



## **MEMORY**

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### **SPECIFICATIONS**

# **256 MEG**

**144 Pin SODIMM Module**

**x8 BASED CHIPS**

**32M Words X 64 Bit Synchronous Dynamic RAM Module**

The Princeton 32M x 64 bit PC100/133 Synchronous Dynamic Random Access Memory (DRAM) module consists of 16 Synchronous DRAM memory chips in TSOP packaging. An 8 pin EEPROM is provided for Serial Presence Detect information.

The 144 pin (72 pin dual-in-line package) JEDEC Standard module is mounted on FR4 glass-epoxy substrate. Two decoupling capacitors are mounted with each DRAM. This module is optimized for main memory applications that require high density and compact size. The module uses a 3.3 V power supply.

The use of Synchronous DRAM's allows fast data operations between the Read and Write cycle of the memory operation. The use of the Serial Presence Detect programming allows for all required module and chip configurations to be programmed into the module using JEDEC standards.

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## FEATURES

- \* 144 Pin JEDEC Standard Configuration
- \* Clock frequency of 100 or 133 MHZ
- \* Single 3.3 V (+/- 10%) power supply
- \* Low Power dissipation
- \* Fully Synchronous DRAM operation
- \* 4 Bank operation controlled by BA0,1 (Bank Address)
- \* Burst Length – 1/2/4/8/Full Programmable
- \* LVTTL Interface
- \* Gold Contacts for motherboard connectivity

## COMPATIBILITY

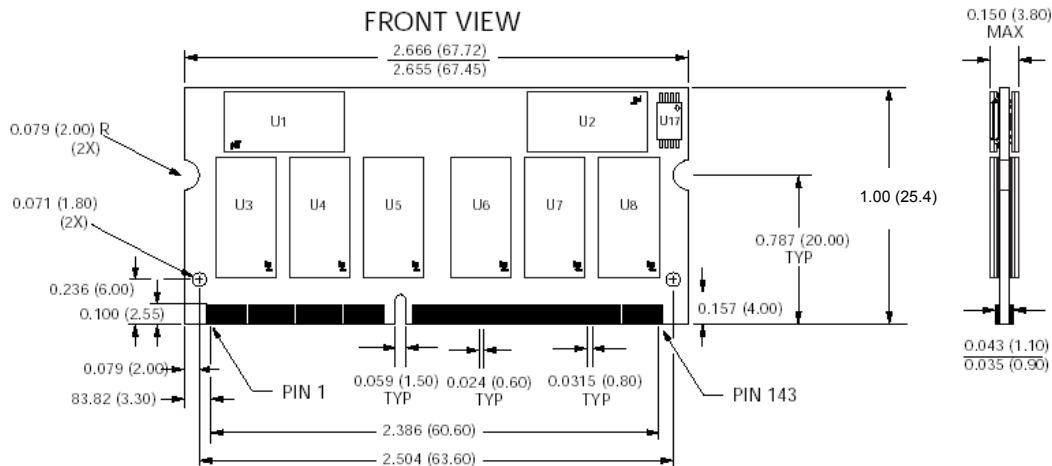
Princeton's 256M PC100/133 Memory Module is fully compatible with industry standard 144 pin memory modules.

## APPLICATION

Main/Expansion memory for desktop computers.

## WARRANTY

Princeton Technology will repair or replace any Princeton memory product that fails due to defective material or workmanship under normal use for the life of the product.



## PIN ASSIGNMENT 144 PIN SMALL OUTLINE DIMM

PIN	FRONT	PIN	BACK	PIN	FRONT	PIN	BACK
1	Vss	2	Vss	73	DNU	74	CK1
3	DQ0	4	DQ32	75	Vss	76	Vss
5	DQ1	6	DQ33	77	NC	78	NC
7	DQ2	8	DQ34	79	NC	80	NC
9	DQ3	10	DQ35	81	Vdd	82	Vdd
11	Vdd	12	Vdd	83	DQ16	84	DQ48
13	DQ4	14	DQ36	85	DQ17	86	DQ49
15	DQ5	16	DQ37	87	DQ18	88	DQ50
17	DQ6	18	DQ38	89	DQ19	90	DQ51
19	DQ7	20	DQ39	91	Vss	92	Vss
21	Vss	22	Vss	93	DQ20	94	DQ52
23	DQMB0	24	DQMB4	95	DQ21	96	DQ53
25	DQMB1	26	DQMB5	97	DQ22	98	DQ54
27	Vdd	28	Vdd	99	DQ23	100	DQ55
29	A0	30	A3	101	Vdd	102	Vdd
31	A1	32	A4	103	A6	104	A7
33	A2	34	A5	105	A8	106	BA0
35	Vss	36	Vss	107	Vss	108	Vss
37	DQ8	38	DQ40	109	A9	110	BA1
39	DQ9	40	DQ41	111	A10	112	A11
41	DQ10	42	DQ42	113	Vdd	114	Vdd
43	DQ11	44	DQ43	115	DQMB2	116	DQMB6
45	Vdd	46	Vdd	117	DQMB3	118	DQMB7
47	DQ12	48	DQ44	119	Vss	120	Vss
49	DQ13	50	DQ45	121	DQ24	122	DQ56
51	DQ14	52	DQ46	123	DQ25	124	DQ57
53	DQ15	54	DQ47	125	DQ26	126	DQ58
55	Vss	56	Vss	127	DQ27	128	DQ59
57	NC	58	NC	129	Vdd	130	Vdd
59	NC	60	NC	131	DQ28	132	DQ60
61	CK0	62	CKE0	133	DQ29	134	DQ61
63	Vdd	64	Vdd	135	DQ30	136	D162
65	RAS#	66	CAS#1	137	DQ31	138	DQ63
67	WE#	68	CKE1	139	Vss	140	Vss
69	S0#	70	RFU(A12)	141	SDA	142	SCL
71	S1#	72	RFU(A13)	143	Vdd	144	Vdd