ACCUTEK MICROCIRCUIT CORPORATION

AK632256W/AK632256Z
256K x 32 SRAM Module

DESCRIPTION

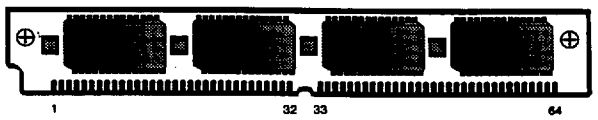
The Accutek AK632256 SRAM Module consists of fast high performance SRAMs mounted on a low profile, 64 pin SIM or ZIP Board. The module utilizes four 28 pin 256K x 4 SRAMs in SOJ packages and four decoupling capacitors mounted on each side of a printed circuit board.

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.

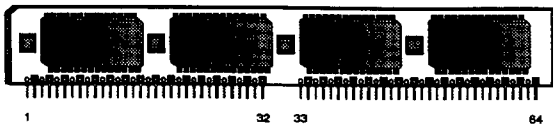
The Accutek module is designed to have a maximum seated height of 0.680 inch SIM or 0.540 inch ZIP to provide for the lowest height off the board. By offset-mounting the back surface SRAMs on the SIM version, the module can be mounted in either angled or straight-up SIM sockets. Each conforms to JEDEC standard sizes and pin-out configurations. Using two pins for module memory density identification, PD_0 and PD_1, minimizes interchangeability and design considerations when changing from one module size to another in customer applications.

Front View

64-Pin SIM



64-Pin ZIP



FEATURES

- 262,144 x 32 bit organization
- JEDEC Standardized 64 pin SIM or ZIP format
- Common I/O, single $\overline{OE}$ functions with four separate chip selects ($\overline{CE}$)
- Low height, 0.680 inch SIM or 0.540 inch ZIP maximum
- Upward compatible with 1 Meg x 32 (AK6321024)
- Downward compatible with 64K x 32 (AK63264) and 128K x 32 (AK632128)
- Presence Detect PD_0 and PD_1 for identifying module density
- Fast access times range from 12 nSEC BiCMOS to 45 nSEC CMOS
- TTL-compatible inputs and outputs
- Single +5 Volt (±10%) power supply
- 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_1	Presence Detect
Vcc	5v Supply
Vss	Ground
$\overline{WE}$	Write Enable

MODULE OPTIONS

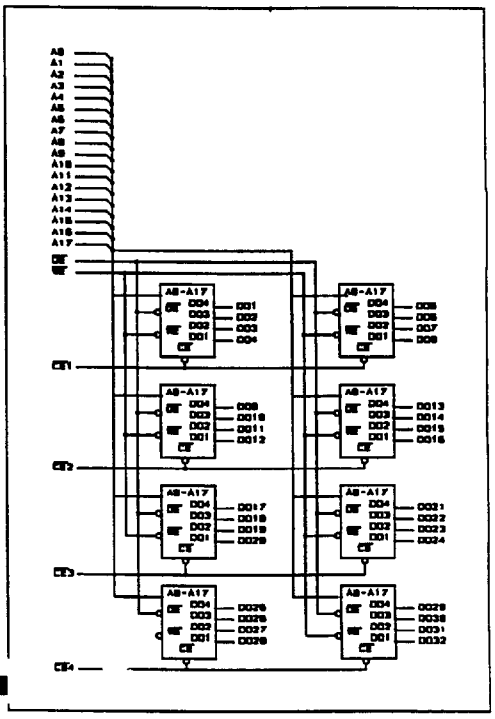
Leadless SIM: AK632256W
Leaded SIP: AK632256G
Leaded ZIP: AK632256Z

PIN ASSIGNMENT

PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL
1	Vss	17	A_2	33	$\overline{CE_4}$	49	A_4
2	PD_0	18	A_9	34	$\overline{CE_3}$	50	A_{11}
3	PD_1	19	DQ_{13}	35	A_{17}	51	A_5
4	DQ_1	20	DQ_5	36	A_{16}	52	A_{12}
5	DQ_9	21	DQ_{14}	37	$\overline{OE}$	53	Vcc
6	DQ_2	22	DQ_6	38	Vss	54	A_{13}
7	DQ_{10}	23	DQ_{15}	39	DQ_{25}	55	A_6
8	DQ_3	24	DQ_7	40	DQ_{17}	56	DQ_{21}
9	DQ_{11}	25	DQ_{16}	41	DQ_{26}	57	DQ_{29}
10	DQ_4	26	DQ_8	42	DQ_{18}	58	DQ_{22}
11	DQ_{12}	27	Vss	43	DQ_{27}	59	DQ_{30}
12	Vcc	28	$\overline{WE}$	44	DQ_{19}	60	DQ_{23}
13	A_0	29	A_{15}	45	DQ_{28}	61	DQ_{31}
14	A_7	30	A_{14}	46	DQ_{20}	62	DQ_{24}
15	A_1	31	$\overline{CE_2}$	47	A_3	63	DQ_{32}
16	A_8	32	$\overline{CE_1}$	48	A_{10}	64	Vss

PD_0 = Vss
PD_1 = Vss

FUNCTIONAL DIAGRAM



ORDER 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 = b y 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	
60	= 60 nS	12	=12 nS
70	= 70 nS	20	=20 nS
80	= 80 nS	25	=25 nS
10	= 100 nS	35	=35 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:

AK632256W-12

256K x 32, 12 nSEC SRAM Module, SIM Configuration

AK632256Z-25

256K x 32, 25 nSEC SRAM Module, ZIP Configuration

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MECHANICAL DIMENSIONS

Inches