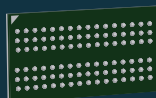




Long-Term Support  
World Class Quality



**DDR3 SDRAM**  
Up to 2133Mbps data rate

## ISSI DDR3 Product Features:

- Bidirectional differential data strobe
- Data masking per byte on Write commands
- Programmable Burst length of 4 or 8
- Programmable CAS Latency
- Auto-Refresh and Self-Refresh Modes
- OCD (Driver Adjustment)
- ODT (On Die Termination) supported
- Write Leveling
- Packages: 96-ball BGA for x16, 78-ball BGA for x8
- Long-term support

## Applications:

- **Telecom/Networking**  
Broadband Gateways  
Ethernet Switches  
Enterprise Access Points
- **Automotive**  
Infotainment  
Telematics  
Safety Cameras  
Driver Monitoring Systems
- **Targeted Consumer**  
Cameras  
IoT devices
- **Industrial**  
Human Machine Interface  
Embedded Computing  
Industrial Controls

DDR3 is implemented in a variety of both new and running applications that require high-speed external memory. The popularity is largely due to fact that the DDR3/3L interface is supported by most leading manufacturers of System-on-Chip (SoC) like Ambarella, Intel, Microsemi, NXP, TI, Renesas, ST Micro, and AMD.

DDR3/3L has also gained tremendous traction due to its advances in performance and its useful features:

- **Data bandwidth/Power:** DDR3 has a maximum data rate of more than twice that of the data rate of DDR2, yet DDR3 offers a reduced power consumption compared to DDR2. DDR3L is even better.
- **Signal Integrity:** It has adjustable on-die termination (ODT) with dynamic control and calibrated output impedance buffers.
- **Layout Topology:** Fly-by topology is supported with DDR3, allowing multiple DRAM to easily be placed on the board, while reducing potential switching noise.
- **Testing/Debugging:** DDR3 can be put in DLL disable mode for memory access at low clock frequencies for testing or debugging.
- **System stability:** a Reset input was added for increased stability.

ISSI offers a broad range of DDR3 and DDR3L DRAM from 1Gbit through 16Gbit. Please refer to the table below and email [DRAM@issi.com](mailto:DRAM@issi.com) for more information.



## ISSI DDR3 Ordering Options

Den.	Speeds <sup>7</sup>	Part No.	Org.	On-chip ECC?	Ordering Options	Status
1G	DDR3-1333, 1600	IS43/46TR16640ED	64M x 16	✓	-15HBLI, -125KBLI	Prod
	DDR3-1600, 1866, 2133	IS43/46TR16640C[L]	64M x 16		-125JBL, -125JBLI, -107MBL, -107MBLI, -093NBL, -093NBLI	Prod
	DDR3-1600, 1866, 2133	IS43/46TR81280C[L]	128M x 8		-125JBL, -125JBLI, -107MBL, -107MBLI, -093NBL, -093NBLI	Prod
2G	DDR3-1600, 1866, 2133	IS43/46TR16128D[L]	128M x 16		-125KBL, -125KBLI, -107MBL, -107MBLI, -093NBL, -093NBLI	Prod
	DDR3-1600, 1866	IS43/46TR82560D[L]	256M x 8		-125KBL, -125KBLI, -107MBL, -107MBLI	Prod
4G	DDR3-1600, 1866	IS43/46TR16256EC[L] <sup>6</sup>	256M x 16	✓	-125LB2LI, -107NB2LI	Prod
	DDR3-1600, 1866, 2133	IS43/46TR16256B[L]	256M x 16		-125KBL, -125KBLI, -107MBL, -107MBLI, -093NBL, -093NBLI	Prod
	DDR3-1600, 1866	IS43/46TR85120EC[L] <sup>6</sup>	512M x 8	✓	-125LB2LI, -107NB2LI	Prod
	DDR3-1600, 1866	IS43/46TR85120B[L]	512M x 8		-125KBL, -125KBLI, -107MBL, -107MBLI	Prod
8G	DDR3-1600, 1866, 2133	IS43/46TR16512B[L]	512M x 16		-125KBL, -125KBLI, -107MBL, -107MBLI, -093NBL, -093NBLI	Prod
	DDR3-1600, 1866	IS43/46TR16512S2D[L] <sup>5</sup>	512M x 16		-125KBL, -125KBLI, -107MBL, -107MBLI	Prod
	DDR3-1600, 1866	IS43/46TR81024B[L]	1G x 8		-125KBL, -125KBLI, -107MBL, -107MBLI	Prod
16G	DDR3-1600	IS43/46TR16K01S2A[L] <sup>5</sup>	1G x 16		-125KBL, -125KBLI	Prod

### Notes:

1. Automotive grade DDR3 part numbers begin with "IS46TR", and end with "A1" - Automotive [-40°C to 85°C], "A2" - Automotive [-40°C to 105°C], "A25" - Automotive [-40°C to 115°C], or "A3" - Automotive [-40°C to 125°C].

2. DDR3L is denoted with "L" and supports 1.35V and 1.5V.  
3. Additional speeds may be available.  
4. S = Samples, Prod = Production  
5. These products have two CS, and are Dual Rank  
6. Certified to ASIL-B.  
7. Each speed option supports slower speed settings as noted in datasheet.