

**DESCRIPTION**

The Accuthek AK63264 SRAM Module consists of fast high performance SRAMs mounted on a low profile, 64 pin SIM or ZIP Board. The module utilizes eight 28 pin 64K x 4 SRAMs in SOJ packages and four decoupling capacitors 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 (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 Accuthek module is designed to have a maximum seated height of 0.600 inch SIM or 0.500 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<sub>0</sub> and PD<sub>1</sub>, minimizes interchangeability and design considerations when changing from one module size to the other in customer applications.

**FEATURES**

- 65,536 x 32 bit organization
- JEDEC Standard 64 pin SIM or ZIP format
- Common I/O, single OE functions with four separate chip selects (CE)
- Low height, 0.600 inch SIM or 0.500 inch ZIP maximum
- Upward compatible with 128K x 32 (AK632128), 256K x 32 (AK632256) and 1 Mea x 32 (AK6321024) designs

**PIN NOMENCLATURE**

A <sub>0</sub> - A <sub>15</sub>	Address Inputs
CE <sub>1</sub> - CE <sub>4</sub>	Chip Enable
DQ <sub>1</sub> - DQ <sub>32</sub>	Data In/Data Out
OE	Output Enable
PD <sub>0</sub> - PD <sub>1</sub>	Presence Detect
V <sub>cc</sub>	Power Supply
V <sub>ss</sub>	Ground
WE	Write Enable

**MODULE OPTIONS**

Leadless SIM:	AK63264W
Leaded SIP:	AK63264G
Leaded ZIP:	AK63264Z

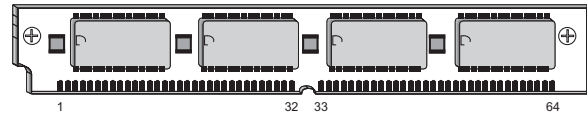
**PIN ASSIGNMENT**

PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL	PIN #	SYMBOL
1	V <sub>ss</sub>	17	A <sub>2</sub>	33	CE <sub>4</sub>	49	A <sub>4</sub>
2	PD <sub>0</sub>	18	A <sub>9</sub>	34	CE <sub>3</sub>	50	A <sub>11</sub>
3	PD <sub>1</sub>	19	DQ <sub>13</sub>	35	NC	51	A <sub>5</sub>
4	DQ <sub>1</sub>	20	DQ <sub>5</sub>	36	NC	52	A <sub>12</sub>
5	DQ <sub>9</sub>	21	DQ <sub>14</sub>	37	OE	53	V <sub>cc</sub>
6	DQ <sub>2</sub>	22	DQ <sub>6</sub>	38	V <sub>ss</sub>	54	A <sub>13</sub>
7	DQ <sub>10</sub>	23	DQ <sub>15</sub>	39	DQ <sub>25</sub>	55	A <sub>6</sub>
8	DQ <sub>3</sub>	24	DQ <sub>7</sub>	40	DQ <sub>17</sub>	56	DQ <sub>21</sub>
9	DQ <sub>11</sub>	25	DQ <sub>16</sub>	41	DQ <sub>26</sub>	57	DQ <sub>29</sub>
10	DQ <sub>4</sub>	26	DQ <sub>8</sub>	42	DQ <sub>18</sub>	58	DQ <sub>22</sub>
11	DQ <sub>12</sub>	27	V <sub>ss</sub>	43	DQ <sub>27</sub>	59	DQ <sub>30</sub>
12	V <sub>cc</sub>	28	WE	44	DQ <sub>19</sub>	60	DQ <sub>23</sub>
13	A <sub>0</sub>	29	A <sub>15</sub>	45	DQ <sub>28</sub>	61	DQ <sub>31</sub>
14	A <sub>7</sub>	30	A <sub>14</sub>	46	DQ <sub>20</sub>	62	DQ <sub>24</sub>
15	A <sub>1</sub>	31	CE <sub>2</sub>	47	A <sub>3</sub>	63	DQ <sub>32</sub>
16	A <sub>8</sub>	32	CE <sub>1</sub>	48	A <sub>10</sub>	64	V <sub>ss</sub>

