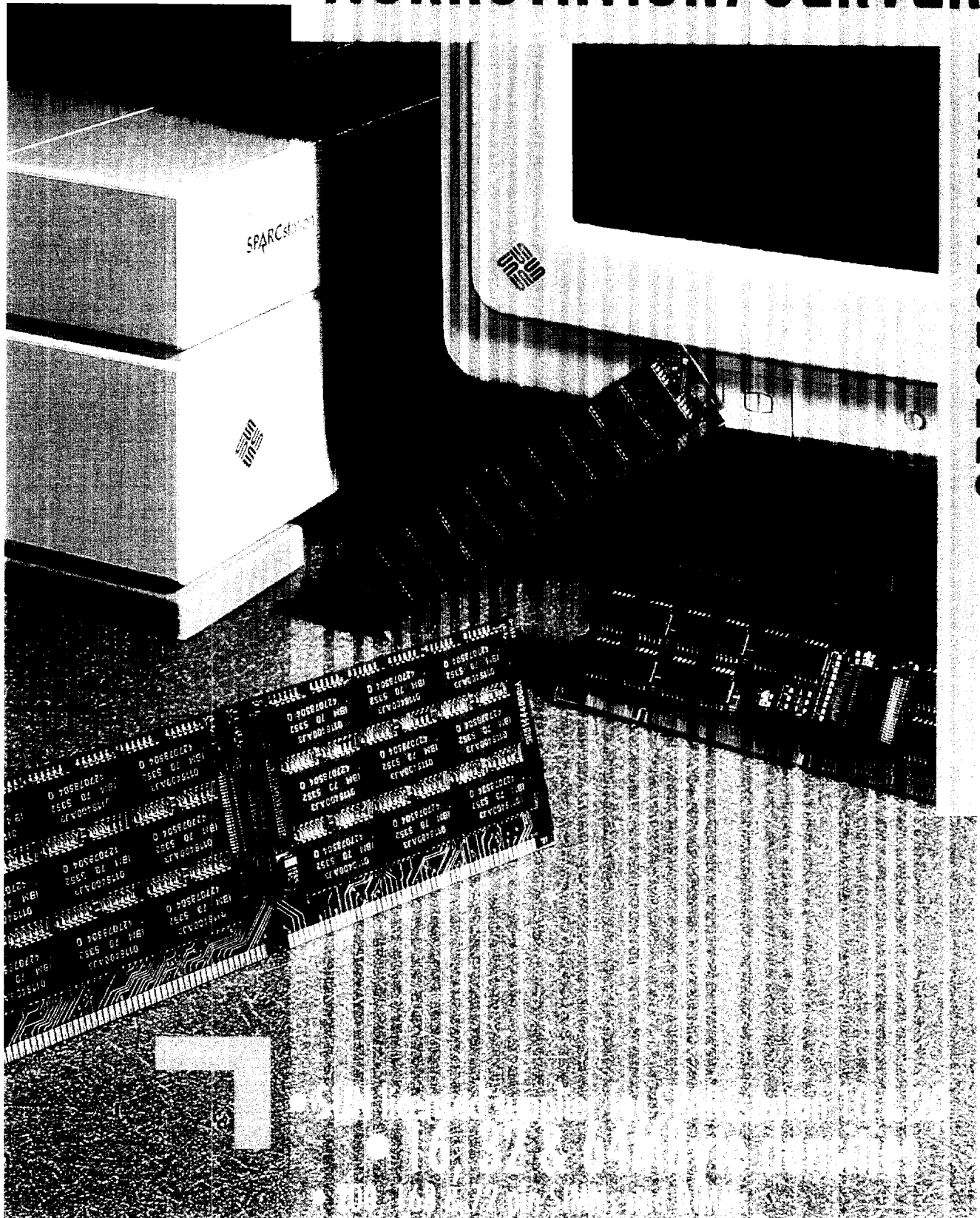


WORKSTATION/SERVER

DRAM MODULES



• Custom designs available



SMART

Modular Technologies

SMRTD004

QUICK REFERENCE GUIDE: WORKSTATION DRAM MODULES

DENSITY	ORG.	REFSH.	DRAMS		DIMEN. LxHxT ¹ (in.)	SMART PART NO. ²	COMMENTS
			4M	16M			

200 PIN, 5V, FAST PAGE MODE (FPM) 144 BIT I/O

64MB	4M x 144	4K	-	36	5.65 x 1.80 x 0.220	SM51444000A6/7	
64MB	4M x 144	2K	-	36	5.65 x 1.94 x 0.220	SM514440006/7	
32MB	2M x 144	2K	-	18	5.65 x 1.94 x 0.220	SM514420006/7	
16MB	1M x 144	1K	36	-	5.65 x 1.80 x 0.220	SM514410006/7	
16MB	1M x 144	1K	36	-	5.65 x 1.40 x 0.220	SM51441000LP6/7	

168 PIN, 5V, FAST PAGE MODE (FPM) 80 BIT I/O (IN DEVELOPMENT)

64MB	8M x 80	4K	-	40	5.25 x 1.50 x T	SM580084004EXYZ	40 bit word control
64MB	8M x 80	2K	-	40	5.25 x 1.50 x T	SM580088002EXYZ	40 bit word control
64MB	8M x 80	1K	-	40	5.25 x 1.50 x T	SM580083001EXYZ	40 bit word control
32MB	4M x 80	4K	-	20	5.25 x 1.00 x T	SM580044004EXYZ	40 bit word control
32MB	4M x 80	2K	-	20	5.25 x 1.00 x T	SM580048002EXYZ	40 bit word control
32MB	4M x 80	1K	-	20	5.25 x 1.00 x T	SM580043001EXYZ	40 bit word control
