



Memory Module Specifications

NTBSD3P16SP-08

8GB (2Rx8 512M x 64-Bit) PC3-12800

CL11 240-Pin DIMM

DESCRIPTION

NTBSD4P16SP-08 is a 512M x 64-bit (8GB) DDR3-1600 CL11 SDRAM (Synchronous DRAM), 2Rx8, memory module, based on sixteen 512M x 8-bit FBGA components per module. The SPD is programmed to JEDEC standard latency DDR3-1600 timing of 11-11-11 at 1.5V. Each 240-pin DIMM uses gold contact fingers. The electrical and mechanical specifications are as follows:

FEATURES

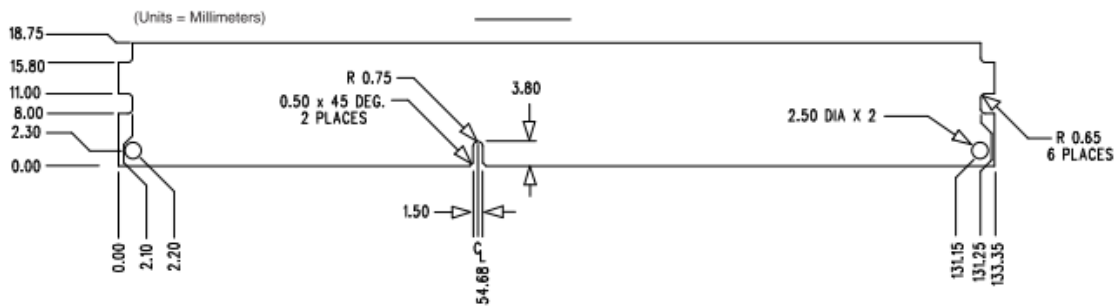
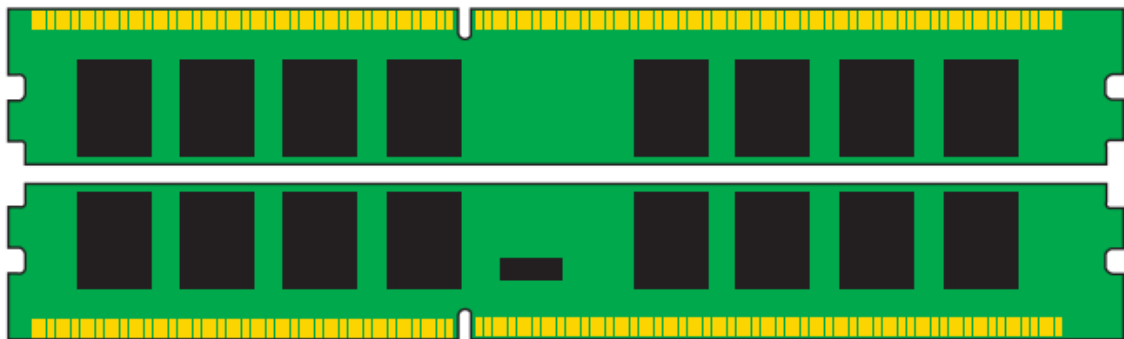
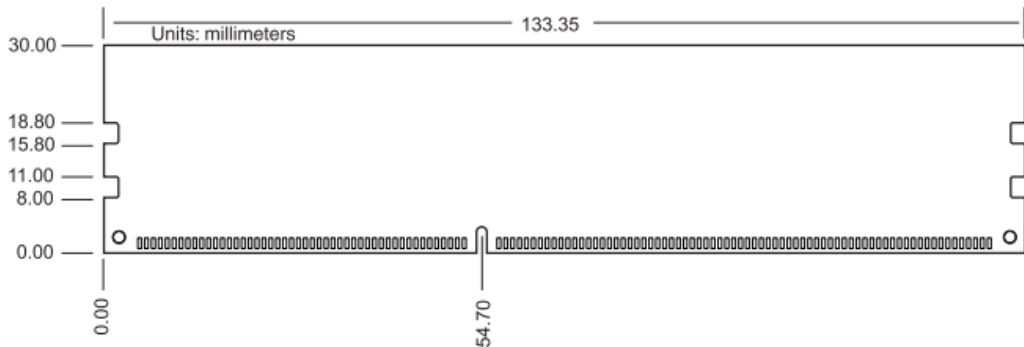
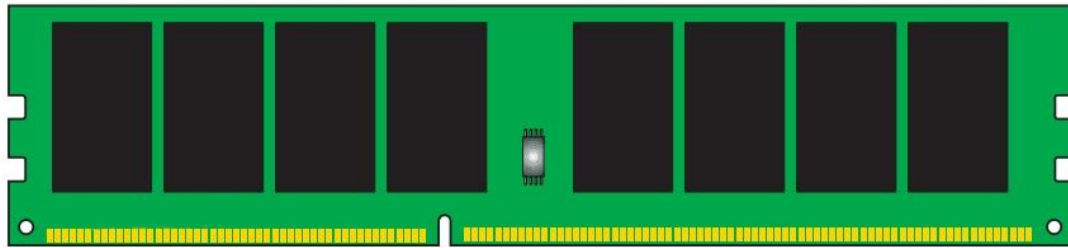
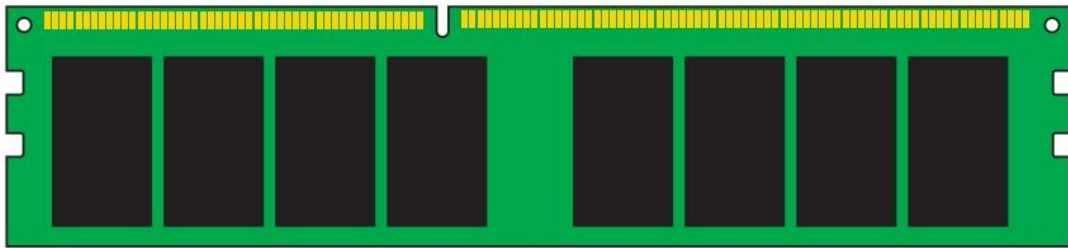
- JEDEC standard 1.5V (1.425V ~1.575V) Power Supply
- $V_{DDQ} = 1.5V$ (1.425V ~ 1.575V)
- 800MHz fCK for 1600Mb/sec/pin
- 8 independent internal bank
- Programmable CAS Latency: 11, 10, 9, 8, 7, 6
- Programmable Additive Latency: 0, CL - 2, or CL - 1 clock
- 8-bit pre-fetch
