



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
- **Targeted Consumer**
Cameras
IoT devices
- **Automotive**
Infotainment
Telematics
Safety Cameras
Driver Monitoring Systems
- **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 Xilinx.

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 for more information.

ISSI DDR3 Ordering Options

Den.	Speeds ⁷	Part No.	Org.	Ordering Options	Status
1G	DDR3-1333, 1600	IS43/46TR16640ED ⁶	64M x 16	-15HBLI, -125KBLI	Prod
	DDR3-1600, 1866	IS43/46TR16640C[L]	64M x 16	-125JBL, -125JBLI, -107MBL, -107MBLI	Prod
	DDR3-1600	IS43/46TR81280ED ⁶	128M x 8	-125KBLI	Prod
	DDR3-1600, 1866	IS43/46TR81280C[L]	128M x 8	-125JBL, -125JBLI, -107MBL, -107MBLI	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] ⁶	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] ⁶	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] ⁵	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] ⁵	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. These products have on-chip ECC.

7. Each speed option supports slower speed settings as noted in datasheet.