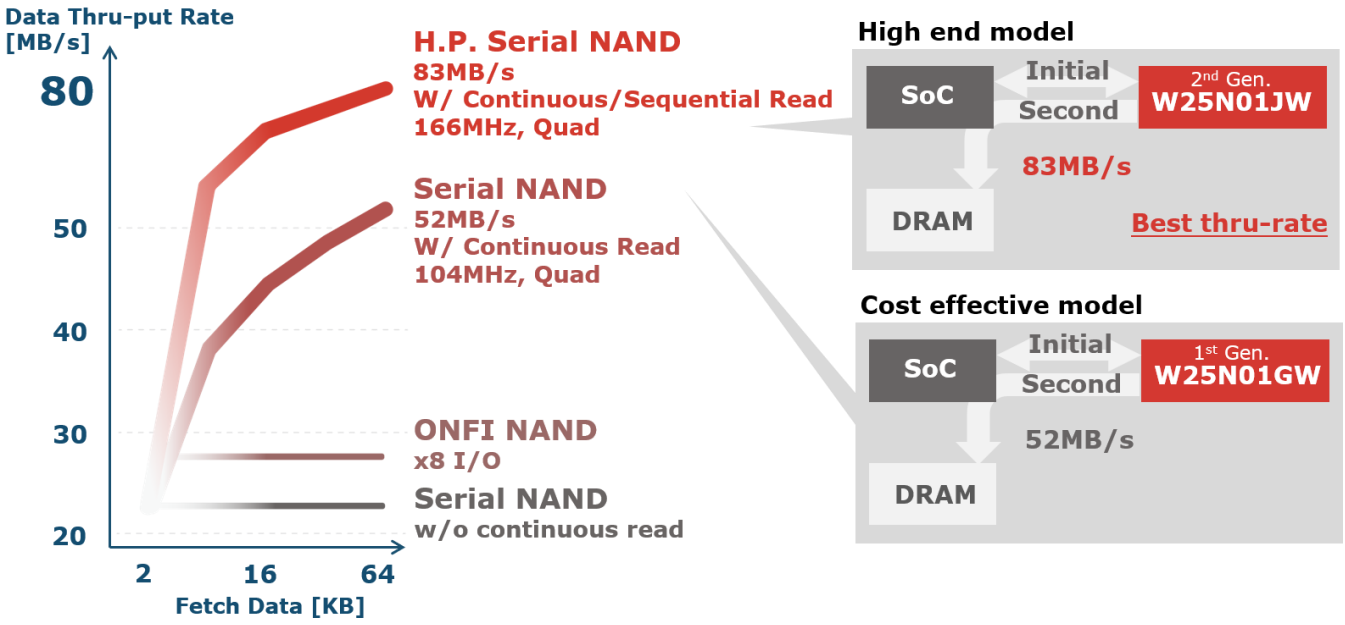
SLC NAND Flash

80% Package Size Reduction

QspiNAND Flash

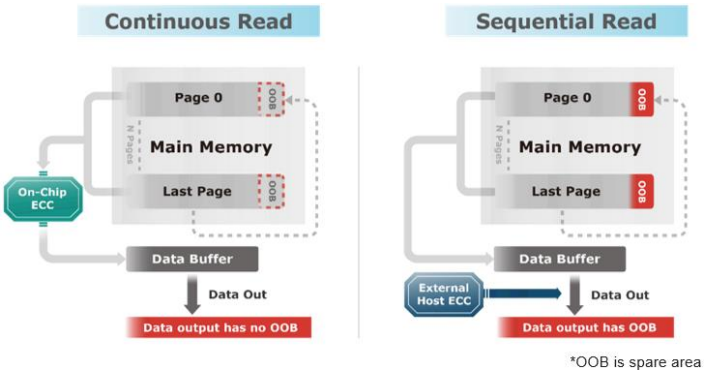
Winbond's Innovative Features

When it comes to code storage memory, Winbond's QspiNAND products provide reliability and cost-effectiveness. The code stored in Flash memory can be quickly and efficiently transferred to DRAM for fast execution through the use of advanced functionalities like "Continuous Read Mode" and "Sequential Read Mode" The high-performance W25N01JW series offers an impressive throughput of up to 83MB/s with Continuous Read mode at a clock rate of 166MHz. Additionally, the series supports DTR (Double Transfer Rate) functionality. Winbond's QspiNAND Flash memory also features built-in ECC (Error Correcting Code), which manages error detection and correction functions (which ONFI NAND does not support), thereby offloading these tasks from the host controller.



The perfect solution for efficient code storage and rapid data transfer.

With its extensive range of features and capabilities, Winbond's QspiNAND Flash series is an excellent choice for those seeking a reliable, cost-effective, and high-performance code storage memory solution. Density options include 512Mb, 1Gb, 2Gb, and 4Gb, with voltage options of 1.7V-1.95V or 2.7V-3.6V. The Continuous Read and Sequential Read modes allow for efficient reading of an entire array of data with just one command.



