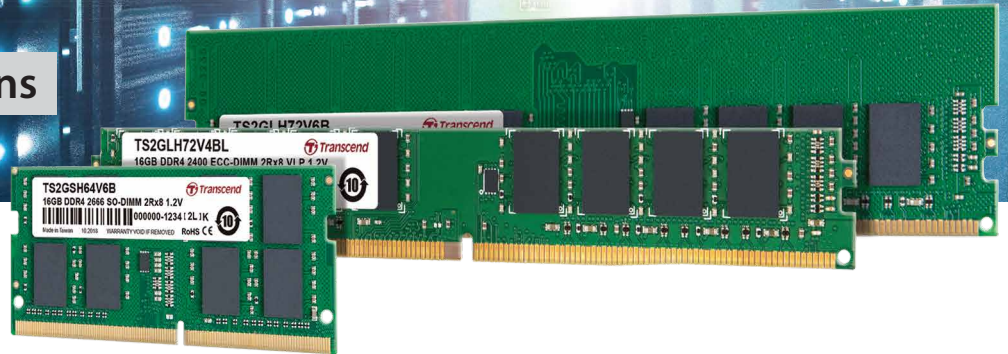


Embedded Solutions



DRAM Modules DDR4

Transcend's DDR4 DRAM modules operate at a nominal voltage of just 1.2V, offering higher energy efficiency and exceptional clock speeds to cater to the demands of the embedded industry. The modules are available in multiple form factors and technologies, such as ECC and wide-temperature support. All components are of the highest quality, having been sourced directly from the world's first-tier supplier of DRAM chips and stringently tested for unparalleled compatibility, reliability, and performance.

Features

- JEDEC standard 1.2V \pm 0.06V power supply
- High energy efficiency
- 8 bit pre-fetch
- Burst Length: 4, 8
- 16 Banks (4 Bank Groups)
- Support DBI mode
- Support Command/Address parity detection
- Support Data Cyclic Redundancy Check (CRC) for improved data reliability
- On-die termination with ODT pin
- Serial presence detect with EEPROM
- 100% tested for stability, compatibility and performance

Advanced Technologies



Anti-Sulfur
Technology



Corner Bond &
Underfill



Conformal
Coating





Wide
Temperature



30µm
Gold Finger

DDR4 Unbuffered DIMMs

Module Type	DDR4	
	Long-DIMM	SO-DIMM
Product Image		
Standard	JEDEC	
Speed	3200/2666/2400/2133 Mbps	
Capacity	2GB~32GB	
Voltage	1.2V	
Pin Count	Long-DIMM: 288 pin	SO-DIMM: 260 pin
PCB Height	Standard: 1.23 inches Very Low Profile: 0.74 inches	1.18 inches
Operating Temperature	Standard Temperature: 0°C~ 95°C Wide Temperature: -40°C~ 95°C	

Ordering Information

DDR4-3200 Long-DIMM

Capacity	Component Composition	Rank x Org.	Standard (1.2V)	Wide Temp. (-40°C~ 95°C)	Very Low Profile (VLP)
4GB	(512Mx16)x4	1Rx16	-	TS512MLH64V2D-I	-
4GB	(512Mx16)x4	1Rx16	TS512MLH64V2D3	-	-
8GB	(1Gx8)x8	1Rx8	TS1GLH64V2B	TS1GLH64V2B-I	-
8GB	(1Gx8)x8	1Rx8	TS1GLH64V2B-G	-	-
8GB	(1Gx8)x8	1Rx8	TS1GLH64V2B3	-	-
8GB	(1Gx16)x4	1Rx16	TS1GLH64V2G	TS1GLH64V2G-I	-
8GB	(1Gx16)x4	1Rx16	TS1GLH64V2G3	-	-
16GB	(1Gx8)x16	2Rx8	TS2GLH64V2B	TS2GLH64V2B-I	-
16GB	(1Gx8)x16	2Rx8	TS2GLH64V2B-G	-	-
16GB	(1Gx8)x16	2Rx8	TS2GLH64V2B3	-	-
16GB	(2Gx8)x8	1Rx8	TS2GLH64V2E	TS2GLH64V2E-I	-
16GB	(2Gx8)x8	1Rx8	TS2GLH64V2E3	-	-
32GB	(2Gx8)x16	2Rx8	TS4GLH64V2E	TS4GLH64V2E-I	-
32GB	(2Gx8)x16	2Rx8	TS4GLH64V2E-G	-	-
32GB	(2Gx8)x16	2Rx8	TS4GLH64V2E3	-	TS4GLH64V2E3L

DDR4-3200 SO-DIMM

Capacity	Component Composition	Rank x Org.	Standard (1.2V)	Wide Temp. (-40°C~ 95°C)	Very Low Profile (VLP)
4GB	(512Mx16)x4	1Rx16	TS512MSH64V2D3	-	-
8GB	(1Gx8)x8	1Rx8	-	TS1GSH64V2B2-I	-
8GB	(1Gx8)x8	1Rx8	TS1GSH64V2B-G	-	-
8GB	(1Gx8)x8	1Rx8	TS1GSH64V2B3	-	-
8GB	(1Gx8)x8	1Rx8	TS1GSH64V2B3-G	-	-
8GB	(1Gx16)x4	1Rx16	TS1GSH64V2G	TS1GSH64V2G-I	-
8GB	(1Gx16)x4	1Rx16	TS1GSH64V2G3	-	-
16GB	(1Gx8)x16	2Rx8	TS2GGSH64V2B	TS2GGSH64V2B-I	-
16GB	(1Gx8)x16	2Rx8	TS2GSH64V2B-G	-	-
16GB	(1Gx8)x16	2Rx8	TS2GSH64V2B3	-	-
16GB	(1Gx8)x16	2Rx8	TS2GSH64V2B3-G	-	-
16GB	(2Gx8)x8	1Rx8	TS2GSH64V2E	TS2GSH64V2E-I	-
16GB	(2Gx8)x8	1Rx8	TS2GSH64V2E3	-	-
32GB	(2Gx8)x16	2Rx8	TS4GSH64V2E	TS4GSH64V2E-I	-
32GB	(2Gx8)x16	2Rx8	TS4GSH64V2E-G	-	-
32GB	(2Gx8)x16	2Rx8	TS4GSH64V2E3	-	-

