

# SU3580 Panther

## 3.5" SATA Solid State Drive



**MEMTECH**

- 3.5" drive low profile form-factor
- 10 to 96 Gbyte capacity under 9.5mm
- Proprietary IC Tower Stacking Technology
- Full -40°C to +85°C industrial temperature range
- 1.5Gbit Serial ATA (SATA) interface
- USB 2.0 Compliant Hi-Speed (480Mbit/sec) interface
- 150 Mbyte/sec interface transfer speeds
- Up to 60 Mbyte/sec sustained Read/Write performance
- Powerful ECC and proprietary wear leveling for exceptional data reliability
- 5 volt, low power operation
- Completely solid state - no moving parts
- 1500G, 0.5ms operating shock
- 16.3G operating random vibration
- 0.1 millisecond random access time
- 7 year product warranty
- Intelligent destructive and non-destructive sanitization



The SU3580 Panther series of solid-state flash drives are a 1.5Gbit Serial ATA and USB 2.0 Hi-Speed compliant memory module offered in an extremely low profile 3.5 inch drive form-factor. The drive is completely solid state, with no moving parts. This contributes to the unit's exceptional ruggedness and wide operating temperature range; with no moving parts, there is no mechanism for mechanical wear-out. The drive fully complies with the Serial ATA 1.0 specification and therefore requires no special drivers or flash file managers to interface to the drive. This makes the drive a virtual drop in replacement for standard rotating media but with superior performance, ruggedness and reliability.

The primary storage media in the drive is sector-erasable NAND E<sup>2</sup>PROMs (Flash). Using these SLC devices, Memtech is able to deliver up to 96 Gbytes of uncompressed, non-volatile solid-state storage in an extremely small, rugged form-factor. The Serial ATA (SATA) interface supports 150-Mbyte per second burst throughputs, and with an access time for the drive under 0.1 milliseconds, thousands of transactions can occur per second. In addition to the extremely high IO capability of the drive, the sustained read and write performance is exceptional at up to 60 Mbytes/sec. The USB 2.0 compliant Hi-Speed interface supports 480 Mbit/second transfer rates and sustained transfers of over 20 Mbytes/second.

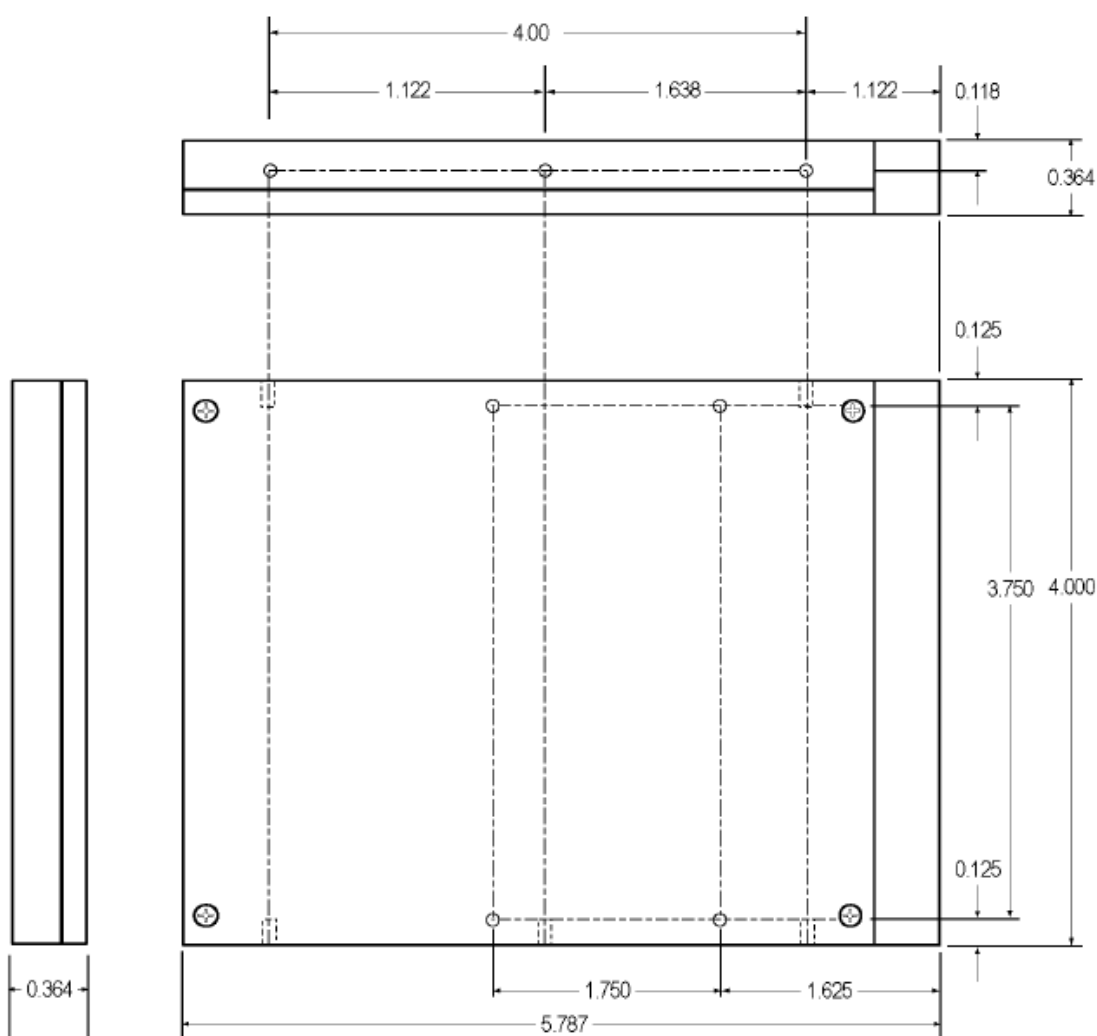
The Panther, with its high-capacity and high-throughput, is a rugged memory and mass storage solution ideal for mission-critical systems in a variety of industries. Applications include data recorders, image exploitation computers, navigation systems, oil pipeline monitors, scientific equipment, RAID systems, financial transaction processing systems, media server equipment, and communications equipment.



