



Product Catalog

Inspiration to Innovation

Automotive, Industrial, Edge Compute, Server and
Data Center, Aerospace and Mission Critical

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Exascend business solutions

- DRAM
- SSD
- Managed NAND
- Memory Card

DDR4: Standard-Temperature

Quality ICs from major memory manufacturers



DIMM Type	U-DIMM	SO-DIMM
Data Rate	3200 MT/s	
Capacity	8GB / 16GB / 32 GB	
Voltage	1.2V $\pm$ 5%	
Pin Count	288 pins	260 pins
Operating Temp.	0°C to 95°C (Tc)	
Warranty	Limited lifetime warranty	
Optional Features	Conformal coating. Underfill.	
Ordering Information	EX08G4U3200YA EX16G4U3200YA EX32G4U3200EB	EX08G4S3200YA EX16G4S3200YB EX32G4S3200EB

DDR5: Standard-Temperature

Reliable and cost-effective high-performance memory empowering next-gen applications



DIMM Type	U-DIMM	SO-DIMM
Data Rate	5600 MT/s	
Capacity	16GB / 32 GB	
Voltage	1.1V $\pm$ 5%	
Pin Count	288 pins	262 pins
Operating Temp.	0°C to 95°C (Tc)	
Warranty	Limited lifetime warranty	
Optional Features	Conformal coating. Underfill.	
Ordering Information	EX16G5U5600EC EX32G5U5600EC	EX16G5S5600EC EX32G5S5600EC

DDR5: Industrial-Temperature

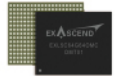
Reliable and cost-effective high-performance memory empowering next-gen applications



DIMM Type	U-DIMM	SO-DIMM
Data Rate	5600 MT/s	
Capacity	16GB / 32 GB	
Voltage	1.1V $\pm$ 5%	
Pin Count	288 pins	262 pins
Operating Temp.	-40°C to 95°C (Tc)	
Warranty	Limited lifetime warranty	
Optional Features	Conformal coating. Underfill.	
Ordering Information	EX16G5U5600EP-I EX32G5U5600EP-I	EX16G5S5600EP-I EX32G5S5600EP-I

DRAM LPDDR5 IC

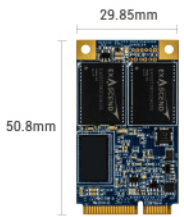
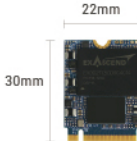
Low-power DRAM complementing eMMC in embedded applications



Memory Type	LPDDR5
Data Rate	6400MT/s
Capacity	32Gb/64Gb
Dimension	12.4x15mm
Ball count	315-ball BGA
Voltage	1.8/1.05/0.5 V
Operating Temp.	-25°C to 85°C (Tc)
Warranty	3 years
Ordering Information	EXL5C32G640GC EXL5C64G640MC

Product dimensions

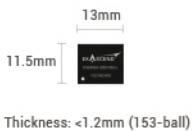
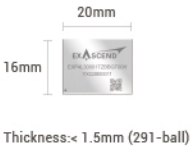
SSD

mSATA	M.2 2230 PCIe	M.2 2242 SATA	M.2 2242 PCIe	M.2 2280 SATA	M.2 2280 PCIe
					

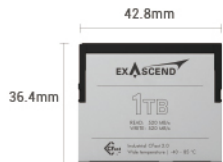
2.5" / U.2	
	

E1.S	E3.S	E3.L
		

Managed NAND

e.MMC	BGA SSD
 Thickness: <1.2mm (153-ball)	 Thickness:< 1.5mm (291-ball)

Memory Card

microSD	SD	CFexpress	CFast
 Thickness: 1mm	 Thickness: 2.1mm	 Thickness: 3.8mm	 Thickness: 3.6mm

