



# DRAM

## 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**
  - Access Nodes
  - Aggregation Nodes
  - Switches and Routers
  - Packet Optical Transport
  - Network Storage
  - (PON OLT, DSLAM, CMTS, Wireless)
- **Automotive**
  - Infotainment
  - Telematics
  - Driver Information Systems
- **Industrial**
  - Human Machine Interface
  - Embedded Computing

### Key Timing Parameters

Speed Grade	-15G	-15H	-125J	-125K	-107M	-093N	Units
	DDR3-1333	DDR3-1333	DDR3-1600	DDR3-1600	DDR3-1866	DDR3-2133	
CL-tRCD-tRP	8-8-8	9-9-9	10-10-10	11-11-11	13-13-13	14-14-14	tCK
tCK (CL = 7)	1.875	1.875	1.875	1.875	1.875	1.875	ns
tCK (CL = 8)	1.5	1.875	1.5	1.875	1.875	1.875	ns
tCK (CL = 9)	--	1.5	1.5	1.5	1.5	1.5	ns
tCK (CL = 10)	--	--	1.25	1.5	1.5	1.5	ns
tCK (CL = 11)	--	--	--	1.25	1.25	1.25	ns
tCK (CL = 12)	--	--	--	--	--	--	ns
tCK (CL = 13)	--	--	--	--	1.07	1.07	ns
tCK (CL = 14)	--	--	--	--	--	0.938	ns
Frequency (max)	666	666	800	800	933	1066	MHz

Note: These are general specs. For any given part number, please refer to the corresponding datasheet.

### ISSI DDR3 Ordering Options

Den.	Speeds	Part No.	Org.	Pkg.	Ordering Options	Status
1G	DDR3-1333, 1600, 1866	IS43TR16640A(L)	64M x 16	BGA[96]	<b>-15GBL, -15GBLI, -125JBL, -125JBLI, -107M</b>	Prod
	DDR3-1333, 1600, 1866, 2133	IS43TR16640B(L)	64M x 16	BGA[96]	<b>-15GBL, -15GBLI, -125KBL, -125KBLI, -125JBL, -125JBLI, -107M, -093N</b>	Prod
2G	DDR3-1333, 1600, 1866, 2133	IS43TR81280B(L)	128M x 8	BGA[78]	<b>-15GBL, -15GBLI, -125KBL, -125KBLI, -125JBL, -125JBLI, -107M, -093N</b>	Prod
	DDR3-1333, 1600, 1866, 2133	IS43TR16128B(L)	128M x 16	BGA[96]	<b>-15HBL, -15HBLI, -125KBL, -125KBLI, -107MBL, -107MBLI, -093NBL</b>	Prod
4G	DDR3-1333, 1600, 1866, 2133	IS43TR16128C(L)	128M x 16	BGA[96]	<b>-15HBL, -15HBLI, -125KBL, -125KBLI, -107MBL, -107MBLI, -093NBL</b>	Prod
	DDR3-1333, 1600, 1866, 2133	IS43TR82560B(L)	256M x 8	BGA[78]	<b>-15HBL, -15HBLI, -125KBL, -125KBLI, -107MBL, -107MBLI, -093NBL</b>	Prod
8G	DDR3-1333, 1600, 1866, 2133	IS43TR82560C(L)	256M x 8	BGA[78]	<b>-15HBL, -15HBLI, -125KBL, -125KBLI, -107MBL, -107MBLI, -093NBL</b>	Prod
	DDR3-1333, 1600, 1866, 2133	IS43TR16256A(L)	256M x 16	BGA[96]	<b>-15HBL, -15HBLI, -125KBL, -125KBLI, -107MBL, -107MBLI, -093NBL</b>	Prod
8G	DDR3-1333, 1600, 1866, 2133	IS43TR85120A(L)	512M x 8	BGA[78]	<b>-125KBL, -125KBLI, -107MBL, -107MBLI, -093NBL</b>	Prod
	DDR3-1333, 1600, 1866	IS43TR16512A(L)	512M x 16	BGA[96]	<b>-15HBL, -15HBLI, -125KBL, -125KBLI, -107MBL</b>	Prod

Notes:  
 1. Automotive grade DDR3 part numbers begin with "IS46TR".  
 2. DDR3L is denoted with "L".  
 3. Additional speeds may be available.  
 4. S = Samples, Prod = Production  
 5. Ordering options in bold are only available for 1.5V.