

# DDR4 Memory Modules

SMART Modular Technologies supports a complete lineup of DDR4 memory modules. These include RDIMMs, VLP RDIMMs, SO-DIMMs, and UDIMMs. SMART's DDR4 Modules are designed with 4Gb and 8Gb DRAMs configured as x4 and x8 running at a DDR4-2133 speed grade. SMART conducts a rigorous design review process to ensure optimal performance and reliability.

### Features & Benefits

- 20% lower overall power vs. DDR3
- 1.2V VDD
- Write CRC is supported at all speed grades (Cyclic Redundancy Check) to assure better reliability in systems
- Higher speeds starting at DDR4-2133
- Form factors include RDIMMs, VLP RDIMMs, SO-DIMMs and UDIMMs



## DDR4 Ordering Information

### 288-PIN - DDR4 Registered DIMM

Smart Part Number	Density	Height (in)	Module Config	Device Config	Speed	Voltage	Temp
SH4097RD420472SB	32GB	1.23	4G x72	2G x4	2400MT/s	1.2V	0°C to +70°C
SH4097RD420451SB	32GB	1.23	4G x72	2G x4	2133MT/s	1.2V	0°C to +70°C
SH2047RD410472HA/SE	16GB	1.23	2G x72	1G x4	2400MT/s	1.2V	0°C to +70°C
SH2047RD410872SB	16GB	1.23	2G x72	1G x8	2400MT/s	1.2V	0°C to +70°C
SH2047RD420472SB	16GB	1.23	2G x72	2G x4	2400MT/s	1.2V	0°C to +70°C
SH2047RD420451SB	16GB	1.23	2G x72	2G x4	2133MT/s	1.2V	0°C to +70°C
SH2047RD410851SB	16GB	1.23	2G x72	1G x8	2133MT/s	1.2V	0°C to +70°C
SH2047RD410451HA/SE	16GB	1.23	2G x72	1G x4	2133MT/s	1.2V	0°C to +70°C
SH1027RD410472HA/SE	8GB	1.23	1G x72	1G x4	2400MT/s	1.2V	0°C to +70°C
SH1027RD410872SB	8GB	1.23	1G x72	1G x8	2400MT/s	1.2V	0°C to +70°C
SH1027RD451872HA/SE	8GB	1.23	1G x72	512M x8	2400MT/s	1.2V	0°C to +70°C
SH1027RD451851HA/SE	8GB	1.23	1G x72	512M x8	2133MT/s	1.2V	0°C to +70°C
SH1027RD410851SB	8GB	1.23	1G x72	1G x8	2133MT/s	1.2V	0°C to +70°C
SH1027RD410451HA/SD	8GB	1.23	1G x72	1G x4	2133MT/s	1.2V	0°C to +70°C
SH5127RD451872HA	4GB	1.23	512M x72	512M x8	2400MT/s	1.2V	0°C to +70°C
SH5127RD451872SE	4GB	1.23	512M x72	512M x8	2400MT/s	1.2V	0°C to +70°C
SH5127RD451851HA/SE	4GB	1.23	512M x72	512M x8	2133MT/s	1.2V	0°C to +70°C
SHI4097RD420472SB	32GB	1.23	4G x72	2G x4	2400 MT/s	1.2V	-40°C to +85°C
SHI4097RD420451SB	32GB	1.23	4G x72	2G x4	2133MT/s	1.2V	-40°C to +85°C
SHI1027RD410451SE	8GB	1.23	4G x72	2G x4	2133MT/s	1.2V	-40°C to +85°C

### 288-PIN - DDR4 Registered VLP DIMM

Smart Part Number	Density	Height (in)	Module Config	Device Config	Speed	Voltage	Temp
SH2047RD420472SBV	16GB	0.74	2G x72	2G x4	2400 MT/s	1.2V	0°C to +70°C
SH2047RD410872SBV	16GB	0.74	2G x72	1G x8	2400 MT/s	1.2V	0°C to +70°C
SH2047RD420451SBV	16GB	0.74	2G x72	2G x4	2133 MT/s	1.2V	0°C to +70°C
SH2047RD410851SBV	16GB	0.74	2G x72	1G x8	2133 MT/s	1.2V	0°C to +70°C
SH1027RD410472HAV/SEV	8GB	0.74	1G x72	1G x4	2400 MT/s	1.2V	0°C to +70°C
SH1027RD410872SBV	8GB	0.74	1G x72	1G x8	2400 MT/s	1.2V	0°C to +70°C
SH1027RD451872HAV/SEV	8GB	0.74	1G x72	512M x8	2400 MT/s	1.2V	0°C to +70°C
SH1027RD410851SBV	8GB	0.74	1G x72	1G x8	2133 MT/s	1.2V	0°C to +70°C