Enterprise SATA SSD



SE4 Streaming Series

Value optimized solution for read-intensive workloads

Form factor	mSATA	M.2 2242	M.2 2280	2.5" (7mm)
Edition	Streaming(Standard)			
Flash Type	3D TLC			
Capacity	120GB ~ 960GB	240GB ~ 1.92TB	240GB ~ 7.68TB	240GB ~ 15.36TB
Input Voltage	3.3V $\pm$ 5%			5V $\pm$ 10%
Power Consumption	Active <2.8W; Idle <1W			
Max Seq. Read/Write	545/520 MB/s		550/525 MB/s	555/530 MB/s
Max 4K Random Read/Write	94,000/17,000 IOPS	92,000/17,000 IOPS	96,000/18,000 IOPS	97,000/24,000 IOPS
Operating Temp.	0°C to 70°C			
Hardware-Based PLP	-		●	●
TCG Opal 2.01	●			
DWPD (JESD219 Enterprise)	0.6 @5 years			
MTBF	2 million hours			
Warranty	5 years			
Ordering Information	EXSE4B0120GB EXSE4B0240GB EXSE4B0480GB EXSE4B0960GB	EXSE4Q0240GB EXSE4Q0480GB EXSE4Q0960GB EXSE4Q1920GB	EXSE4M0240GB EXSE4M0480GB EXSE4M0960GB EXSE4M1920GB EXSE4M3840GB EXSE4M7680GB	EXSE4A0240GB EXSE4A0480GB EXSE4A0960GB EXSE4A1920GB EXSE4A3840GB EXSE4A7680GB EXSE4A0153TB



SE4 Pro/Max Series

Solution for mixed and write-intensive workload

Form factor	M.2 2280	2.5" (7mm)	M.2 2242	M.2 2280	2.5" (7mm)
Edition	Pro		Max		
Flash Type	3D TLC		pSLC		
Capacity	240GB ~ 3840GB	240GB ~ 7.68TB	240GB / 480GB	240GB ~ 1.92TB	240GB ~ 3.84TB
Input Voltage	3.3V ±5%	5V ±10%	3.3V ±5%		5V ±10%
Power Consumption	Active <2.8W; Idle <1W				
Max Seq. Read/Write	550/525 MB/s		560/535 MB/s		
Max 4K Random Read/Write	95,000/46,000 IOPS		97,000/50,000 IPOS		
Operating Temp.	0°C to 70°C				
Hardware-Based PLP			-		
TCG Opal 2.01					
DWPD (JESD219 Enterprise)	1 @5 years		25 @5 years		
MTBF	2 million hours				
Warranty	5 years				
Ordering Information	EXSE4M0240GB-OP EXSE4M0480GB-OP EXSE4M0960GB-OP EXSE4M1920GB-OP EXSE4M3840GB-OP	EXSE4A0240GB-OP EXSE4A0480GB-OP EXSE4A0960GB-OP EXSE4A1920GB-OP EXSE4A3840GB-OP EXSE4A7680GB-OP	EXSE4Q0240GB-0X EXSE4Q0480GB-0X	EXSE4M0240GB-0X EXSE4M0480GB-0X EXSE4M0960GB-0X EXSE4M1920GB-0X	EXSE4A0240GB-0X EXSE4A0480GB-0X EXSE4A0960GB-0X EXSE4A1920GB-0X EXSE4A3840GB-0X

Enterprise PCIe Gen 4 SSD

PE4 Streaming Series

Value optimized solution for read-intensive workloads



Form Factor	M.2 2230	M.2 2242	M.2 2280	E1.S	U.2 (7mm)
Edition	Streaming(Standard)				
Flash Type	3D TLC				
Capacity	240GB ~ 960GB	120GB ~ 1.92TB	240GB ~ 15.36TB	960GB ~ 15.36TB	960GB ~ 30.72TB
Input Voltage	3.3V ±5%			12V ±10%	
Power Consumption	Active <8W; Idle <1.5W			Active <8.6W; Idle <1.8W	
Max Seq. Read/Write	2,000/1,400 MB/s	3,270/3,000 MB/s	3,270/2,980 MB/s	3,350/3,350 MB/s	3,350/3,200 MB/s
Max 4K Random Read/Write	100,000/4,000 IOPS	400,000/47,000 IOPS	404,000/52,000 IOPS	384,000/56,000 IOPS	375,000/53,000 IOPS
Operating Temp.	0°C to 70°C				
Hardware-Based PLP	-				
TCG Opal 2.01					
DWPD (JESD219 Enterprise)	0.6 @5 years				
MTBF	2 million hours				
Warranty	5 years				
Ordering Information	EXPE4R0240GB EXPE4R0480GB EXPE4R0960GB	EXPE4Q0120GB EXPE4Q0240GB EXPE4Q0480GB EXPE4Q0960GB EXPE4Q1920GB	EXPE4M0240GB EXPE4M0480GB EXPE4M0960GB EXPE4M1920GB EXPE4M3840GB EXPE4M7680GB EXPE4M0153TB	EXPE4E0960GB EXPE4E1920GB EXPE4E3840GB EXPE4E7680GB EXPE4E0153TB	EXPE4U0960GB EXPE4U1920GB EXPE4U3840GB EXPE4U7680GB EXPE4U0153TB EXPE4U0307TB

