

# DDR3 Memory Module

SMART's DDR3 modules have multiple benefits including quadrank architecture for enabling cost effective high-densities and a single-register design for reduced memory bus loading. Registered DIMMs (RDIMMs) use 4-bit DRAMs and leverage 8-bit DDR3 DRAMs, allowing for lower power consumption due to half the number of rows and columns being accessed.

### Features & Benefits

- Lower power
- Larger densities
- Improved signaling with fly-by architecture
- Thermal sensors

## DDR3 Ordering Information

240 PIN - DDR3 RDIMM							
SMART Part Number	Density	Height (mm)	Module Config	Device Config	Speed	Voltage	Temp
SP4097RV310493MP	32GB	30	4Gb x72	1Gx4	1333MT/s	1.35V	0°C to +70°C
SPI2047RV310438SE	16GB	30	2Gb x72	1Gx4	1866MT/s	1.35V	-40°C to +85°C
SP2047RV310438SE	16GB	30	2Gb x72	1Gx4	1866MT/s	1.35V	0°C to +70°C
SP2047RV310416MP	16GB	30	2Gb x72	1Gx4	1600MT/s	1.35V	0°C to +70°C
SP2047RV310416SE	16GB	30	2Gb x72	1Gx4	1600MT/s	1.35V	0°C to +70°C
SP2047RD351893SE	16GB	30	2Gb x72	512Mx8	1333MT/s	1.5V	0°C to +70°C
SPI027RD310438SE	8GB	30	1Gb x72	1Gx4	1866MT/s	1.5V	0°C to +70°C
SPI027RV310416SE	8GB	30	1Gb x72	1Gx4	1600MT/s	1.35V	0°C to +70°C
SPI027RV351816HE	8GB	30	1Gb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SPI027RV351816SE	8GB	30	1Gb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5127RV351816HE	4GB	30	512Mb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5127RV351816SE	4GB	30	512Mb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP2567RV325816SF	2GB	30	256Mb x72	256Mx8	1600MT/s	1.35V	0°C to +70°C
240 PIN - DDR3 VLP RDIMM							
SMART Part Number	Density	Height (mm)	Module Config	Device Config	Speed	Voltage	Temp
SP2047RV310416MPV	16GB	19.25	2Gb x72	1Gx4	1600MT/s	1.35V	0°C to +70°C
SP2047RV310416MPV1	16GB	18.75	2Gb x72	1Gx4	1600MT/s	1.35V	0°C to +70°C
SPI1027RV351816SEV	8GB	18.75	1Gb x72	512Mx8	1600MT/s	1.35V	-40°C to +85°C
SPI027RV310416SEV	8GB	18.75	1Gb x72	1Gx4	1600MT/s	1.35V	0°C to +70°C
SPI027RV351816HEV	8GB	18.75	1Gb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SPI027RV351816SEV	8GB	18.75	1Gb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5127RV351816HEV	4GB	18.75	512Mb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5127RV351816SEV	4GB	18.75	512Mb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
240 PIN - DDR3 ECC UDIMM							
SMART Part Number	Density	Height (mm)	Module Config	Device Config	Speed	Voltage	Temp
SP2047UV310816GB	16GB	30	2Gb x72	1Gx8	1600MT/s	1.35V	0°C to +70°C
SPI027UD351838SE	8GB	30	1Gb x72	512Mx8	1866MT/s	1.5V	0°C to +70°C
SPI027UV351816HE	8GB	30	1Gb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SPI027UV351816SE	8GB	30	1Gb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5127UV351838SE	4GB	30	512Mb x72	512Mx8	1866MT/s	1.35V	0°C to +70°C
SP5127UV351816HE	4GB	30	512Mb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5127UV351816SE	4GB	30	512Mb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C

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## DDR3 Ordering Information continued