In conclusion, Winbond's QspiNAND flash memory products offer designers a reliable and cost-effective solution for storing code, especially in NOR flash systems with densities exceeding 512Mb. With built-in ECC, the QspiNAND family of products ensures greater reliability for every application. Simultaneously, our High-Performance QspiNAND flash memory boasts faster data transfer rates, making it an excellent fit for automotive applications and beyond. Choose Winbond for innovation, affordability, and performance. Elevate your embedded designs with our QspiNAND flash memory solutions today.

Please note: NAND Flash memory requires a controller to manage various functions related to error detection and correction, as well as memory block management. Winbond's QspiNAND features built-in ECC, which handles error detection and correction, thereby offloading these tasks from the controller.

Winbond QspiNAND Flash Memory Selection Guide (Industrial Grade)

Part Number	Density (bit)	Clock Frequency (MHz)	Min. Operating Voltage (V)	Max. Operating Voltage (V)	Min. Operating Temp. (°C)	Max. Operating Temp. (°C)	Page Size (Byte)	Spare Area (Byte)	On Chip ECC Count	Double Transfer Rate (DTR MHz)	SpiStack (C2h command)	Dual/Quad SPI Clocks	Default Read Mode	Able to be Switched Mode	Package
W25N512GVFIG[1]	512M	166	2.7	3.6	-40	85	2048	64	1			•	Buffer Read	Continuous Read	SOP16 300mil
W25N512GVPIG[1]	512M	166	2.7	3.6	-40	85	2048	64	1			•	Buffer Read	Continuous Read	WSON8 6x5mm
W25N512GVEIG	512M	166	2.7	3.6	-40	85	2048	64	1			•	Buffer Read	Continuous Read	WSON8 8x6mm
W25N512GVBIG[1]	512M	166	2.7	3.6	-40	85	2048	64	1			•	Buffer Read	Continuous Read	TFBGA24 8x6mm(5x5-1)
W25N512GVFIT[1]	512M	166	2.7	3.6	-40	85	2048	64	1			•	Continuous Read	Buffer Read	SOP16 300mil
W25N512GVPIT[1]	512M	166	2.7	3.6	-40	85	2048	64	1			•	Continuous Read	Buffer Read	WSON8 6x5mm
W25N512GVEIT	512M	166	2.7	3.6	-40	85	2048	64	1			•	Continuous Read	Buffer Read	WSON8 8x6mm
W25N512GVBIT[1]	512M	166	2.7	3.6	-40	85	2048	64	1			•	Continuous Read	Buffer Read	TFBGA24 8x6mm(5x5-1)
W25N512GVFIR[1]	512M	166	2.7	3.6	-40	85	2048	64	1			•	Buffer Read	-	SOP16 300mil
W25N512GVPIR[1]	512M	166	2.7	3.6	-40	85	2048	64	1			•	Buffer Read	-	WSON8 6x5mm
W25N512GVEIR[1]	512M	166	2.7	3.6	-40	85	2048	64	1			•	Buffer Read	-	WSON8 8x6mm
W25N512GVBIR[1]	512M	166	2.7	3.6	-40	85	2048	64	1			•	Buffer Read	-	TFBGA24 8x6mm(5x5-1)
W25N512GWFIT[1]	512M	104	1.7	1.95	-40	85	2048	64	1			•	Continuous Read	Buffer Read	SOP16 300mil
W25N512GWPIT[1]	512M	104	1.7	1.95	-40	85	2048	64	1			•	Continuous Read	Buffer Read	WSON8 6x5mm
W25N512GWEIT[1]	512M	104	1.7	1.95	-40	85	2048	64	1			•	Continuous Read	Buffer Read	WSON8 8x6mm
W25N512GWBIT[1]	512M	104	1.7	1.95	-40	85	2048	64	1			•	Continuous Read	Buffer Read	TFBGA24 8x6mm(5x5-1)
W25N512GWYIT	512M	104	1.7	1.95	-40	85	2048	64	1			•	Continuous Read	Buffer Read	WLCSP (48-ball)
W25N512GWFIR	512M	104	1.7	1.95	-40	85	2048	64	1			•	Buffer Read	-	SOP16 300mil
W25N512GWPIR[1]	512M	104	1.7	1.95	-40	85	2048	64	1			•	Buffer Read	-	WSON8 6x5mm
W25N512GWEIR	512M	104	1.7	1.95	-40	85	2048	64	1			•	Buffer Read	-	WSON8 8x6mm
W25N512GWBIR[1]	512M	104	1.7	1.95	-40	85	2048	64	1			•	Buffer Read	-	TFBGA24 8x6mm(5x5-1)
W25N512GWYIR	512M	104	1.7	1.95	-40	85	2048	64	1			•	Buffer Read	-	WLCSP (48-ball)
W25N01GVSFIG	1G	104	2.7	3.6	-40	85	2048	64	1			•	Buffer Read	Continuous Read	SOP16 300mil
W25N01GVZEIG	1G	104	2.7	3.6	-40	85	2048	64	1			•	Buffer Read	Continuous Read	WSON8 8x6mm
W25N01GVTBIG[1]	1G	104	2.7	3.6	-40	85	2048	64	1			•	Buffer Read	Continuous Read	TFBGA24 8x6mm(5x5-1)
W25N01GVTCIG[1]	1G	104	2.7	3.6	-40	85	2048	64	1			•	Buffer Read	Continuous Read	TFBGA24 8x6mm(6x4)
W25N01GVSFIT	1G	104	2.7	3.6	-40	85	2048	64	1			•	Continuous Read	Buffer Read	SOP16 300mil
W25N01GVZEIT	1G	104	2.7	3.6	-40	85	2048	64	1			•	Continuous Read	Buffer Read	WSON8 8x6mm
W25N01GVTBIT	1G	104	2.7	3.6	-40	85	2048	64	1			•	Continuous Read	Buffer Read	TFBGA24 8x6mm(5x5-1)
