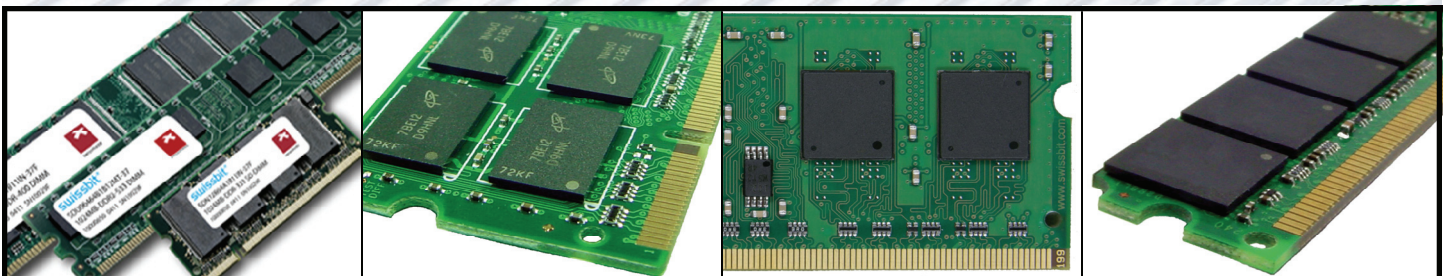


SWISSMEMORY™ INDUSTRIAL Product Line

DRAM Memory Products

Solutions for Industrial and Embedded Applications
Surface Mount Technology (SMT)



DDR3
DDR2
DDR
SDRAM
DRAM



DDR3 SDRAM TECHNOLOGY

Density	Swissbit PN	Data Rate (MT/s) - CL	Height	# IC's	IC Org	Rank
DDR3 SDRAM UDIMM (240 pin)						
512MB (64Mx64)	SGU06464C1CB1xx-ssR	800-CL5 / 1066-CL7 / 1333-CL9	1.18" (29.97mm)	4	64Mx16	1
1GB (128Mx64)	SGU12864D1BB1xx-ssR	800-CL5 / 1066-CL7 / 1333-CL9	1.18" (29.97mm)	8	128Mx8	1
2GB (256Mx64)	SGU25664E1BB2xx-ssR	800-CL5 / 1066-CL7 / 1333-CL9	1.18" (29.97mm)	16	128Mx8	2
DDR3 SDRAM UDIMM w/ ECC (240 pin)						
512MB (64Mx72)	SGU06472H1CB1xx-ssR	800-CL5 / 1066-CL7 / 1333-CL9	1.18" (29.97mm)	5	64Mx16	1
1GB (128Mx72)	SGU12872F1BB1xx-ssR	800-CL5 / 1066-CL7 / 1333-CL9	1.18" (29.97mm)	9	128Mx8	1
2GB (256Mx72)	SGU25672G1BB2xx-ssR	800-CL5 / 1066-CL7 / 1333-CL9	1.18" (29.97mm)	18	128Mx8	2
DDR3 SDRAM RDIMM w/ ECC Parity (240 pin)						
1GB (128Mx72)	SGP12872A1BB1xx-ssR	800-CL5 / 1066-CL7 / 1333-CL9	1.18" (29.97mm)	9	128Mx8	1
1GB (128Mx72)	SGP12872B1AB1xx-ssR	800-CL5 / 1066-CL7 / 1333-CL9	1.18" (29.97mm)	18	128Mx4	1
2GB (256Mx72)	SGP25672C1BB2xx-ssR	800-CL5 / 1066-CL7 / 1333-CL9	1.18" (29.97mm)	18	128Mx8	2
2GB (256Mx72)	SGP25672B1AB2xx-ssR	800-CL5 / 1066-CL7 / 1333-CL9	1.18" (29.97mm)	18	256Mx4	2
4GB (512Mx72)	SGP51272E1BB4xx-ssR	800-CL5 / 1066-CL7 / 1333-CL9	1.18" (29.97mm)	36	128Mx4	4
4GB (512Mx72)	SGP51272D1AB2xx-ssR	800-CL5 / 1066-CL7 / 1333-CL9	1.18" (29.97mm)	36	256Mx4	2
DDR3 SDRAM SODIMM (204 pin)						
512MB (64Mx64)	SGN06464C1CB1xx-ssR	800-CL5 / 1066-CL7 / 1333-CL9	1.18" (29.97mm)	4	64Mx16	1
1GB (128Mx64)	SGN12864D1BB1xx-ssR	800-CL5 / 1066-CL7 / 1333-CL9	1.18" (29.97mm)	8	128Mx8	1
2GB (256Mx64)	SGN25664E1BB2xx-ssR	800-CL5 / 1066-CL7 / 1333-CL9	1.18" (29.97mm)	16	128Mx8	2
<p>NOTE: ALL SMT MEMORY MODULES AVAILABLE IN COMMERCIAL (0°C TO +70°C) AND INDUSTRIAL (-40°C TO +85°C) TEMPERATURE GRADES</p> <p>THIS REPRESENTS A PARTIAL LISTING OF OUR PRODUCT LINE</p>						

