



2.5" SSD

Targeted Product Portfolio, Engineered Specifically for Your Mission Critical Applications



Key Features

- MCU-based Power Loss Protection Design*
- Self-Encrypting Drive (SED) with AES 256-bit Encryption, TCG OPAL 2.0*
- NSA-compliant Secure Erase*
- MIL-STD-810G standards*

* May vary by product and project support

ATP's shock/vibration-resistant industrial 2.5" SSDs are encased in durable enclosures for outstanding performance in challenging environments. The convenient 2.5" form factor and SATA III interface allow easy integration into SATA-based systems, while unique ATP technologies ensure extended endurance for long years of dependable use.

Power Loss Protection Design technology options combines hardware and/or firmware solutions to ensure that data is preserved and protected during a sudden power failure. The MCU design also protects the storage device from damage by allowing the power loss protection (PLP) to intelligently manage power challenges such as inrush current, input overvoltage, incorrect cache flushing and more.

ATP's 2.5" SSDs comply with US National Security Agency (NSA) and MIL-STD-810G standards. They support the S.M.A.R.T. ATA feature set and Advanced Wear Leveling algorithm for enhanced endurance.

| Technologies & Add-On Services | S.M.A.R.T. | Hardware-based Power Loss Protection | AutoRefresh | Advanced Wear Leveling | Dynamic Data Refresh | Secure Erase | TCG Opal 2.0 | Industrial Temperature | Anti-Sulfur Resistors | Conformal Coating |
|--------------------------------|------------|--------------------------------------|-------------|------------------------|----------------------|--------------|--------------|------------------------|-----------------------|-------------------|
| Premium | ○ | ○ | ○ | ○ | ○ | ▲ | ○ | ○ | ▲ | ▲ |
| Superior | ○ | ○ | ○ | ○ | ○ | ▲ | ○ | ▲ | ▲ | ▲ |
| Value | ○ | — | ○ | ○ | ○ | — | — | — | — | — |

▲: Customization option available on a project basis.

Specifications

| 2.5" SSD | | | | | |
|--|---------------------------|----------------------------------|-----------|--------------------------------------|--------|
| Product Line | Premium | | | Superior | |
| | A800Pi | A750Pi | A700Pi | A650Si | A650Sc |
| Interface | SATA III 6 Gb/s | | | | |
| Flash Type | SLC | 3D TLC (pSLC mode) | | 3D TLC | |
| Form Factor | 2.5" | | | | |
| Operating Temperature (Tcase) ¹ | -40°C to 85°C | | | 0°C to 70°C | |
| Power Loss Protection Options | Hardware + Firmware Based | | | | |
| Optional SED Features | - | | | AES 256-bit Encryption, TCG Opal 2.0 | |
| Capacity | 8 GB to 256 GB | 80 GB to 640 GB | | 120 GB to 1,920 GB | |
| Performance | | | | | |
| Sequential Read (MB/s) up to | 520 | 560 | | 560 | |
| Sequential Write (MB/s) up to | 420 | 520 | | 520 | |
| Random Reads IOPS (4K, QD32) up to | 76,000 | 90,000 | | 100,000 | |
| Random Writes IOPS (4K, QD32) up to | 74,000 | 88,000 | | 91,000 | |
| Endurance and Reliability | | | | | |
| Endurance (TBW) ² up to | 21,333 TB | 38,400 TB | 25,600 TB | 9,310 TB | |
| Reliability MTBF @ 25°C | >2,000,000 hours | | | | |
| Reliability Number of Insertions | 10,000 minimum | | | | |
| Others | | | | | |
| Dimensions: L x W x H (mm) | 100 x 69.9 x 9.2 | 100 x 69.9 x 7/9.2 | | | |
| Certifications | CE, FCC | CE, FCC, BSMI, UKCA, RoHS, REACH | | | |
| Warranty | 5 years | | | 2 years | |

| 2.5" SSD | | | |
|---|--------------------------------------|-------------|----------------|
| Product Line | Superior | | Value |
| | A600Si | A600Sc | A600Vc |
| Interface | SATA III 6 Gb/s | | |
| Flash Type | 3D TLC | | |
| Form Factor | 2.5" | | |
| Operating Temperature (Tcase) ¹ | -40°C to 85°C | 0°C to 70°C | 0°C to 70°C |
| Power Loss Protection Options | Hardware + Firmware Based | | Firmware Based |
| Optional SED Features | AES 256-bit Encryption, TCG Opal 2.0 | | - |
| Capacity | 120 GB to 1,920 GB | | 32 GB to 1 TB |
| Performance | | | |
| Sequential Read (MB/s) up to | 560 | | 560 |
| Sequential Write (MB/s) up to | 520 | | 525 |
| Random Reads IOPS (4K, QD32) up to | 100,000 | | 72,000 |
| Performance Random Writes IOPS (4K, QD32) up to | 91,000 | | 85,000 |
| Endurance and Reliability | | | |
| Endurance (TBW) ² up to | 5,585 TB | | 2,792 TB |
| Reliability MTBF @ 25°C | >2,000,000 hours | | |
| Reliability Number of Insertions | 10,000 minimum | | |
| Others | | | |
| Dimensions: L x W x H (mm) | 100 x 69.9 x 7/9.2 | | 100 x 69.9 x 7 |
| Certifications | CE, FCC, BSMI, UKCA, RoHS, REACH | | |
| Warranty | 2 years | | |

¹ Case Temperature, the composite temperature as indicated by SMART temperature attributes.