PE4 Pro Series

Solution for mixed workload



Form Factor	M.2 2280	E1.S	U.2 (7mm)
Edition	Pro		
Flash Type	3D TLC		
Capacity	240GB ~ 3.84TB	960GB ~ 7.68TB	960GB ~ 15.36TB
Input Voltage	3.3V ±5%	12V ±10%	
Power Consumption	Active <8.1W; Idle <1.8W		
Max Seq. Read/Write	3,200/3,000 MB/s	3,345/3,180 MB/s	3,350/3,200 MB/s
Max 4K Random Read/Write	381,000/121,000 IOPS	382,000/114,000 IOPS	
Operating Temp.	0°C to 70°C		
Hardware-Based PLP			
TCG Opal 2.01			
DWPD (JESD219 Enterprise)	1 @5 years		
MTBF	2 million hours		
Warranty	5 years		
Ordering Information	EXPE4M0240GB-0P EXPE4M0480GB-0P EXPE4M0960GB-0P EXPE4M1920GB-0P EXPE4M3840GB-0P	EXPE4E0960GB-0P EXPE4E1920GB-0P EXPE4E3840GB-0P EXPE4E7680GB-0P	EXPE4U0960GB-0P EXPE4U1920GB-0P EXPE4U3840GB-0P EXPE4U7680GB-0P EXPE4U0153TB-0P



By request.



By default.

* Performance and specification parameters may vary depending on capacity and firmware setting.

PE4 Max Series

Solution for write-intensive workload



Form Factor	M.2 2230	M.2 2242	M.2 2280	E1.S	U.2 (7mm)
Edition	Max				
Flash Type	pSLC				
Capacity	240GB	240GB / 480GB	240GB ~ 1.92TB	960GB / 1.92TB	960GB ~ 3.84TB
Input Voltage	3.3V ±5%			12V ±10%	
Power Consumption	Active <7.4W; Idle <1.7W				
Max Seq. Read/Write	2,800/2,300 MB/s	3,100/3,000 MB/s		3,470/3,200 MB/s	3,500/3,200 MB/s
Max 4K Random Read/Write	150,000/10,000 IOPS	400,000/173,000 IOPS	436,000/173,000 IOPS		
Operating Temp.	0°C to 70°C				
Hardware-Based PLP	-				
TCG Opal 2.01					
DWPD (JESD219 Enterprise)	25 @5 years				
MTBF	2 million hours				
Warranty	5 years				
Ordering Information	EXPE4R0240GB-0X	EXPE4Q0240GB-0X EXPE4Q0480GB-0X	EXPE4M0240GB-0X EXPE4M0480GB-0X EXPE4M0960GB-0X EXPE4M1920GB-0X	EXPE4E0960GB-0X EXPE4E1920GB-0X	EXPE4U0960GB-0X EXPE4U1920GB-0X EXPE4U3840GB-0X

Enterprise PCIe Gen 5 SSD

PE5 Streaming Series

Value optimized solution for read-intensive workloads

Coming Soon



Form Factor	M.2 2280	E1.S	E3.S	U.2
Edition	Streaming(Standard)			
Flash Type	3D TLC			
Capacity	1.92TB ~ 7.68TB	1.92TB ~ 7.68TB	1.92TB ~ 15.36TB	
Input Voltage	3.3V ±5%	12V ±10%		
Power Consumption	Active <11W; Idle <2.5W	Active <13W; Idle <2.5W		
Max Seq. Read/Write	14.5/3.8 GB/s (burst 13.5GB/s)			
Max 4K Random Read/Write	2.5M/2.5M IOPS			
Operating Temp.	0°C to 70°C			
Hardware-Based PLP				
TCG Opal 2.01				
DWPD (JESD219 Enterprise)	0.6 @5 years			
MTBF	2 million hours			
Warranty	5 years			
Ordering Information	EXPE5M1920GB EXPE5M3840GB EXPE5M7680GB	EXPE5E1920GB EXPE5E3840GB EXPE5E7680GB	EXPE5S1920GB EXPE5S3840GB EXPE5S7680GB EXPE5S0153TB	EXPE5U1920GB EXPE5U3840GB EXPE5U7680GB EXPE5U0153TB

* The above value is preliminary evaluation. The final product specifications shall prevail.

