SMART RUGGED™

T5PFLC 2.5″ and M.2 2280

SMART Modular Technologies' T5PFLC 2.5″ and M.2 2280 SATA solid state drives (SSDs) deliver high performance, high capacity storage solutions optimized for commercial, industrial and other applications requiring durable and secure storage. The T5PFLC also comes equipped with FIPS 140-2 encryption capabilities.

Powered by a flexible flash controller, T5PFLC SSDs provide sustained Read/Write performance to meet the needs of high throughput database applications, as well as transactional and boot and load applications.

T5PFLC SSDs offer up to 2TB of storage using 3D TLC NAND Flash. They are more reliable, offer superior performance, and require less power and cooling than traditional hard disk drives (HDDs).

Features & Benefits

- FIPS 140-2 encryption
- AES-XTS 256-bit encryption automatically protects all data written to the drive
- True industrial grade storage solution for "no-compromise" applications
- Advanced flash management for enhanced reliability and durability
- Self-Monitoring Analysis and Reporting Technology (S.M.A.R.T.) support
- TCG Opal 2.0

Applications

- Military
- Defense
- Aerospace
- Telemetry
- Surveillance

Product Family Overview

Capacity	Sequential Performance	Random Performance
2.5": 120GB, 240GB, 480GB, 960GB, 1920GB	500MB/s Read	50,000 IOPS Read
M.2 2280: 120GB, 240GB, 480GB, 960GB	470MB/s Write	48,000 IOPS Write

One gigabyte, or GB, equals one billion bytes when referring to drive capacity. Accessible capacity may vary based on the operating environment and drive formatting.

Based on the 1920GB capacity.

Specifications

	T5PFLC 2.5″ SATA	M.2 2280
NAND Type	**TLC**	
Performance		
Burst	600MB/s	
Sustained	500MB/s Read 470MB/s Write	
Random[1]	50,000 IOPs Read 48,000 IOPs Write	
Capacity		
3D-TLC	120, 240, 480, 960, 1920GB[2]	240, 480, 960GB
Reliability		
Data Reliability	1 in 10^{17} bits read	
Data Retention	> 10 years @ 25°C	
Endurance	2,800 Total Drive Writes[3]	
Warranty	1 Year	
Power		
Input Voltage	5 V +/- 10%	3.3V +/- 5%
Idle (typical)	1.6 W	
Operational (typical)	3.9 W	
Environmental		
Operating Shock	50 g half-sine, 11 ms, 3 shocks along each axis, X, Y, Z, in each direction[4,5,8]	
Vibration	16.4 g rms[4,5,6,8]	
Altitude	24,384m [80,000 ft.][4,8]	
Relative Humidity	5% to 95% non-condensing[4]	
Conformal Coating	Optional	
Operating Temp[7]	Industrial (-40° C to 85° C) Commercial (0° C to 70° C)	
Storage Temp	-55° C to 95° C	
Mechanical		
Length	100.2mm	80mm
Width	69.85mm	22mm
Height	7.0mm	2.64mm
Connector	6 Gb/s SATA	M.2 M Keyed

(1) Based on the 1920GB capacity
(2) One gigabyte, or GB, equals one billion bytes when referring to drive capacity. Accessible capacity may vary based on the operating environment and drive formatting
(3) Based on 100% Sequential Workload
(4) Based on MIL-STD-810G
(5) Tested on 240GB Drive
(6) 10-2000 Hz random, 3-axes
(7) Drive temperature as reported by S.M.A.R.T. Attribute
(8) Test results pending

Data Security Features

	T5PFLC 2.5” SATA
Encryption	AES-XTS (256-bit) Encryption, FIPS 197 FIPS 140-2 compliant

2.5″ SATA Ordering Information

Part Number	Capacity (GB)
C-Temp	
HRJA2F0120HC001*	120
HRJA2F0240HC001*	240
HRJA2F0480HC001*	480
HRJA2F0960HC001*	960
HRJA2F1920HC001*	1920
I-temp	
HRJA2F0120HI001*	120
HRJA2F0240HI001*	240
HRJA2F0480HI001*	480
HRJA2F0960HI001*	960
HRJA2F1920HI001*	1920

M.2 2280 Ordering Information

Part Number	Capacity (GB)
C-Temp	
HRJA3F0240HC001*	240
HRJA3F0480HC001*	480
HRJA3F0960HC001*	960
I-temp	
HRJA3F0240HI001*	240
HRJA3F0480HI001*	480
HRJA3F0960HI001*	960

*Conformal Coat Option Replace “001” with “CC1

One gigabyte, or GB, equals one billion bytes when referring to drive capacity. Accessible capacity may vary based on the operating environment and drive formatting.
CC1 part numbers refer to Conformal Coating

SMART® Modular Technologies
A PENGUIN SOLUTIONS™ BRAND

For more information, please visit: **www.smartm.com**

**Product images are for promotional purposes only. Labels may not be representative of the actual product.*

Headquarters/North America:
T: (+1) 800-956-7627 • T: (+1) 510-623-1231
F: (+1) 510-623-1434 • E: info@smartm.com

Latin America:
T: (+55) 11 4417-7200 • E: sales.br@smartm.com

Asia/Pacific:
T: (+65) 6678-7670 • E: sales.asia@smartm.com

EMEA:
T: (+44) 0 7826-064-745 • E: sales.euro@smartm.com

Customer Service:
T: (+1) 510-623-1231 • E: customers@smartm.com

10.15.24/T5PFLC/Rev.8