DDR2 SDRAM TECHNOLOGY

Density	Swissbit PN	Data Rate (MT/s) - CL	Height	# IC's	IC Org	Rank
DDR2 SDRAM UDIMM (240 pin)						
256MB (32Mx64)	SEU03264H1CB1xx-ssR	533-CL4 / 667-CL5 / 800-CL5	1.18" (29.97mm)	4	32Mx16	1
512MB (64Mx64)	SEU06464A3BB1xx-ssR	533-CL4 / 667-CL5 / 800-CL5	1.18" (29.97mm)	8	64Mx8	1
512MB (64Mx64)	SEU06464H1CE1xx-ssR	533-CL4 / 667-CL5 / 800-CL5	1.18" (29.97mm)	4	64Mx16	1
1GB (128Mx64)	SEU12864B3BB2xx-ssR	533-CL4 / 667-CL5 / 800-CL5	1.18" (29.97mm)	16	64Mx8	2
1GB (128Mx64)	SEU12864A3BE1xx-ssR	533-CL4 / 667-CL5 / 800-CL5	1.18" (29.97mm)	8	128Mx8	1
2GB (256Mx64)	SEU25664B3BE2xx-ssR	533-CL4 / 667-CL5 / 800-CL5	1.18" (29.97mm)	16	128Mx8	2
DDR2 SDRAM UDIMM w/ ECC (240 pin)						
512MB (64Mx72)	SEU06472D4BB1xx-ssR	533-CL4 / 667-CL5 / 800-CL5	1.10" (27.94mm)	9	64Mx8	1
1GB (128Mx72)	SEU12872D4BE1xx-ssR	533-CL4 / 667-CL5 / 800-CL5	1.10" (27.94mm)	9	128Mx8	1
1GB (128Mx72)	SEU12872D4BB2xx-ssR	533-CL4 / 667-CL5 / 800-CL5	1.10" (27.94mm)	18	64Mx8	2
2GB (256Mx72)	SEU25672D4BE2xx-ssR	533-CL4 / 667-CL5 / 800-CL5	1.10" (27.94mm)	18	128Mx8	2
DDR2 SDRAM FBDIMM (240 pin)						
1GB (128Mx72)	SEF12872C1BD2xx-ssRE	533-CL4 / 667-CL5 / 800-CL5	1.195" (30.35mm)	18	64Mx8	2
2GB (256Mx72)	SEF25672C1BD2xx-ssRE	533-CL4 / 667-CL5 / 800-CL5	1.195" (30.35mm)	18	128Mx8	2
DDR2 SDRAM RDIMM w/ ECC Parity (240 pin)						
1GB (128Mx72)	SEP12872E1BB2xx-ssR	533-CL4 / 667-CL5	1.18" (29.97mm)	18	64Mx8	2
1GB (128Mx72)	SEP12872F1AB1xx-ssR	533-CL4 / 667-CL5	1.18" (29.97mm)	18	128Mx4	1
2GB (256Mx72)	SEP25672E1BE2xx-ssR	533-CL4 / 667-CL5	1.18" (29.97mm)	18	128Mx8	2
2GB (256Mx72)	SEP25672F1AB2xx-ssR	533-CL4 / 667-CL5	1.18" (29.97mm)	18	256Mx4	2
4GB (512Mx72)	SEP25672G1AE2xx-ssR	533-CL4 / 667-CL5	1.18" (29.97mm)	36	256Mx4	2
DDR2 SDRAM VLP RDIMM w/ ECC Parity (240 pin)						
1GB (128Mx72)	SEP12872B1BB2xx-ssR	533-CL4 / 667-CL5	0.72" (18.29mm)	18	64Mx8	2
1GB (128Mx72)	SEP12872K1BB2xx-ssR	533-CL4 / 667-CL5	0.72" (18.29mm)	18	128Mx4	2
2GB (256Mx72)	SEP25672B1BB2xx-ssR	533-CL4 / 667-CL5	0.72" (18.29mm)	18	128Mx8	2
2GB (256Mx72)	SEP25672K1BB2xx-ssR	533-CL4 / 667-CL5	0.72" (18.29mm)	18	256Mx4	2
DDR2 SDRAM SODIMM (200 pin)						
256MB (32Mx64)	SEN03264H2CB1xx-ssR	533-CL4 / 667-CL5 / 800-CL5	1.18" (29.97mm)	4	32Mx16	1
512MB (64Mx64)	SEN06464D1BB1xx-ssR	533-CL4 / 667-CL5 / 800-CL5	1.18" (29.97mm)	8	64Mx8	1
512MB (64Mx64)	SEN06464H2CE1xx-ssR	533-CL4 / 667-CL5 / 800-CL5	1.18" (29.97mm)	4	64Mx16	1
1GB (128Mx64)	SEN12864C2BB2xx-ssR	533-CL4 / 667-CL5 / 800-CL5	1.18" (29.97mm)	16	64Mx8	2
1GB (128Mx64)	SEN12864D1B51xx-ssR	533-CL4 / 667-CL5 / 800-CL5	1.18" (29.97mm)	8	128Mx8	1
2GB (256Mx64)	SEN25664C4B52xx-ssR	533-CL4 / 667-CL5 / 800-CL5	1.18" (29.97mm)	16	128Mx8	2
DDR2 SDRAM SORDIMM (200 pin)						
512MB (64Mx72)	SEG06472A1BE1xx-ssR	533-CL4 / 667-CL5 / 800-CL5	1.18" (29.97mm)	9	64Mx8	1
1GB (128Mx72)	SEG12872A1BE1xx-ssR	533-CL4 / 667-CL5 / 800-CL5	1.18" (29.97mm)	9	128Mx8	1