DDR4-2666 Long-DIMM

Capacity	Component Composition	Rank x Org.	Standard (1.2V)	Wide Temp. (-40°C~ 95°C)	Very Low Profile (VLP)
2GB	(256Mx16)x4	1Rx16	TS256MLH64V6X	-	-
4GB	(512Mx16)x4	1Rx16	TS512MLH64V6D	-	-
4GB	(512Mx8)x8	1Rx8	TS512MLH64V6H	TS512MLH64V6H-I	TS512MLH64V6HL
8GB	(1Gx8)x8	1Rx8	TS1GLH64V6B	-	TS1GLH64V6BL
8GB	(1Gx8)x8	1Rx8	TS1GLH64V6B3	-	-
16GB	(1Gx8)x16	2Rx8	TS2GLH64V6B	TS2GLH64V6B-I	TS2GLH64V6BL
16GB	(1Gx8)x16	2Rx8	TS2GLH64V6B-G	-	-
16GB	(1Gx8)x16	2Rx8	TS2GLH64V6B3	-	-
32GB	(2Gx8)x16	2Rx8	TS4GLH64V6E	TS4GLH64V6E-I	TS4GLH64V6EL

DDR4-2666 SO-DIMM

Capacity	Component Composition	Rank x Org.	Standard (1.2V)	Wide Temp. (-40°C~ 95°C)
2GB	(256Mx16)x4	1Rx16	TS256MSH64V6X	-
4GB	(512Mx16)x4	1Rx16	TS512MSH64V6D	-
4GB	(512Mx8)x8	1Rx8	TS512MSH64V6H	TS512MSH64V6H-I
8GB	(512Mx8)x16	2Rx8	TS1GSH64V6H	-
8GB	(1Gx8)x8	1Rx8	TS1GSH64V6B	TS1GSH64V6B-I
8GB	(1Gx8)x8	1Rx8	TS1GSH64V6B3	-
16GB	(1Gx8)x16	2Rx8	TS2GSH64V6B	TS2GSH64V6B-I
16GB	(1Gx8)x16	2Rx8	TS2GSH64V6B3	-
32GB	(2Gx8)x16	2Rx8	TS4GSH64V6E	TS4GSH64V6E-I
32GB	(2Gx8)x16	2Rx8	TS4GSH64V6E3	-

DDR4-2400 Long-DIMM

Capacity	Component Composition	Rank x Org.	Standard (1.2V)	Wide Temp. (-40°C~ 95°C)	Very Low Profile (VLP)
2GB	(256Mx16)x4	1Rx16	-	-	TS256MLH64V4XL
4GB	(512Mx8)x8	1Rx8	TS512MLH64V4H	-	TS512MLH64V4HL
8GB	(512Mx8)x16	2Rx8	TS1GLH64V4H	-	-
8GB	(1Gx8)x8	1Rx8	TS1GLH64V4B	-	-
16GB	(1Gx8)x16	2Rx8	TS2GLH64V4B	-	TS2GLH64V4BL

DDR4-2400 SO-DIMM

Capacity	Component Composition	Rank x Org.	Standard (1.2V)	Wide Temp. (-40°C~ 95°C)
2GB	(256Mx16)x4	1Rx16	TS256MSH64V4X	-
4GB	(512Mx8)x8	1Rx8	TS512MSH64V4H	TS512MSH64V4H-I
8GB	(512Mx8)x16	2Rx8	TS1GSH64V4H	-
8GB	(1Gx8)x8	1Rx8	TS1GSH64V4B	TS1GSH64V4B-I
16GB	(1Gx8)x16	2Rx8	TS2GSH64V4B	TS2GSH64V4B-I

DDR4-2133 Long-DIMM

Capacity	Component Composition	Rank x Org.	Standard (1.2V)	Wide Temp. (-40°C~ 95°C)	Very Low Profile (VLP)
4GB	(512Mx8)x8	1Rx8	TS512MLH64V1H	-	-
8GB	(512Mx8)x16	2Rx8	TS1GLH64V1H	-	TS1GLH64V1HL
16GB	(1Gx8)x16	2Rx8	TS2GLH64V1B	-	-
16GB	(1Gx8)x16	2Rx8	TS2GLH64V1B-G	-	-

DDR4-2133 SO-DIMM

Capacity	Component Composition	Rank x Org.	Standard (1.2V)	Wide Temp. (-40°C~ 95°C)
4GB	(512Mx8)x8	1Rx8	TS512MSH64V1H	TS512MSH64V1H-I
8GB	(512Mx8)x16	2Rx8	TS1GSH64V1H	TS1GSH64V1H-I
16GB	(1Gx8)x16	2Rx8	TS2GSH64V1B	TS2GSH64V1B-I