16MB	2M x 80	2K	-	10	5.25 x 1.00 x T	SM580028002EXYZ	40 bit word control
16MB	2M x 80	1K	-	10	5.25 x 1.00 x T	SM580023001EXYZ	40 bit word control
8MB	1M x 80	1K	-	5	5.25 x 1.00 x T ₁	SM580013001EXYZ	40 bit word control
8MB	1M x 80	2K	-	5	5.25 x 1.00 x T ₁	SM580013002EXYZ	40 bit word control
8MB	1M x 80	1K	20	-	5.25 x 1.00 x T	SM580014001EXYZ	40 bit word control

168 PIN, 3.3V, EXTENDED DATA OUT (EDO) 72 BIT I/O

64MB	8M x 72	4K	-	36	5.25 x 1.50 x T	SM572084094EXYZ	36 bit word control
64MB	8M x 72	2K	-	36	5.25 x 1.50 x T	SM572084092EXYZ	36 bit word control
32MB	4M x 72	4K	-	18	5.25 x 1.00 x T	SM572044094EXYZ	36 bit word control
32MB	4M x 72	2K	-	18	5.25 x 1.00 x T	SM572044092EXYZ	36 bit word control

¹ T = 0.350" for SOJ & 0.170" for TSOP, T₁ = 0.200" for SOJ & 0.120" for TSOP

² To complete the part numbers, refer to the ordering instructions below the part numbering guide to indicate DRAM package type, lead finish and access time. 6/7 indicates 60 ns or 70 ns access time options. All versions are gold lead finish dual read out (DIMM) modules. The 144 bit I/O pin part numbers are complete.

QUICK REFERENCE GUIDE: WORKSTATION DRAM MODULES contd.

