

## 4M X 32 Bits (16MB) Flash Memory Module (3.3V Only)—Preliminary

### FEATURES

- Access Time of 120ns
- TTL compatible inputs and outputs
- 3.3V only power supply
- JEDEC standard
- Tin (option “T”) or gold (option “G”) edge connectors
- Three power on reset options
  - No power on reset:  $\overline{RST}$  tied to  $V_{CC}$  (Option “V”)
  - Power on reset:  $\overline{RST}$  tied to power supervisor circuit (Option “R”)
  - System control of power on reset:  $\overline{RST}$  tied to pin 7 (Option “S”; this option is not JEDEC standard)
- AMD Part Number Am29LV081-120 flash memory components
- Minimum 1,000,000 write guarantee per sector
- Low profile height of 0.600 inches

### PIN CONFIGURATION

Pin	Symbol	Pin	Symbol	Pin	Symbol
1	$V_{SS}$	28	$DQ_{31}$	55	$DQ_{15}$
2	$V_{CC}$	29	$\overline{WE}_2$	56	$DQ_{14}$
3	NC	30	NC	57	$DQ_{13}$
4	$\overline{OE}$	31	NC	58	$DQ_{12}$
5	$\overline{WE}_0$	32	$A_{20}$	59	$DQ_{11}$
6	$\overline{WE}_1$	33	$A_{19}$	60	$DQ_{10}$
7	$NC/\overline{RST}$	34	$A_{18}$	61	$DQ_9$
8	$DQ_{16}$	35	$A_{17}$	62	$DQ_8$
9	$DQ_{17}$	36	$A_{16}$	63	$DQ_7$
10	$DQ_{18}$	37	$A_{15}$	64	$DQ_6$
11	$DQ_{19}$	38	$A_{14}$	65	$DQ_5$
12	$DQ_{20}$	39	$A_{13}$	66	$DQ_4$
13	$DQ_{21}$	40	$A_{12}$	67	$DQ_3$
14	$DQ_{22}$	41	$A_{11}$	68	$DQ_2$
15	$DQ_{23}$	42	$A_{10}$	69	$DQ_1$
16	$DQ_{24}$	43	$A_9$	70	$DQ_0$
17	$DQ_{25}$	44	$A_8$	71	NC
18	$DQ_{26}$	45	$A_7$	72	$V_{CC}$
19	$DQ_{27}$	46	$A_6$	73	$PD_1$
20	$DQ_{28}$	47	$A_5$	74	$PD_2$
21	NC	48	$A_4$	75	$PD_3$
22	NC	49	$A_3$	76	$PD_4$
23	$\overline{CE}_1$	50	$A_2$	77	$PD_5$
24	$\overline{CE}_0$	51	$A_1$	78	$PD_6$
25	$V_{SS}$	52	$A_0$	79	$PD_7$
26	$DQ_{29}$	53	$\overline{WE}_3$	80	$V_{SS}$
27	$DQ_{30}$	54	$V_{SS}$		

### GENERAL DESCRIPTION

The SiliconTech SL29161-12(T/G)4(V/R/S) is a 4M x 32 bits flash 80-pin Single In-line Memory Module (SIMM). This module consists of eight 2M x 8 bits CMOS flash memory in 40-pin TSOP packages mounted on an 80-pin glass epoxy substrate. Decoupling capacitors of 0.1 $\mu$ F are mounted for the flash memory.

The module has a maximum access time of 120ns and 3.3V only power supply. Option “T” provides tin edge connectors and option “G” provides gold edge connectors. Option “R” provides power on reset through a power supervisor circuit; option “S” provides system control of power on reset by connecting the reset signals to Pin 7; and, option “V” provides no power on reset.

The module is intended for mounting into 80-pin edge connector sockets. The module uses the standard programming algorithms for AMD Am29LV161-120 flash memory components.

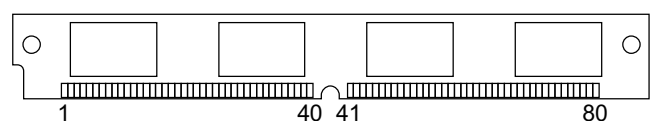
### Pin Names

Pin Name	Pin Function
$A_0$ - $A_{20}$	Address Inputs
$DQ_0$ - $DQ_{31}$	Data In/Out
$\overline{CE}_0$ , $\overline{CE}_1$	Chip Enable
$\overline{WE}_0$ - $\overline{WE}_3$	Write Enable
$\overline{OE}$	Output Enable
$PD_1$ - $PD_7$	Presence Detect
$\overline{RST}$	Reset
$V_{CC}$	Power (+3.3V)
$V_{SS}$	Ground
NC	No Connection