W25N01GVTCIT[1]	1G	104	2.7	3.6	-40	85	2048	64	1			•	Continuous Read	Buffer Read	TFBGA24 8x6mm(6x4)
W25N01GVSFIR[1]	1G	104	2.7	3.6	-40	85	2048	64	1			•	Buffer Read	-	SOP16 300mil
W25N01GVZEIR	1G	104	2.7	3.6	-40	85	2048	64	1			•	Buffer Read	-	WSON8 8x6mm
W25N01GVTBIR[1]	1G	104	2.7	3.6	-40	85	2048	64	1			•	Buffer Read	-	TFBGA24 8x6mm(5x5-1)
W25N01GVTCIR[1]	1G	104	2.7	3.6	-40	85	2048	64	1			•	Buffer Read	-	TFBGA24 8x6mm(6x4)
W25N01GWSFIG[1]	1G	104	1.7	1.95	-40	85	2048	64	1			•	Buffer Read	Continuous Read	SOP16 300mil
W25N01GWZEIG	1G	104	1.7	1.95	-40	85	2048	64	1			•	Buffer Read	Continuous Read	WSON8 8x6mm
W25N01GWTBIG	1G	104	1.7	1.95	-40	85	2048	64	1			•	Buffer Read	Continuous Read	TFBGA24 8x6mm(5x5-1)
W25N01GWTCIG[1]	1G	104	1.7	1.95	-40	85	2048	64	1			•	Buffer Read	Continuous Read	TFBGA24 8x6mm(6x4)
W25N01GWSFIT[1]	1G	104	1.7	1.95	-40	85	2048	64	1			•	Continuous Read	Buffer Read	SOP16 300mil
W25N01GWZEIT[1]	1G	104	1.7	1.95	-40	85	2048	64	1			•	Continuous Read	Buffer Read	WSON8 8x6mm
W25N01GWTBIT[1]	1G	104	1.7	1.95	-40	85	2048	64	1			•	Continuous Read	Buffer Read	TFBGA24 8x6mm(5x5-1)
W25N01GWTCIT[1]	1G	104	1.7	1.95	-40	85	2048	64	1			•	Continuous Read	Buffer Read	TFBGA24 8x6mm(6x4)
W25N01JWSFIG[1]	1G	166	1.7	1.95	-40	85	2048	64	1	80		•	Buffer Read	Continuous Read	SOP16 300mil
W25N01JWZEIG	1G	166	1.7	1.95	-40	85	2048	64	1	80		•	Buffer Read	Continuous Read	WSON8 8x6mm
W25N01JWTBIG[1]	1G	166	1.7	1.95	-40	85	2048	64	1	80		•	Buffer Read	Continuous Read	TFBGA24 8x6mm(5x5-1)
W25N01JWSFIT[1]	1G	166	1.7	1.95	-40	85	2048	64	1	80		•	Continuous Read	Buffer Read	SOP16 300mil
W25N01JWZEIT[1]	1G	166	1.7	1.95	-40	85	2048	64	1	80		•	Continuous Read	Buffer Read	WSON8 8x6mm
W25N01JWTBIT[1]	1G	166	1.7	1.95	-40	85	2048	64	1	80		•	Continuous Read	Buffer Read	TFBGA24 8x6mm(5x5-1)
W25N01KVZPIR	1G	104	2.7	3.6	-40	85	2048	64	4			•	Buffer Read	-	WSON8 6x5mm
W25N01KVZEIR	1G	104	2.7	3.6	-40	85	2048	64	4			•	Buffer Read	-	WSON8 8x6mm
W25N01KVZPIU[1]	1G	104	2.7	3.6	-40	85	2048	96	4			•	Sequential Read	Buffer Read	WSON8 6x5mm
W25N01KVZEIU[1]	1G	104	2.7	3.6	-40	85	2048	96	4			•	Sequential Read	Buffer Read	WSON8 8x6mm
W25N01KVZPIE[1]	1G	104	2.7	3.6	-40	85	2048	96	4			•	Buffer Read	Sequential Read	WSON8 6x5mm
W25N01KVZEIE[1]	1G	104	2.7	3.6	-40	85	2048	96	4			•	Buffer Read	Sequential Read	WSON8 8x6mm
W25N01KWZPIG[1,2]	1G	104	1.7	1.95	-40	85	2048	64	4			•	Buffer Read	Continuous Read	WSON8 6x5mm
W25N01KWZEIG[1,2]	1G	104	1.7	1.95	-40	85	2048	64	4			•	Buffer Read	Continuous Read	WSON8 8x6mm
W25N01KWZPIT[1,2]	1G	104	1.7	1.95	-40	85	2048	64	4			•	Continuous Read	Buffer Read	WSON8 6x5mm
W25N01KWZEIT[1,2]	1G	104	1.7	1.95	-40	85	2048	64	4			•	Continuous Read	Buffer Read	WSON8 8x6mm
W25N01KWZPIR[1,2]	1G	104	1.7	1.95	-40	85	2048	64	4			•	Buffer Read	-	WSON8 6x5mm
W25N01KWZEIR[1,2]	1G	104	1.7	1.95	-40	85	2048	64	4			•	Buffer Read	-	WSON8 8x6mm
W25N01KWZPIU[1,2]	1G	104	1.7	1.95	-40	85	2048	64	4			•	Sequential Read	Buffer Read	WSON8 6x5mm
W25N01KWZEIU[1,2]	1G	104	1.7	1.95	-40	85	2048	64	4			•	Sequential Read	Buffer Read	WSON8 8x6mm
W25N01KWZPIE[1,2]	1G	104	1.7	1.95	-40	85	2048	64	4			•	Buffer Read	Sequential Read	WSON8 6x5mm
W25N01KWZEIE[1,2]	1G	104	1.7	1.95	-40	85	2048	64	4			•	Buffer Read	Sequential Read	WSON8 8x6mm
W25N02KVZEIR	2G	104	2.7	3.6	-40	85	2048	128	8			•	Buffer Read	-	WSON8 8x6mm
W25N02KVTBIR[1]	2G	104	2.7	3.6	-40	85	2048	128	8			•	Buffer Read	-	TFBGA24 8x6mm(5x5-1)
W25N02KVZEIU	2G	104	2.7	3.6	-40	85	2048	128	8			•	Sequential Read	Buffer Read	WSON8 8x6mm
W25N02KVTBIU[1]	2G	104	2.7	3.6	-40	85	2048	128	8			•	Sequential Read	Buffer Read	TFBGA24 8x6mm(5x5-1)
W25N02KVZEIE	2G	104	2.7	3.6	-40	85	2048	128	8			•	Buffer Read	Sequential Read	WSON8 8x6mm
W25N02KVTBIE[1]	2G	104	2.7	3.6	-40	85	2048	128	8			•	Buffer Read	Sequential Read	TFBGA24 8x6mm(5x5-1)
W25N02JWSFIF[1]	2G	166	1.7	1.95	-40	85	2048	64	1	80		•	Buffer Read	Continuous Read	SOP16 300mil

