

# Mini-DIMM

# Mini-DIMM

SMART Modular Technologies' DDR4 and DDR3 Mini-DIMM memory modules are capable of operating at high data transfer rates within a small form factor. The advantage of Mini-DIMMs is their versatility across many different applications such as networking, telecom, industrial, and storage.

Mini-DIMMs are designed with additional power and ground pins compared to SO-DIMMs for reliable operation in telecom, networking and industrial applications. They save up to one-third the board space of SO-DIMM when used with a vertical or 22.5° angled socket and are ideal for very dense system boards. SMART's Mini-DIMMs are available in Industrial Grade. For customers still in the design process, SMART offers a DDR4 Mini-DIMM-to-DIMM adaptor which allows for Mini-DIMM testing on standard DDR4 systems that use DIMMs.

SMART's DDR4 Mini-DIMMs are offered from 4GB to 16GB, and DDR3 from 1GB to 8GB. All Mini-DIMMs meet JEDEC pinout standards.

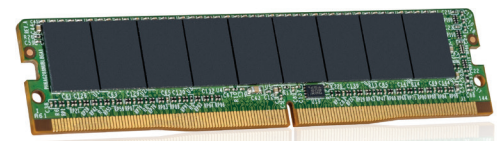
Mini-DIMMs are ideal for long life-cycle OEM products which require high durability, density and performance.

### Features & Benefits

- Small form factor, 80mm length, variable heights (standard, ULP, VLP)
- Extra power & ground pins vs. SO-DIMMs - higher reliability and better signal integrity
- More robust latched connector vs. SO-DIMMs

### Product Family Overview

	Density	Speed
<b>DDR4</b>		
288-PIN Mini-RDIMM	8GB to 16GB	2133/2400
288-PIN ULP Mini-RDIMM	4GB to 8GB	2133/2400
244-PIN VLP Mini-UDIMM	4GB to 16GB	2133/2400
<b>DDR3</b>		
244-PIN Mini RDIMM	2GB to 8GB	1600
244-PIN VLP Mini-RDIMM	2GB to 8GB	1333/1600
244 PIN ECC Mini-UDIMM	1GB to 8GB	1600
244 PIN ECC VLP Mini-UDIMM	1GB to 4GB	1333/1600
244 PIN ECC ULP Mini-UDIMM	8GB	1600



### Applications

- Networking and telecom
- Industrial, computing, and storage
- ATCA blades

## DDR4 Mini-DIMM Ordering Information

### 288-PIN - DDR4 Registered Mini-RDIMM

SMART Part Number	Density	Height (mm)	Module Config.	Device Type	Speed	Voltage	Temperature
SH2047MR410851SB	16GB	31.25	2G x72	1G x8	2133 MT/s	1.2V	0°C to +70°C
SH2047MR410872SB	16GB	31.25	2G x72	1G x8	2400 MT/s	1.2V	0°C to +70°C
SH1027MR451851SE	8GB	31.25	1G x72	512M x8	2133 MT/s	1.2V	0°C to +70°C
SH1027MR451851SD	8GB	31.25	1G x72	512M x8	2133 MT/s	1.2V	0°C to +70°C
SH1027MR451872SE	8GB	31.25	1G x72	512M x8	2400 MT/s	1.2V	0°C to +70°C

### 288-PIN - DDR4 ULP Registered Mini-RDIMM

SMART Part Number	Density	Height (mm)	Module Config.	Device Type	Speed	Voltage	Temperature
SH1027MR410851SBU	8GB	17.78	1G x72	1G x8	2133 MT/s	1.2V	0°C to +70°C
SH1027MR410872SBU	8GB	17.78	1G x72	1G x8	2400 MT/s	1.2V	0°C to +70°C
SH5127MR451851SDU	4GB	17.78	512M x72	512M x8	2133 MT/s	1.2V	0°C to +70°C
SH5127MR451851SEU	4GB	17.78	512M x72	512M x8	2133 MT/s	1.2V	0°C to +70°C

