



# MACH4 CompactFlash

## Industrial-Grade Storage Solutions

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Introducing MACH4, the World's fastest CompactFlash optimized for embedded OEM applications as only STEC can deliver. With multi-channel support, Ultra DMA performance, and TrueIDE mode support, it represents the fastest, highest capacity, and most reliable compact storage solution available in the industry today.

Revolutionizing the way CompactFlash is used, STEC's new MACH4 CompactFlash platform is a high-performance industrial NAND flash storage device suitable as a hard disk drive replacement or alternate storage device in a wide variety of industrial applications.

Because the MACH4 CompactFlash uses solid state NAND flash technology, it has very low latency compared to a traditional hard disk drive, consumes far less power (approximately 200 milliamps or 1 watt compared to 12 watts for a standard 7200rpm ATA disk drive), and performs much better under extreme environmental conditions.

With its small footprint, high capacity (up to 32 gigabytes using MLC flash), and throughput up to 90 megabytes per second, the MACH4 CompactFlash is an ideal hard disk drive replacement. The MACH4 is especially well suited for space-constrained or rugged applications or those requiring less capacity than available hard disk drives offer including blade servers and embedded PCs.

### MACH4 Features

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- CFA Compliant for greatest compatibility
- Type 1 CompactFlash card with 4 independent flash channels
- ATA and True IDE Mode Support
- Ultra DMA
- Capacities up to 16GB (32GB with MLC flash)
- Built-in Wear Leveling and Block Management for ultra-high endurance
- Full data-path protection with built-in 8-bit ECC engine for highest reliability
- Built-in power-down data protection
- Commercial and Industrial Operating Temperature Range
- Full RoHS 6/6 compliance

# Specifications

<b>Capacity</b>	8GB to 16GB (32GB with MLC)
<b>Interface</b>	
Type	ATA with True IDE Mode Support
Connector	50 Pin CF Interface
Transfer modes:	UDMA 0-6, MWDMA 0-4, PIO 0-6 PC Card Memory, PC Card I/O, True IDE and Ultra DMA
<b>Performance</b>	
To/From Host	
Sustained Read	Up to 90MB/sec
Sustained Write	Up to 55MB/sec
<b>Electrical</b>	
DC Input Voltage	5V (± 5%) or 3.3V (± 5%)
<b>Power consumption</b>	
Suspend Mode	2 mA (max)
Operating Mode	210 mA (max)
<b>Environmental</b>	
Operating Temperature	
Commercial	0° to 70°C
Industrial	-40° to 85°C
Storage Temperature	-65° to 150°C
Humidity	5% to 95% non-condensing
Operating Vibration	20G; 10-2000 Hz @147 meter/sec <sup>2</sup>
Operating Shock	1500G; 4903.3 meter/sec <sup>2</sup>
<b>Reliability</b>	
MTBF (Mean Time Between Failure)	greater than 8,000,000 hours
Endurance	Varies with usage
Non-Recoverable Error Rate	less than 1 in 10 <sup>14</sup> bits read
<b>PHYSICAL DIMENSIONS</b>	
TYPE I	1.43 in (L) x 1.68 in (W) x 0.13 in (H) 36.4mm (L) x 42.8mm (W) x 3.3mm (H)
<b>WEIGHT</b>	
CF Type I	0.40 oz (11.4 g)
<b>Compliance</b>	
RoHS-6, UL 60950, FCC – Class B for Information Technology, CE – EN 55022/55024 CFA 4.1 Compatible, PCMCIA 7.0 Compatible	

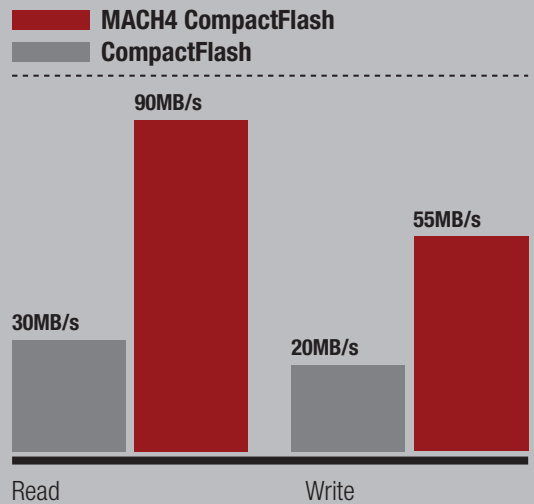
## Related Applications

- Professional Media
- Communications Equipment/Networking
- Enterprise Computing
- Embedded/Industrial
- Military / Aerospace
- Automotive

## Related Applications

- Life Cycle Management
- Flash Management
- TotalDriveProtection
- Power-down Data Protection
- Flash Controller Technology

## MACH4 CF vs. CF Comparison



## PERFORMANCE in MB/s

## Product Key

### Part #: SLCFxGM4U(I)

- x = Capacity (8, 16 GB)
- G = Gigabyte
- U = RoHS-6 Compliant
- I = Industrial Temperature

### Examples:

SLCF8GM4U(I) = 8GB MACH4 CF Card  
Industrial Temperature

### Worldwide Headquarters

STEC, Inc.  
3001 Daimler Street  
Santa Ana, California 92705 USA  
Tel: (949) 476-1180  
Fax: (949) 476-1209  
Web: www.stec-inc.com

### STEC Europe

Donau-City-Strasse 1  
1220 Vienna, Austria  
Tel: +43-1-263-38-08  
Fax: +43-1-263-37-65

### STEC Japan

Arents Daikanyama 114  
11-1 Hachiyama-cho  
Shibuya-ku, Tokyo  
150-0035 Japan  
Tel: +81 (0) 3-5428-2231  
Tel: +81 (0) 3-5489-0230

### STEC Malaysia

STEC Technology Sdn Bhd  
Plot 107 Bayan Lepas Industrial Park  
Phase 4, 11900 Penang, Malaysia  
Phone: +60 (4) 6198888

### STEC China

RM1805, 18F Bund Centre  
222 Yan An Rd. East  
HuangPu District Shanghai, 200002  
P.R. China  
Tel: +81 21 6132 3892 ext. 629