

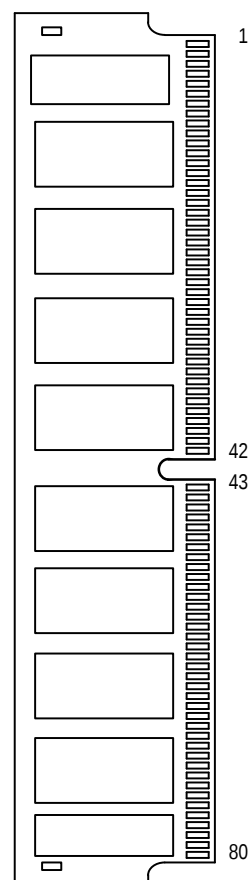
Product Preview **256KB Secondary Cache Module for Pentium™**

The MCM64AG32 is designed to provide asynchronous 256KB secondary cache for the Pentium microprocessor using VLSI 82C590 chip set. The modules are configured as 32K x 64 bits in a 160 pin card edge memory module. Each module uses eight of Motorola's MCM6306 3.3 V power supply SRAM components.

- All Inputs and Outputs are LVTTTL Compatible
- Multiple V_{SS} Pins and Decoupling Capacitors for Maximum Noise Immunity
- Three State Outputs
- Byte Write Enable
- Fast SRAM Access Times: 15 ns
- Decoupling Capacitors for each Fast Static RAM
- High Quality Multi-Layer FR4 PWB With Separate Power and Ground Planes
- I/Os are 3.3 V Compatible
- Low Cost Solution for use with VLSI 82C590
- Presence Detect Pins Enable Active Probing by the System to Determine Cache Size and Type thus Supporting Multiple Cache Options Without Jumpers
- 160 Pin Card Edge Module
- Burndy Connector, Part Number: CELP2X80SC3Z48

MCM64AG32

160-LEAD
CARD EDGE
CASE TBD*
TOP VIEW



* SEE BACK PAGE FOR PRELIMINARY
CASE OUTLINE.