### 288-PIN - DDR4 VLP Unbuffered Mini-UDIMM

SMART Part Number	Density	Height (mm)	Module Config.	Device Type	Speed	Voltage	Temperature
SH2046MU410872SBV	16GB	18.75	2G x64	1G x8	2400 MT/s	1.2V	0°C to +70°C
SH2047MU410851SBV	16GB	18.75	2G x72	1G x8	2133 MT/s	1.2V	0°C to +70°C
SH2047MU410872SBV	16GB	18.75	2G x72	1G x8	2400 MT/s	1.2V	0°C to +70°C
SH2047MU410872HAV	16GB	18.75	2G x72	1G x8	2400 MT/s	1.2V	0°C to +70°C
SH1027MU451851SEV	8GB	18.75	1G x72	512M x8	2133 MT/s	1.2V	0°C to +70°C
SH1027MU451872SEV	8GB	18.75	1G x72	512M x8	2400 MT/s	1.2V	0°C to +70°C
SH1027MU451851SDV	8GB	18.75	1G x72	512M x8	2133 MT/s	1.2V	0°C to +70°C
SH1027MU410851SBV	8GB	18.75	1G x72	1G x8	2133 MT/s	1.2V	0°C to +70°C
SH1027MU410872SBV	8GB	18.75	1G x72	1G x8	2400 MT/s	1.2V	0°C to +70°C
SH1027MU410872HAV	8GB	18.75	1G x72	1G x8	2400 MT/s	1.2V	0°C to +70°C
SH5126MU451872SEV	4GB	18.75	512M x64	512M x8	2400 MT/s	1.2V	0°C to +70°C
SH5127MU451872SEV	4GB	18.75	512M x72	512M x8	2400 MT/s	1.2V	0°C to +70°C
SH5127MU451851SEV	4GB	18.75	512M x72	512M x8	2133 MT/s	1.2V	0°C to +70°C
SH5127MU451851SDV	4GB	18.75	512M x72	512M x8	2133 MT/s	1.2V	0°C to +70°C

## DDR3 Mini-DIMM Ordering Information

### 244 PIN - DDR3 Registered Mini-RDIMM

SMART Part Number	Density	Height (mm)	Module Config.	Device Type	Speed	Voltage	Temperature
SH1027MR351893SE	8GB	30.00	1G x72	512M x8	1333 MT/s	1.5V	0°C to +70°C
SH1027MV351816HD	8GB	30.00	1G x72	512M x8	1600 MT/s	1.35V	0°C to +70°C
SH1027MV351816SE	8GB	30.00	1G x72	512M x8	1600 MT/s	1.35V	0°C to +70°C
SH2567MV325816NI	2GB	30.00	256M x 72	256M x8	1600 MT/s	1.35V	0°C to +70°C
SH2567MV325816SF	2GB	30.00	256M x 72	256M x8	1600 MT/s	1.35V	0°C to +70°C

### 244 PIN - DDR3 VLP Registered Mini-RDIMM

SMART Part Number	Density	Height (mm)	Module Config.	Device Type	Speed	Voltage	Temperature
SH11027MV351816HBV	8GB	18.30	1G x72	512M x8	1600 MT/s	1.35V	-40°C to +85°C
SH11027MV351816SDV	8GB	18.30	1G x72	512M x8	1600 MT/s	1.35V	-40°C to +85°C
SH1027MV351816HBV	8GB	18.30	1G x72	512M x8	1600 MT/s	1.35V	0°C to +70°C
SH1027MV351816MNV	8GB	18.30	1G x72	512M x8	1600 MT/s	1.35V	0°C to +70°C
SH1027MR351816PAV	8GB	18.30	1G x72	512M x8	1600 MT/s	1.5V	0°C to +70°C
SH5127MR351893SEV	4GB	18.75	512M x72	512M x8	1333 MT/s	1.5V	0°C to +70°C
SH5127MV325816NIV	4GB	27.00	512M x 72	256M x8	1600 MT/s	1.35V	0°C to +70°C
SH5127MV325816SFV	4GB	27.00	512M x 72	256M x8	1600 MT/s	1.35V	0°C to +70°C
SH5127MV351816HDV	4GB	18.75	512M x 72	512M x8	1600 MT/s	1.35V	0°C to +70°C
SH5127MV351816SDV	4GB	18.75	512M x 72	512M x8	1600 MT/s	1.35V	0°C to +70°C
SH2567MV325816NIV	2GB	18.75	256M x 72	256M x8	1600 MT/s	1.35V	0°C to +70°C
SH2567MV325816SFV	2GB	18.75	256M x 72	256M x8	1600 MT/s	1.35V	0°C to +70°C
SH2567MV325816SFV	2GB	18.75	256M x 72	256M x8	1600 MT/s	1.35V	0°C to +70°C

