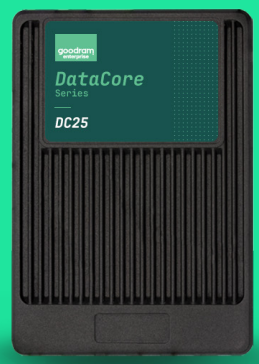
goodram enterprise

ENTERPRISE BootSystem

Ultra High Capacity PCIe Gen5 Data Center SSD to Reduce OPEX Costs



Sequential read

up to 14 600 MB/s

Sequential write

up to 3 000 000 MB/s

Interface

PCIe 5.0 1x4 (Single port), 2x2 (Dual port)

Capacity

up to 122,88 TB

Form factor

U.2, E3.L

DWPD

0.3

Product features

- NVMe 2.0
- AES-XTS 256-bit Encryption
- TCG Opal 2.0 Support
- ISE
- End-to-End Data Path Protection
- NVMe-MI (Management Interface)
- SMBus
- Metadata Protection
- 128 Namespaces
- SECDED
- Power Loss Protection (PLP)
- Sanitize
- Data Integrity and Protection

Solutions - DC25F

Form factor U.2[1]	
Capacity[2]	122.88 GB
Interface	PCIe 5.0 1x4, 2x2
NVMe	2.0
NAND Flash	3D QLC
Performance[3,4,5,6]	
Sequential read to (MB/s)	14 600
Sequential write to (MB/s)	3 200
4K random read to (IOPS)	3 000 000
4K random write to (IOPS)	35 000
Read latency (Typ.,µs)	110
Write latency (Typ.,µs)	12
Power consumption[7]	
Active (W)	25
Idle (W)	5
Endurance/Reliability	
DWPD[8]	0.3
UBER[9]	< 1 sector per 10^{18} bits read
MTBF (hours)[10]	2 500 000
Limited warranty (years)[11]	5
Temperature	
Operating temp. (°C)	0 – 70
Non-operating temp. (°C)	-40 – 85
Physical dimension	
Length (mm)	110.10
Width (mm)	68.85
Height (mm)	15.00

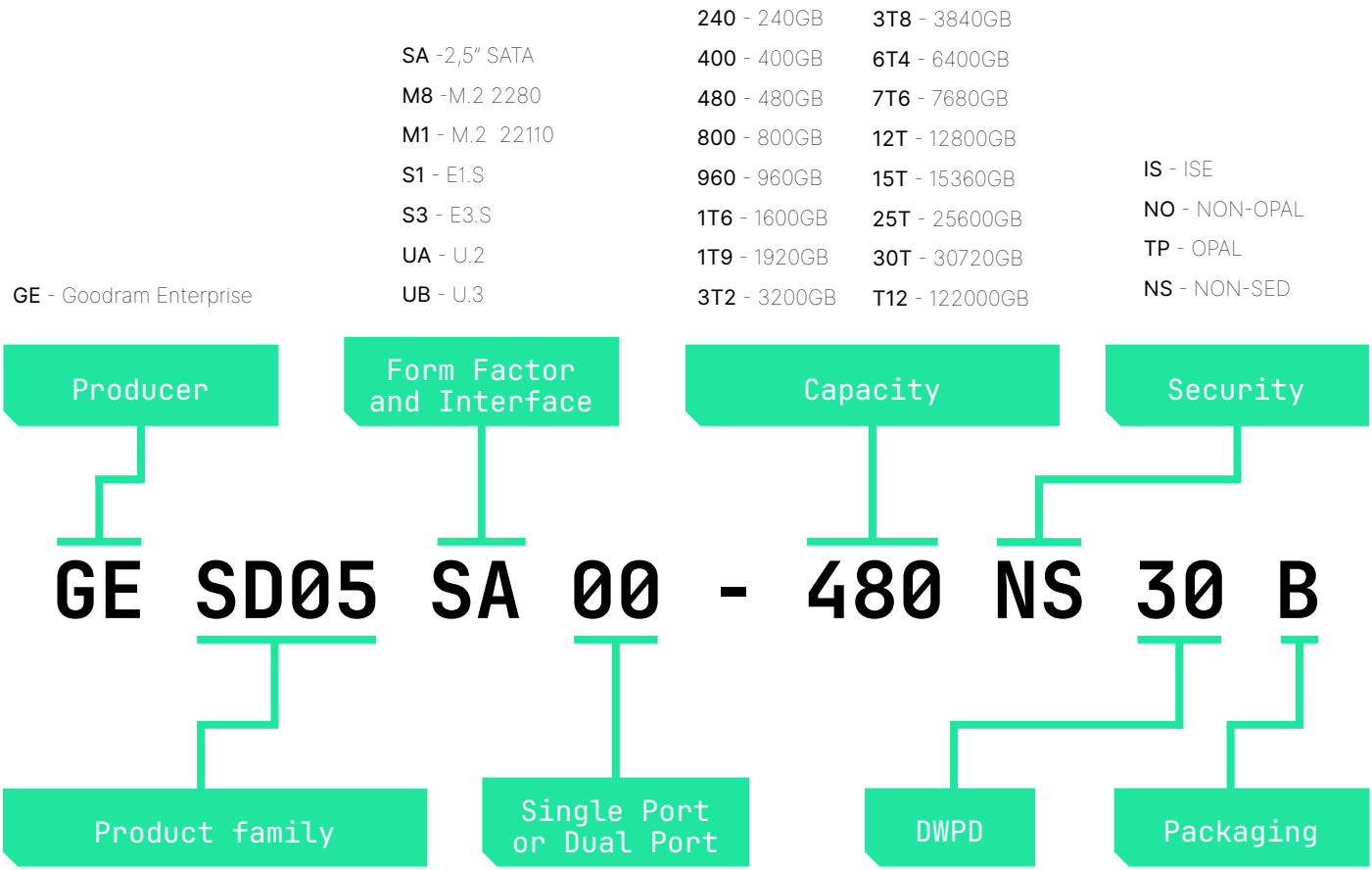
* A detailed explanation of symbols and markings is provided on the final page.

