

NS7520: Active Command To Read / Write Command Delay Time, tRCD - *Minimum*, is the most critical timing.
tRCD = 1 BCLK. with 0 wait states, 2 BCLK's with 1 wait state.
CPU @ 55MHz, 0 wait states - tRCD = 16.5ns Min.
CPU @ 55MHz, 1 wait state - tRCD = 20ns Min.
CPU @ 46MHz, 0 wait states - tRCD = 20ns Min.

NET+50: Auto Refresh Period, tRFC - *Minimum*, is the most critical timing. (Sometimes listed as tRC)
Select only those SDRAM components that specify an auto refresh period that is 67.5 ns or less.
This timing is fixed by the 3 Refresh BCLK cycles.

Notes:

- 1) **NS7520:** Bus speed vs. wait states. **Full** = 0 waits @ 55MHz. **Reduced** = 1 wait @ 55MHz; 0 waits @ 46MHz or less.
- 2) **NET+50:** Bus speed. **Full** = 44.2368MHz. **Reduced** = 42.8MHz Maximum
- 3) **Status:** **APR** = A Digi Approved RoHS part
- 4) This ARM7 memory controller does not support any SDRAM's with more than 8 CAS inputs
- 5) Some of these listed SDRAM part numbers may not be "in stock" items.
- 6) This listing is not exhaustive, and is subject to change due to the nature of the SDRAM market.
- 7) Elpida was formed by joint venture of Hitachi and NEC.

SDRAM Description	Manufacturer	Part Number	tRCD	tRFC	NS7520 - Note			NET+50 - Note		Status - Note
					1	2	3	1	2	
					Speed vs.					
					ns	ns	Waits	Speed	Digi	RoHS
64MBits x16										
64MB, 4Mx16, 3.3V, TSOP54	Micron Tech., Inc.	MT48LC4M16A2TG-75:G	20	66	Reduced	Full				
64MB, 4Mx16, 3.3V, TSOP54	Micron Tech., Inc.	MT48LC4M16A2TG-7E:G	15	66	Full	Full				
64MB, 4Mx16, 3.3V, TSOP54, RoHS	Micron Tech., Inc.	MT48LC4M16A2P-75:G	20	66	Reduced	Full				
64MB, 4Mx16, 3.3V, TSOP54, RoHS	Micron Tech., Inc.	MT48LC4M16A2P-7E:G	15	66	Full	Full			APR	
64MB, 4Mx16, 3.3V, BGA54	Micron Tech., Inc.	MT48LC4M16AF4-7E:G	15	66	Full	Full				
64MB, 4Mx16, 3.3V, BGA54, RoHS	Micron Tech., Inc.	MT48LC4M16AB4-7E:G	15	66	Full	Full				
64MB, 4Mx16, 3.3V, TSOP54, RoHS	Integrated Silicon Solution, Inc.	IS42S16400B-7TL	16	63	Full	Full				
64MB, 4Mx16, 3.3V, TSOP54, RoHS	Elpida	EDS6416AHTA-75-E	20	67.5	Reduced	Full				
64MB, 4Mx16, 3.3V, TSOP54	Etron Tech, Inc.	EM638165TS-7	20	63	Reduced	Full				
64MB, 4Mx16, 3.3V, TSOP54, RoHS	Etron Tech, Inc.	EM638165TS-7G	20	63	Reduced	Full				
64MB, 4Mx16, 3.3V, BGA60	Etron Tech, Inc.	EM638165BE-7	20	63	Reduced	Full				
64MB, 4Mx16, 3.3V, BGA60, RoHS	Etron Tech, Inc.	EM638165BE-7G	20	63	Reduced	Full			APR	
64MB, 4Mx16, 3.3V, BGA60, RoHS	Winbond	W9864G6DB-7	20	65	Reduced	Full				
64MB, 4Mx16, 3.3V, TSOP54, RoHS	Samsung	K4S641632H-UC(L)75	20	65	Reduced	Full				
64MBits x32										
64MB, 2Mx32, 3.3V, TSOP86	Micron Tech., Inc.	MT48LC2M32B2TG-7:G	20	70	Reduced	Reduced				
64MB, 2Mx32, 3.3V, TSOP86, RoHS	Micron Tech., Inc.	MT48LC2M32B2P-7:G	20	70	Reduced	Reduced			APR	
64MB, 2Mx32, 3.3V, TSOP86, RoHS	Micron Tech., Inc.	MT48LC2M32B2P-6:G	18	60	Reduced	Full				
64MB, 2Mx32, 3.3V, TSOP86, RoHS	Integrated Silicon Solution, Inc.	IS42S32200B-7TL	20	70	Reduced	Reduced			APR	
64MB, 2Mx32, 3.3V, TSOP86, RoHS	Integrated Silicon Solution, Inc.	IS42S32200B-6TL	18	60	Reduced	Full				
64MB, 2Mx32, 3.3V, TSOP86, RoHS	Elpida	EDS6432AFTA-75-E	20	67.5	Reduced	Full				
64MB, 2Mx32, 3.3V, TSOP86, RoHS	Samsung	K4S643232H-UC/L70	21	70	Reduced	Reduced			APR	
64MB, 2Mx32, 3.3V, TSOP86, RoHS	Samsung	K4S643232H-UC/L60	18	60	Reduced	Full				
64MB, 2Mx32, 3.3V, TSOP86, RoHS	Samsung	K4S643232H-UC/L55	16.5	55	Full	Full				
64MB, 2Mx32, 3.3V, TSOP86, RoHS	Samsung	K4S643232H-UC/L50	15	55	Full	Full				
128MB x32										
128MB, 4Mx32, 3.3V, TSOP86	Micron Tech., Inc.	MT48LC4M32B2TG-7:G	20	70	Reduced	Reduced				
128MB, 4Mx32, 3.3V, TSOP86, RoHS	Micron Tech., Inc.	MT48LC4M32B2P-7:G	20	70	Reduced	Reduced			APR	
128MB, 4Mx32, 3.3V, BGA90, RoHS	Micron Tech., Inc.	MT48LC4M32B2F5-7:G	20	70	Reduced	Reduced				
128MB, 4Mx32, 3.3V, BGA90	Micron Tech., Inc.	MT48LC4M32B2B5-7:G	20	70	Reduced	Reduced				
128MB, 4Mx32, 3.3V, BGA90, RoHS	Micron Tech., Inc.	MT48LC4M32B2F5-6:G	18	60	Reduced	Full				
128MB, 4Mx32, 3.3V, BGA90	Micron Tech., Inc.	MT48LC4M32B2B5-6:G	18	60	Reduced	Full				
128MB, 4Mx32, 3.3V, TSOP86	Micron Tech., Inc.	MT48LC4M32B2TG-6:G	18	60	Reduced	Full				
128MB, 4Mx32, 3.3V, TSOP86, RoHS	Micron Tech., Inc.	MT48LC4M32B2P-6:G	18	60	Reduced	Full				
128MB, 4Mx32, 3.3V, TSOP86	Elpida	EDS1232AATA-70	20	67.5	Reduced	Full				
128MB, 4Mx32, 3.3V, TSOP86	Elpida	EDS1232AATA-60	15	60	Full	Full				
128MB, 4Mx32, 3.3V, TSOP86, RoHS	Elpida	EDS1232AATA-70-E	20	67.5	Reduced	Full				
128MB, 4Mx32, 3.3V, TSOP86, RoHS	Elpida	EDS1232AATA-60-E	15	60	Full	Full				