NOTE: ALL SMT MEMORY MODULES AVAILABLE IN COMMERCIAL (0°C TO +70°C) AND INDUSTRIAL (-40°C TO +85°C) TEMPERATURE GRADES

THIS REPRESENTS A PARTIAL LISTING OF OUR PRODUCT LINE

DDR SDRAM TECHNOLOGY

Density	Swissbit PN	Data Rate (MT/s) - CL	Height	# IC's	IC Org	Rank
DDR SDRAM UDIMM (184 Pin)						
256MB (32Mx64)	SDU03264B5BG1xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.25" (31.75mm)	8	32Mx8	1
256MB (32Mx64)	SDU03264O1CF1xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.25" (31.75mm)	4	32Mx16	1
512MB (64Mx64)	SDU06464H1BG2xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.25" (31.75mm)	16	32Mx8	2
512MB (64Mx64)	SDU06464B5B61xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.25" (31.75mm)	8	64Mx8	1
1GB (128Mx64)	SDU12864H1B62xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.25" (31.75mm)	16	64Mx8	2
DDR SDRAM UDIMM w/ ECC (184 Pin)						
256MB (32Mx72)	SDU03272B5BG1xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.25" (31.75mm)	9	32Mx8	1
512MB (64Mx72)	SDU06472H1BG2xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.25" (31.75mm)	18	32Mx8	2
512MB (64Mx72)	SDU06472B5BF1xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.25" (31.75mm)	9	64Mx8	1
1GB (128Mx72)	SDU12872H1BF2xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.25" (31.75mm)	18	64Mx8	2
DDR SDRAM RDIMM (184 Pin)						
512MB (64Mx72)	SDR06472D1BG2xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.20" (30.48mm)	18	32Mx8	2
512MB (64Mx72)	SDR06472D1BF1xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.20" (30.48mm)	9	64Mx8	1
1GB (128Mx72)	SDR12872D1B62xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.20" (30.48mm)	18	64Mx8	2
2GB (256Mx72)	SDR25672K2A62xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.20" (30.48mm)	18	256Mx4	2
DDR SDRAM SODIMM (200 Pin)						
256MB (32Mx64)	SDN03264G1C61xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.25" (31.75mm)	4	32Mx16	1
512MB (64Mx64)	SDN06464A1B61xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.25" (31.75mm)	8	64Mx8	1
512MB (64Mx64)	SDN06464E1C62xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.25" (31.75mm)	8	32Mx16	2
1GB (128Mx64)	SDN12864L1B62xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.25" (31.75mm)	16	64Mx8	2
DDR SDRAM miniDIMM (100 Pin)						
128MB (32Mx32)	SDU03232B1BG1xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.10" (27.94mm)	4	32Mx8	1
256MB (64Mx32)	SDU06432B1BF1xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.10" (27.94mm)	4	64Mx8	1
256MB (64Mx32)	SDU06432A1CF2xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.10" (27.94mm)	4	32Mx16	2
512MB (128Mx32)	SDU12832B1BF2xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.10" (27.94mm)	8	64Mx8	2
512MB (128Mx32)	SDU12832A1CF2xx-ssR	266-CL2.5 / 333-CL2.5 / 400-CL3	1.10" (27.94mm)	4	64Mx16	2
NOTE: ALL SMT MEMORY MODULES AVAILABLE IN COMMERCIAL (0°C TO +70°C) AND INDUSTRIAL (-40°C TO +85°C) TEMPERATURE GRADES						
THIS REPRESENTS A PARTIAL LISTING OF OUR PRODUCT LINE						

