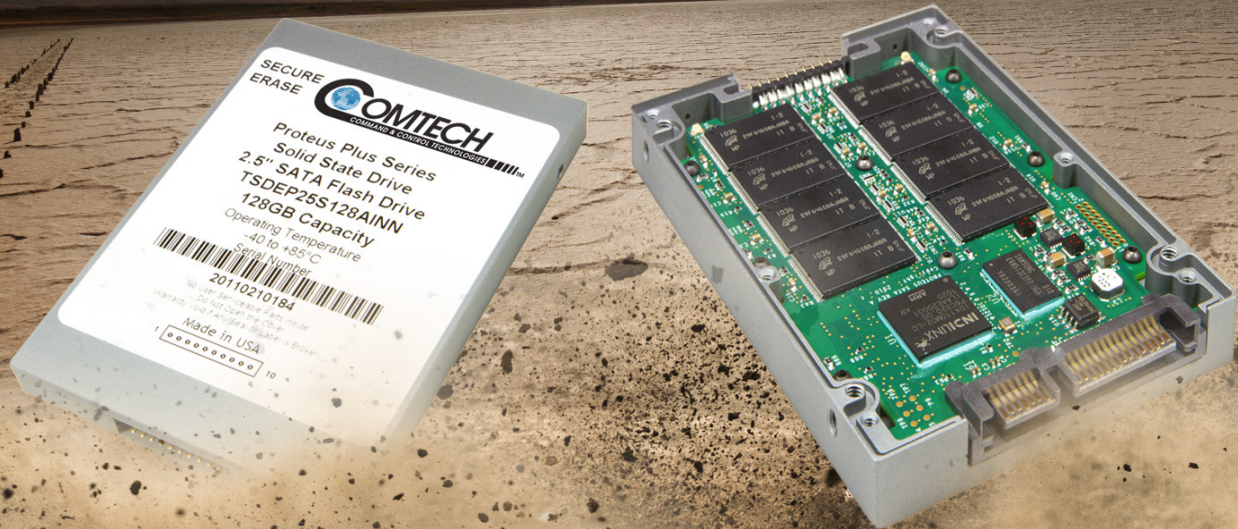# Proteus® Plus | 2.5"

Proteus® Plus | 2.5"

The Proteus Plus Solid State Drives extend write performance over the established Proteus series. With 20% faster sustained writes and random writes of 4K blocks running almost 3x faster, these SSDs can better support intense system applications that require higher levels of performance.

Proteus Plus delivers ultra-high-reliability mass storage in an industry-standard package. They fit the standard 2.5 inch drive dimensions, allowing direct replacement of rotating disk drives. Secure erase functionality features seven different agencyapproved enhanced erase methods. Erasure can be initiated by either software command or an internal jumper.

Proteus Plus support the SATA, revision 2.6, interface standard at up to 3.0Gb/s. With a high speed controller and 64MB of on-board cache, the Proteus Plus SSD delivers sustained reads up to 250MB/s and sustained writes up to 205MB/s. A robust interface is ensured by integrated hardware support for on-the-fly, per sector error detection and correction. The resulting bit error rate is less than one in 10^{14}.

Rigorously tested and independently verified to MIL-STD-810, the ultra-rugged Proteus Plus will survive the harshest environments. The drives have a conservatively calculated MTBF of over 1.24 million hours. 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, C&CT's SSDs are the unquestioned reliability leaders among high-performance, rugged SSDs.

Features

- Support for SATA 2.6 at 1.5 and 3.0 Gb/s
- 64MB cache enables high IOPS for small block random operations
- Available with and without secure erase capability
- Alternative enhanced erasure available on request
- Write Protect by jumper
- Ruggedized design; tested to MIL-STD-810
- Precision machined, anodized aluminum alloy case
- Enhanced reliability options include conformal coating, staking, and component encapsulation
- No device driver development required (completely compatible with standard SATA)

Specifications

Performance	
Capacity Raw:	64GB, 128GB, 256GB
User:	59.6GB, 119.2GB, 238.4GB
Cache Size / Sector Size	64MB / 512 Byte Standard
Sustained Read (128GB SSD)	Up to 250 MB/s
Sustained Write (128GB SSD)	Up to 205 MB/s
Random Read, 4KB blocks (128GB SSD)	> 7500 IOPS
Random Write, 4KB blocks (128GB SSD)	> 1700 IOPS

Erase Methods
Fast Erase, DoD NISPOM 5220.22-M, DoD NISPOM 5220.22-M Sup 1, NSA/CSS 9-12, Army AR 380-19, Navy NAVSO P-5239-26, Air Force AFSSI-5020, RCC-TG IRIG 106-7

Power	
Input Voltage	+5VDC ± 10%
Read Max (256GB SSD)	1.45 W
Write Max (256GB SSD)	2.75 W
Max. In-rush Current (128GB SSD)	< 1.5 Amp

Reliability	
MTBF	> 1.24 million hours, Telcordia 25°C
Data Reliability	< 1 non-recoverable error in 1014 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
MIL-STD-810 Test Options	Thermal Cycling, Thermal Shock, Shock, Vibration,Gunfire Vibration, Low Pressure, Sand & Dust,Fungus, Explosive Atmosphere, Salt Fog

Mechanical	
Dimensions (mm)	ATA Standard

Contact

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Applications

- Military and Defense — Ground, Sea and Air
- Ruggedized computers/notebooks — mobile and system-based
- Homeland Security/Surveillance/ Mapping/ Reconnaissance/Remote Sensing
- Aerospace avionics, cockpit instrumentation both commercial and defense
- Unmanned vehicles including UAVs, robotics and mine detection
- Radar/Guidance Systems and Telemetry/Tracking
- Vehicle Management/Information Systems
- Extreme operating environments including down-hole drilling and transportation whenever non-C&CT SSD's fail
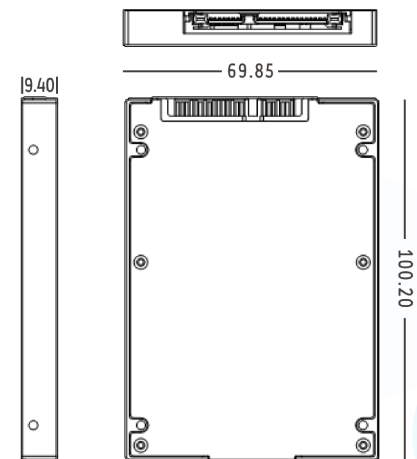
Jumper Locations:

- 9-10 Reserved
- 7-8 IRIG 106-07*
- 5-6 NSA/CSS 9-12*
- 3-4 Fast Erase
- 1-2 Write Protect

Entire enclosure is machined, anodized aluminum

Packaging options:

- Conformal coat
- Silicone gel fill
- Epoxy staking

*Erase options on secure drives only

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.

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