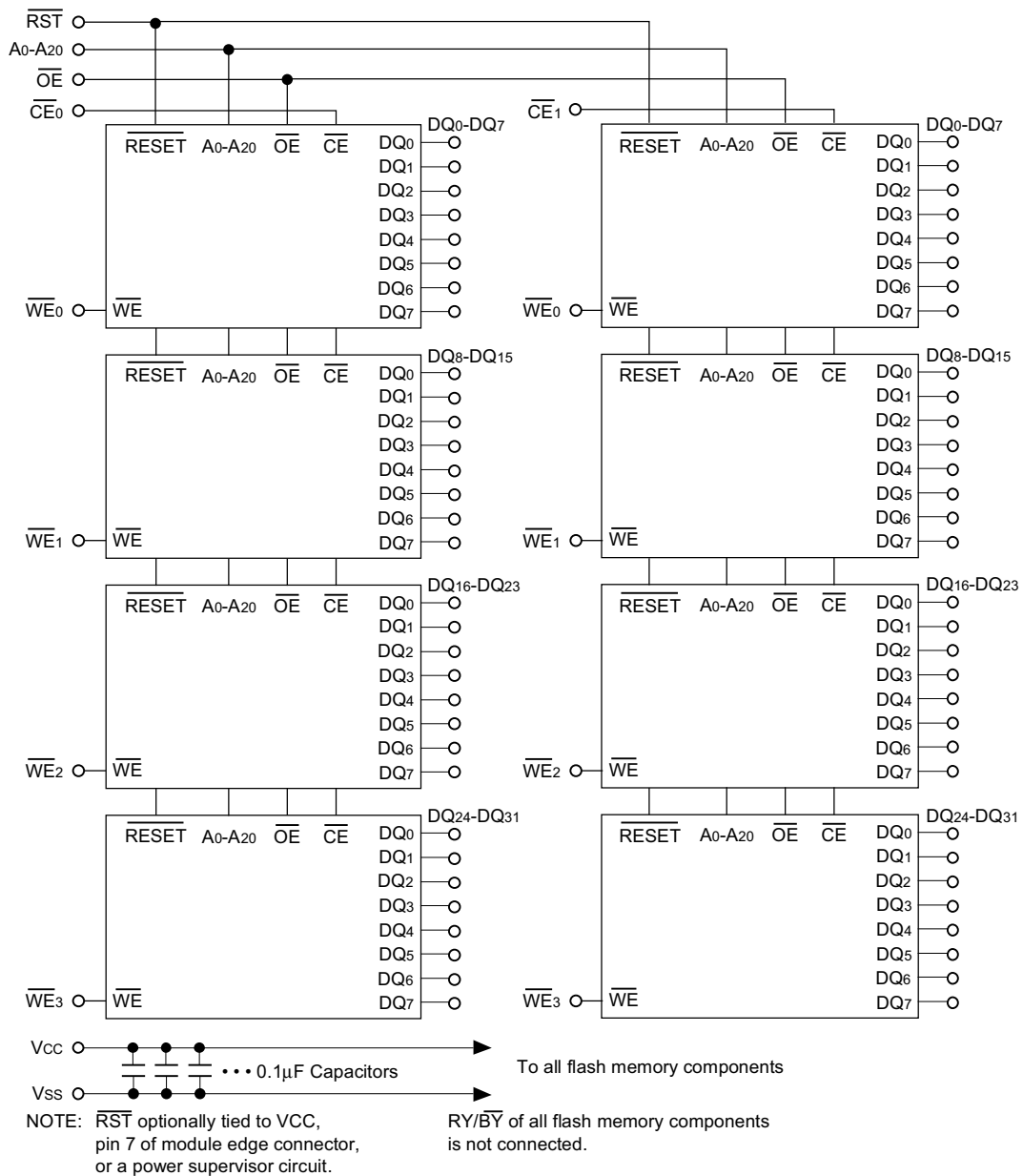
### Presence Detect Pins\*

Pin Name	Signal
$PD_1$	NC
$PD_2$	$V_{SS}$
$PD_3$	$V_{SS}$
$PD_4$	$V_{SS}$
$PD_5$	$V_{SS}$
$PD_6$	NC
$PD_7$	$V_{SS}$

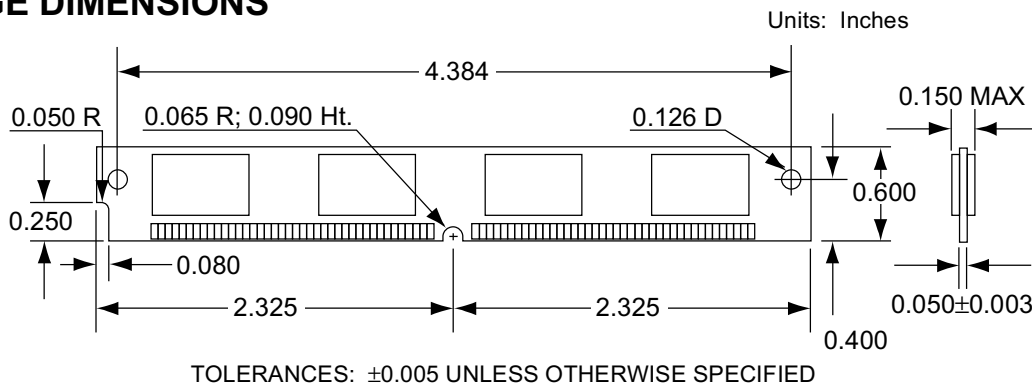
\* Pin Connection Changing Available



FUNCTIONAL BLOCK DIAGRAM



PACKAGE DIMENSIONS



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