



## UDIMM DDR3 SDRAM

Rev:1.0

### **Note:**

Company will not give any notice for change of products specifications. This product manual is only for reference. Please contact with Oreton Technology Co., Ltd. for more detail technical parameters and information.

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## 1 . Product introduction

### 1.1 Summary

Oreton 4G DDR3(1333Mbps/1600Mbps)& 8G DDR3(1600Mbps/1866Mbps) UDIMM is high-speed memory module. Fast data transfer rates: PC3-14900, PC3-12800, or PC3-10600. 240-pin, unbuffered dual in-line memory module. Synchronous design allows precise cycle control with the,use of system clock. Data I/O transactions are possible,on both edges of DQS. Range of operation frequencies, programmable latencies allow the same device to be useful for a variety of high bandwidth, high performance memory system applications.

### 1.2 Product model list

Model	Voltage	Capacity	Configuration	Data transfer rates	CL
R1333D3P15004G	1.5V	4GB	256M x 8	DDR3-1333	9
R1600D3P15004G	1.5V	4GB	256M x 8	DDR3-1600	11
R1600D3P15008G	1.5V	8GB	512M x 8	DDR3-1600	11
R1866D3P15008G	1.5V	8GB	512M x 8	DDR3-1866	13

### 1.3 Specifications

1.3.1 Interface: 240-pin UDIMM;

1.3.2 Speed: 1333Mbps,1600Mbps,1866Mbps;

1.3.3 Input voltage: DC 1.5V ( $\pm 0.75V$ );

1.3.4 Operating temperature: 0°C ~ +85°C;

1.3.5 Storage temperature: -20°C ~ +100°C;

1.3.6 Physical dimension: 133.0mm length \* 30.0mm wide \* 4.0mm height error $\pm 0.5$ mm;

1.3.7 Support Capacity: 4GB 、 8GB;

1.3.8 MTBF: one million hours.

## 1.4 Features

- 1.4.1 RoHS compliant products;
- 1.4.2 Reset pin for improved system stability;
- 1.4.3. Adjustable data-output drive strength;
- 1.4.4 Fixed burst chop (BC) of 4 and burst length (BL) of 8 via the mode register set (MRS);
- 1.4.5 Nominal and dynamic on-die termination (ODT) for data, strobe, and mask signals;
- 1.4.6 Serial presence-detect (SPD) EEPROM;
- 1.4.7 Fly-by topology;
- 1.4.8 Terminated control, command, and address bus;

## 2 . Measurements

L1 33.0mm \* W30.0mm \* H4.0mm, Error±0.5mm (e.g. Figure 1)

