

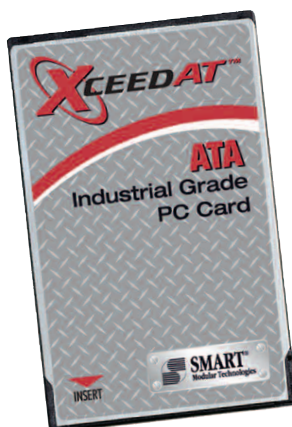
SMART's Flash Products XceedAT

MEMORY • FLASH • STORAGE • DISPLAYS • EMBEDDED

XceedAT Flash PC Card

SMART Modular Technologies' XceedAT Flash PC Cards are ideal for use in mobile and embedded computing, medical, automotive, and industrial applications. This industrial-grade RoHS-compliant product line is available in densities from 64MB to 32GB and is designed with the industry's best-in-class read and write speeds, satisfying the requirements of the ultra direct memory access (UDMA) protocol. Featuring high performance (47MB/s read/write) combined with low power (60mA read/write = 0.198W), SMART's industrial-grade XceedAT cards are particularly well suited for embedded applications, such as housing embedded code, embedded storage, and boot code.

The entire Xceed Flash product line supports self-monitoring analysis and reporting technology (S.M.A.R.T.), which is designed to reduce field failures and unscheduled service maintenance operations. By providing an accurate forecast of the expected lifespan, S.M.A.R.T. enables a reliable monitoring application that efficiently supports the Xceed Flash product in the field and guarantees a 24/7 service availability.



XceedAT Specifications:

Performance

- Maximum Performance (PIO 6)
Read Write
 - 256MB – 16GB 24MB/s 12MB/s
 - 128MB 19MB/s 6MB/s
 - 64MB 10MB/s 1.7MB/s
- Maximum Performance (UDMA 5)
 - 256MB – 16GB 47MB/s 25MB/s
 - 128MB 24MB/s 7MB/s
 - 64MB 10MB/s 1.7MB/s
- Host Interface Transfer Rate 16MB/s
- Startup Times
 - Sleep to Read/Write <2.5ms
 - Power up to Ready < 100ms
- Command to DRQ
 - Read < 220us
 - Write < 75us

Reliability

- MTBF > 2,500,000 hours
- Data Reliability 1 in 10¹⁴ bits read
- Data Retention 10 years
- Endurance >2,000,000 program/erase cycles

Power

- VCC 5.0V±10% 3.3V±5%
- Read 80mA 60mA
- Write 70mA 60mA
- Passive 9mA 6mA

Environmental

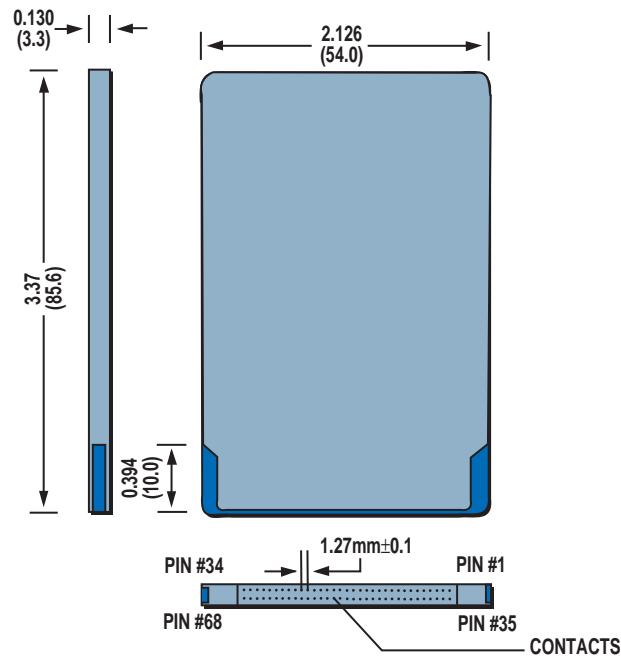
- Shock 50G max. @ 11ms
- Vibration 15G peak to peak
- Operating temperature
 - 0°C to 70°C (Industrial Grade)
 - 40°C to +85°C (Industrial Temp)
- Storage temperature -65°C to 150°C
- Humidity 5% to 95%
- Altitude up to 80,000 ft.



Ordering Information

SMART Part Number	Chip Density	Physical Capacity	Sector Card	Head	Cylinder	Sector Track	Un-Formatted Capacity
SG9PC64SME5xxx	512Mb	64MB	123,904	8	484	32	63,438,848
SG9PC128SME1xxx	1Gb	128MB	248,064	8	969	32	127,008,768
SG9PC256SME1xxx	1Gb	256MB	497,152	16	971	32	254,541,824
SG9PC512SME2xxx	2Gb	512MB	994,896	16	987	63	509,386,752
SG9PC1GSME4xxx	4Gb	1GB	1,989,792	16	1,974	63	1,018,773,504
SG9PC2GSME9xxx	8Gb	2GB	3,915,072	16	3,884	63	2,004,516,864
SG9PC4GSMEAxxx	16Gb	4GB	7,831,152	16	7,769	63	4,009,549,824
SG9PC8GSMEBxxx	32Gb	8GB	15,596,784	16	15,148	63	7,985,553,408
SG9PC16GSMEBxxx	32Gb	16GB	31,195,136	16	16,3841	63	15,971,909,632
SG9PC32GSMEBxxx	32Gb	32GB	61,079,552	16	16,3841	63	31,272,730,624

XceedAT Diagram



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