Part Number	Density (bit)	Clock Frequency (MHz)	Min. Operating Voltage (V)	Max. Operating Voltage (V)	Min. Operating Temp. (°C)	Max. Operating Temp. (°C)	Page Size (Byte)	Spare Area (Byte)	On Chip ECC Count	Double Transfer Rate (DTR MHz)	SpiStack (C2h command)	Dual/Quad SPI Clocks	Default Read Mode	Able to be Switched Mode	Package
W25N02JWZEIF	2G	166	1.7	1.95	-40	85	2048	64	1	80		●	Buffer Read	Continuous Read	WSON8 8x6mm
W25N02JWTBIF	2G	166	1.7	1.95	-40	85	2048	64	1	80		●	Buffer Read	Continuous Read	TFBGA24 8x6mm(5x5-1)
W25N02JWSFIC[1]	2G	166	1.7	1.95	-40	85	2048	64	1	80		●	Continuous Read	Buffer Read	SOP16 300mil
W25N02JWZEIC[1]	2G	166	1.7	1.95	-40	85	2048	64	1	80		●	Continuous Read	Buffer Read	WSON8 8x6mm
W25N02JWTBIC[1]	2G	166	1.7	1.95	-40	85	2048	64	1	80		●	Continuous Read	Buffer Read	TFBGA24 8x6mm(5x5-1)
W25N02KWZEIR	2G	104	1.7	1.95	-40	85	2048	128	8			●	Buffer Read	-	WSON8 8x6mm
W25N02KWTBIR[1]	2G	104	1.7	1.95	-40	85	2048	128	8			●	Buffer Read	-	TFBGA24 8x6mm(5x5-1)
W25N02KWZEIU[1]	2G	104	1.7	1.95	-40	85	2048	128	8			●	Sequential Read	Buffer Read	WSON8 8x6mm
W25N02KWTBIU[1]	2G	104	1.7	1.95	-40	85	2048	128	8			●	Sequential Read	Buffer Read	TFBGA24 8x6mm(5x5-1)
W25N04KVZEIR	4G	104	2.7	3.6	-40	85	2048	128	8			●	Buffer Read	-	WSON8 8x6mm
W25N04KVTBIR	4G	104	2.7	3.6	-40	85	2048	128	8			●	Buffer Read	-	TFBGA24 8x6mm(5x5-1)
W25N04KVZEIU	4G	104	2.7	3.6	-40	85	2048	128	8			●	Sequential Read	Buffer Read	WSON8 8x6mm
W25N04KVTBIU[1]	4G	104	2.7	3.6	-40	85	2048	128	8			●	Sequential Read	Buffer Read	TFBGA24 8x6mm(5x5-1)
W25N04KWZEIR	4G	104	1.7	1.95	-40	85	2048	128	8			●	Buffer Read	-	WSON8 8x6mm
W25N04KWTBIR[1]	4G	104	1.7	1.95	-40	85	2048	128	8			●	Buffer Read	-	TFBGA24 8x6mm(5x5-1)
W25N04KWZEIU[1]	4G	104	1.7	1.95	-40	85	2048	128	8			●	Sequential Read	Buffer Read	WSON8 8x6mm
W25N04KWTBIU[1]	4G	104	1.7	1.95	-40	85	2048	128	8			●	Sequential Read	Buffer Read	TFBGA24 8x6mm(5x5-1)

