

SMART's Flash Products

Linear Flash Card

MEMORY • FLASH • STORAGE • DISPLAYS • EMBEDDED

Linear Flash Card

SMART Modular Technologies, Inc. offers an array of standard Linear Flash products that are PCMCIA compliant. All standard products are enclosed in a stainless steel, sonic welded case to assure performance, reliability, and durability and provide isolation from the ESD. SMART's standard products address most OEM needs for Linear Flash Cards and are available in a wide selection of capacities.

SMART also offers custom Linear Flash memory solutions that conform to OEM application and design specifications. Custom solutions enable OEMs to avoid the packaging limitations and technical constraints by offering support from conception to design.

Not only does SMART offer standard and custom solutions, but as an additional benefit to the customer, the Company offers card recycling as well. SMART's recycling program is an economical service that enables OEMs to return cards with outdated firmware, whereby SMART then cleans, verifies, re-programs and returns the recycled cards.



www.smartm.com

Linear Flash Specifications:

Customized

Any customer specified Linear Flash technology including:

- Intel
- Spansion/AMD
- Catalyst
- Sharp
- Other

SMART plans to continue to offer new flash technologies and expand its list of semiconductor suppliers as new products are announced and available.

Packages

Available packages include:

- SOP
- FBGA
- TSOP
- Micro BGA

Programming

SMART can program and verify standard or custom memory modules. SMART can also provide memory modules with custom attribute files.

Data Mode Options

- Attribute Memory
- Hardware Reset
- Ready / Busy
- Write Protect Switch
- Address Wraparound

Data Mode

- PCMCIA Compliant 8 or 16 bit
- PCMCIA Compatible 8 or 16 bit
 - 8 bit only direct addressing
 - 16 bit only direct addressing
- JEIDA 6 .1 Compliant

Packaging and Labeling

- Standard
- Bulk Static Packed
- Custom Labeled
- Individual Plastic Sleeves
- Custom Screened
- PC Card Jewel Cases
- Ink Jet Marked

Accessories

- 12V pump adaptor
 - 68 pin to 68 pin PCMCIA

RoHS compliant version available



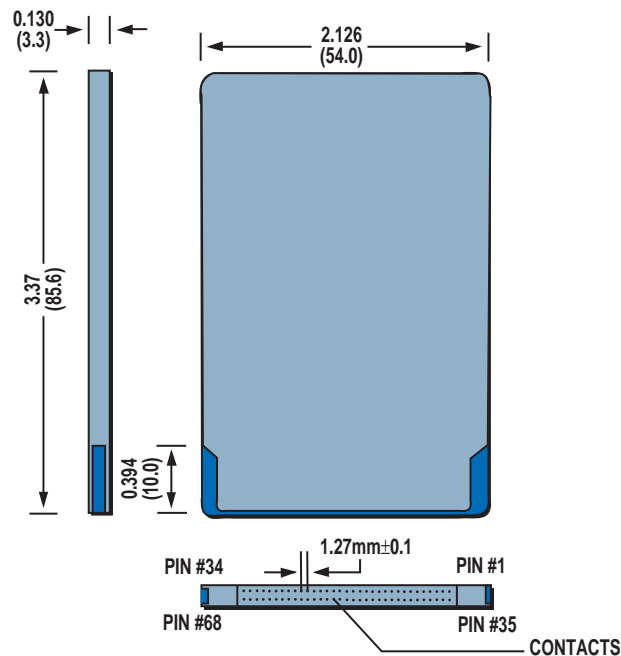
 **SMART**[®]
Modular Technologies

Standard Linear Flash Configurations

	Series 1 PC Card	C Series PC Card	D Series PC Card	MLC Series StrataFlash
Package	Type I PCMCIA	Type I PCMCIA	Type I PCMCIA	Type I PCMCIA
Memory Capacity	256K to 4MB	1MB to 10MB	4MB to 40MB	8MB to 64MB
Configuration	1 or 2 Mbit	4 Mbit	16Mbit	32 or 64 Mbit
Operating Voltage	12V write/ 5V read	5V write/ 5V read	5V write/ 5V read	5V write/ 5V read
Power Standby*	1.6mA	0.7mA	100mA	150mA
Read	80mA	45mA to 90mA	45mA to 70mA	35mA to 70mA
Write	30mA	65mA	65mA	75mA
Erase	30mA	50mA	65mA	50mA
Access Time	150 200ns	150ns 200ns	150ns 200ns	200ns
Temperature (Commercial)	0°C to 70°C	0°C to 70°C	0°C to 70°C	0°C to 70°C
Temperature (Industrial)	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C
Reliability	100,000 cycles	1,000,000 cycles	1,000,000 cycles	100,000 cycles

* Maximum value for lowest capacity within series.

Linear Flash Diagram



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