240 PIN - DDR3 Non-ECC UDIMM							
SMART Part Number	Density	Height (mm)	Module Config	Device Config	Speed	Voltage	Temp
SPI1026UV351838SE	8GB	30	1Gb x64	512Mx8	1866MT/s	1.35V	-40°C to +85°C
SP1026UV351838SE	8GB	30	1Gb x64	512Mx8	1866MT/s	1.35V	0°C to +70°C
SPI1026UV351816SE	8GB	30	1Gb x64	512Mx8	1600MT/s	1.35V	-40°C to +85°C
SP1026UV351816SE	8GB	30	1Gb x64	512Mx8	1600MT/s	1.35V	0°C to +70°C
SPI5126UV351838SE	4GB	30	512Mb x64	512Mx8	1866MT/s	1.35V	-40°C to +85°C
SP5126UV351838SE	4GB	30	512Mb x64	512Mx8	1866MT/s	1.35V	0°C to +70°C
SP5126UV325816SF	4GB	30	512Mb x64	256Mx8	1600MT/s	1.35V	0°C to +70°C
SP5126UV351816SE	4GB	30	512Mb x64	512Mx8	1600MT/s	1.35V	0°C to +70°C
SPI2566UV325838SF	2GB	30	256Mb x64	256Mx8	1866MT/s	1.35V	-40°C to +85°C
SP2566UV325838SF	2GB	30	256Mb x64	256Mx8	1866MT/s	1.35V	0°C to +70°C
SPI2566UV325816SF	2GB	30	256Mb x64	256Mx8	1600MT/s	1.35V	-40°C to +85°C
SP2566UV325816SF	2GB	30	256Mb x64	256Mx8	1600MT/s	1.35V	0°C to +70°C
240 PIN - DDR3 ECC VLP UDIMM							
SMART Part Number	Density	Height (mm)	Module Config	Device Config	Speed	Voltage	Temp
SPI027UV351816HEV	8GB	18.29	1Gb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP1027UV351816SEV	8GB	18.29	1Gb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5127UV351816HEV	4GB	18.75	512Mb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5127UV351816SEV	4GB	18.75	512Mb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
240 PIN - DDR3 Non-ECC VLP UDIMM							
SMART Part Number	Density	Height (mm)	Module Config	Device Config	Speed	Voltage	Temp
SPI026UV351816HEV	8GB	18.29	1Gb x64	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP1026UV351816SEV	8GB	18.29	1Gb x64	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5126UV325816SFV	4GB	18.29	512Mb x64	256Mx8	1600MT/s	1.35V	0°C to +70°C
244 PIN - DDR3 Mini-RDIMM							
SMART Part Number	Density	Height (mm)	Module Config	Device Config	Speed	Voltage	Temp
SPI027MV351816HE	8GB	30	1Gb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP1027MV351816SE	8GB	30	1Gb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP2567MV325816SF	2GB	30	256Mb x72	256Mx8	1600MT/s	1.35V	0°C to +70°C
244 PIN - DDR3 ECC ULP (17.8mm) and VLP (18.8mm) Mini-RDIMM							
SMART Part Number	Density	Height (mm)	Module Config	Device Config	Speed	Voltage	Temp
SPI027MV351816SEU	8GB	17.78	1Gb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SPI1027MV351816MPV	8GB	18.3	1Gb x72	512Mx8	1600MT/s	1.35V	-40°C to +85°C
SP1027MV351816MPV	8GB	18.3	1Gb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5127MV351816HEV	4GB	18.75	512Mb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5127MV351816SEV	4GB	18.75	512Mb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5127MR351893SEV	4GB	18.75	512Mb x72	512Mx8	1333MT/s	1.5V	0°C to +70°C
SP2567MV325816SFV	2GB	18.75	256Mb x72	256Mx8	1600MT/s	1.35V	0°C to +70°C
244 PIN - DDR3 ECC Mini-UDIMM							
SMART Part Number	Density	Height (mm)	Module Config	Device Config	Speed	Voltage	Temp
SPI027ML351816HE	8GB	30	1Gb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5127ML351816HE	4GB	30	512Mb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5127ML351816SE	4GB	30	512Mb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP2567ML325816SF	4GB	30	512Mb x72	256Mx8	1600MT/s	1.35V	0°C to +70°C
SP5127ML325816SF	4GB	30	512Mb x72	256Mx8	1600MT/s	1.35V	0°C to +70°C
244 PIN - DDR3 ECC ULP (17.8mm) and VLP (18.8mm) Mini-UDIMM							
SMART Part Number	Density	Height (mm)	Module Config	Device Config	Speed	Voltage	Temp
SPI1027ML351816SEU	8GB	17.78	1Gb x72	512Mx8	1600MT/s	1.35V	-40°C to +85°C
SP1027ML351816MPU	8GB	17.78	1Gb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP1027ML351816SEU	8GB	17.78	1Gb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SPI5127ML351816SEV	4GB	18.75	512Mb x72	512Mx8	1600MT/s	1.35V	-40°C to +85°C
SP5127ML351816HEV	4GB	18.75	512Mb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5127ML351816SEV	4GB	18.75	512Mb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5127ML325816SFU	4GB	17.78	512Mb x72	256Mx8	1600MT/s	1.35V	0°C to +70°C
SPI2567ML325816SFV	2GB	18.75	256Mb x72	256Mx8	1600MT/s	1.35V	-40°C to +85°C
SP2567ML325816SFV	2GB	18.75	256Mb x72	256Mx8	1600MT/s	1.35V	0°C to +70°C
SP2567MU325816SFV	2GB	18.75	256Mb x72	256Mx8	1600MT/s	1.5V	0°C to +70°C