See datasheet for further technical information. This is subject to change without notice.

[1] please contact the factory

[2]W25N01KW series are under development. Please contact Winbond for details.

Winbond QspiNAND Flash Memory Selection Guide (Industrial Plus Grade)

Part Number	Density (bit)	Clock Frequency (MHz)	Min. Operating Voltage (V)	Max. Operating Voltage (V)	Min. Operating Temp. (°C)	Max. Operating Temp. (°C)	Page Size (Byte)	Spare Area (Byte)	On Chip ECC Count	Double Transfer Rate (DTR MHz)	SpiStack (C2h command)	Dual/Quad SPI Clocks	Default Read Mode	Able to be Switched Mode	Package
W25N512GVFJG[1]	512M	166	2.7	3.6	-40	105	2048	64	1			•	Buffer Read	Continuous Read	SOP16 300mil
W25N512GVPJG[1]	512M	166	2.7	3.6	-40	105	2048	64	1			•	Buffer Read	Continuous Read	WSON8 6x5mm
W25N512GVEJG[1]	512M	166	2.7	3.6	-40	105	2048	64	1			•	Buffer Read	Continuous Read	WSON8 8x6mm
W25N512GVBJG[1]	512M	166	2.7	3.6	-40	105	2048	64	1			•	Buffer Read	Continuous Read	TFBGA24 8x6mm(5x5-1)
W25N512GVFJT[1]	512M	166	2.7	3.6	-40	105	2048	64	1			•	Continuous Read	Buffer Read	SOP16 300mil
W25N512GVPJT[1]	512M	166	2.7	3.6	-40	105	2048	64	1			•	Continuous Read	Buffer Read	WSON8 6x5mm
W25N512GVEJT[1]	512M	166	2.7	3.6	-40	105	2048	64	1			•	Continuous Read	Buffer Read	WSON8 8x6mm
W25N512GVBJT[1]	512M	166	2.7	3.6	-40	105	2048	64	1			•	Continuous Read	Buffer Read	TFBGA24 8x6mm(5x5-1)
W25N512GVFJR[1]	512M	166	2.7	3.6	-40	105	2048	64	1			•	Buffer Read	-	SOP16 300mil
W25N512GVPJR[1]	512M	166	2.7	3.6	-40	105	2048	64	1			•	Buffer Read	-	WSON8 6x5mm
W25N512GVEJR[1]	512M	166	2.7	3.6	-40	105	2048	64	1			•	Buffer Read	-	WSON8 8x6mm
W25N512GVBJR[1]	512M	166	2.7	3.6	-40	105	2048	64	1			•	Buffer Read	-	TFBGA24 8x6mm(5x5-1)
W25N512GWFJT[1]	512M	104	1.7	1.95	-40	105	2048	64	1			•	Continuous Read	Buffer Read	SOP16 300mil
W25N512GWPJT[1]	512M	104	1.7	1.95	-40	105	2048	64	1			•	Continuous Read	Buffer Read	WSON8 6x5mm
W25N512GWEJT[1]	512M	104	1.7	1.95	-40	105	2048	64	1			•	Continuous Read	Buffer Read	WSON8 8x6mm
W25N512GWBJT[1]	512M	104	1.7	1.95	-40	105	2048	64	1			•	Continuous Read	Buffer Read	TFBGA24 8x6mm(5x5-1)
W25N512GWYJT[1]	512M	104	1.7	1.95	-40	105	2048	64	1			•	Continuous Read	Buffer Read	WLCSP (48-ball)
W25N512GWFJR[1]	512M	104	1.7	1.95	-40	105	2048	64	1			•	Buffer Read	-	SOP16 300mil
W25N512GWPJR[1]	512M	104	1.7	1.95	-40	105	2048	64	1			•	Buffer Read	-	WSON8 6x5mm
W25N512GWEJR[1]	512M	104	1.7	1.95	-40	105	2048	64	1			•	Buffer Read	-	WSON8 8x6mm
W25N512GWBJR[1]	512M	104	1.7	1.95	-40	105	2048	64	1			•	Buffer Read	-	TFBGA24 8x6mm(5x5-1)
W25N512GWYJR[1]	512M	104	1.7	1.95	-40	105	2048	64	1			•	Buffer Read	-	WLCSP (48-ball)
W25N01GVSFJG[1]	1G	104	2.7	3.6	-40	105	2048	64	1			•	Buffer Read	Continuous Read	SOP16 300mil
W25N01GVZEJG	1G	104	2.7	3.6	-40	105	2048	64	1			•	Buffer Read	Continuous Read	WSON8 8x6mm
W25N01GVTBJG[1]	1G	104	2.7	3.6	-40	105	2048	64	1			•	Buffer Read	Continuous Read	TFBGA24 8x6mm(5x5-1)
W25N01GVTCJG[1]	1G	104	2.7	3.6	-40	105	2048	64	1			•	Buffer Read	Continuous Read	TFBGA24 8x6mm(6x4)
W25N01GVSFJT[1]	1G	104	2.7	3.6	-40	105	2048	64	1			•	Continuous Read	Buffer Read	SOP16 300mil
W25N01GVZEJT[1]	1G	104	2.7	3.6	-40	105	2048	64	1			•	Continuous Read	Buffer Read	WSON8 8x6mm
W25N01GVTBJT[1]	1G	104	2.7	3.6	-40	105	2048	64	1			•	Continuous Read	Buffer Read	TFBGA24 8x6mm(5x5-1)
W25N01GVTCJT[1]	1G	104	2.7	3.6	-40	105	2048	64	1			•	Continuous Read	Buffer Read	TFBGA24 8x6mm(6x4)
W25N01GVSFJR[1]	1G	104	2.7	3.6	-40	105	2048	64	1			•	Buffer Read	-	SOP16 300mil
W25N01GVZEJR	1G	104	2.7	3.6	-40	105	2048	64	1			•	Buffer Read	-	WSON8 8x6mm