LEGACY SDRAM & DRAM TECHNOLOGY

Density	Swissbit PN	Data Rate (MT/s) - CL	Height	# IC's	IC Org	Rank
SDRAM UDIMM (168 pin)						
256MB (32Mx64)	SSU03264F1BG2xx-ssR	100-CL2 / 133-CL3 / 133-CL2	1.15" (29.21 mm)	16	16Mx8	2
256MB (32Mx64)	SSU03264F1BG1xx-ssR	100-CL2 / 133-CL3 / 133-CL2	1.15" (29.21 mm)	8	32Mx8	1
512MB (64Mx64)	SSU06464F1BG2xx-ssR	100-CL2 / 133-CL3 / 133-CL2	1.15" (29.21 mm)	16	32Mx8	2
SDRAM UDIMM w/ ECC (168 pin)						
256MB (32Mx72)	SSU03272F1BG2xx-ssR	100-CL2 / 133-CL3 / 133-CL2	1.15" (29.21 mm)	18	16Mx8	2
256MB (32Mx72)	SSU03272F1BG1xx-ssR	100-CL2 / 133-CL3 / 133-CL2	1.15" (29.21 mm)	9	32Mx8	1
512MB (64Mx72)	SSU06472F1BG2xx-ssR	100-CL2 / 133-CL3 / 133-CL2	1.15" (29.21 mm)	18	32Mx8	2
SDRAM RDIMM (168 pin)						
512MB (64Mx72)	SSR06472C1BD2xx-ssR	100-CL2 / 133-CL3 / 133-CL2	1.20" (30.48mm)	18	32Mx8	2
512MB (64Mx72)	SSR06472C1AD2xx-ssR	100-CL2 / 133-CL3 / 133-CL2	1.20" (30.48mm)	18	64Mx4	2
1GB (128Mx72)	SSR12872C1BD2xx-ssR	100-CL2 / 133-CL3 / 133-CL2	1.20" (30.48mm)	18	64Mx8	2
1GB (128Mx72)	SSR12872C1AD2xx-ssR	100-CL2 / 133-CL3 / 133-CL2	1.20" (30.48mm)	18	128Mx4	2
SDRAM SODIMM (144 pin)						
256MB (32Mx64)	SSN03264A3BG1xx-ssR	100-CL2 / 133-CL3 / 133-CL2	1.15" (29.21 mm)	8	32Mx8	1
256MB (32Mx64)	SSN03264D2CD1xx-ssR	100-CL2 / 133-CL3 / 133-CL2	1.15" (29.21 mm)	4	32Mx16	1
512MB (64Mx64)	SSN06464A3BG1xx-ssR	100-CL2 / 133-CL3 / 133-CL2	1.15" (29.21 mm)	8	64Mx8	1
DRAM SIMM EDO (72 pin) GOLD / TIN LEAD						
4MB (1Mx32)	SAE00132G1CF1xx-ssR	70ns / 60ns / 50ns	1.00" (25.40mm)	2	1Mx16	1
4MB (1Mx36)	SAE00136G1CF1xx-ssR	70ns / 60ns / 50ns	1.00" (25.40mm)	3	1Mx16	1
