

256MEGX72 **(Unbuffered-ECC DDR3** **SODIMM)**

128MX8 BASED Lead_Free

268,435,456 words x 72Bit Double Data Rate SDRAM Memory Module

Centon's 2GB Unbuffered-ECC DDR3 SODIMM Memory Module is 268,435,456 words by 72Bit Double Data Rate SDRAM Memory Module which is assembled with 18 pieces of a 128MX8Bit, FBGA, Double Data Rate SDRAM on the printed circuit board. The module is optimized for high density and large capacity in a compact size.

256MEGX72 (DDR3) - 2GB

M0836.01

Rev: 0.1 08/11

Pinout Information

		KEY							
1	VREF/DQ	2	Vss			141	DQS4	142	DQ38
3	Vss	4	DQ4			143	Vss	144	DQ39
5	DQ0	6	DQ5	73	Vss	74	CB5	145	DQ34
7	DQ1	8	Vss	75	DQS8	76	DM8	147	DQ35
9	Vss	10	DQS0	77	DQS8	78	Vss	148	DQ44
11	DM0	12	DQS0	79	Vss	80	CB6	149	Vss
13	DQ2	14	Vss	81	CB2	82	CB7	151	DQ40
15	DQ3	16	DQ6	83	CB3	84	VREFCA	153	DQ41
17	Vss	18	DQ7	85	VDD	86	VDD	155	Vss
19	DQ8	20	Vss	87	CKE0	88	A15*	157	DM5
21	DQ9	22	DQ12	89	CKE1	90	A14*	159	DQ42
23	Vss	24	DQ13	91	BA2	92	A9	161	DQ43
25	DQS1	26	Vss	93	VDD	94	VDD	163	Vss
27	DQS1	28	DM1	95	A12/BC	96	A11	165	DQ48
29	Vss	30	RST	97	A8	98	A7	167	DQ49
31	DQ10	32	Vss	99	A5	100	A6	169	Vss
33	DQ11	34	DQ14	101	VDD	102	VDD	171	DQS6
35	Vss	36	DQ15	103	A3	104	A4	173	DQS6
37	DQ16	38	Vss	105	A1	106	A2	175	Vss
39	DQ17	40	DQ20	107	A0	108	BA1	177	DQ50
41	Vss	42	DQ21	109	VDD	110	VDD	179	DQ51
43	DQS2	44	DM2	111	CK0	112	CK1	181	Vss
45	DQS2	46	Vss	113	CK0	114	CK1	183	DQ56
47	Vss	48	DQ22	115	VDD	116	VDD	185	DQ57
49	DQ18	50	DQ23	117	A10/AP	118	CS3*	187	Vss
51	DQ19	52	Vss	119	BA0	120	CS2*	189	DM7
53	Vss	54	DQ28	121	WE	122	RAS	191	DQ58
55	DQ24	56	DQ29	123	VDD	124	VDD	193	DQ59
57	DQ25	58	Vss	125	CAS	126	ODT0	195	Vss
59	DM3	60	DQS3	127	CS0	128	ODT1	197	SA0
61	Vss	62	DQS3	129	CS1	130	A13	199	VDDSPD
63	DQ26	64	Vss	131	VDD	132	VDD	201	SA1
65	DQ27	66	DQ30	133	DQ32	134	DQ36	203	VTT
67	VSS	68	DQ31	135	DQ33	136	DQ37		
69	CB0	70	Vss	137	Vss	138	Vss		
71	CB1	72	CB4	139	DQS4	140	DM4		

Pin Name	Function
A0 ~ A13	Address input Row=A0-A13, Col=A0-A9
BA0 ~BA2	Bank Select Address
DQ0 ~DQ63	Data input/output
DQS0 ~ DQS8	Data Strobe input/output
CK0 ~ CK1	Positive Edge Clock Inputs
CK0 ~ CK1	Negative Edge Clock Inputs
CKE0,CKE1	Clock Enable input
CS0 ,CS1	Chip Select input
RAS	Row Address Strobe
CAS	Column Address Strobe
WE	Write Enable
DM0 ~ DM8	Data-in mask
VDD	Power Supply
Vss	Ground
VREF	Power supply for reference
VDDSPD	Serial EEPROM Power Supply
SDA	Serial Data I/O
SCL	Serial Clock
SA0 ~ SA1	Address in EEPROM
ODT0,ODT1	On-die termination control
RESET	Reset Pin
CB0~CB7	Check Bits