W25N01GVTBJR[1]	1G	104	2.7	3.6	-40	105	2048	64	1			•	Buffer Read	-	TFBGA24 8x6mm(5x5-1)
W25N01GVTCJR[1]	1G	104	2.7	3.6	-40	105	2048	64	1			•	Buffer Read	-	TFBGA24 8x6mm(6x4)
W25N01GWSFJG[1]	1G	104	1.7	1.95	-40	105	2048	64	1			•	Buffer Read	Continuous Read	SOP16 300mil
W25N01GWZEJG	1G	104	1.7	1.95	-40	105	2048	64	1			•	Buffer Read	Continuous Read	WSON8 8x6mm
W25N01GWTBJG[1]	1G	104	1.7	1.95	-40	105	2048	64	1			•	Buffer Read	Continuous Read	TFBGA24 8x6mm(5x5-1)
W25N01GWTCJG[1]	1G	104	1.7	1.95	-40	105	2048	64	1			•	Buffer Read	Continuous Read	TFBGA24 8x6mm(6x4)
W25N01GWSFJT[1]	1G	104	1.7	1.95	-40	105	2048	64	1			•	Continuous Read	Buffer Read	SOP16 300mil
W25N01GWZEJT[1]	1G	104	1.7	1.95	-40	105	2048	64	1			•	Continuous Read	Buffer Read	WSON8 8x6mm
W25N01GWTBJT[1]	1G	104	1.7	1.95	-40	105	2048	64	1			•	Continuous Read	Buffer Read	TFBGA24 8x6mm(5x5-1)
W25N01GWTCJT[1]	1G	104	1.7	1.95	-40	105	2048	64	1			•	Continuous Read	Buffer Read	TFBGA24 8x6mm(6x4)
W25N01JWSFJG[1]	1G	166	1.7	1.95	-40	105	2048	64	1	80		•	Buffer Read	Continuous Read	SOP16 300mil
W25N01JWZEJG[1]	1G	166	1.7	1.95	-40	105	2048	64	1	80		•	Buffer Read	Continuous Read	WSON8 8x6mm
W25N01JWTBJG[1]	1G	166	1.7	1.95	-40	105	2048	64	1	80		•	Buffer Read	Continuous Read	TFBGA24 8x6mm(5x5-1)
W25N01JWSFJT[1]	1G	166	1.7	1.95	-40	105	2048	64	1	80		•	Continuous Read	Buffer Read	SOP16 300mil
W25N01JWZEJT[1]	1G	166	1.7	1.95	-40	105	2048	64	1	80		•	Continuous Read	Buffer Read	WSON8 8x6mm
W25N01JWTBJT[1]	1G	166	1.7	1.95	-40	105	2048	64	1	80		•	Continuous Read	Buffer Read	TFBGA24 8x6mm(5x5-1)
W25N01KVZPJR[1]	1G	104	2.7	3.6	-40	105	2048	64	4			•	Buffer Read	-	WSON8 6x5mm
W25N01KVZEJR[1]	1G	104	2.7	3.6	-40	105	2048	64	4			•	Buffer Read	-	WSON8 8x6mm
W25N01KVZPJU[1]	1G	104	2.7	3.6	-40	105	2048	96	4			•	Sequential Read	Buffer Read	WSON8 6x5mm
W25N01KVZEJU[1]	1G	104	2.7	3.6	-40	105	2048	96	4			•	Sequential Read	Buffer Read	WSON8 8x6mm
W25N01KVZPJE[1]	1G	104	2.7	3.6	-40	105	2048	96	4			•	Buffer Read	Sequential Read	WSON8 6x5mm
W25N01KVZEJE[1]	1G	104	2.7	3.6	-40	105	2048	96	4			•	Buffer Read	Sequential Read	WSON8 8x6mm
W25N01KWZPJG[1,2]	1G	104	1.7	1.95	-40	105	2048	64	4			•	Buffer Read	Continuous Read	WSON8 6x5mm
W25N01KWZEJG[1,2]	1G	104	1.7	1.95	-40	105	2048	64	4			•	Buffer Read	Continuous Read	WSON8 8x6mm
W25N01KWZPJT[1,2]	1G	104	1.7	1.95	-40	105	2048	64	4			•	Continuous Read	Buffer Read	WSON8 6x5mm
W25N01KWZEJT[1,2]	1G	104	1.7	1.95	-40	105	2048	64	4			•	Continuous Read	Buffer Read	WSON8 8x6mm
W25N01KWZPJR[1,2]	1G	104	1.7	1.95	-40	105	2048	64	4			•	Buffer Read	-	WSON8 6x5mm
W25N01KWZEJR[1,2]	1G	104	1.7	1.95	-40	105	2048	64	4			•	Buffer Read	-	WSON8 8x6mm
W25N01KWZPJU[1,2]	1G	104	1.7	1.95	-40	105	2048	64	4			•	Sequential Read	Buffer Read	WSON8 6x5mm
W25N01KWZEJU[1,2]	1G	104	1.7	1.95	-40	105	2048	64	4			•	Sequential Read	Buffer Read	WSON8 8x6mm
W25N01KWZPJE[1,2]	1G	104	1.7	1.95	-40	105	2048	64	4			•	Buffer Read	Sequential Read	WSON8 6x5mm
W25N01KWZEJE[1,2]	1G	104	1.7	1.95	-40	105	2048	64	4			•	Buffer Read	Sequential Read	WSON8 8x6mm
W25N02KVZEJR	2G	104	2.7	3.6	-40	105	2048	128	8			•	Buffer Read	-	WSON8 8x6mm
W25N02KVTBJR[1]	2G	104	2.7	3.6	-40	105	2048	128	8			•	Buffer Read	-	TFBGA24 8x6mm(5x5-1)
W25N02KVZEJU[1]	2G	104	2.7	3.6	-40	105	2048	128	8			•	Sequential Read	Buffer Read	WSON8 8x6mm
W25N02KVTBJU[1]	2G	104	2.7	3.6	-40	105	2048	128	8			•	Sequential Read	Buffer Read	TFBGA24 8x6mm(5x5-1)
W25N02KVZEJE[1]	2G	104	2.7	3.6	-40	105	2048	128	8			•	Buffer Read	Sequential Read	WSON8 8x6mm
W25N02KVTBJE[1]	2G	104	2.7	3.6	-40	105	2048	128	8			•	Buffer Read	Sequential Read	TFBGA24 8x6mm(5x5-1)

