

MOTOROLA ZERO BUS TURNAROUND®

FAST STATIC RAMS FOR THE COMMUNICATIONS MARKET

The ZBT® RAM is a synchronous fast static RAM designed to provide 100% bus utilization. The ZBT RAM eliminates dead bus cycles during back-to-back read/write and write/read cycles. These devices allow efficient bus usage in high performance systems allowing maximum bus throughput for a given system topology.

Product Description

The 4M-bit ZBT RAM is available in 128K x 36 and 256K x 18 configurations and comes in both pipeline and flow-through versions. A new 8M-bit version will be available in 256K x 36 and 512K x 18 configurations. Simplified burst logic allows the ZBT RAM to perform well in burst applications. The pinout is also similar to that of BurstRAMs, which simplifies the integration of ZBT parts into existing burst sockets. Address, data, and control inputs are all synchronous to the clock input with the exception of the output enable (\overline{G}) and linear burst order (\overline{LBO}) signals.

Write cycles are internally self-timed and are initiated by the rising edge of the clock (CK) input. This feature eliminates complex off-chip write pulse generation and provides increased timing flexibility for incoming signals.

For read cycles, pipelined ZBT RAM output data is temporarily stored by an edge-triggered output register and then released to the output buffers at the next rising edge of clock (CK).

Features

- Single 3.3 V and 2.5 V Power Supplies
- Selectable Burst Order (Linear or Interleaved)
- Internally Self-Timed Write
- Byte Write Control
- ADV Controlled Burst

Suggested Applications

- Switch/Hub Shared Fabric and Router Tables
- Network Interface Cards (NIC)
- LAN and WAN Switches
- Networking Computer
- Gigabit Switching



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REV 6
10/26/99

For More Information On This Product,
Go to: www.freescale.com

 **Digital DNA™**
from Motorola

Freescale Semiconductor, Inc.

Available Products

Description	Part Number	Configuration	V _{DD}	V _{DDQ}	Speed	Package	Comments
4M	MCM63Z736	128K x 36	3.3 V	N/A	143/133/100 MHz	100 TQFP	Pipelined
	MCM63Z737				10/11/15 ns		Flow-Through
	MCM63Z818	256K x 18			143/133/100 MHz		Pipelined
	MCM63Z819				10/11/15 ns		Flow-Through

New Products (Samples 4Q99)

Descrip- tion	Part Number	Config- uration	VDD	VDDQ	Speed	Package	Comments
8M	MCM63Z836	256K x 36	3.3 V	2.5/ 3.3 V	7/8/8.5 ns Latency	100 TQFP 119 PBGA	Flow-Through/ Pipelined
	MCM63Z834				10/11/15 ns Latency		
	MCM63Z918	512K x 18			7/8/8.5 ns Latency		
	MCM63Z916				10/11/15 ns Latency		
	MCM64Z836	256K x 36	2.5 V	2.5 V	7/8/8.5 ns Latency		
	MCM64Z834				10/11/15 ns Latency		
	MCM64Z918	512K x 18			7/8/8.5 ns Latency		
	MCM64Z916				10/11/15 ns Latency		
4M	MCM64Z736K	128K x 36	2.5 V	2.5 V	143/133/100 MHz	100 TQFP	Pipelined
	MCM64Z737K				10/11/15 ns		Flow-Through
	MCM64Z818K	256K x 18			143/133/100 MHz		Pipelined
	MCM64Z819K				10/11/15 ns		Flow-Through

Contact Information

- Motorola offers data sheets, application notes and models for Fast Static RAM products. In addition, more information is provided for these products at:

<http://motorola.com/fastsrms>

- For all other inquiries about Motorola products, please contact the Motorola Customer Response Center:

Phone: 800-521-6274

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