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PIN ASSIGNMENT
160-LEAD CARD EDGE MODULE
TOP VIEW

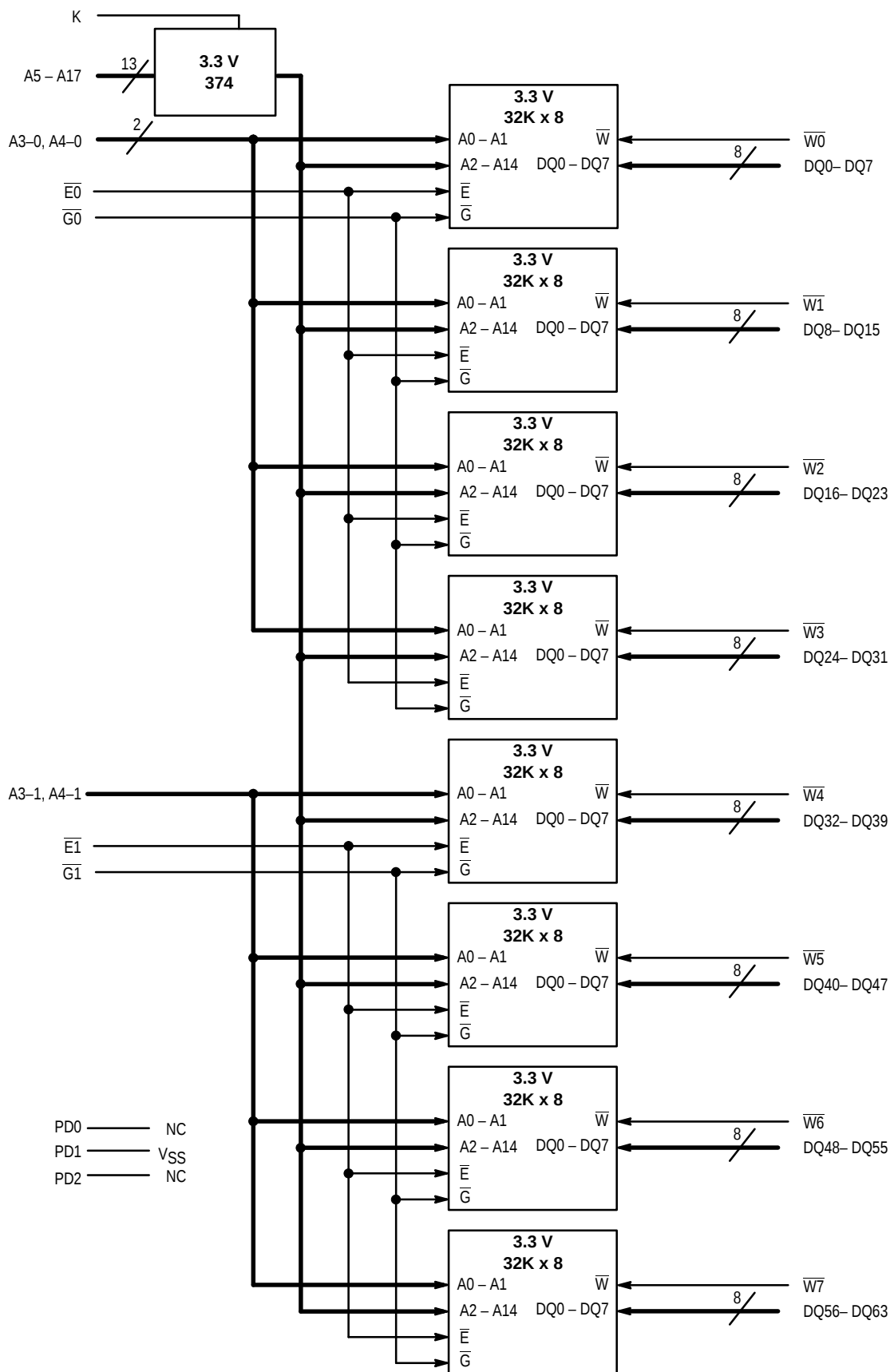
Cache Size and Functionality	Module	PD2	PD1	PD0
256KAsync	MCM64AG32	NC	V _{SS}	NC
256K Burst	—	V _{SS}	V _{SS}	NC
512K Burst	—	V _{SS}	V _{SS}	V _{SS}

PIN NAMES	
A3–0 – A4–0	Address Inputs
A3–1 – A4–1	Address Inputs
A5 – A19	Address Inputs
K	Clock
$\overline{W0} - \overline{W7}$	Byte Write Enable
$\overline{E0} - \overline{E1}$	Module Enable
$\overline{G0} - \overline{G1}$	Module Output Enable
DQ0 – DQ63	Cache Data Input/Output
PD0 – PD2	Presence Detect
V _{CC3}	+ 3.3 V Power Supply
V _{SS}	Ground
NC	No Connect