● By request.

● By default.

* Performance and specification parameters may vary depending on capacity and firmware setting.

PE5 Pro Series

Solution for mixed workload

Coming Soon



Form Factor	M.2 2280	E1.S	E3.S	U.2
Edition	Pro			
Flash Type	3D TLC			
Capacity	1.92TB	1.92TB ~ 3.84TB		
Input Voltage	3.3V ±5%	12V ±10%		
Power Consumption	Active <11W; Idle <2.5W	Active <13W; Idle <2.5W		
Max Seq. Read/Write	14.5/3.8 GB/s (burst 13.5GB/s)			
Max 4K Random Read/Write	2.5M/2.5M IOPS			
Operating Temp.	0°C to 70°C			
Hardware-Based PLP				
TCG Opal 2.01				
DWPD (JESD219 Enterprise)	1 @5 years			
MTBF	2 million hours			
Warranty	5 years			
Ordering Information	EXPE5M1920GB-0P	EXPE5E1920GB-0P EXPE5E3840GB-0P	EXPE5S1920GB-0P EXPE5S3840GB-0P	EXPE5U1920GB-0P EXPE5U3840GB-0P

* The above value is preliminary evaluation. The final product specifications shall prevail.

Enterprise PCIe Gen 5 SSD

PD5 Streaming Series

High-performance solution for mixed and write-intensive workload

Coming Soon

Coming Soon



Form factor	E3.S	E3.L	U.2 (15mm)
Edition	Streaming(Standard)		
Flash Type	3D TLC		
Capacity	7.68TB ~ 15.36TB	7.68TB ~ 30.72TB	7.68TB ~ 30.72TB
Input Voltage	12V $\pm$ 10%		
Power Consumption	Active <24W; Idle <5W		
Max Seq. Read/Write	14/10 GB/s		
Max 4K Random Read/Write	3.4M/480K IOPS		
Operating Temp.	0°C to 70°C		
Hardware-Based PLP	●		
TCG Opal 2.01	●		
DWPD (JESD219 Enterprise)	0.6 @5 years	0.6 @5 years	0.6 @5 years
MTBF	2 million hours		
Warranty	5 years		
Ordering Information	EXPD5S7680GB EXPD5S0153TB	EXPD5L7680GB EXPD5L0153TB EXPD5L0307TB	EXPD5U7680GBRM4 EXPD5U0153TBRM4 EXPD5U0307TBRM4

* The above value is preliminary evaluation. The final product specifications shall prevail.

PD5 Pro Series

High-performance solution for mixed and write-intensive workload

Coming Soon

Coming Soon



Form factor	E3.S	E3.L	U.2 (15mm)
Edition	Pro		
Flash Type	3D TLC		
Capacity	7.68TB	7.68TB ~ 15.36TB	7.68TB ~ 15.36TB
Input Voltage	12V $\pm$ 10%		
Power Consumption	Active <24W; Idle <5W		
Max Seq. Read/Write	14/10 GB/s		
Max 4K Random Read/Write	3.4M/480K IOPS		
Operating Temp.	0°C to 70°C		
Hardware-Based PLP	●		
TCG Opal 2.01	●		
DWPD (JESD219 Enterprise)	1 @5 years	1 @5 years	1 @5 years
MTBF	2 million hours		
Warranty	5 years		
Ordering Information	EXPD5S7680GB-0P	EXPD5L7680GB-0P EXPD5L0153TB-0P	EXPD5U7680GBRM4-0P EXPD5U0153TBRM4-0P

* The above value is preliminary evaluation. The final product specifications shall prevail.

