


**Computational Storage Drive CSD 2000 Series**

| Form Factor            | Device OPN          | Physical Capacity        | Endurance                 | Form Factor                  | Device OPN             | Physical Capacity       | Endurance     |
|------------------------|---------------------|--------------------------|---------------------------|------------------------------|------------------------|-------------------------|---------------|
| PCIe AIC               | CSDP3RF040B1        | 4TB                      | 21.1 TBW (PB)             | U.2 Drive                    | CSDU3RF040B1           | 4TB                     | 21.1 TBW (PB) |
|                        | CSDP3RF080B0        | 8TB                      | 41.1 TBW (PB)             |                              | CSDU3RF080B0           | 8TB                     | 41.1 TBW (PB) |
| Data Compression Ratio | Drive Capacity (TB) | 4KiB Random Read (kIOPS) | 4KiB Random Write (kIOPS) | 4KiB 70/30 Mixed R/W (kIOPS) | 128KiB Seq Read (GB/s) | 128KiB Seq Write (GB/s) |               |
| 2:1                    | 3.2                 | 640                      | 500                       | 635                          | 2.9                    | 2.3                     |               |
|                        | 3.84                | 640                      | 480                       | 635                          | 2.9                    | 2.3                     |               |
|                        | 6.4                 | 720                      | 500                       | 665                          | 2.9                    | 2.3                     |               |
|                        | 7.68                | 720                      | 500                       | 665                          | 2.9                    | 2.3                     |               |
| 1:1                    | 3.2                 | 680                      | 185                       | 370                          | 2.9                    | 2.2                     |               |
|                        | 3.84                | 680                      | 80                        | 200                          | 2.9                    | 2.2                     |               |
|                        | 6.4                 | 725                      | 225                       | 470                          | 2.9                    | 2.3                     |               |
|                        | 7.68                | 720                      | 110                       | 300                          | 2.9                    | 2.3                     |               |

Test Server Configuration: Intel(R) Xeon(R) Gold 6126 CPU @ 2.60GHz

Test Kernel Version: 3.10.0-862

|                            |  |                         |   |
|----------------------------|--|-------------------------|---|
| Form Factor                | PCIe AIC & U.2 Drive   | QD1 Latency             | 85-95 $\mu$ s (4KiB Random Read)<br>10-13 $\mu$ s (4KiB Random Write) |
| NAND                       | 3D TLC NAND  | Power (Active)          | 25W Max, 16W Typical (AIC)<br>25W Max, 16W Typical (U.2)              |
| Interface                  | PCIe Gen3 x4<br>- Low-latency Flash storage I/O device<br>- (Ext3/4, ZFS, XFS, ...) & all block storage applications             | Power (Idle)            | 9W (AIC)<br>9W (U.2)  |
| Computational Capability   | Transparent Data-Path Compression and Decompression  | Temp & Power Throttling | Yes   |
| Power Loss Protection      | Yes  | Ambient Operating Temp  | 50°C/200LFM (AIC)<br>35°C/200LFM (U.2)                                |
| End-to-End Data Protection | Yes<br>- ECC on all internal memories in data path<br>- Integrated LDPC engine and Flash die RAID assures 10 <sup>-20</sup> UBER | Operating Temp Range    | 0°C to 70°C   |
|                            |  | MTTF                    | 2 Million Device Hours  |

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