Part Number	Density (bit)	Clock Frequency (MHz)	Min. Operating Voltage (V)	Max. Operating Voltage (V)	Min. Operating Temp. (°C)	Max. Operating Temp. (°C)	Page Size (Byte)	Spare Area (Byte)	On Chip ECC Count	Double Transfer Rate (DTR MHz)	SpiStack (C2h command)	Dual/Quad SPI Clocks	Default Read Mode	Able to be Switched Mode	Package
W25N02JWSFJF[1]	2G	166	1.7	1.95	-40	105	2048	64	1	80		●	Buffer Read	Continuous Read	SOP16 300mil
W25N02JWZEJF[1]	2G	166	1.7	1.95	-40	105	2048	64	1	80		●	Buffer Read	Continuous Read	WSON8 8x6mm
W25N02JWTBJF[1]	2G	166	1.7	1.95	-40	105	2048	64	1	80		●	Buffer Read	Continuous Read	TFBGA24 8x6mm(5x5-1)
W25N02JWSFJC[1]	2G	166	1.7	1.95	-40	105	2048	64	1	80		●	Continuous Read	Buffer Read	SOP16 300mil
W25N02JWZEJC[1]	2G	166	1.7	1.95	-40	105	2048	64	1	80		●	Continuous Read	Buffer Read	WSON8 8x6mm
W25N02JWTBJC[1]	2G	166	1.7	1.95	-40	105	2048	64	1	80		●	Continuous Read	Buffer Read	TFBGA24 8x6mm(5x5-1)
W25N02KWZEJR	2G	104	1.7	1.95	-40	105	2048	128	8			●	Buffer Read	-	WSON8 8x6mm
W25N02KWTBJR[1]	2G	104	1.7	1.95	-40	105	2048	128	8			●	Buffer Read	-	TFBGA24 8x6mm(5x5-1)
W25N02KWZEJU[1]	2G	104	1.7	1.95	-40	105	2048	128	8			●	Sequential Read	Buffer Read	WSON8 8x6mm
W25N02KWTBJU[1]	2G	104	1.7	1.95	-40	105	2048	128	8			●	Sequential Read	Buffer Read	TFBGA24 8x6mm(5x5-1)
W25N04KVZEJR[1]	4G	104	2.7	3.6	-40	105	2048	128	8			●	Buffer Read	-	WSON8 8x6mm
W25N04KVTBJR[1]	4G	104	2.7	3.6	-40	105	2048	128	8			●	Buffer Read	-	TFBGA24 8x6mm(5x5-1)
W25N04KVZEJU[1]	4G	104	2.7	3.6	-40	105	2048	128	8			●	Sequential Read	Buffer Read	WSON8 8x6mm
W25N04KVTBJU[1]	4G	104	2.7	3.6	-40	105	2048	128	8			●	Sequential Read	Buffer Read	TFBGA24 8x6mm(5x5-1)
W25N04KWZEJR[1]	4G	104	1.7	1.95	-40	105	2048	128	8			●	Buffer Read	-	WSON8 8x6mm
W25N04KWTBJR[1]	4G	104	1.7	1.95	-40	105	2048	128	8			●	Buffer Read	-	TFBGA24 8x6mm(5x5-1)
W25N04KWZEJU[1]	4G	104	1.7	1.95	-40	105	2048	128	8			●	Sequential Read	Buffer Read	WSON8 8x6mm
W25N04KWTBJU[1]	4G	104	1.7	1.95	-40	105	2048	128	8			●	Sequential Read	Buffer Read	TFBGA24 8x6mm(5x5-1)