Industrial SATA SSD

SV4 Streaming Series

Value choice industrial solution (sorted flash)



Form Factor	mSATA	M.2 2280	2.5" (7mm)
Edition	Streaming(Standard)		
Flash Type	3D TLC		
Capacity	480GB ~ 1.92TB	480GB ~ 7.68TB	480GB ~ 15.36TB
Input Voltage	3.3V ±5%		5V ±10%
Power Consumption	Active <4W; Idle <1W		
Max Seq. Read/Write	530/520 MB/s		560/520 MB/s
Max 4K Random Read/Write	98,000/16,000 IOPS		98,000/19,000 IOPS
Operating Temp.	-40°C to 85°C		
Hardware-Based PLP	-		●
TCG Opal 2.01	●		
DWPD (JESD219 Enterprise)	1 @3 years		
MTBF	2 million hours		
Warranty	3 years		
Ordering Information	EXSV4B0480GB EXSV4B0960GB EXSV4B1920GB	EXSV4M0480GB EXSV4M0960GB EXSV4M1920GB EXSV4M7680GB	EXSV4A0480GB EXSV4A0960GB EXSV4A1920GB EXSV4A3840GB EXSV4A7680GB EXSV4A0153TB

SI4 Streaming Series

High performance storage for extreme temperature environments



Form factor	mSATA	M.2 2242	M.2 2280	2.5" (7mm)
Edition	Streaming(Standard)			
Flash Type	3D TLC			
Capacity	120GB ~ 1.92TB	240GB ~ 1.92TB	240GB ~ 7.68TB	240GB ~ 15.36TB
Input Voltage	3.3V ±5%			5V ±10%
Power Consumption	Active <3W; Idle <1W			
Max Seq. Read/Write	545/520 MB/s		550/525 MB/s	555/530 MB/s
Max 4K Random Read/Write	94,000/17,000 IOPS	92,000/17,000 IOPS	96,000/18,000 IOPS	97,000/24,000 IOPS
Operating Temp.	-40°C to 85°C			
Hardware-Based PLP	-		●	●
TCG Opal 2.01	●			
DWPD (JESD219 Enterprise)	1 @3 years			
MTBF	2 million hours			
Warranty	3 years			
Ordering Information	EXSI4B0120GB EXSI4B0240GB EXSI4B0480GB EXSI4B0960GB EXSV4B1920GB	EXSI4Q0240GB EXSI4Q0480GB EXSI4Q0960GB EXSI4Q1920GB	EXSI4M0240GB EXSI4M0480GB EXSI4M0960GB EXSI4M1920GB EXSI4M3840GB EXSI4M7680GB	EXSI4A0240GB EXSI4A0480GB EXSI4A0960GB EXSI4A1920GB EXSI4A3840GB EXSI4A7680GB EXSI4A0153TB

● By request.

● By default.

* Performance and specification parameters may vary depending on capacity and firmware setting.

Industrial PCIe Gen 4 SSD

PI4 Streaming Series

High performance storage for extreme temperature environments



Form Factor	M.2 2230	M.2 2242	M.2 2280	E1.S	U.2 (7mm)
Edition	Streaming(Standard)				
Flash Type	3D TLC				
Capacity	240GB ~ 960GB	240GB ~ 1.92TB	240GB ~ 7.68TB	960GB ~ 7.68TB	960GB ~ 15.36TB
Input Voltage	3.3V ±5%			12V ±10%	
Power Consumption	Active <4W; Idle <1W	Active <9.6W; Idle <1.7W			
Max Seq. Read/Write	2,500/1,350 MB/s	2,450/2,450 MB/s	3,200/3,000 MB/s	3,300/3,200 MB/s	
Max 4K Random Read/Write	100,000/4,000 IOPS	360,000/40,000 IOPS	390,000/52,000 IOPS	395,000/60,000 IOPS	410,000/58,000 IOPS
Operating Temp.	-40°C to 85°C				
Hardware-Based PLP	-				
TCG Opal 2.01					
DWPD (JESD219 Enterprise)	1 @3 years				
MTBF	2 million hours				
Warranty	3 years				
Ordering Information	EXPI4R0240GB EXPI4R0480GB EXPI4R0960GB	EXPI4Q0240GB EXPI4Q0480GB EXPI4Q0960GB EXPI4Q1920GB	EXPI4M0240GB EXPI4M0480GB EXPI4M0960GB EXPI4M1920GB EXPI4M3840GB EXPI4M7680GB	EXPI4E0960GB EXPI4E1920GB EXPI4E3840GB EXPI4E7680GB	EXPI4U0960GB EXPI4U1920GB EXPI4U3840GB EXPI4U7680GB EXPI4U0153TB