DU: Reserved for future use
 VTT: Termination voltage
 EVENT: Temperature event
 TEST: Reserved for bus analysis probes and is NC.
 * : these pins are not used in this module.

NOTES:

* This address might be connected to the NC balls of the DRAMs (depending on density); either way they will be connected to the termination resistor.

CPCB-00702

256MEGX72 DDR3 - 2GB

FEATURES

- * 268,435,456 words by 72 bits organization.
- * Utilizes 667MHz DDR3 SDRAM components.
- * CAS Latency specified in the performance table.
- * Single power supply of 1.5V +/- 0.075V.
- * ECC error detection and correction.
- * ODT(On Die Termination).
- * Bi-directional Differential Data Strobe.
- * 8 independent internal bank.
- * Serial Presence Detect with EEPROM (VDDSPD=3.0V to 3.6V).
- * Burst length: 8.
- * 7.8us maximum average periodic refresh interval.
- * Fly-by topology.
- * SSTL_15 Interface.
- * 204 pin SODIMM JEDEC compatible.
- * PCB : Height (1,181 mil), double sided component.
- * RoHS compliant.

PERFORMANCE RANGE

TYPE	MAX FREQ.
DDR3-1333	667Mhz (1.5ns @ CL9)
DDR3-1066	533Mhz (1.875ns @ CL7)

COMPATIBILITY

Centon's 2GB DDR3 Memory Module is fully compatible with industry standard 204 pin SODIMM, Unbuffered-ECC DDR3 SDRAM Memory Modules.

APPLICATION

High Density Memory Unit for Personal Computers, Workstations and Servers.