- Burst Length: 8 (Interleave without any limit, sequential with starting address "000" only), 4 with $t_{CCD} = 4$ which does not allow seamless read or write [either on the fly using A12 or MRS]
- Bi-directional Differential Data Strobe
- Internal(self) calibration : Internal self calibration through ZQ pin (RZQ : 240 ohm \pm 1%)
- On Die Termination using ODT pin
- Average Refresh Period 7.8us at lower than TCASE 85°C, 3.9us at 85°C < TCASE \leq 95°C
- Asynchronous Reset
- PCB : Height 0.740" (18.75mm) or 1.180" (30.00mm)
- RoHS Compliant and Halogen-Free

SPECIFICATIONS

CL(IDD)	11 cycles
Row Cycle Time (tRCmin)	48.125ns(min.)
Refresh to Active/Refresh	260ns(min.)
Command Time (tRFCmin)	
Row Active Time (tRASmin)	35ns(min.)
Maximum Operating Power	TBD W*
UL Rating	94V-0
Operating Temperature	0° C to +70° C
Storage Temperature	-40° C to +85° C

*Power will vary depending on the SDRAM used.

MODULE DIMENSIONS



※The module defined in this data sheet is one of several configurations available under this part number. While all configurations are compatible, the DRAM combination and/or the module height may vary from what is described here.