## DDR3 Ordering Information continued

204 PIN - DDR3 On-Chip ECC SO-DIMM							
SMART Part Number	Density	Height (mm)	Module Config	Device Config	Speed	Voltage	Temp
SPT102ESV351816GC	8GB	30	1Gb x64	512Mx8	1600MT/s	1.35V	-40°C to +85°C
204 PIN - DDR3 Non-ECC SO-DIMM							
SMART Part Number	Density	Height (mm)	Module Config	Device Config	Speed	Voltage	Temp
SPT2046SV310816GB	16GB	30	2Gb x64	1Gx8	1600MT/s	1.35V	-40°C to +85°C
SP2046SV310816GB	16GB	30	2Gb x64	1Gx8	1600MT/s	1.35V	0°C to +70°C
SPI1026SV351838SE	8GB	30	1Gb x64	512Mx8	1866MT/s	1.35V	-40°C to +85°C
SP1026SV351838MP	8GB	30	1Gb x64	512Mx8	1866MT/s	1.35V	0°C to +70°C
SP1026SV351838SE	8GB	30	1Gb x64	512Mx8	1866MT/s	1.35V	0°C to +70°C
SPI1026SV351816SE	8GB	30	1Gb x64	512Mx8	1600MT/s	1.35V	-40°C to +85°C
SP1026SV310816GB	8GB	30	1Gb x64	1Gx8	1600MT/s	1.35V	0°C to +70°C
SPI1026SV351816SE1	8GB	30	1Gb x64	512Mx8	1600MT/s	1.35V	-40°C to +85°C
SP1026SV351816HE	8GB	30	1Gb x64	512Mx8	1600MT/s	1.35V	0°C to +70°C
SPI026SV351816SE1	8GB	30	1Gb x64	512Mx8	1600MT/s	1.35V	0°C to +70°C
SPI5126SV351838SE	4GB	30	512Mb x64	512Mx8	1866MT/s	1.35V	-40°C to +85°C
SP5126SV351838SE1	4GB	30	512Mb x64	512Mx8	1866MT/s	1.35V	0°C to +70°C
SPI5126SV351816SE	4GB	30	512Mb x64	512Mx8	1600MT/s	1.35V	-40°C to +85°C
SP5126SV351816HE	4GB	30	512Mb x64	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5126SV351816NE	4GB	30	512Mb x64	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5126SV351816SE	4GB	30	512Mb x64	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5126SV321616SE	4GB	30	512Mb x64	256Mx16	1600MT/s	1.35V	0°C to +70°C
SP2566SV321638SE	2GB	30	256Mb x64	256Mx16	1866MT/s	1.35V	0°C to +70°C
SP2566SV325838SF	2GB	30	256Mb x64	256Mx8	1866MT/s	1.35V	0°C to +70°C
SPI2566SV325838SF	2GB	30	256Mb x64	256Mx8	1866MT/s	1.35V	-40°C to +85°C
SP2566SO321616SE	2GB	30	256Mb x64	256Mx16	1600MT/s	1.5V	0°C to +70°C
SP2566SV321616SE	2GB	30	256Mb x64	256Mx16	1600MT/s	1.35V	0°C to +70°C
SPI2566SV325816SF	2GB	30	256Mb x64	256Mx8	1600MT/s	1.35V	-40°C to +85°C
SP2566SV325816SF	2GB	30	256Mb x64	256Mx8	1600MT/s	1.35V	0°C to +70°C
SP646SV364616SI	512MB	30	64Mb x64	64Mx16	1600MT/s	1.35V	0°C to +70°C
204 PIN - DDR3 Registered ECC SORDIMM							
SMART Part Number	Density	Height (mm)	Module Config	Device Config	Speed	Voltage	Temp
SPI1027SL351816SE	8GB	30	1Gb x72	512Mx8	1600MT/s	1.35V	-40°C to +85°C
SP1027SL351816HE	8GB	30	1Gb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SPI027SL351816SE	8GB	30	1Gb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SPI5127SL351816SE	4GB	30	512Mb x72	512Mx8	1600MT/s	1.35V	-40°C to +85°C
SP5127SL351816HE	4GB	30	512Mb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5127SL351816SE	4GB	30	512Mb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP2567SL325816SF	2GB	30	256Mb x72	256Mx8	1600MT/s	1.35V	0°C to +70°C
204 PIN - DDR3 ECC SOUDIMM							
SMART Part Number	Density	Height (mm)	Module Config	Device Config	Speed	Voltage	Temp
SPT2047SV310816GB	16GB	30	2Gb x72	1Gx8	1600MT/s	1.35V	-40°C to +85°C
SP2047SV310816GB	16GB	30	2Gb x72	1Gx8	1600MT/s	1.35V	0°C to +70°C
SPI1027SV351816SE	8GB	30	1Gb x72	512Mx8	1600MT/s	1.35V	-40°C to +85°C
SP1027SV351816HE	8GB	30	1Gb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP1027SV351816SE	8GB	30	1Gb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SPI5127SV351816SE	4GB	25.4	512Mb x72	512Mx8	1600MT/s	1.35V	-40°C to +85°C
SP5127SV351816HE	4GB	25.4	512Mb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SP5127SV351816SE	4GB	25.4	512Mb x72	512Mx8	1600MT/s	1.35V	0°C to +70°C
SPI2567SO325838SF	2GB	25.4	256Mb x72	256Mx8	1866MT/s	1.5V	-40°C to +85°C
SP2567SO325838SF	2GB	25.4	256Mb x72	256Mx8	1866MT/s	1.5V	0°C to +70°C
SP2567SV325816SF	2GB	25.4	256Mb x72	256Mx8	1600MT/s	1.35V	0°C to +70°C