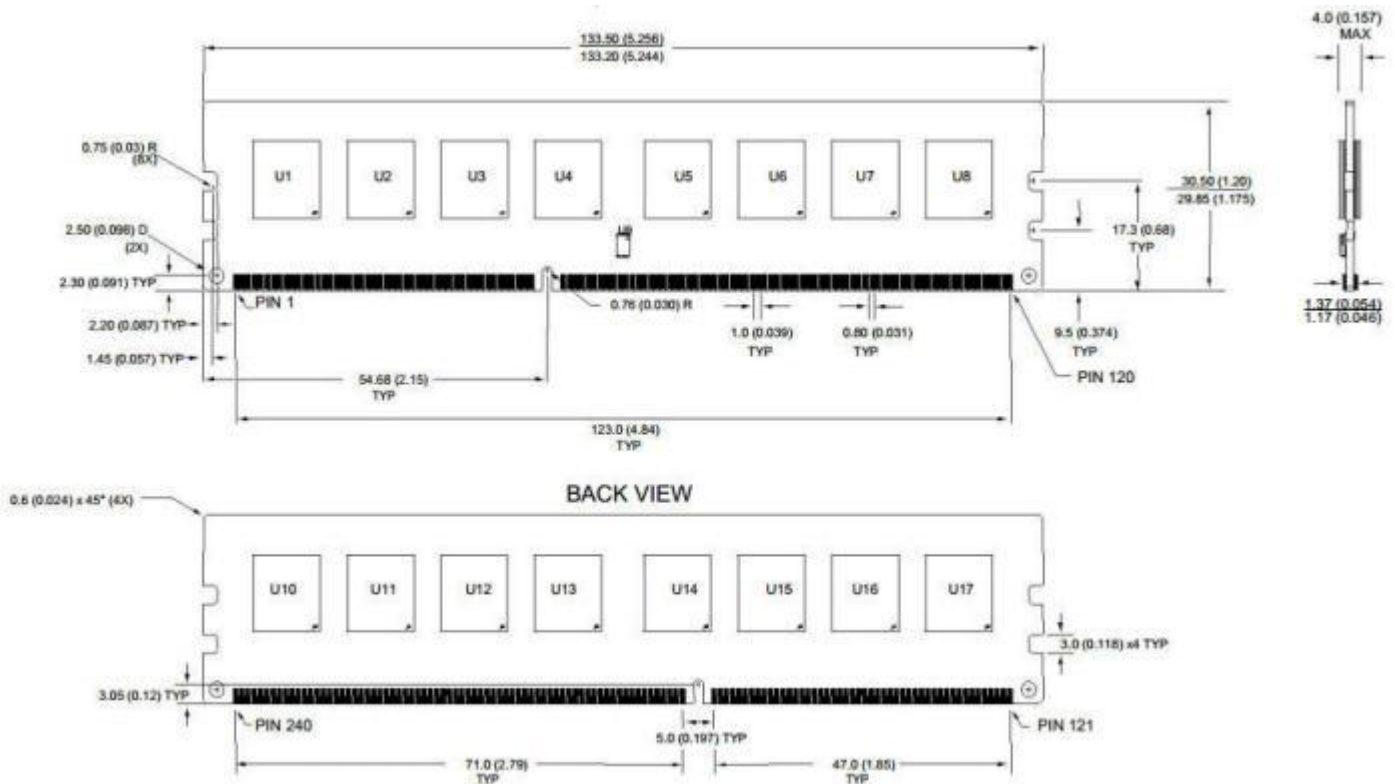


Figure 1

### 3 . Interface description/ Pin description

(e.g. Figure 2)

Pin	Symbol	Pin	Symbol	Pin	Symbol	Pin	Symbol	Pin	Symbol	Pin	Symbol	Pin	Symbol	Pin	Symbol
1	REFDQ	31	DQ25	61	A2	91	DQ41	121	ss	151	ss	181	A1	211	ss
2	ss	32	ss	62	DD	92	ss	122	DQ4	152	DM3	182	DD	212	DM5
3	DQ0	33	DQS3#	63	CK1	93	DQS5#	123	DQ5	153	NC	183	DD	213	NC
4	DQ1	34	DQS3	64	CK1#	94	DQS5	124	ss	154	ss	184	CK0	214	ss
5	ss	35	ss	65	DD	95	ss	125	DM0	155	DQ30	185	CK0#	215	DQ46
6	DQS0#	36	DQ26	66	DD	96	DQ42	126	NC	156	DQ31	186	DD	216	DQ47
7	DQS0	37	DQ27	67	REFCA	97	DQ43	127	ss	157	ss	187	NC	217	ss
8	ss	38	ss	68	NC	98	ss	128	DQ6	158	NC	188	A0	218	DQ52
9	DQ2	39	NC	69	DD	99	DQ48	129	DQ7	159	NC	189	DD	219	DQ53
10	DQ3	40	NC	70	A10	100	DQ49	130	ss	160	ss	190	BA1	220	ss
11	ss	41	ss	71	BA0	101	ss	131	DQ12	161	NC	191	DD	221	DM6
12	DQ8	42	NC	72	DD	102	DQS6#	132	DQ13	162	NC	192	RAS#	222	NC
13	DQ9	43	NC	73	WE#	103	DQS6	133	ss	163	ss	193	S0#	223	ss
14	ss	44	ss	74	CAS#	104	ss	134	DM1	164	NC	194	DD	224	DQ54
15	DQS1#	45	NC	75	DD	105	DQ50	135	NC	165	NC	195	ODT0	225	DQ55
16	DQS1	46	NC	76	S1#	106	DQ51	136	ss	166	ss	196	A13	226	ss
17	ss	47	ss	77	ODT1	107	ss	137	DQ14	167	NC	197	DD	227	DQ60
18	DQ10	48	NC	78	DD	108	DQ56	138	DQ15	168	RESET#	198	NC	228	DQ61
19	DQ11	49	NC	79	NC	109	DQ57	139	ss	169	CKE1	199	ss	229	ss
20	ss	50	CKE0	80	ss	110	ss	140	DQ20	170	DD	200	DQ36	230	DM7
21	DQ16	51	DD	81	DQ32	111	DQS7#	141	DQ21	171	NF/A15	201	DQ37	231	NC
22	DQ17	52	BA2	82	DQ33	112	DQS7	142	ss	172	A14	202	ss	232	ss
23	ss	53	NC	83	ss	113	ss	143	DM2	173	DD	203	DM4	233	DQ62
24	DQS2#	54	DD	84	DQS4#	114	DQ58	144	NC	174	A12	204	NC	234	DQ63
25	DQS2	55	A11	85	DQS4	115	DQ59	145	ss	175	A9	205	ss	235	ss
26	ss	56	A7	86	ss	116	ss	146	DQ22	176	DD	206	DQ38	236	DDSPD
27	DQ18	57	DD	87	DQ34	117	SA0	147	DQ23	177	A8	207	DQ39	237	SA1
28	DQ19	58	A5	88	DQ35	118	SCL	148	ss	178	A6	208	ss	238	SDA
29	ss	59	A4	89	ss	119	SA2	149	DQ28	179	DD	209	DQ44	239	ss
30	DQ24	60	DD	90	DQ40	120	TT	150	DQ29	180	A3	210	DQ45	240	TT

Note: 1. Pin 171 is NF for 4GB; A15 for 8GB.

Figure 2