

Proteus® Plus Embedded



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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

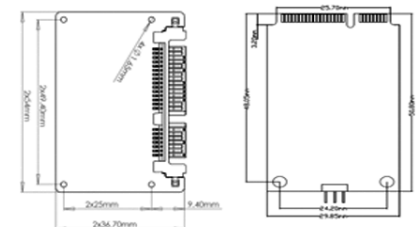
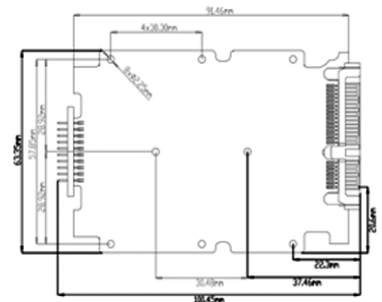
- Support for SATA 2.6 at 1.5 and 3.0 Gb/s
- 64MB cache enables high IO/s for small block random operations
- Available with and without secure erase capabilities
- Available in a 2.5" form factor bare PCB, or in industry standard JEDEC MO-297 and MO-300 form factors
- MO-297 is available with Standard 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
Performance			
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
Erase Methods			
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			
Power			
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
Reliability			
Bit Error Rate	< 1 non-recoverable error in 10 ¹⁴ bits read		
Data Retention	> 10 years		
Endurance	> 100,000 writes		
Wear-leveling	Proprietary static and dynamic algorithms		
Environment			
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		
Mechanical			
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!



About Us

Comtech Telecommunications Corp. is a leading global technology company providing terrestrial and wireless network solutions, next-generation 9-1-1 emergency services, satellite and space communications technologies, and cloud native solutions to commercial and government customers around the world. Our unique culture of innovation and employee empowerment unleashes a relentless passion for customer success. With multiple facilities located in technology corridors throughout the United States and the world, Comtech leverages its global presence, technology leadership and decades of experience to create the world's most innovative communications solutions. For more information visit comtech.com.

Note: Technical specifications are subject to change without notice.

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