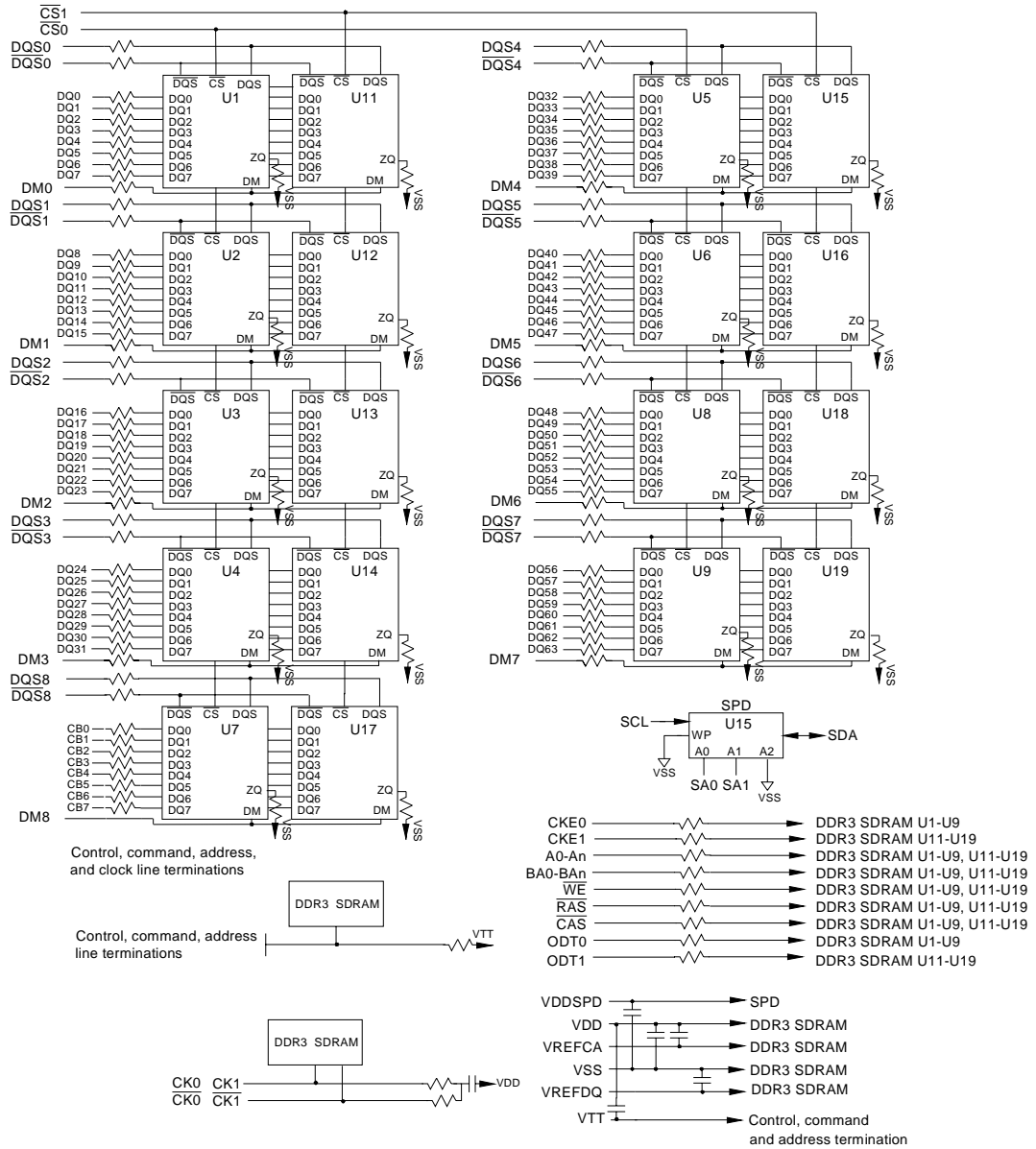
ENVIRONMENT

	OPERATING	STORAGE
TEMPERATURE	0°C to +95°C	-55°C to 125°C
HUMIDITY	20% to 80%	5% to 80%

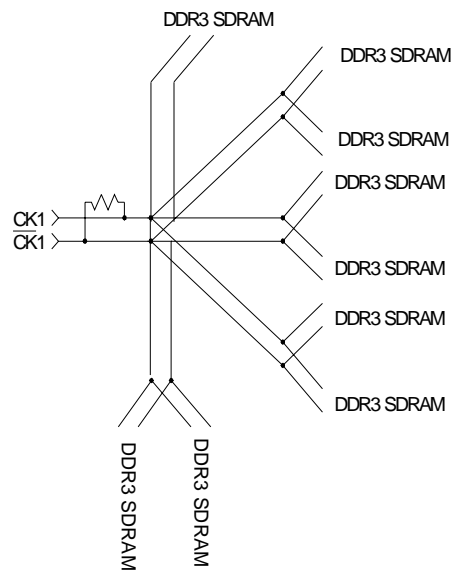
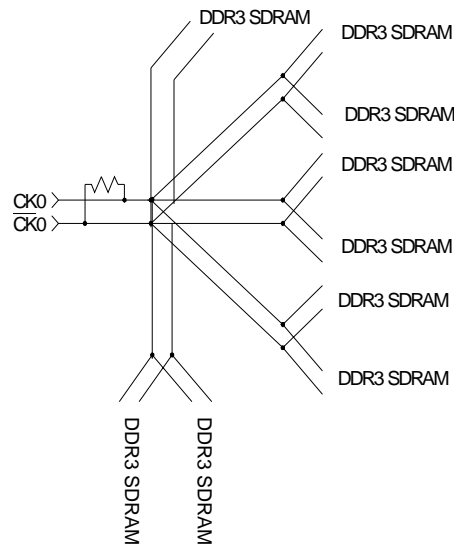
WARRANTY