**MEMTECH**

The SU3580 is available now in standard capacities ranging from 10 to 96 Gbytes, all in the same, 9.5mm low profile solution. Every drive is subjected to Memtech's exacting EnduroTest™ program in which each drive is fully tested under environmental and voltage extremes to guarantee data integrity under even the harshest conditions, and to ensure full functionality out of the box.

The SU3580 may be mounted in any orientation. Ten mounting holes are available: four on the bottom and six on the sides. All holes are tapped 6-32 with a maximum penetration of 0.25 inches.



**Note:** All dimensions in inches, unless otherwise noted.



## **SPECIFICATIONS\***

### **Interface**

Compatibility	ATA/ATAPI-7 compliant SATA 1.0 USB 2.0 Hi-Speed
Physical Capacity	10 to 96 Gbytes
Physical Sector Size	512 bytes
SMART (Self-Monitoring, Analysis and Reporting Technology) compliant	

### **Performance**

Average Access	0.1 ms
Track/Track Access	0.1 ms
Burst Transfers	150 Mbytes/sec
Sustained Data Rate	
SU3585	50 Mbytes/sec
SU3586	60 Mbytes/sec

### **Environmental**

Operating Temperature Range	
Commercial	0° to +70°C
Extended	-20° to +75°C
Industrial	-40° to +85°C
Storage Temperature	-55° to +125°C
Shock - operating	1500G, 0.5ms half sine
Vibration - operating	16.3G, random
Altitude	80,000 feet
Airflow	None required
Humidity	5% to 95% NC
Safety	CSA File LR114427
EMC	EN55022 and EN50024

### **Reliability**

Proprietary wear-leveling and remapping architecture	
Endurance	
erase/write endurance	8 million cycles
read endurance	unlimited
data Integrity	10 years
ECC	32-bit Reed-Solomon

### **Power Requirements**

Voltage	5V +/- 5%
Current Draw – 12 Gbyte model	
Read/Write	431 mA
Erase/Fill	675 mA
Current Draw – 48 Gbyte model	
Read/Write	502 mA
Erase/Fill	741 mA

### **Mechanical**

Length	5.79" (147.0 mm)
Width	4.00" (101.6 mm)
Height	0.37" (9.5 mm)
Cable Interface	
7-pin SATA signal	
15-pin SATA power	
5-pin mini USB signal	
Cable Length	
1-meter – SATA	
2-meter – USB	
Weight	varies by size

\*Specifications subject to change without notice.