DENSITY	ORG.	REFSH.	DRAMS		DIMEN. LxHxT ¹ (in.)	SMART PART NO. ²	COMMENTS
			4M	16M			
168 PIN, 3.3V, FAST PAGE MODE (FPM) 72 BIT I/O							
64MB	8M x 72	4K	-	36	5.25 x 1.50 x T	SM572084094EXYZ	36 bit word control
64MB	8M x 72	2K	-	36	5.25 x 1.50 x T	SM572084092EXYZ	36 bit word control
32MB	4M x 72	4K	-	18	5.25 x 1.00 x T	SM572044094EXYZ	36 bit word control
32MB	4M x 72	2K	-	18	5.25 x 1.00 x T	SM572044092EXYZ	36 bit word control
168 PIN, 5V, EXTENDED DATA OUT (EDO) 72 BIT I/O							
64MB	8M x 72	4K	-	36	5.25 x 1.50 x T	SM572084084EXYZ	36 bit word control
64MB	8M x 72	2K	-	36	5.25 x 1.50 x T	SM572084082EXYZ	36 bit word control
32MB	4M x 72	4K	-	18	5.25 x 1.00 x T	SM572044084EXYZ	36 bit word control
32MB	4M x 72	2K	-	18	5.25 x 1.00 x T	SM572044082EXYZ	36 bit word control
168 PIN, 5V, FAST PAGE MODE (FPM) 72 BIT I/O							
64MB	8M x 72	4K	-	36	5.25 x 1.50 x T	SM572084004EXYZ	36 bit word control
64MB	8M x 72	2K	-	36	5.25 x 1.50 x T	SM572084002EXYZ	36 bit word control
32MB	4M x 72	4K	-	18	5.25 x 1.00 x T	SM572044004EXYZ	36 bit word control
32MB	4M x 72	2K	-	18	5.25 x 1.00 x T	SM572044002EXYZ	36 bit word control
168 PIN, 5V, FAST PAGE MODE (FPM) 66 BIT I/O							
32MB	4M x 66	4K	2	16	5.25 x 1.50 x 0.15	SM5664004ECTP6/7	
32MB	4M x 66	2K	2	16	5.25 x 1.50 x 0.15	SM5664002ECTP6/7	
32MB	4M x 66	4K	2	16	5.25 x 1.00 x 0.15	SM5664004ECATP6/7	
32MB	4M x 66	2K	2	16	5.25 x 1.00 x 0.15	SM5664002ECATP6/7	
72 PIN, 5V FAST PAGE MODE (FPM) 40 BIT I/O							
32MB	8M x 40	4K	-	20	4.25 x 1.16 x T ₂	SM5408004YZ	
32MB	8M x 40	2K	-	20	4.25 x 1.16 x T ₂	SM5408002YZ	
16MB	4M x 40	4K	-	10	4.25 x 1.16 x T ₃	SM5404004YZ	
16MB	4M x 40	2K	-	10	4.25 x 1.16 x T ₃	SM5404002YZ	

¹ T = 0.350" for SOJ & 0.170" for TSOP, T₂ = 0.350" for SOJ & 0.150" for TSOP, T₃ = 0.200" for SOJ & 0.100" for TSOP

² To complete the part numbers, refer to the ordering instructions below the part numbering guide to indicate DRAM package type, lead finish and access time. 6/7 indicates 60 ns or 70 ns access time options. All versions are gold lead finish dual read out (DIMM) modules. The 66 bit I/O pin part numbers are complete.

