

# Proteus<sup>®</sup> Plus Embedded



## Proteus<sup>®</sup> Plus Embedded

The speed and ruggedness of the Comtech Proteus Plus Solid State Drives is now available in bare board form factors for embedded use. Available in capacities from 32GB to 256GB, these drives provide another option for delivering extreme ruggedness and reliability to applications where an industry standard drive form factor is too large.

Like all Proteus Plus SSDs, these boards support the SATA revision 2.6 interface standard at up to 3.0 Gb/s. With a high speed controller and 64MB of on-board cache, Proteus Plus SSDs deliver sustained reads up to 250 MB/s and sustained writes up to 205 MB/s. Robust data integrity is ensured by integrated hardware support for on-the-fly error detection and correction, resulting in a Bit Error Rate of less than one in  $10^{14}$ .

These drives are rigorously tested and independently verified to MIL-STD-810 to survive in the harshest environments. Industrial grade SLC NAND technology provides data retention of over 10 years and write endurance of over 100,000 writes.

Designed and manufactured in the USA at ISO9001-certified facilities, these Proteus Plus embedded drives set a new standard in reliability and ruggedness for embedded SSD boards.

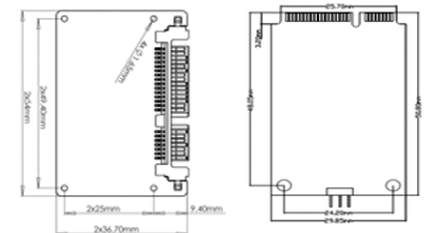
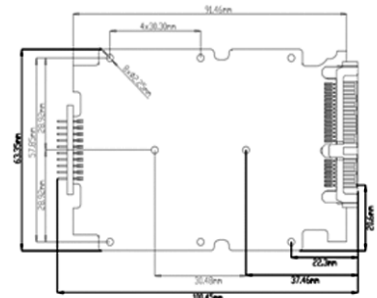
### Features

- Support for SATA 2.6 at 1.5 and 3.0 Gb/s
- 64MB cache enables high IO/s for small block random operations
- Available with and without secure erase capabilities
- Available in a 2.5" form factor bare PCB, or in industry standard JEDEC MO-297 and MO-300 form factors
- MO-297 is available with Standard SATA connector or with vertical connector for robust use as a mezzanine card
- Completely SATA compatible, no device driver development required

Specifications	2.5" PCBA	MO-297A SlimSATA	MO-300B mSATA
<b>Performance</b>			
Raw Capacity	32, 64, 128, 256 GB	32, 64 GB	32, 64 GB
Sustained Read	Up to 250 MB/s	Up to 136 MB/s	Up to 136 MB/s
Sustained Write	Up to 205 MB/s	Up to 132 MB/s	Up to 132 MB/s
Random Read (4K blocks)	> 7500 IOPS	> 7500 IOPS	> 7500 IOPS
Random Write (4K blocks)	> 1700 IOPS	> 1700 IOPS	> 1700 IOPS
<b>Erase Methods</b>			
Fast Erase, DoD NISPOM 5220.22-M, DoD NISPOM 5220.22-M Sup 1, NSA/CSS 9-12, NSA 130-1, Army AR 380-19, Navy NAVSO P-5239-26, Air Force AFSSI-5020, RCC-TG IRIG 106-7			
<b>Power</b>			
Input Voltage	+5Vdc ± 10%	+5.0Vdc ± 10%	+3.3Vdc ± 10%
Read Max	1.30 W	1.60 W	1.60 W
Write Max	2.00 W	1.50 W	1.50 W
Idle Power		0.4 W	0.4 W
<b>Reliability</b>			
Bit Error Rate	< 1 non-recoverable error in 10 <sup>14</sup> bits read		
Data Retention	> 10 years		
Endurance	> 100,000 writes		
Wear-leveling	Proprietary static and dynamic algorithms		
<b>Environment</b>			
Operating Temperature	-40°C to +85°C		
Storage Temperature	-50°C to +95°C		
Altitude	80,000 feet		
Humidity	5% to 95% relative humidity, non-condensing		
Shock	1,500G at 0.5ms		
Vibration	16.3G RMS minimum		
<b>Mechanical</b>			
Dimensions	63.35mm x 100.45mm x 4.69mm	39mm x 54mm x 4.5mm	29.85mm x 50.80mm x 4.85mm

### Applications

- Military and Defense – Ground, Sea and Air
- Ruggedized computers and notebooks, including small form factors like Netbooks
- Data recorders for extreme environments
- Portable and handheld devices
- Unmanned vehicles including UAVs, robotics and mine detection
- Radar/Guidance Systems and Telemetry/Tracking
- Extreme operating environments including oil & gas exploration and drilling
- Anywhere your SSD absolutely, positively has to work!



### Contact

#### CCT Production Facility

212 Outlook Point Drive  
Suite 101

Orlando, FL 32809

[www.ssd.comtech-cct.com](http://www.ssd.comtech-cct.com)

### About Comtech

Comtech Telecommunications Corp. (Nasdaq: CMTL) designs, develops, produces and markets innovative products, systems and services for advanced communications solutions. The Company sells products to a diverse customer base in the global commercial and government communications markets. For more information visit [www.comtechtel.com](http://www.comtechtel.com).

### Command & Control Technologies™

275 West Street  
Annapolis, MD 21401 USA  
Toll Free: 1.800.557.5869  
Outside US: +1.410.263.7616  
[www.comtech-cct.com](http://www.comtech-cct.com)