



## DuraMemory™

# 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 Type	Speed	Voltage	Temperature
SR4G8RD5285MA	32GB	31.25	4Gb x80	2Gx8	4800MT/s	1.1V	0°C to +70°C
SR4G8RD5285SB	32GB	31.25	4Gb x80	2Gx8	4800MT/s	1.1V	0°C to +70°C

## DDR5 Ordering Information

288-PIN - DDR5 VLP RDIMM							
SMART Part Number	Density	Height (mm)	Module Config.	Device Type	Speed	Voltage	Temperature
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
SR4G8RD5285MAV	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.	Device Type	Speed	Voltage	Temperature
SR6G6SO5385SB	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
SR3G6SO5385SB	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.	Device Type	Speed	Voltage	Temperature
SR4G7SO5285SB	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
ST4G7SO5285SB	32GB	30.00	4Gb x72	2Gx8	4800MT/s	1.1V	0°C to +70°C
SR2G7SO5285MA	16GB	30.00	2Gb x72	2Gx8	4800MT/s	1.1V	0°C to +70°C
SR2G7SO5285SB	16GB	30.00	2Gb 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
288-PIN - DDR5 ECC UDIMM							
SMART Part Number	Density	Height (mm)	Module Config.	Device Type	Speed	Voltage	Temperature
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
SR4G7UD5288MG	32GB	31.25	4Gb x72	2Gx8	5600MT/s	1.1V	0°C to +70°C
SR4G7UD5285SB	32GB	31.25	4Gb x72	2Gx8	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
SR2G7UD5285SB	16GB	31.25	2Gb 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
288-PIN - DDR5 ECC VLP UDIMM							
SMART Part Number	Density	Height (mm)	Module Config.	Device Config	Speed	Voltage	Temp
SR4G7UD5288MDV	32GB	18.75	4Gb x72	2Gx8	5600MT/s	1.1V	0°C to +70°C
SR4G7UD5288MGV	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
SR4G7UD5285SBV	32GB	18.75	4Gb x72	2Gx8	4800MT/s	1.1V	0°C to +70°C
SR2G7UD5285SBV	16GB	18.75	2Gb x72	2Gx8	4800MT/s	1.1V	0°C to +70°C
SRI2G7UD5285SBV	16GB	18.75	2Gb x72	2Gx8	4800MT/s	1.1V	-40°C to +85°C

## DDR5 Value Memory Modules Ordering Information

288-PIN - DDR5 Value RDIMM							
SMART Part Number	Density	Height (mm)	Module Config.	Device Type	Speed	Voltage	Temperature
SRBG8RD544H-SB	256GB	31.25	32Gb x80	16Gx4	5600MT/s	1.1V	0°C to +70°C
STAG8RD544H-HA	128GB	31.25	16Gb x80	8Gx4	5600MT/s	1.1V	0°C to +70°C
SRAG8RD5846-SB	128GB	31.25	16Gb x80	4Gx4	4800MT/s	1.1V	0°C to +70°C
STHG8RD5645-HM	96GB	31.25	12Gb x80	6Gx4	4800MT/s	1.1V	0°C to +70°C
ST8G8RD5448-HA	64GB	31.25	8Gb x80	4Gx4	5600MT/s	1.1V	0°C to +70°C
SRI8G8RD5445-SB	64GB	31.25	8Gb x80	4Gx4	4800MT/s	1.1V	-40°C to +85°C
SR8G8RD5445-SB	64GB	31.25	8Gb x80	4Gx4	4800MT/s	1.1V	0°C to +70°C
SRB8G8RD5445-SB	64GB	31.25	8Gb x80	4Gx4	4800MT/s	1.1V	0°C to +70°C
ST8G8RD5445-HA	64GB	31.25	8Gb x80	4Gx4	4800MT/s	1.1V	0°C to +70°C
ST8G8RD5445-MA	64GB	31.25	8Gb x80	4Gx4	4800MT/s	1.1V	0°C to +70°C
STZ8G8RD5445-HA	64GB	31.25	8Gb x80	4Gx4	4800MT/s	1.1V	0°C to +70°C

