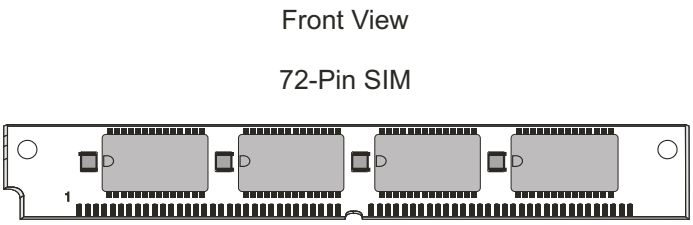
AK632256AW-72
262,144 x 32 Bit CMOS/BiCMOS
72 Pin Format
Static Random Access Memory

DESCRIPTION

The Accutek AK632256AW-72 SRAM Module consists of fast high performance SRAMs mounted on a low profile, 72 pin SIM Board. The module utilizes four 28 pin 256K x 4 SRAMs in 300 mil SOJ packages and four decoupling capacitors mounted on each side of a printed circuit board.

The SRAMs used have common I/O functions and single output enable functions. Also, four separate chip select ($\overline{CE}$) connections are used to independently enable the four bytes. The modules can be supplied in a variety of access time values from 12 nSEC to 45 nSEC in CMOS or BiCMOS technology.

The Accutek module is designed to have a maximum seated height of 0.600 inch to provide for the lowest height off the board. By offset-mounting the back surface SRAMs the module can be mounted in either angled or straight-up SIM sockets. The module conforms to JEDEC standard sizes and pin-out configurations. Using four pins for module memory density identification, PD_0 to PD_3, minimizes interchangeability and design considerations when changing from one module size to another in customer applications.



FEATURES

- 262,144 x 32 bit organization
- JEDEC Standardized 72 pin SIM or ZIP pinout
- Common I/O, single $\overline{OE}$ functions with four separate chip selects ($\overline{CE}$)
- Low height, 0.605 inch maximum
- Upward compatible with 512K x 32 (AK632512) and 1 Meg x 32 (AK6321024)
- Downward compatible with 32K x 32 (AK63232), 64K x 32 (AK63264) and 128K x 32 AK632128
- Presence Detect PD_0 to PD_3 for identifying module density
- Fast access times range from 12 nSEC BiCMOS to 45 nSEC CMOS
- TTL-compatible inputs and outputs
- Single 5 volt power supply - AK632256AW-72
- Single 3.3 volt power supply - AK632256AW-72/3.3
- Operating temperature range in free air, 0^0C to 70^0C

ELECTRICAL SPECIFICATIONS

Timing diagrams and basic electrical characteristics are those of the standard 256K x 4 SRAMs used to construct these modules. Accutek's module design allows the flexibility of selecting industry-compatible 256K x 4 SRAMs from several semiconductor manufacturers.

PIN NOMENCLATURE

A_0 - A_{17}	Address Inputs
$\overline{CE}_1$ - $\overline{CE}_4$	Chip Enable
DQ_1 - DQ_{32}	Data In/Data Out
$\overline{OE}$	Output Enable
PD_0 - PD_3	Presence Detect
Vcc	5v Supply
Vss	Ground
$\overline{WE}$	Write Enable
NC	No Connect

MODULE OPTIONS

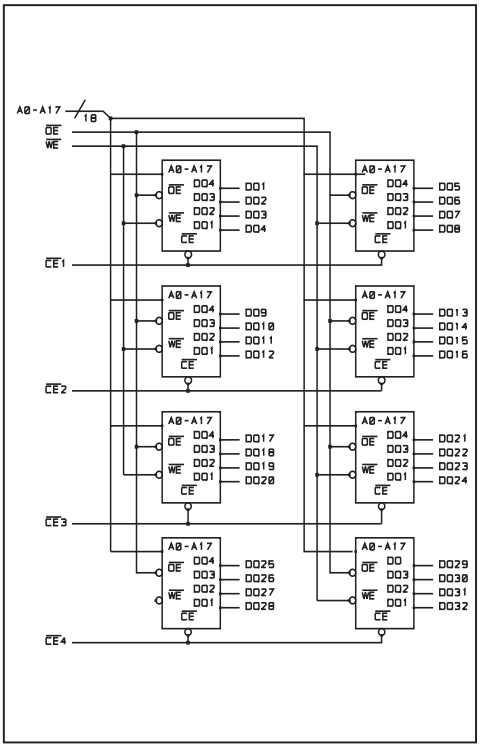
Leadless SIM: AK632256AW-72

PIN ASSIGNMENT

PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL
1	NC	19	A1	37	$\overline{CE}4$	55	A5
2	NC	20	A8	38	$\overline{CE}3$	56	A12
3	PD2/NC	21	A2	39	A17	57	Vcc
4	PD3/NC	22	A9	40	A16	58	A13
5	Vss	23	DQ13	41	$\overline{OE}$	59	A6
6	PD0	24	DQ5	42	Vss	60	DQ21
7	PD1	25	DQ14	43	DQ25	61	DQ29
8	DQ1	26	DQ6	44	DQ17	62	DQ22
9	DQ9	27	DQ15	45	DQ26	63	DQ38
10	DQ2	28	DQ7	46	DQ18	64	DQ23
11	DQ10	29	DQ16	47	DQ27	65	DQ31
12	DQ3	30	DQ8	48	DQ19	66	DQ24
13	DQ11	31	Vss	49	DQ28	67	DQ32
14	DQ4	32	$\overline{WE}$	50	DQ20	68	Vss
15	DQ12	33	A15	51	A3	69	A18/NC
16	Vcc	34	A14	52	A10	70	A19/NC
17	A0	35	$\overline{CE}2$	53	A4	71	NC
18	A7	36	$\overline{CE}1$	54	A11	72	NC