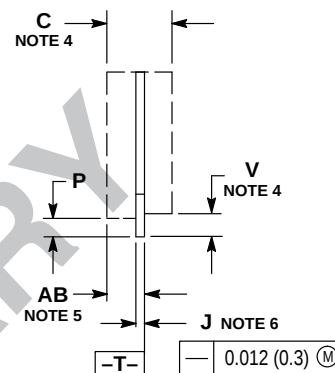
V _{SS}	81	1	V _{SS}
DQ63	82	2	DQ62
V _{CC5}	83	3	V _{CC3}
DQ61	84	4	DQ60
V _{CC5}	85	5	V _{CC3}
DQ59	86	6	DQ58
DQ57	87	7	DQ56
V _{SS}	88	8	V _{SS}
NC	89	9	NC
DQ55	90	10	DQ54
DQ53	91	11	DQ52
DQ51	92	12	DQ50
V _{SS}	93	13	V _{SS}
DQ49	94	14	DQ48
DQ47	95	15	DQ46
DQ45	96	16	DQ44
DQ43	97	17	DQ42
V _{SS}	98	18	V _{SS}
DQ41	99	19	DQ40
NC	100	20	NC
DQ39	101	21	DQ38
DQ37	102	22	DQ36
DQ35	103	23	DQ34
V _{SS}	104	24	V _{SS}
DQ33	105	25	DQ32
DQ31	106	26	DQ30
DQ29	107	27	DQ28
DQ27	108	28	DQ26
DQ25	109	29	DQ24
V _{SS}	110	30	V _{SS}
NC	111	31	NC
DQ23	112	32	DQ22
DQ21	113	33	DQ20
V _{CC5}	114	34	V _{CC3}
DQ19	115	35	DQ18
V _{SS}	116	36	V _{SS}
DQ17	117	37	DQ16
V _{CC5}	118	38	V _{CC3}
DQ15	119	39	DQ14
DQ13	120	40	DQ12
V _{SS}	121	41	V _{SS}
DQ11	122	42	DQ10
V _{CC5}	123	43	V _{CC3}
DQ9	124	44	DQ8
NC	125	45	NC
V _{CC5}	126	46	V _{CC3}
DQ7	127	47	DQ6
DQ5	128	48	DQ4
DQ3	129	49	DQ2
DQ1	130	50	DQ0
V _{SS}	131	51	V _{SS}
NC	132	52	NC
NC	133	53	NC
NC	134	54	A5
NC	135	55	A6
A7	136	56	A8
V _{SS}	137	57	V _{SS}
A9	138	58	A10
A11	139	59	A12
A13	140	60	A14
A15	141	61	A16
A17	142	62	NC
V _{SS}	143	63	V _{SS}
NC	144	64	PD0
PD1	145	65	PD2
K	146	66	NC
NC	147	67	NC
V _{SS}	148	68	V _{SS}
$\overline{W7}$	149	69	$\overline{W6}$
$\overline{W5}$	150	70	$\overline{W4}$
$\overline{W3}$	151	71	$\overline{W2}$
$\overline{W1}$	152	72	$\overline{W0}$
V _{SS}	153	73	V _{SS}
A3–1	154	74	A3–0
E1	155	75	E0
A4–1	156	76	A4–0
G1	157	77	G0
V _{CC5}	158	78	V _{CC3}
NC	159	79	NC
V _{SS}	160	80	V _{SS}

For proper operation of the device, V_{SS} must be connected to the ground.
V_{CC5} does not need to be wired to module.

MCM64AG32 BLOCK DIAGRAM



**CARD EDGE MODULE
160-LEAD
CASE TBD**



SIDE VIEW



- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
 2. CONTROLLING DIMENSION: INCH.
 3. CARD THICKNESS APPLIES ACROSS TABS AND INCLUDES PLATING AND/OR METALLIZATION.
 4. DIMENSIONS C AND V DEFINE A DOUBLE-SIDED MODULE.
 5. DIMENSION AB DEFINES OPTIONAL SINGLE-SIDED MODULE.
 6. STRAIGHTNESS CALLOUT APPLIES TO TAB AREA ONLY.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	4.330	4.350	109.98	110.49
B	1.290	1.310	32.77	33.27
C	—	0.454	—	11.53
D	0.033	0.037	0.84	0.94
E	2.265	2.275	57.53	57.79
F	0.075 BSC		1.91 BSC	
G	0.050 BSC		1.27 BSC	
H	—	0.030	—	0.51
J	0.055	0.069	1.40	1.75
K	0.210	—	5.33	—
L	1.955	1.965	49.66	49.91
M	2.155	2.165	54.74	54.99
N	0.110 REF		2.79 REF	
P	0.125	—	3.18	—
R	0.285	0.305	7.24	7.75
V	0.157	—	3.99	—
W	0.040	0.060	1.02	1.52
AB	—	0.262	—	6.66
AC	0.072	0.076	1.83	1.93

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◆ CODELINE TO BE PLACED HERE

MCM64AG32/D

