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Find the *Abaco Systems / SBS / Greenspring IP-FLASH-4M* at our website: *Click HERE*

SBS Technologies, Inc.

www.sbs.com

IP-Flash

IndustryPack Module with 8 Mbytes Flash™ Memory

Application Information

IP-Flash provides a convenient and reliable way to implement reprogrammable Flash memory of up to eight megabytes in a single-wise IndustryPack. This high density permits cost-effective solid-state replacement of rotating memories for faster access, better reliability, smaller system size, and simplified cabling/assembly. Up to 32 megabytes of Flash memory may be placed in a single VMEbus slot.

Flash memory is ideal for holding primary applications code and operating system software, system configuration state, and data tables. The easy and fast reprogrammable

Eight TSOP 1M x 8bit Flash chips are organised into four banks sixteen bits wide of two chips each. Each two megabyte bank of Flash memory is further subdivided into sixteen, 128Kbyte blocks. Each of the blocks may be erased separately. Each block or byte may be written individually. This allows selective updating of data or code conveniently and quickly. While one bank of Flash chips is being reprogrammed or erased, the other banks may be read normally.

The IP-Flash provides an interrupt when each erase or programming step is complete permitting efficient Flash reprogramming concurrent with other activities. Special hardware protection on the IndustryPack prevents accidental erasure or programming. Typical time to erase and program a block is under three seconds.

Features

- 8 Mbytes of Intel Flash memory on a single-wide IndustryPack
- Organized into four banks of 2 Mbytes, each 16 bits wide
- Each bank comprises sixteen 128 Kbyte blocks that are individually erasable
- 100,000 program/erase cycles minimum
- Interrupts supported
- Hardware protection against accidental erasure
- Also available with reduced memory capacities

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Specifications

Form Factor	Single-wide Type I IndustryPack
Memory Capacity	2, 4, 6, or 8 Mbytes according to order option
Bank Size	2 Mbytes, 16 bits wide
Blocks Per Bank	Eight, each 128 Kbytes, 16 bits wide Sixty-four blocks total on –8M
Minimum Program/Erae Cycles	100,000
IndustryPack Wait States	One
Memory Chips	120 ns 1 Mbyte TSOP Flash Intel 28F008SA
Block Erase Time, Typical	Less than 3 seconds
Block Write Time, Typical	600 ms, rising to 3000 ms after 10,000 cycles
Byte Write Time, Typical	9 us
Interrupts	On completion of erase cycle Maskable, with programmable 8-bit vector
I/O Access	All I/O lines are no-connect
Dimensions	1.8 inches x 3.9 inches
Weight	0.06 kg (0.14 lb)
Power Requirements	+5 VDC, 375 mA typ operating, 215 mA typ deep standby +12 VDC, 0 mA typ operating, read mode and power down +12 VDC, 30 mA typ, 90 mA max erasing and programming +12 V supply must be between 11.75 and 12.50 V
Environmental	Operating temperature: 10 to +60°C Humidity: 5 to 95% non-condensing Storage: –40 to +85°C

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Ordering Information

IP-FLASH-8M	Flash IndustryPack with 8 Mbytes memory
IP-FLASH-6M*	Flash IndustryPack with 6 Mbytes memory
IP-FLASH-4M*	Flash IndustryPack with 4 Mbytes memory
IP-FLASH-2M	Flash IndustryPack with 2 Mbytes memory
EKIP50-FLASH	Engineering kit for IP-Flash. Contains: Printed hardware user manual Bill of Materials Board Schematics Assembly Diagram Intel Flash 28F008SA data sheet Intel application note AP-360 Software Drivers Floppy disk containing: Example C code

*IP-Flash is available with 4 and 6 Mbyte capacities by special order subject to minimum order quantities. Contact factory for details.

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