

# Memory Module Specifications

## KHX1866C11S3P1K2/4G

4GB (2GB 1Rx8 256M x 64-Bit x 2 pcs.)  
 DDR3-1866MHz CL11 204-Pin SODIMM Kit  
 Supports Kingston HyperX Plug and Play (PnP)



### SPECIFICATIONS

CL(IDD)	11 cycles
Row Cycle Time (tRCmin)	47.91ns (min.)
Refresh to Active/Refresh Command Time (tRFCmin)	160ns (min.)
Row Active Time (tRASmin)	32ns (min.)
Maximum Operating Power	TBD* (per module)
UL Rating	94 V - 0
Operating Temperature	0° C to 85° C
Storage Temperature	-55° C to +100° C

\*Power will vary depending on the SDRAM used.

### DESCRIPTION

Kingston's KHX1866C11S3P1K2/4G is a kit of two 256M x 64-bit (2GB) DDR3-1866 CL11 SDRAM (Synchronous DRAM) 1Rx8 memory modules, based on eight 256M x 8-bit DDR3 FBGA components per module. Total kit capacity is 4GB. Each module kit has been tested to run at JEDEC DDR3-1866 at a low latency timing of 11-11-11 at 1.5V. Additional timing parameters are shown in the PnP Timing Parameters section. Each 204-pin SODIMM uses gold contact fingers and requires +1.5V. The electrical and mechanical specifications are as follows:

**Note:** PnP implementation is only possible in configurations that include a BIOS that supports the PnP function. Your maximum speed will be determined by your BIOS.

### PnP JEDEC TIMING PARAMETERS:

- DDR3-1866 CL11-11-11 @1.5V
- DDR3-1600 CL10-10-10 @1.5V
- DDR3-1333 CL8-8-8 @1.5V

### FEATURES

- JEDEC standard 1.5V (1.425V ~ 1.575V) Power Supply
- VDDQ = 1.5V (1.425V ~ 1.575V)
- 933MHz fCK for 1866Mb/sec/pin
- 8 independent internal bank
- Programmable CAS Latency: 11, 10, 9, 8, 7, 6, 5
- Posted CAS
- Programmable Additive Latency: 0, CL - 2, or CL - 1 clock
- Programmable CAS Write Latency(CWL) = 9 (DDR3-1866)
- 8-bit pre-fetch
- Burst Length: 8 (Interleave without any limit, sequential with starting address "000" only), 4 with tCCD = 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 ± 1%)
- On Die Termination using ODT pin
- Average Refresh Period 7.8us at lower than TCASE 85°C, 3.9us at 85°C < TCASE ≤ 95°C
- Asynchronous Reset
- PCB : Height 1.180" (30.00mm), double sided component

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