



Mobile DDR SDRAM

Ideal for applications requiring
memory bandwidth and low-power

► Features

- Standard double-data rate clock timing
- Four internal banks with bank controls
- Data masking per byte on Write commands
- Programmable burst length of 2, 4, or 8
- Programmable CAS Latency of 2 or 3
- Auto-Refresh and Self-Refresh Modes
- Auto-Precharge Supported
- JEDEC compliant BGA: 60-ball (x16)
90-ball (x32), 152-ball PoP BGA (x32)

Density	Configuration	Part Number
32Mb	2M x 16	IS43LR16200C
	1M x 32	IS43LR32100C
64Mb	4M x 16	IS43LR16400B
	2M x 32	IS43LR32200B
128Mb	8M x 16	IS43LR16800F
	4M x 32	IS43LR32400F
256Mb	16M x 16	IS43LR16160F
	8M x 32	IS43LR32800F
512Mb	32M x 16	IS43LR16320B, (IS43LR16320C)
	16M x 32	IS43LR32160B, (IS43LR32160C)
1Gb	64M x 16	(IS43LR16640A)
	32M x 32	(IS43LR32320B)
2Gb	64M x 32	(IS43LR32640A)

Notes:

1. Automotive grade mDDR part numbers begin with "IS46LR".
2. Part numbers in parenthesis are sampling. All others are in mass production.
3. Please check for availability of PoP BGA package options.

► Save Power

- Low supply voltage: 1.8V +/- 0.1V
- Clock Stop, Power Down, and Deep Power Down Modes (DPD)
- Extended Mode Register (EMR)
 - On-chip Temperature Compensated Self-Refresh (TCSR)
 - Partial Array Self-Refresh (PASR)
 - Selectable Output Drive Strength (DS)

Options

Clock cycle time 6ns (166MHz) 5ns (200MHz)	-5 -6
Package Leadfree BGA Leadfree PoP BGA	BL BPL
Temperature grades Commercial (0°C to +70°C) Industrial (-40°C to +85°C) Automotive A1 (-40°C to +85°C) Automotive A2 (-40°C to +105°C)	(blank) I A1 A2

128Mbit Power Specification

Operating Burst Read	IDD4R	70mA max.
Precharge Power Down Standby	IDD2PS	80µA max.
Full Array Self-Refresh	IDD6	200µA max.
Deep Power Down	IDD8	10µA max.