² Under highest Sequential write value. May vary by density, configuration and applications.

| Hot Items Ordering Information | | | | | |
|--------------------------------|-----------------------|------------------------------------|------------------------------------|------------------|------------------|
| Product Line | Capacity ₁ | Operating Temperature ₂ | Power Loss Protection ₃ | SED ₄ | P/N |
| A800Pi | 8GB | -40°C to 85°C | Hardware + Firmware Based | - | AF8GSSCJ-VACXP |
| A800Pi | 16GB | -40°C to 85°C | Hardware + Firmware Based | - | AF16GSSCJ-VACXP |
| A800Pi | 32GB | -40°C to 85°C | Hardware + Firmware Based | - | AF32GSSCJ-VACXP |
| A800Pi | 64GB | -40°C to 85°C | Hardware + Firmware Based | - | AF64GSSCJ-VACXP |
| A800Pi | 128GB | -40°C to 85°C | Hardware + Firmware Based | - | AF128GSSCJ-VACXP |
| A800Pi | 256GB | -40°C to 85°C | Hardware + Firmware Based | - | AF256GSSCJ-VACXP |
| A650Si | 120GB | -40°C to 85°C | Hardware + Firmware Based | - | AF120GSTCJ-7BCIP |
| A650Si | 240GB | -40°C to 85°C | Hardware + Firmware Based | - | AF240GSTCJ-7BCIP |
| A650Si | 480GB | -40°C to 85°C | Hardware + Firmware Based | - | AF480GSTCJ-7BCIP |
| A650Si | 960GB | -40°C to 85°C | Hardware + Firmware Based | - | AF960GSTCJ-7BCIP |
| A650Si | 1.92TB | -40°C to 85°C | Hardware + Firmware Based | - | AF1T92STCJ-7BCIP |
| A650Sc | 120GB | 0°C to 70°C | Hardware + Firmware Based | - | AF120GSTCJ-7BCXP |
| A650Sc | 240GB | 0°C to 70°C | Hardware + Firmware Based | - | AF240GSTCJ-7BCXP |
| A650Sc | 480GB | 0°C to 70°C | Hardware + Firmware Based | - | AF480GSTCJ-7BCXP |
| A650Sc | 960GB | 0°C to 70°C | Hardware + Firmware Based | - | AF960GSTCJ-7BCXP |
| A650Sc | 1.92TB | 0°C to 70°C | Hardware + Firmware Based | - | AF1T92STCJ-7BCXP |
| A600Vc | 32GB | 0°C to 70°C | Firmware Based | - | AF32GSTCJ-2BAXX |
| A600Vc | 64GB | 0°C to 70°C | Firmware Based | - | AF64GSTCJ-2BAXX |
| A600Vc | 128GB | 0°C to 70°C | Firmware Based | - | AF128GSTCJ-2BAXX |
| A600Vc | 256GB | 0°C to 70°C | Firmware Based | - | AF256GSTCJ-2BAXX |
| A600Vc | 512GB | 0°C to 70°C | Firmware Based | - | AF512GSTCJ-2BAXX |
| A600Vc | 128GB | 0°C to 70°C | Firmware Based | - | AF128GSTCJ-2BBXX |
| A600Vc | 256GB | 0°C to 70°C | Firmware Based | - | AF256GSTCJ-2BBXX |
| A600Vc | 512GB | 0°C to 70°C | Firmware Based | - | AF512GSTCJ-2BBXX |
| A600Vc | 1TB | 0°C to 70°C | Firmware Based | - | AF1TSTCJ-2BBXX |

1 Amount of actual usable storage that can be utilized.

2 Refers to Case Temperature range during device operation, as indicated by SMART temperature attributes.

3 Hardware + Firmware-based power loss protection design with Level 4 (data-in-flight) protection; Firmware-based power loss protection design with Level 1 (data-at-rest) protection.

4 Allows data written to and read from the SSD to be constantly and automatically encrypted and decrypted. Conforms to TCG Opal 2.0 and uses AES 256-bit HW encryption.

Product spec and its related information are subject to change without advance notice.

Please refer to www.atpinc.com for latest information

v1.1 202205

© Copyright 2022 ATP Electronics, Inc. All rights reserved.



The Global Leader in Specialized Storage and Memory Solutions

WE BUILD WITH YOU

ATP TAIWAN (HQ)

TEL: +886-2-2659-6368
sales-apac@atpinc.com

ATP USA

TEL: +1-408-732-5000
sales@atpinc.com

ATP EUROPE

TEL: +49-89-374-9999-0
sales-europe@atpinc.com

ATP JAPAN

TEL: +81-3-6260-0797
sales-japan@atpinc.com

ATP CHINA

TEL: +86-21-5080-2220
sales@cn.atpinc.com