## DDR3 Mini-DIMM Ordering Information cont.

244 PIN - DDR3 Unbuffered ECC Mini-UDIMM							
SMART Part Number	Density	Height (mm)	Module Config.	Device Type	Speed	Voltage	Temperature
SH1027ML351816HD	8GB	30.00	1G x72	512M x8	1600 MT/s	1.35V	0°C to +70°C
SH1027ML351816MP	8GB	30.00	1G x72	512M x8	1600 MT/s	1.35V	0°C to +70°C
SH1027ML351816SD	8GB	30.00	1G x72	512M x8	1600 MT/s	1.35V	0°C to +70°C
SH5127ML325816NI	4GB	30.00	512M x 72	256M x8	1600 MT/s	1.35V	0°C to +70°C
SH5127ML325816SF	4GB	30.00	512M x 72	256M x8	1600 MT/s	1.35V	0°C to +70°C
SH5127ML351816HD	4GB	30.00	512M x 72	512M x8	1600 MT/s	1.35V	0°C to +70°C
SH5127ML351816SE	4GB	30.00	512M x 72	512M x8	1600 MT/s	1.35V	0°C to +70°C
SH2567ML325816NI	2GB	30.00	256M x 72	256M x8	1600 MT/s	1.35V	0°C to +70°C
SH2567ML325816SF	2GB	30.00	256M x 72	256M x8	1600 MT/s	1.35V	0°C to +70°C
244 PIN - DDR3 VLP Unbuffered ECC Mini-UDIMM							
SMART Part Number	Density	Height (mm)	Module Config.	Device Type	Speed	Voltage	Temperature
SHI5127ML351816SEV	4GB	18.75	512M x 72	512M x8	1600 MT/s	1.35V	-40°C to +85°C
SH5127ML351816HDV	4GB	18.75	512M x 72	512M x8	1600 MT/s	1.35V	0°C to +70°C
SH5127ML351816SEV	4GB	18.75	512M x 72	512M x8	1600 MT/s	1.35V	0°C to +70°C
SH5127ML351816SDV	4GB	18.75	512M x 72	512M x8	1600 MT/s	1.35V	0°C to +70°C
SH2567ML325816NIV	2GB	18.75	256M x 72	256M x8	1600 MT/s	1.35V	0°C to +70°C
SH2567ML325816SFV	2GB	18.75	256M x 72	256M x8	1600 MT/s	1.35V	0°C to +70°C
SH2567MU325816SFV	2GB	18.75	256M x72	256M x8	1600 MT/s	1.5V	0°C to +70°C
SH2567MU325838NIV	2GB	18.75	256M x72	256M x8	1866 MT/s	1.5V	0°C to +70°C
SHI2567ML325816SFV	2GB	18.75	256M x 72	256M x8	1600 MT/s	1.35V	-40°C to +85°C
SHI1287MU312893MJV	1GB	18.75	128M x 72	128M x8	1333 MT/s	1.5V	-40°C to +85°C
SH1287ML312816SIV	1GB	18.75	128M x 72	128M x8	1600 MT/s	1.35V	0°C to +70°C
244 PIN - DDR3 ULP Unbuffered ECC Mini-UDIMM							
SMART Part Number	Density	Height (mm)	Module Config.	Device Type	Speed	Voltage	Temperature
SHI1027ML351816SEU	8GB	17.78	1G x72	512M x8	1600 MT/s	1.35V	-40°C to +85°C
SH1027ML351816SEU1	8GB	17.78	1G x72	512M x8	1600 MT/s	1.35V	0°C to +70°C
SH1027ML351816HAU	8GB	17.78	1G x72	512M x8	1600 MT/s	1.35V	0°C to +70°C
SH1027ML351816MNU	8GB	17.78	1G x72	512M x8	1600 MT/s	1.35V	0°C to +70°C
SH5127ML325816SFU	4GB	17.78	512M x 72	256M x8	1600 MT/s	1.35V	0°C to +70°C

### Contact information

**Corporate Headquarters/North America:** T: (+1) 800-956-7627 • T: (+1) 510-623-1231 • F: (+1) 510-623-1434 • E: info@smartm.com

**Customer Service:** T: (+1) 978-303-8500 • E: customers@smartm.com

**Latin America:** T: (+55) 11 4417-7200 • E: sales.br@smartm.com

**EMEA:** T: (+44) 7825-084427 • E: sales.euro@smartm.com

**Asia/Pacific:** T: (+65) 6678-7670 • E: sales.asia@smartm.com

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