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# DDR4 Ordering Information

288-PIN - DDR4 Registered VLP DIMM Continued							
Smart Part Number	Density	Height (in)	Module Config	Device Config	Speed	Voltage	Temp
SH1027RD410451HAV/SEV	8GB	0.74	1G x72	1G x4	2133 MT/s	1.2V	0°C to +70°C
SH1027RD451851HAV/SEV	8GB	0.74	1G x72	512M x8	2133 MT/s	1.2V	0°C to +70°C
SH5127RD451872HAV/SEV	4GB	0.74	512M x72	512M x8	2400MT/s	1.2V	0°C to +70°C
SH5127RD451851HAV/SEV	4GB	0.74	512M x72	512M x8	2133 MT/s	1.2V	0°C to +70°C
SHI2047RD420472SBV	16GB	0.74	2G x72	2G x4	2400 MT/s	1.2V	-40°C to +85°C
SHI2047RD420451SBV	16GB	0.74	2G x72	2G x4	2133 MT/s	1.2V	-40°C to +85°C
260-PIN - DDR4 ECC SODIMM							
Smart Part Number	Density	Height (in)	Module Config	Device Config	Speed	Voltage	Temp
SH2047SO410872SB	16GB	1.23	2G x72	1G x8	2400MT/s	1.2V	0°C to +70°C
SH2047SO410851SB	16GB	1.23	2G x72	1G x8	2133 MT/s	1.2V	0°C to +70°C
SH1027SO410851SB	8GB	1.23	1G x72	1G x8	2133 MT/s	1.2V	0°C to +70°C
SH1027SO451872HA/SE	8GB	1.23	1G x72	512M x8	2400MT/s	1.2V	0°C to +70°C
SH1027SO410872SB	8GB	1.23	1G x72	1G x8	2400MT/s	1.2V	0°C to +70°C
SH1027SO451851HA/SE	8GB	1.23	1G x72	512M x8	2133 MT/s	1.2V	0°C to +70°C
SH5127SO451872HA/SE	4GB	1.23	512M x72	512M x8	2400MT/s	1.2V	0°C to +70°C
SH5127SO451851HA/SE	4GB	1.23	512M x72	512M x8	2133 MT/s	1.2V	0°C to +70°C
SHI2047SO410872SB	16GB	1.23	2G x72	1G x8	2400 MT/s	1.2V	-40°C to +85°C
SHI2047SO410851SB	16GB	1.23	2G x72	1G x8	2133 MT/s	1.2V	-40°C to +85°C
SHI1027SO451872SE	8GB	1.23	1G x72	512M x8	2400 MT/s	1.2V	-40°C to +85°C
SHI1027SO451851SE	8GB	1.23	1G x72	512M x8	2133 MT/s	1.2V	-40°C to +85°C
SHI5127SO451872SE	4GB	1.23	512M x72	512M x8	2400 MT/s	1.2V	-40°C to +85°C
SHI5127SO451851SE	4GB	1.23	512M x72	512M x8	2133 MT/s	1.2V	-40°C to +85°C
288-PIN - DDR4 ECC Unbuffered DIMM							
Smart Part Number	Density	Height (in)	Module Config	Device Config	Speed	Voltage	Temp
SH2047UD410872SB	16GB	1.23	2G x72	1G x8	2400 MT/s	1.2V	0°C to +70°C
SH2047UD410851SB	16GB	1.23	2G x72	1G x8	2133 MT/s	1.2V	0°C to +70°C
SH1027UD410851SB	8GB	1.23	1G x72	1G x8	2133 MT/s	1.2V	0°C to +70°C
SH1027UD451872SE	8GB	1.23	1G x72	512M x8	2400 MT/s	1.2V	0°C to +70°C
SH1027UD451851SE	8GB	1.23	1G x72	512M x8	2133 MT/s	1.2V	0°C to +70°C
SH5127UD451872SE	4GB	1.23	512M x72	512M x8	2400 MT/s	1.2V	0°C to +70°C
SH5127UD451851SE	4GB	1.23	512M x72	512M x8	2133 MT/s	1.2V	0°C to +70°C
288-PIN - DDR4 Mini-RDIMM							
Smart Part Number	Density	Height (in)	Module Config	Device Config	Speed	Voltage	Temp
SH2047MR410872SB	16GB	1.23	2G x72	1G x8	2400 MT/s	1.2V	0°C to +70°C
SH2047MR410851SB	16GB	1.23	2G x72	1G x8	2133 MT/s	1.2V	0°C to +70°C
SH1027MR451872SE	8GB	1.23	1G x72	512M x8	2400 MT/s	1.2V	0°C to +70°C
SH1027MR451851SE	8GB	1.23	1G x72	512M x8	2133 MT/s	1.2V	0°C to +70°C
288-PIN - DDR4 VLP Mini-UDIMM							
Smart Part Number	Density	Height (in)	Module Config	Device Config	Speed	Voltage	Temp
SH2047MU410872SBV	16GB	0.72	2G x72	1G x8	2400 MT/s	1.2V	0°C to +70°C
SH2047MU410851SBV	16GB	0.72	2G x72	1G x8	2133 MT/s	1.2V	0°C to +70°C
SH1027MU451872SEV	8GB	0.72	1G x72	512M x8	2400 MT/s	1.2V	0°C to +70°C
SH1027MU451851SEV	8GB	0.72	1G x72	512M x8	2133 MT/s	1.2V	0°C to +70°C
288-PIN - DDR4 LRDIMM							
Smart Part Number	Density	Height (in)	Module Config	Device Config	Speed	Voltage	Temp
SH8197LR420451-HM/SB	64GB	1.23	8G x72	2G x4	2133 MT/s	1.2V	0°C to +70°C
SH4097LR410472-SD	32GB	1.23	4G x72	1G x4	2400 MT/s	1.2V	0°C to +70°C
SH4097LR410451-HM/SD	32GB	1.23	4G x72	1G x4	2133 MT/s	1.2V	0°C to +70°C
SH2047LR410451SE	16GB	1.23	2G x72	1G x4	2133 MT/s	1.2V	0°C to +70°C
288-PIN - DDR4 ECODIMM							
Smart Part Number	Density	Height (in)	Module Config	Device Config	Speed	Voltage	Temp
SE2047RD410472SE	16GB	1.23	2G x72	1G x4	2400 MT/s	1.2V	0°C to +70°C
SE2047RD410451SE	16GB	1.23	2G x72	1G x4	2133 MT/s	1.2V	0°C to +70°C

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