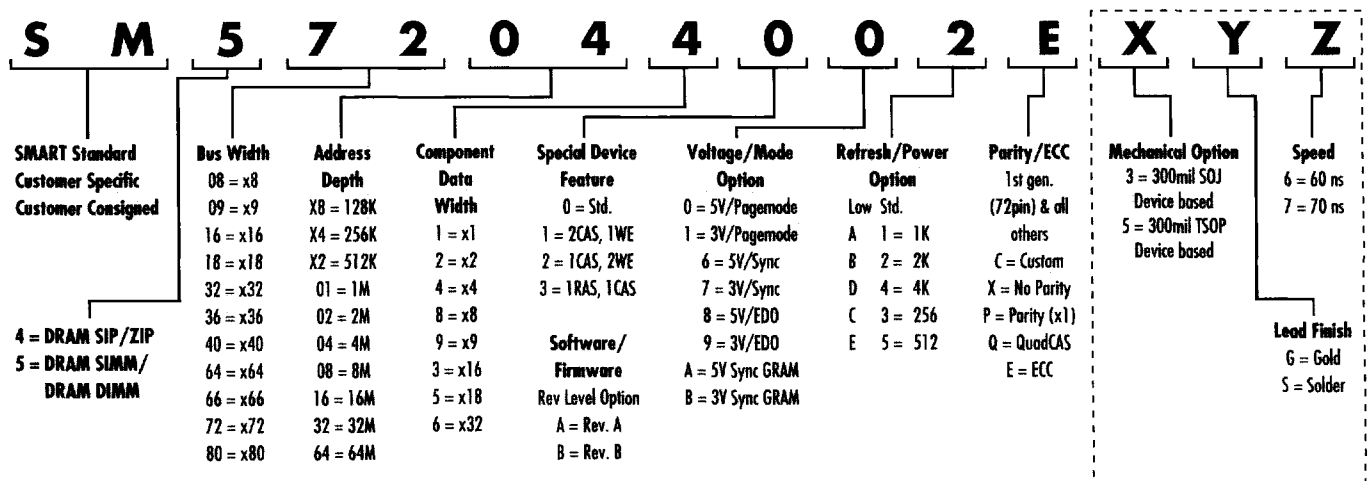
QUICK REFERENCE GUIDE: WORKSTATION DRAM MODULES contd.

DENSITY	ORG.	REFSH.	DRAMS		DIMEN. LxHxT ¹ (in.)	SMART PART NO. ²	COMMENTS
			4M	16M			
72 PIN, 5V FAST PAGE MODE (FPM) 36 BIT I/O							
64MB	16M x 36	4K	-	36	4.25 x 1.75 x T ₂	SM536161004CXYZ [†]	Non Std.
64MB	16M x 36	2K	-	36	4.25 x 1.75 x T ₂	SM536161002CXYZ [†]	Non Std.
64MB	16M x 36	4K	-	36	4.60 x 1.25 x T ₂	SM536161004PXYZ	
64MB	16M x 36	2K	-	36	4.60 x 1.25 x T ₂	SM536161002PXYZ	
32MB	8M x 36	4K	8	16	4.25 x 1.25 x T ₂	SM536084004PXYZ	
32MB	8M x 36	2K	8	16	4.25 x 1.25 x T ₂	SM536084002PXYZ	
32MB	8M x 36	4K	-	18	4.25 x 1.00 x T ₂	SM536084004EXYZ	
32MB	8M x 36	2K	-	18	4.25 x 1.00 x T ₂	SM536084002EXYZ	
16MB	4M x 36	4K	4	8	4.25 x 0.85 x T ₂	SM536044004PXYZ	
16MB	4M x 36	2K	4	8	4.25 x 0.85 x T ₂	SM536044002PXYZ	

¹ T₂ = 0.350" for SOJ & 0.150" for TSOP, † = Custom pinout, standard length

² To complete the part numbers, refer to the ordering instructions below the part numbering guide to indicate DRAM package type, lead finish and access time. 6/7 indicates 60 ns or 70 ns access time options. All versions are gold lead finish dual read out (DIMM) modules.

DRAM MODULE PART NUMBERING GUIDE



Shown above is our new part numbering guide which applies to newer products. Part numbers of earlier designs do not follow this scheme. To order a specific line item, use the part number shown in the product list and fill in the necessary characters according to the guide above.

EXAMPLE: SM572044002E 5 G 6 **4M X 72, ECC, 5V FPM, DRAMs in 300mil TSOP, gold lead finish, 60 ns access time**

SMART Modular also offers a full line of DRAMs in both Extended Data Out (EDO) and Fast Page Mode (FPM) 168 pin DIMMs, 72 pin DRAMs, 72 pin SO DIMMs, Flash and L2 Cache memory modules. SDRAM and SGRAM modules are in development.



SMART
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