8MB (2Mx32)	SAE00232G1CF1xx-ssR	70ns / 60ns / 50ns	1.00" (25.40mm)	4	1Mx16	1
8MB (2Mx36)	SAE00236G1CF1xx-ssR	70ns / 60ns / 50ns	1.00" (25.40mm)	6	1Mx16	1
16MB (4Mx32)	SAE00432E1AF1xx-ssR	70ns / 60ns / 50ns	1.00" (25.40mm)	8	4Mx4	1
16MB (4Mx36)	SAE00436E1AF1xx-ssR	70ns / 60ns / 50ns	1.00" (25.40mm)	9	4Mx4	1
32MB (8Mx32)	SAE00832E1AF2xx-ssR	70ns / 60ns / 50ns	1.00" (25.40mm)	16	4Mx4	2
32MB (8Mx36)	SAE00836E1AF2xx-ssR	70ns / 60ns / 50ns	1.00" (25.40mm)	18	4Mx4	2
NOTE: ALL SMT MEMORY MODULES AVAILABLE IN COMMERCIAL (0°C TO +70°C) AND INDUSTRIAL (-40°C TO +85°C) TEMPERATURE GRADES						
THIS REPRESENTS A PARTIAL LISTING OF OUR PRODUCT LINE						

DRAM MODULE PART NUMBER GUIDE

S E N 128 64 D1 B 5 1 MT - 30 - * R *

1 2 3 4 5 6 7 8 9 10 11 12 13 14

Swissbit Memory (1)

Product Group (2)

S: SDRAM SDR
 D: SDRAM DDR
 E: SDRAM DDR2
 G: SDRAM DDR3

Module Type (3)

SDR
 U: 168 Pin UDIMM 3.3V
 R: 168 Pin RDIMM 3.3V
 N: 144 Pin SODIMM 3.3V
DDR
 U: 184 Pin UDIMM 2.5V
 R: 184 Pin RDIMM 2.5V
 N: 200 Pin SODIMM 2.5V
 M: 172 Pin Micro-DIMM 2.5V
DDR2
 U: 240 Pin UDIMM 1.8V
 R: 240 Pin RDIMM 1.8V, w/o Parity
 P: 240 Pin RDIMM 1.8V, w/ Parity
 F: 240 Pin FBDIMM
 N: 200 Pin SODIMM 1.8V
 G: 200 Pin SORDIMM 1.8V
DDR3
 U: 240 Pin UDIMM 1.5V
 R: 240 Pin RDIMM 1.5V
 N: 200 Pin SODIMM 1.5V

Data Depth (4)

008: 64MB	256: 2GB
016: 128MB	512: 4GB
032: 256MB	01G: 8GB
064: 512MB	02G: 16GB
128: 1GB	

Data Width (5)

32: w/o Parity
 36: w/ Parity
 64: w/o ECC
 72: w/ ECC

Printed Circuit Board with Revision (6)

**AMB /
Heat Spreader (14)**

RoHs / Lead Free (13)