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

Block Diagram



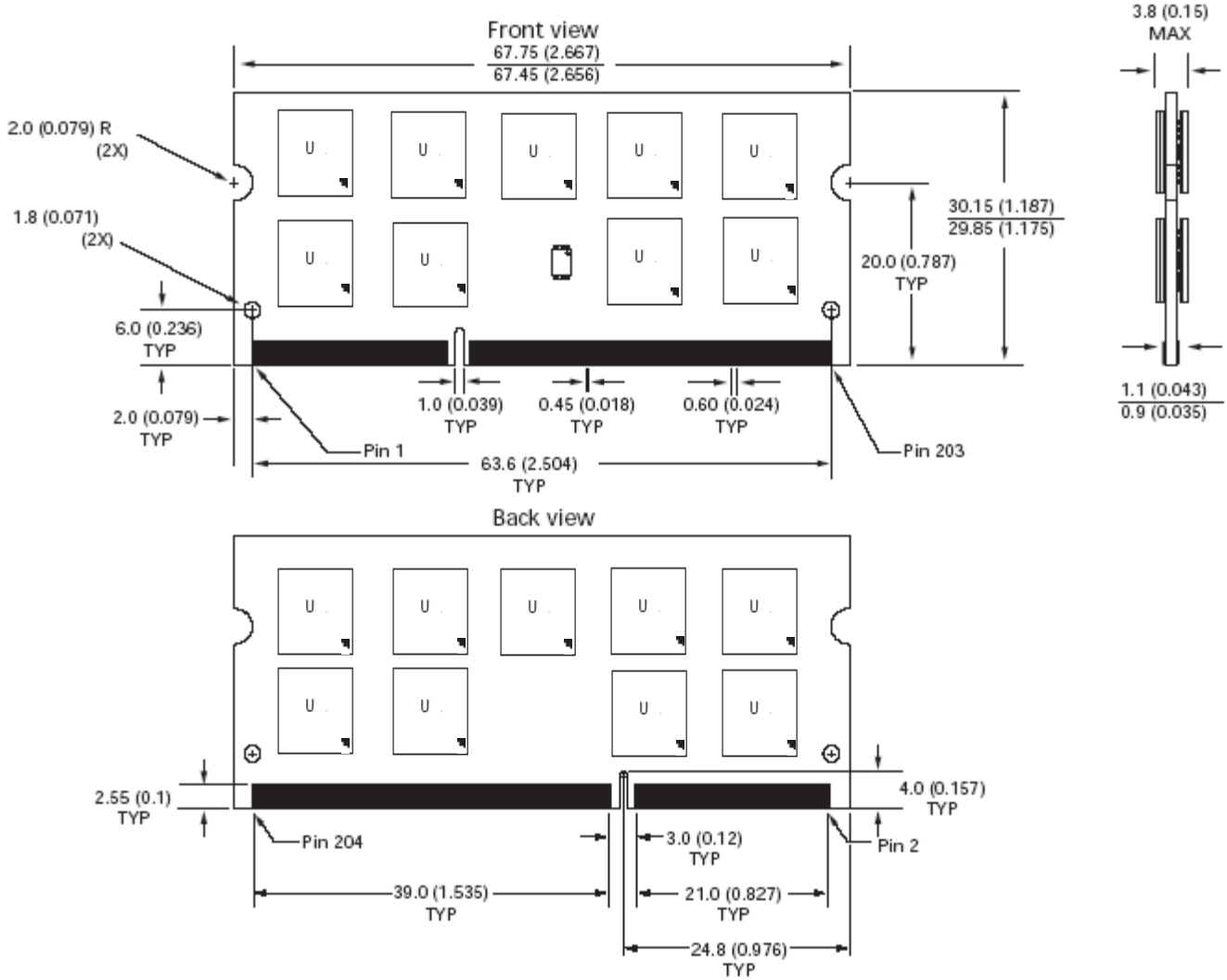
Differential Clock Wiring Diagram



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Mechanical/Assembly Drawing



Notes: 1. All dimensions are in millimeters (inches); MAX/MIN or typical (TYP) where noted.



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