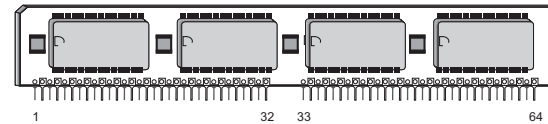
PD<sub>0</sub> = Open  
PD<sub>1</sub> = V<sub>ss</sub>

**Front View**

64-Pin SIM



64-Pin ZIP

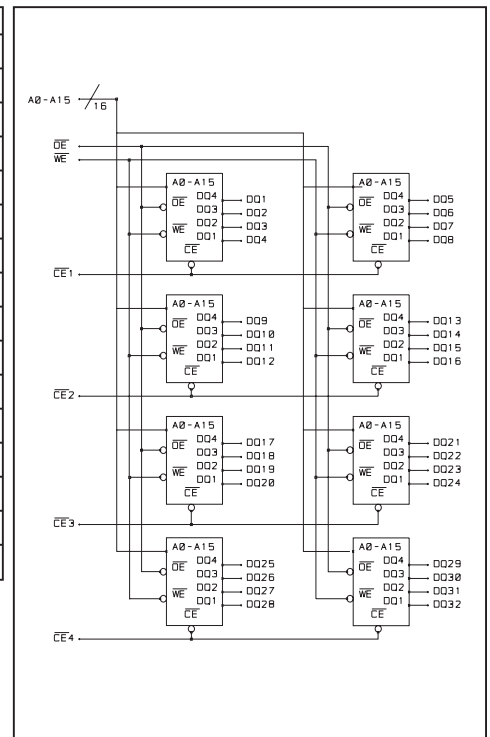


- Presence Detect, PD<sub>0</sub> and PD<sub>1</sub> for identifying module density
- Fast Access Times range from 12 nSEC BiCMOS to 45 nSEC CMOS
- TTL-compatible inputs and outputs
- Single 5 volt power supply - AK63264W, AK63264Z
- Single 3.3 volt power supply - AK63264W/3.3, AK63264Z/3.3
- Operating temperature range in free air, 0°C to 70°C

**ELECTRICAL SPECIFICATIONS**

Timing diagrams and basic electrical characteristics are those of the standard 64K x 4 SRAMs used to construct these modules. Accuthek's module design allows the flexibility of selecting industry-compatible 64K x 4 SRAMs from at least seven semiconductor manufacturers.

**FUNCTIONAL DIAGRAM**



## ORDERING INFORMATION

## PART NUMBER CODING INTERPRETATION

Position	1	2	3	4	5	6	7	8
<b>1 Product</b>								
	<b>AK = Accuthek Memory</b>							
<b>2 Type</b>								
	4 = Dynamic RAM							
	5 = CMOS Dynamic RAM							
	6 = Static RAM							
<b>3 Organization/Word Width</b>								
	1 = by 1 16 = by 16							
	4 = by 4 32 = by 32							
	8 = by 8 36 = by 36							
	9 = by 9							
<b>4 Size/Bits Depth</b>								
	64 = 64K		4096 = 4 MEG					
	256 = 256K		8192 = 8 MEG					
	1024 = 1 MEG		16384 = 16 MEG					
<b>5 Package Type</b>								
	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)							
<b>6 Special Designation</b>								
	P = Page Mode							
	N = Nibble Mode							
	K = Static Column Mode							
	W = Write Per Bit Mode							
	V = Video Ram							
<b>7 Separator</b>								
	- = Commercial 0°C to +70°C							
	M = Military Equivalent Screened (-55°C to +125°C)							
	I = Industrial Temperature Tested (-45°C to +85°C)							
	X = Burned In							
<b>8 Speed (first two significant digits)</b>								
	DRAMS				SRAMS			
	60 = 60 nS		8 = 8 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 Accuthek if other information is required.

