APLUS TECHNOLOGY

DDR4 SDRAM 2400/2666/3200 260-PIN SO_DIMM 8GB 1GBx8

DESCRIPTION:

This document describes Aplus 1GBx 64-bit 4GB DDR4 SDRAM (Synchronous DRAM) Dual In-Line Memory Module. The components on this module include eight 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

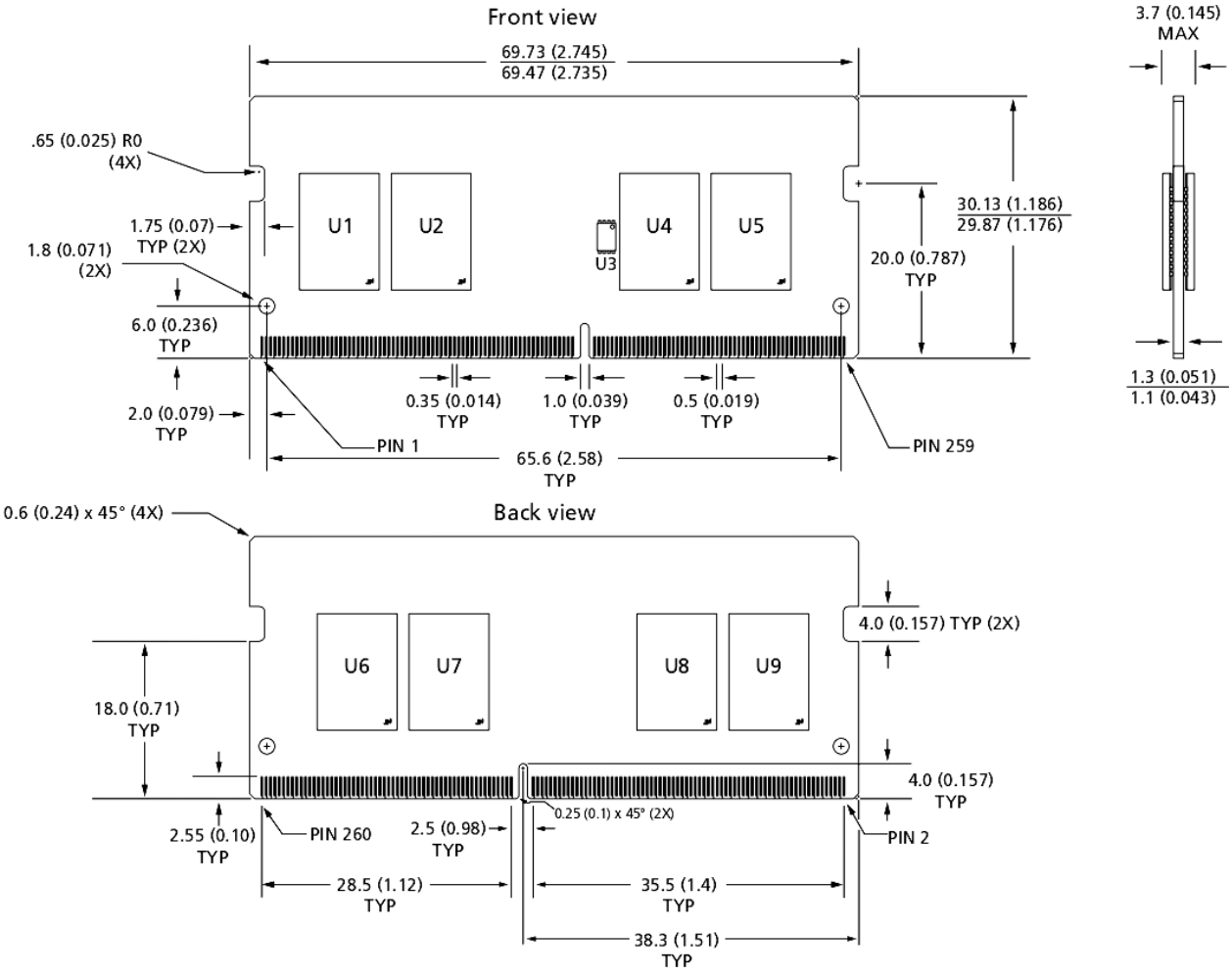
- DDR4 functionality and operations supported as defined in the component data sheet
- 260-pin, small-outline dual in-line memory module (SODIMM)
- Fast data transfer rates: PC4-3200, PC4-2666, or PC4-2400
- 8GB (1 Gig x 64)
- VDD = 1.20V (NOM)
- VPP = 2.5V (NOM)
- VDDSPD = 2.5V (NOM)
- Nominal and dynamic 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
- Single-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 temperature1
– Commercial (0°C ≤TA ≤+95°C)
Frequency/CAS latency
– 0.62ns @ CL = 22 (DDR4-3200)
– 0.75ns @ CL = 19 (DDR4-2666)
– 0.83ns @ CL = 17 (DDR4-2400)

Industry Nomenclature	Data Rate (MT/s)					t_{RCD} (ns)	t_{RP} (ns)	t_{RC} (ns)	t_{RAS} (ns)	Memory Clock/ Data Rate	Clock Cycles (CL-tRCD-tRP)
	CL=24	CL=22	CL=21	CL=20 CL=19	CL=18 CL=17						
PC4-3200	3200	3200	2933	2666	2400	13.75	13.75	45.75	32	0.62ns/3200 MT/s	22-22-22
PC4-2666				2666	2400	14.25	14.25	46.25	32	0.75ns/2666 MT/s	19-19-19
PC4-2400					2400	14.06	14.06	47.06	32	0.83ns/2400 MT/s	17-17-17

260-Pin DDR4 SODIMM



Notes:
1. All dimensions are in millimeters (inches); MAX/MIN or typical (TYP) where noted.
2. Tolerance on all dimensions ±0.15mm unless otherwise specified.
3. The dimensional diagram is for reference only.