

## DDR4 SDRAM 2133/2400/2666 260-PIN SO\_DIMM 16GB 1GBx8

### DESCRIPTION:

This document describes Aplus 1GBx 64-bit 8GB DDR4 SDRAM (Synchronous DRAM) Dual In-Line Memory Module. The components on this module include sixteen 1GB x 8-bit DDR4 SDRAMs in FBGA packages and a 2048-bit serial EEPROM. Those components were mounted on a 260-pin printed circuit board. This 260-pin SO\_DIMM is used to be mounted into 260-pin edge connector sockets and data I/O transactions could be apply on both edges of DQS. The electrical and mechanical specifications are as follows:

### Features

- 260-pin, small-outline dual in-line memory module (SODIMM)
- Fast data transfer rates: PC4-2666, PC4-2400, or PC4-2133
- 16GB (2 Gig x 64)
- VDD = 1.20V (NOM)
- VPP = 2.5V (NOM)
- VDDSPD = 2.5V (NOM)
- Nominal and dynamic on-die termination (ODT) for data, strobe, and mask signals
- Low-power auto self refresh (LPASR)
- Data bus inversion (DBI) for data bus
- On-die VREFDQ generation and calibration
- Dual-rank
- On-board I2C serial presence-detect (SPD) EEPROM
- 16 internal banks; 4 groups of 4 banks each
- Fixed burst chop (BC) of 4 and burst length (BL) of 8 via the mode register set (MRS)
- Selectable BC4 or BL8 on-the-fly (OTF)
- Gold edge contacts
- Halogen-free
- Fly-by topology
- Terminated control, command, and address bus

### Options

Operating temperature<sup>1</sup>

– Commercial (0°C ≤TA ≤+95°C)

Frequency/CAS latency

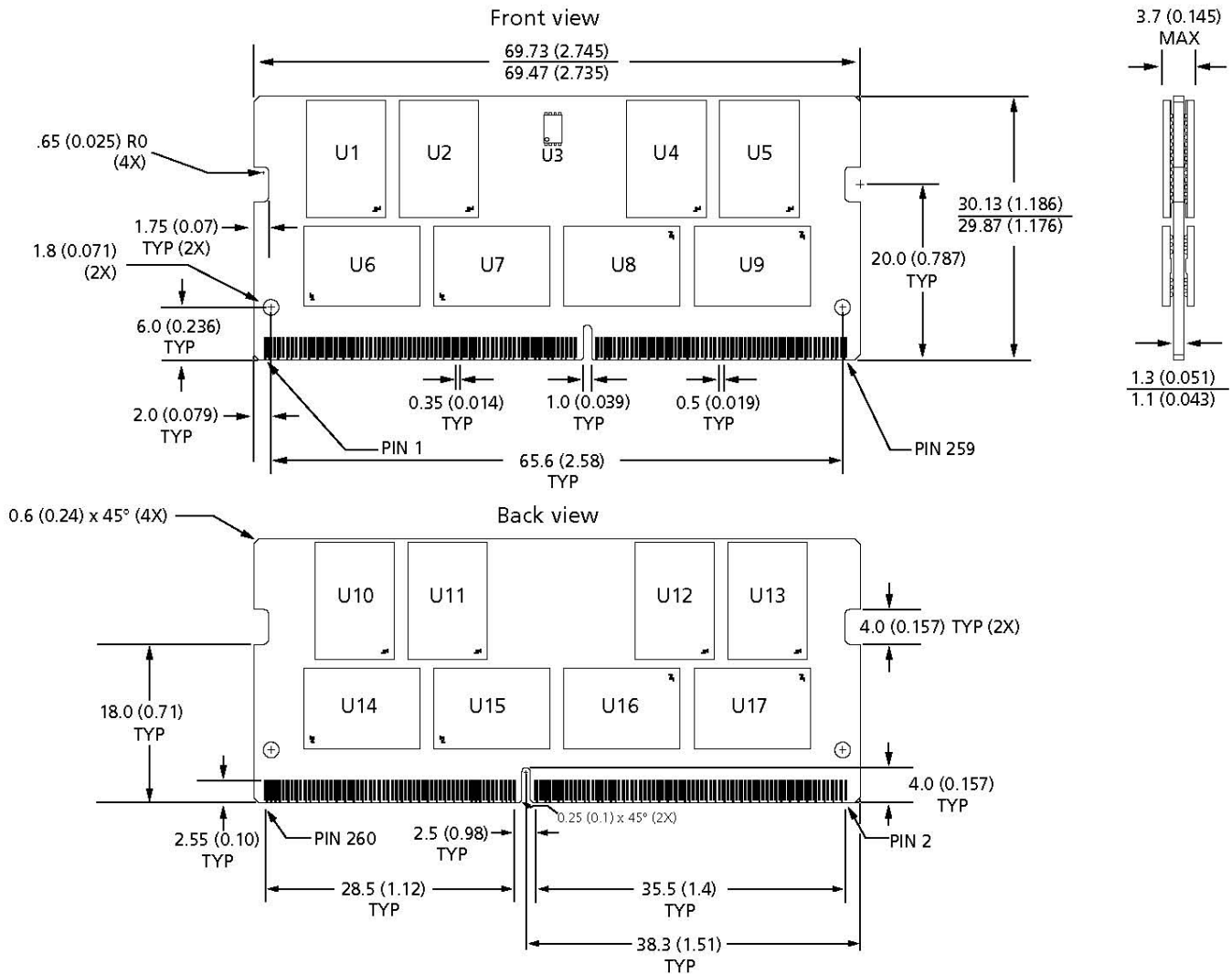
– 0.75ns @ CL = 19 (DDR4-2666)

– 0.83ns @ CL = 17 (DDR4-2400)

– 0.93ns @ CL = 15 (DDR4-2133)

Industry Nomenclature	Data Rate (MT/s)					tRCD (ns)	tRP (ns)	tRC (ns)	Module Bandwidth	Memory Clock/ Data Rate	Clock Cycles (CL-tRCD-tRP)
	CL=20 CL=19	CL=18	CL=17	CL=16	CL=15						
PC4-2666	2666	2666	2400	2133	2133	14.16	14.16	46.16	21.3GB/s	0.75ns/2666 MT/s	19-19-19
PC4-2400	–	2400	2400	2133	2133	14.16	14.16	46.16	19.2GB/s	0.83ns/2400 MT/s	17-17-17
PC4-2133	–	–	–	2133	2133	13.5	13.5	13.5	17.0GB/s	0.93ns/2133 MT/s	15-15-15

### 260-Pin DDR4 SODIMM



- Notes: 1. All dimensions are in millimeters (inches); MAX/MIN or typical (TYP) where noted.  
 2. The dimensional diagram is for reference only.