### EXAMPLES:

#### AK63264W-15

64K x 32, 15 nSEC SRAM Module, SIM Configuration

#### AK63264Z-12

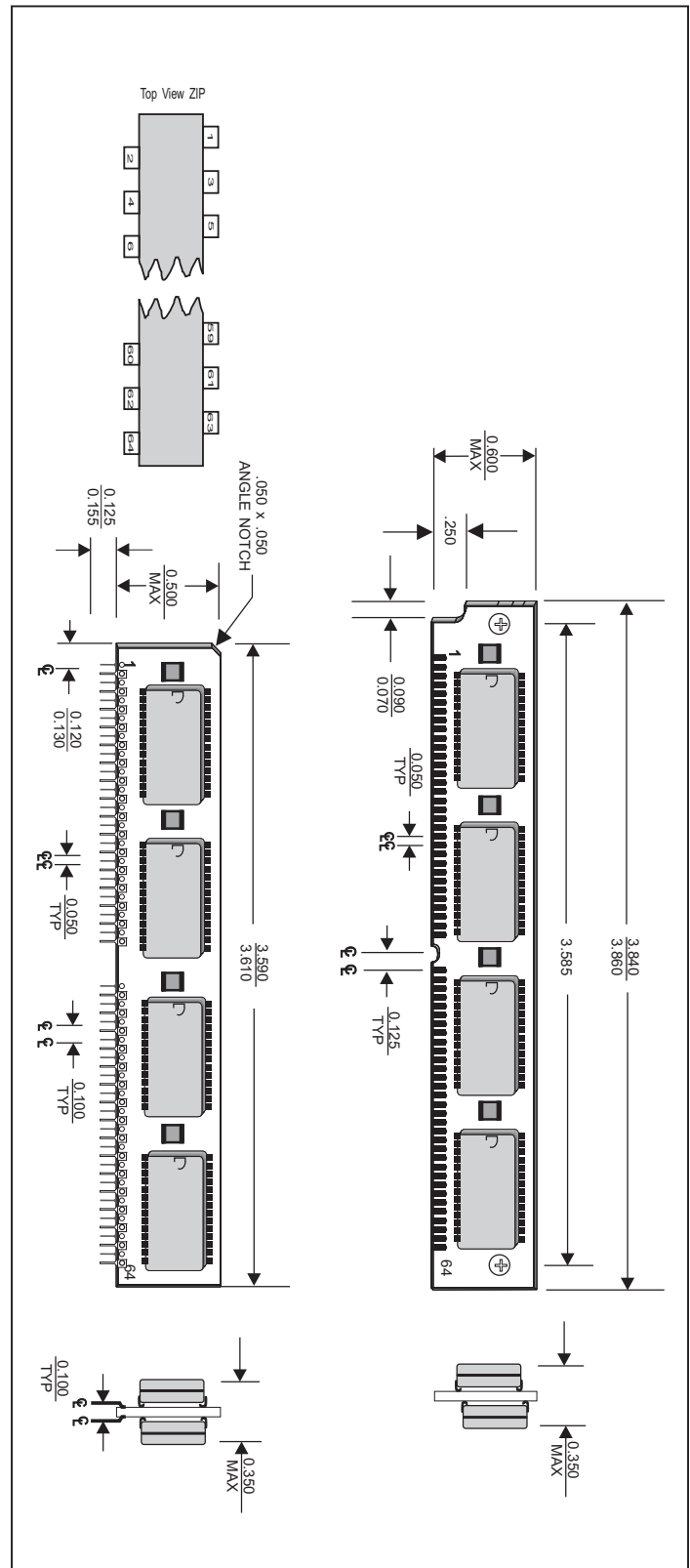
64K x 32, 12 nSEC SRAM Module, ZIP Configuration



5 NEW PASTURE ROAD  
NEWBURYPORT, MA 01950-4040  
PHONE: 978-465-6200 FAX: 978-462-3396  
Email: sales@accutekmicro.com  
Internet: www.accutekmicro.com

## MECHANICAL DIMENSIONS

Inches



Accuthek reserves the right to make changes in specifications at any time and without notice. Accuthek 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.