PD0 = Vss PD2 = Open
PD1 = Vss PD3 = Open

FUNCTIONAL DIAGRAM



ORDERING INFORMATION

PART NUMBER CODING INTERPRETATION

Position	1	2	3	4	5	6	7	8

1 Product

AK = Accutek Memory

2 Type

4 = Dynamic RAM
5 = CMOS Dynamic RAM
6 = Static RAM

3 Organization/Word Width

1 = by 1 16 = by 16
4 = by 4 32 = by 32
8 = by 8 36 = by 36
9 = by 9

4 Size/Bits Depth

64	= 64K	4096	= 4 MEG
256	= 256K	8192	= 8 MEG
1024	= 1 MEG	16384	= 16 MEG

5 Package Type

G = Single In-Line Package (SIP)
S = Single In-Line Module (SIM)
D = Dual In-Line Package (DIP)
W = .050 inch Pitch Edge Connect
Z = Zig-Zag In-Line Package (ZIP)

6 Special Designation

P = Page Mode
N = Nibble Mode
K = Static Column Mode
W = Write Per Bit Mode
V = Video Ram

7 Separator

- = Commercial 0^0C to +70^0C
M = Military Equivalent Screened (-55^0C to +125^0C)
I = Industrial Temperature Tested (-45^0C to +85^0C)
X = Burned In

8 Speed (first two significant digits)

DRAMS		SRAMS	
50	= 50 nS	8	= 8 nS
60	= 60 nS	10	= 10 nS
70	= 70 nS	12	= 12 nS
80	= 80 nS	15	= 15 nS

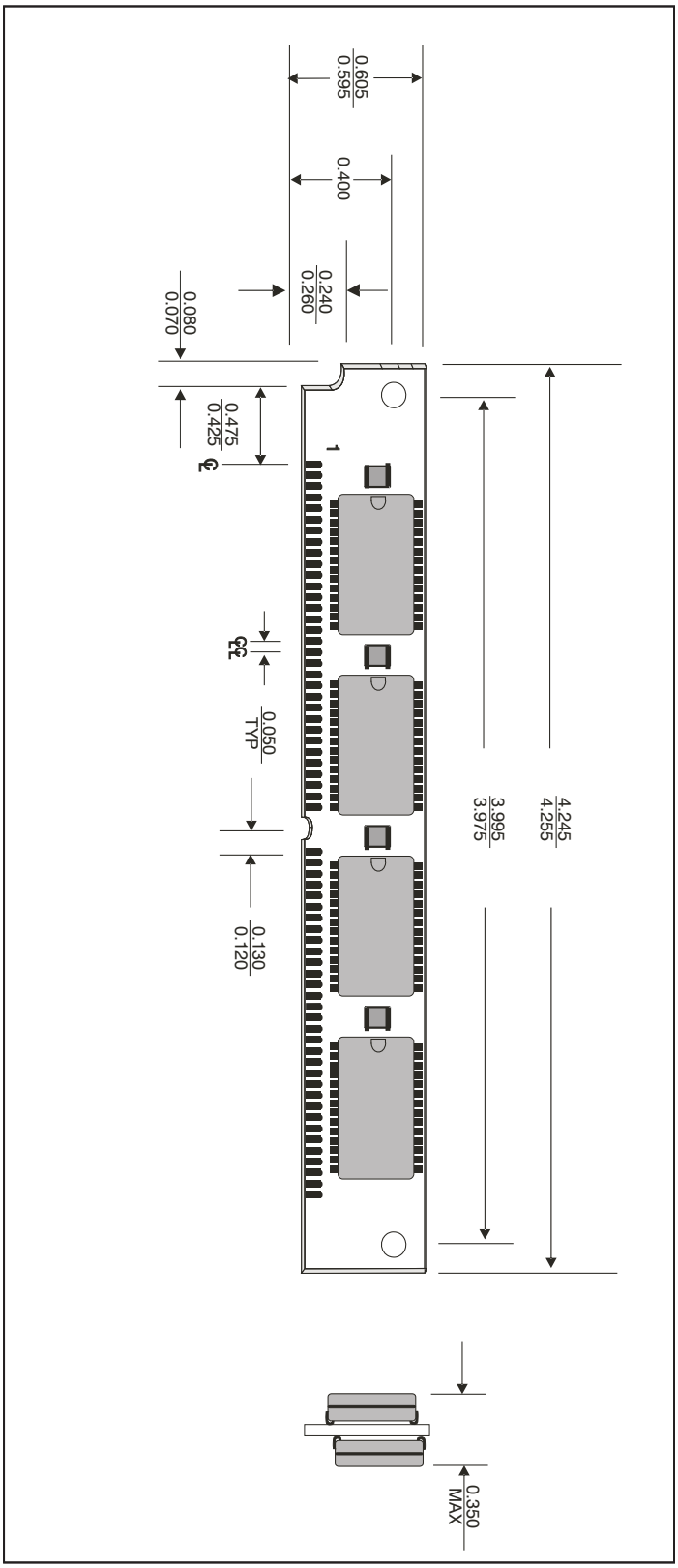
The numbers and coding on this page do not include all variations available but are shown as examples of the most widely used variations. Contact Accutek if other information is required.

EXAMPLES:

AK632256AW72-12

MECHANICAL DIMENSIONS

Inches



Accutek reserves the right to make changes in specifications at any time and without notice. Accutek does not assume any responsibility for the use of any circuitry described; no circuit patent licenses are implied. Preliminary data sheets contain minimum and maximum limits based upon design objectives, which are subject to change upon full characterization over the specific operating conditions.

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