Temperature Rating (12)

C: (or blank) (0°C to +70°C)
 E: Ext. Temp. (0°C to +85°C)
 I: Ext. Temp. (-25° to +85°C)
 W: Ind. Temp. (-40° to +85°C)

Speed (11)

DDR3
 AA: DDR3-800 CL5 AB: DDR3-800 CL6
 BA: DDR3-1066 CL6 BB: DDR3-1066 CL7
 CA: DDR3-1333 CL7 CB: DDR3-1333 CL8
 CC: DDR3-1333 CL9
DDR2
 50: DDR2-400 CL3 37: DDR2-533 CL4
 30: DDR2-667 CL5 3A: DDR2-667 CL4
 25: DDR2-800 CL6 2A: DDR2-800 CL5
DDR
 08: DDR-200 CL2 75: DDR-266B CL2.5
 70: DDR-266A CL2 7A: DDR-266A CL2
 60: DDR-333B CL2.5 6A: DDR-333A CL2
 50: DDR-400B CL3 5A: DDR-400A CL2.5
SDR
 10: PC-100 CL3 08: PC-100 CL2
 75: PC-133 CL3 70: PC-133 CL2

DRAM Manufacturer (10)

MT: Micron Technology
 EP: Elpida
 QI: Qimonda
 SA: Samsung

Module Ranks (9)

1: 1 Rank Module
 2: 2 Rank Module

DRAM Revision (8)

DRAM Organization (7)

A: x4 D: x4 TSOP Stack
 B: x8 E: x8 TSOP Stack
 C: x16 G: x4 BGA Stack

WHY CHOOSE SWISSBIT

Swissbit is the largest independent DRAM module and Flash storage manufacturer in Europe and is a global leader in technology supplying High Quality Memory solutions to the Industrial, Embedded, Communications & Networking, Military & Aerospace, Automotive, Casino Gaming, and Medical Equipment markets. Swissbit was created from a management buy-out from Siemens Memory Products in 2001 and has over 17 years of combined knowledge and experience in the memory industry. Swissbit's commitment to high quality, reliability, exceptional customer service, and competitive pricing is what enables our customers and partners to enjoy a constant source of supply and product commitment for their past, current, and future requirements.

Product Depth

- Complete line of DRAM modules and NAND Flash Solid State Drives
- Extensive support on DDR3, DDR2, DDR, SDRAM, DRAM memory modules
- Interface expertise SATA, PATA, DMA CFC, UDMA CFC, USB, and SD Flash Products
- Application specific form factors (VLP, UDIMM, RDIMM, miniDIMM, SORDIMM, SOCDIMM)
- Unique Chip-On-Board (COB) technology
- Extended and Industrial temperature grade product offering

Sales Service and Engineering Support

- Fast, effective, and competent sales staff on hand to serve your needs
- Your requirements combined with our market expertise result in tailor-made solutions
- Our expert technical staff is available for quick response
- Fast turn sample and production orders
- Global manufacturing facilities

In-House Manufacturing

- World's only COB memory manufacturer
- 1 Million product-per-month capacity
- Faster time-to-market
- Dock-to-stock delivery

Customization

- Custom module and Flash designs
- Electronic Design and Manufacturing Services (EDMS)
- Patented static / active wear leveling
- Patented data loss protection
- Security features
- Thermal simulations
- Labeling

OEM Services

- Controlled Bill of Materials (BOM)
- Serialization and Lot Code Tracking
- Quality and Engineering documents provided
- Support long life cycles
- Vendor Managed Inventory (VMI)

Test for Reliability

- Advantest, KTI, and CST
- System level Test During Burn-In (TDBI)
- Extended and Industrial Temperature Testing
- Environmental testing
- Application testing

Compliance

- RoHS
- WEEE
- UL
- FCC
- CE

Quality

- ISO 9001:2000

Associations

- Member of CompactFlash Association (CFA)
- Member of JEDEC
- Member of Memory Implementers Forum
- Member of SATA-IO
- Member of SecureDigital Association (SDA)
- Member of USB Implementer Forum
- Designs Qualified by Intel Designated Test Laboratory (CMTL)