



DDR5 Memory Modules

DDR5 is designed to meet increasing needs for efficient performance in a wide range of applications including cloud computing, and data center processing. The DDR5 memory provides developers with twice the performance (4800 to 6400 MT/s) and improved power efficiency in comparison to DDR4 by using an on-DIMM 12V voltage regulator (PMIC) and 1.1 I/O Voltage.

DDR5 also improves scaling performance without degrading channel efficiency at higher speeds. This increased performance is achieved by doubling the burst length to BL16 and bank-count from 16 to 32. For increased reliability and efficiency, a DDR5 DIMM utilizes two 40-bit fully independent sub-channels on the same module. DDR5 memory modules have a maximum die density of 64Gb and hence are capable of having a much higher DIMM storage capacity.

Features

- Command/Address and Control bus is double data rate
- Generates CRC checksum in READ data frames
- Default burst length increased to BL16 – Single burst = 64B of data
- Integrated Temperature Sensor (MR4)
- DDR5 DRAM contain 256 mode registers



Applications

- High Performance Computing
- Cloud Computing and Storage
- Enterprise Networking

Benefits

- Higher Bandwidth
- Lower Power
- Better power efficiency and scalability
- Higher memory efficiency, lower latency
- Higher capacity DIMMs

DDR5 Ordering Information

288-PIN - DDR5 RDIMM							
SMART Part Number	Density	Height (mm)	Module Config	Device Config	Speed	Voltage	Temp*
SR4G8RD5285SB	32GB	31.25	4Gb x80	2Gx8	4800MT/s	1.1V	0°C to +70°C

* Reflects Operating Ambient Temperature

DDR5 Ordering Information

288-PIN - DDR5 VLP RDIMM							
SMART Part Number	Density	Height (mm)	Module Config	Device Config	Speed	Voltage	Temp*
SR4G8RD5288SBV	32GB	18.75	4Gb x80	2Gx8	5600MT/s	1.1V	0°C to +70°C
SR4G8RD5288MDV	32GB	18.75	4Gb x80	2Gx8	5600MT/s	1.1V	0°C to +70°C
SR4G8RD5285SBV	32GB	18.75	4Gb x80	2Gx8	4800MT/s	1.1V	0°C to +70°C
SR4G8RD5285HAV	32GB	18.75	4Gb x80	2Gx8	4800MT/s	1.1V	0°C to +70°C
262-PIN - DDR5 Non-ECC SODIMM							
SMART Part Number	Density	Height (mm)	Module Config	Comp Config	Speed	Voltage	Temp*
SR6G6SO5385HM	48GB	30.00	6Gb x64	3Gx8	4800MT/s	1.1V	0°C to +70°C
SR6G6SO5385MB	48GB	30.00	6Gb x64	3Gx8	4800MT/s	1.1V	0°C to +70°C
SR4G6SO5285SB	32GB	30.00	4Gb x64	2Gx8	4800MT/s	1.1V	0°C to +70°C
SR3G6SO5385HM	24GB	30.00	3Gb x64	3Gx8	4800MT/s	1.1V	0°C to +70°C
SR2G6SO5285SB	16GB	30.00	2Gb x64	2Gx8	4800MT/s	1.1V	0°C to +70°C
262-PIN - DDR5 ECC SODIMM							
SMART Part Number	Density	Height (mm)	Module Config	Comp Config	Speed	Voltage	Temp*
SR6G7SO5388HM	48GB	30.00	6Gb x72	3Gx8	5600MT/s	1.1V	0°C to +70°C
SR6G7SO5385HM	48GB	30.00	6Gb x72	3Gx8	4800MT/s	1.1V	0°C to +70°C
SR4G7SO5288SB	32GB	30.00	4Gb x72	2Gx8	5600MT/s	1.1V	0°C to +70°C
ST4G7SO5285SB	32GB	30.00	4Gb x72	2Gx8	4800MT/s	1.1V	0°C to +70°C
SRI4G7SO5285SB	32GB	30.00	4Gb x72	2Gx8	4800MT/s	1.1V	-40°C to +85°C
SR4G7SO5285SB	32GB	30.00	4Gb x72	2Gx8	4800MT/s	1.1V	0°C to +70°C
SRI2G7SO5285SB	16GB	30.00	2Gb x72	2Gx8	4800MT/s	1.1V	-40°C to +85°C
SR2G7SO5285SB	16GB	30.00	2Gb x72	2Gx8	4800MT/s	1.1V	0°C to +70°C
288-PIN - DDR5 ECC UDIMM							
SMART Part Number	Density	Height (mm)	Module Config	Comp Config	Speed	Voltage	Temp*
SR6G7UD5388HM	48GB	31.25	6Gb x72	3Gx8	5600MT/s	1.1V	0°C to +70°C
SRI6G7UD5385HM	48GB	31.25	6Gb x72	3Gx8	4800MT/s	1.1V	-40°C to +85°C
SR6G7UD5385HM	48GB	31.25	6Gb x72	3Gx8	4800MT/s	1.1V	0°C to +70°C
SRI6G7UD5385MB	48GB	31.25	6Gb x72	3Gx8	4800MT/s	1.1V	-40°C to +85°C
SR6G7UD5385MB	48GB	31.25	6Gb x72	3Gx8	4800MT/s	1.1V	0°C to +70°C
SRI4G7UD5285SB	32GB	31.25	4Gb x72	2Gx8	4800MT/s	1.1V	-40°C to +85°C
SR4G7UD5285SB	32GB	31.25	4Gb x72	2Gx8	4800MT/s	1.1V	0°C to +70°C
SRI2G7UD5285SB	16GB	31.25	2Gb x72	2Gx8	4800MT/s	1.1V	-40°C to +85°C
SR2G7UD5285SB	16GB	31.25	2Gb x72	2Gx8	4800MT/s	1.1V	0°C to +70°C
288-PIN - DDR5 ECC VLP UDIMM							
SMART Part Number	Density	Height (mm)	Module Config	Comp Config	Speed	Voltage	Temp*
SR6G7UD5388HMV	48GB	18.75	6Gb x72	3Gx8	5600MT/s	1.1V	0°C to +70°C
SR6G7UD5385HMV	48GB	18.75	6Gb x72	3Gx8	4800MT/s	1.1V	0°C to +70°C
SR4G7UD5288SBV	32GB	18.75	4Gb x72	2Gx8	5600MT/s	1.1V	0°C to +70°C
SR4G7UD5288MDV	32GB	18.75	4Gb x72	2Gx8	5600MT/s	1.1V	0°C to +70°C
SRI4G7UD5285SBV	32GB	18.75	4Gb x72	2Gx8	4800MT/s	1.1V	-40°C to +85°C
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SRI2G7UD5285SBV	16GB	18.75	2Gb x72	2Gx8	4800MT/s	1.1V	-40°C to +85°C
SR2G7UD5285SBV	16GB	18.75	2Gb x72	2Gx8	4800MT/s	1.1V	0°C to +70°C

* Reflects Operating Ambient Temperature



For more information, please visit: www.smartm.com

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