# DDR5 Value Memory Modules Ordering Information

288-PIN - DDR5 Value RDIMM Continued							
SMART Part Number	Density	Height (mm)	Module Config.	Device Type	Speed	Voltage	Temperature
STZ8G8RD5445-MA	64GB	31.25	8Gb x80	4Gx4	4800MT/s	1.1V	0°C to +70°C
ST6G8RD5645-HM	48GB	31.25	6Gb x80	6Gx4	4800MT/s	1.1V	0°C to +70°C
ST4G8RD5448-HA	32GB	31.25	4Gb x80	4Gx4	5600MT/s	1.1V	0°C to +70°C
ST4G8RD5288-HA	32GB	31.25	4Gb x80	2Gx8	5600MT/s	1.1V	0°C to +70°C
SRI4G8RD5445-SB	32GB	31.25	4Gb x80	4Gx4	4800MT/s	1.1V	-40°C to +85°C
SR4G8RD5445-SB	32GB	31.25	4Gb x80	4Gx4	4800MT/s	1.1V	0°C to +70°C
SRB4G8RD5445-SB	32GB	31.25	4Gb x80	4Gx4	4800MT/s	1.1V	0°C to +70°C
SRZ4G8RD5445-SB	32GB	31.25	4Gb x80	4Gx4	4800MT/s	1.1V	0°C to +70°C
ST4G8RD5445-MA	32GB	31.25	4Gb x80	4Gx4	4800MT/s	1.1V	0°C to +70°C
SRI4G8RD5285-SB	32GB	31.25	4Gb x80	2Gx8	4800MT/s	1.1V	-40°C to +85°C
SR4G8RD5285-SB	32GB	31.25	4Gb x80	2Gx8	4800MT/s	1.1V	0°C to +70°C
ST3G8RD5385-HM	24GB	31.25	3Gb x80	3Gx8	4800MT/s	1.1V	0°C to +70°C
ST2G8RD5288-HA	16GB	31.25	2Gb x80	2Gx8	5600MT/s	1.1V	0°C to +70°C
SRI2G8RD5285-SB	16GB	31.25	2Gb x80	2Gx8	4800MT/s	1.1V	-40°C to +85°C
SR2G8RD5285-SB	16GB	31.25	2Gb x80	2Gx8	4800MT/s	1.1V	0°C to +70°C
SRZ2G8RD5285-SB	16GB	31.25	2Gb x80	2Gx8	4800MT/s	1.1V	0°C to +70°C
ST2G8RD5285-MA	16GB	31.25	2Gb x80	2Gx8	4800MT/s	1.1V	0°C to +70°C

262-PIN - DDR5 Value Non-ECC SODIMM							
SMART Part Number	Density	Height (mm)	Module Config.	Device Type	Speed	Voltage	Temperature
SR4G6SO5285-SB	32GB	30.00	4Gb x64	2Gx8	4800MT/s	1.1V	0°C to +70°C
SRI4G6SO5285-SB	32GB	30.00	4Gb x64	2Gx8	4800MT/s	1.1V	-40°C to +85°C
SR2G6SO5285-SB	16GB	30.00	2Gb x64	2Gx8	4800MT/s	1.1V	0°C to +70°C
SRI2G6SO5285-SB	16GB	30.00	2Gb x64	2Gx8	4800MT/s	1.1V	-40°C to +85°C
SR1G6SO5165-SB	8GB	30.00	1Gb x64	1Gx16	4800MT/s	1.1V	0°C to +70°C
SRI1G6SO5165-SB	8GB	30.00	1Gb x64	1Gx16	4800MT/s	1.1V	-40°C to +85°C

262-PIN - DDR5 Value ECC SODIMM							
SMART Part Number	Density	Height (mm)	Module Config.	Device Type	Speed	Voltage	Temperature
SR4G7SO5285-SB	32GB	30.00	4Gb x72	2Gx8	4800MT/s	1.1V	0°C to +70°C
SR2G7SO5285-SB	16GB	30.00	2Gb x72	2Gx8	4800MT/s	1.1V	0°C to +70°C
SRI2G7SO5285-SB	16GB	30.00	2Gb x72	2Gx8	4800MT/s	1.1V	-40°C to +85°C

288-PIN - DDR5 Value Non-ECC UDIMM							
SMART Part Number	Density	Height (mm)	Module Config.	Device Type	Speed	Voltage	Temperature
SR4G6UD5285-SB	32GB	31.25	4Gb x64	2Gx8	4800MT/s	1.1V	0°C to +70°C
SRI4G6UD5285-SB	32GB	31.25	4Gb x64	2Gx8	4800MT/s	1.1V	0°C to +70°C
SR2G6UD5285-SB	16GB	31.25	2Gb x64	2Gx8	4800MT/s	1.1V	0°C to +70°C
SRI2G6UD5285-SB	16GB	31.25	2Gb x64	2Gx8	4800MT/s	1.1V	-40°C to +85°C
SR1G6UD5165-SB	8GB	31.25	1Gb x64	1Gx16	4800MT/s	1.1V	0°C to +70°C
SRI1G6UD5165-SB	8GB	31.25	1Gb x64	1Gx16	4800MT/s	1.1V	-40°C to +85°C

288-PIN - DDR5 Value ECC UDIMM							
SMART Part Number	Density	Height (mm)	Module Config.	Device Type	Speed	Voltage	Temperature
SR4G7UD5285-SB	32GB	31.25	4Gb x72	2Gx8	4800MT/s	1.1V	0°C to +70°C
SRI4G7UD5285-SB	32GB	31.25	4Gb x72	2Gx8	4800MT/s	1.1V	-40°C to +85°C
SRI2G7UD5285-SB	16GB	31.25	2Gb x72	2Gx8	4800MT/s	1.1V	-40°C to +85°C
SR2G7UD5285-SB	16GB	31.25	2Gb x72	2Gx8	4800MT/s	1.1V	0°C to +70°C



For more information, please visit: [www.smartm.com](http://www.smartm.com)

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