Solutions - DC25F

Form factor E3.L[1]	
Capacity[2]	122.88 GB
Interface	PCIe 5.0 1x4, 2x2
NVMe	2.0
NAND Flash	3D QLC
Performance[3,4,5,6]	
Sequential read to (MB/s)	14 600
Sequential write to (MB/s)	3 200
4K random read to (IOPS)	3 000 000
4K random write to (IOPS)	35 000
Read latency (Typ.,µs)	110
Write latency (Typ.,µs)	12
Power consumption[7]	
Active (W)	25
Idle (W)	5
Endurance/Reliability	
DWPD[8]	0.3
UBER[9]	< 1 sector per 10^{18} bits read
MTBF (hours)[10]	2 500 000
Limited warranty (years)[11]	5
Temperature	
Operating temp. (°C)	0 – 70
Non-operating temp. (°C)	-40 – 85
Physical dimension	
Length (mm)	142.20
Width (mm)	76.00
Height (mm)	7.50

* A detailed explanation of symbols and markings is provided on the final page.

Decoder P/N



US10 - UltraSpeed Series PCIe Gen4×4
US20 - UltraSpeed Series PCIe Gen5×4
DC10 - DataCore Series PCIe Gen4×4
DC20 - DataCore Series PCIe Gen5×4
DC25 - DataCore Series PCIe Gen5×4
BS10 - BootSystem Series PCIe Gen4×4
BS05 - BootSystem Series SATA III
SD05 - SATADrive Series SATA III

SP - Single Port
DP - Dual Port
00 - None

03 - 0,3
04 - 0,4
05 - 0,5
10 - 1
30 - 3

B - GOODRAM BULK

Legend

(1) The product is still in the early development stage, all values provided are based on estimation.

(2) 1 TB = 10^{12} bytes.

(3) Sequential Performance is based on FIO on Linux, 128 KB, with QD=32, 1 worker.

(4) Random Performance is based on FIO on Linux, random read 4 KB data size, random write 16KB data size, QD=64, 8 workers.

(5) Latency is measured with random workloads based on FIO on Linux, 4 KB data size, QD=1, 1 worker.

(6) Sequential performance is based on FIO (Flexible I/O Tester - an open source tool used to measure the performance of input/output (I/O) operations for disk drives and storage systems under various test scenarios) on Linux, 128 K, with QD=32, 1 worker.

(7) Power consumption (Average RMS) is measured during the sequential read/write and random read/write operations performed by Iometer with the conditions described in (2)(3).

(8) The results of DWPD are obtained in compliance with JESD219A Standards.

(9) UBER (Uncorrectable Bit Error Rate) – a measure of data storage reliability, indicating the number of uncorrectable bit errors per amount of data read. This value shows how often errors may occur that cannot be corrected using internal ECC (Error Correction Code) mechanisms.

(10) Please note that a lower MTBF should be expected for higher capacity drives, and we apply the lowest MTBF for all capacities.

(11) We warrant that each Product manufactured and delivered by Wilk Elektronik SA will comply with the specifications for five (5) years from the date of delivery or until the total number of stored terabytes specified in the S.M.A.R.T. attribute is exceeded, whichever occurs first.