See datasheet for further technical information. This is subject to change without notice.

[1] Please contact the factory.

[2] W25N01KW series are under development. Please contact Winbond for details.

Winbond Part Number Naming Rule

W 25N 01 G V ZE A G

1 Winbond Standard Products

W: Winbond

2 Product Family

25N: QspiNAND
25M: SpiStack

3 Density

512: 512Mb
01: 1Gb
02: 2Gb
04: 4Gb

4 Product Version

G: 46nm 1st generation
K: 32nm 1st generation
J: 46nm 2nd generation

5 Voltage

V: 3V
W: 1.8V

6 Packages

SF(F): SOP16 (SOIC) 300mil
ZP(P): WSON8 6x5x0.8mm
ZE(E): WSON8 8x6x0.8mm
TB(B): TFBGA24 (5x5 ball array)
TC(C): TFBGA24 (6x4 ball array)
BY(Y): WLCSP

7 Temperature Range

I: Industrial (-40ºC to +85ºC)
J: Industrial Plus (-40ºC to +105ºC)
A: Automotive 2 (-40ºC to +105ºC)
K: Automotive 2 Plus (-40ºC to +115ºC)

8 Options

G: Default B.R. mode, can switch to C.R.
E: Default B.R. mode, can switch to S.R
R: B.R. mode only
T: Default C.R. mode, can switch to B.R
U: Default S.R. mode, can switch to B.R
C: Default C.R. mode with linear addressing, can switch to B.R
F: Default B.R. mode with linear addressing, can switch to C.R.

(B.R.= Buffer Read; C.R.= Continuous Read; S.R. = Sequential Read)

About Winbond

Winbond Electronics Corporation is a leading global supplier of semiconductor memory solutions. The Company provides customer-driven memory solutions backed by the expert capabilities of product design, R&D, manufacturing, and sales services. Winbond's product portfolio, consisting of Specialty DRAM, Mobile DRAM, Code Storage Flash, and TrustME® Secure Flash, is widely used by tier-1 customers in communication, consumer electronics, automotive and industrial, and computer peripheral markets. Winbond is headquartered in Central Taiwan Science Park (CTSP), and it has subsidiaries in the USA, Japan, Israel, China, Hong Kong, and Germany. Based on Taichung and Kaohsiung 12-inch fabs in Taiwan, Winbond keeps pace to develop in-house technologies to provide high-quality memory IC products.

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