Industrial PCIe Gen 5 SSD

PI5 Streaming Series

High performance storage for extreme temperature environments

Coming Soon



Form Factor	M.2 2280	E1.S	E3.S	U.2
Edition	Streaming(Standard)			
Flash Type	3D TLC			
Capacity	1.92TB ~ 7.68TB	1.92TB ~ 7.68TB	1.92TB ~ 15.36TB	
Input Voltage	3.3V ±5%	12V ±10%		
Power Consumption	Active <11W; Idle <2.5W	Active <13W; Idle <2.5W		
Max Seq. Read/Write	14.5/3.8 GB/s (burst 13.5GB/s)			
Max 4K Random Read/Write	2.5M/2.5M IOPS			
Operating Temp.	-40°C to 85°C			
Hardware-Based PLP				
TCG Opal 2.01				
DWPD (JESD219 Enterprise)	1 @3 years			
MTBF	2 million hours			
Warranty	3 years			
Ordering Information	EXPI5M1920GB EXPI5M3840GB EXPI5M7680GB	EXPI5E1920GB EXPI5E3840GB EXPI5E7680GB	EXPI5S1920GB EXPI5S3840GB EXPI5S7680GB EXPI5S0153TB	EXPI5U1920GB EXPI5U3840GB EXPI5U7680GB EXPI5U0153TB

* The above value is preliminary evaluation. The final product specifications shall prevail.

● By request. ● By default.

* Performance and specification parameters may vary depending on capacity and firmware setting.

Automotive SATA SSD

SA4 Streaming Series

Automotive-rated SATA storage for extreme temperature operation



Form factor	mSATA	M.2 2242	M.2 2280	2.5" (7mm)
Edition	Streaming(Standard)			
Flash Type	3D TLC			
Capacity	120GB ~ 1.92TB	240GB ~ 1.92TB	240GB ~ 7.68TB	240GB ~ 15.36TB
Input Voltage	3.3V $\pm$ 5%			5V $\pm$ 10%
Power Consumption	Active <3W; Idle <1W			
Max Seq. Read/Write	545/520 MB/s		550/525 MB/s	555/530 MB/s
Max 4K Random Read/Write	94,000/17,000 IOPS	92,000/17,000 IOPS	96,000/18,000 IOPS	97,000/24,000 IOPS
Operating Temp.	-40°C to 85°C			
Hardware-Based PLP	-		●	●
TCG Opal 2.01			●	
Conformal Coating and Underfill			●	
DWPD (JESD219 Enterprise)	1 @3 years			
MTBF	2 million hours			
Warranty	3 years			
Ordering Information	EXSA4B0120GB EXSA4B0240GB EXSA4B0480GB EXSA4B0960GB EXSA4B1920GB	EXSA4Q0240GB EXSA4Q0480GB EXSA4Q0960GB EXSA4Q1920GB	EXSA4M0240GB EXSA4M0480GB EXSA4M0960GB EXSA4M1920GB EXSA4M3840GB EXSA4M7680GB	EXSA4A0240GB EXSA4A0480GB EXSA4A0960GB EXSA4A1920GB EXSA4A3840GB EXSA4A7680GB EXSA4A0153TB

Automotive PCIe Gen 4 SSD

PA4 Streaming Series

Automotive-rated PCIe storage for extreme temperature operation



Form Factor	M.2 2230	M.2 2242	M.2 2280	E1.S	U.2 (7mm)
Edition	Streaming(Standard)				
Flash Type	3D TLC				
Capacity	240GB ~ 960GB	240GB ~ 1.92TB	240GB ~ 7.68TB	960GB ~ 7.68TB	960GB ~ 15.36TB
Input Voltage	3.3V ±5%			12V ±10%	
Power Consumption	Active <4W; Idle <1W	Active <9.6W; Idle <1.7W			
Max Seq. Read/Write	2,500/1,350 MB/s	2,450/2,450 MB/s	3,200/3,000 MB/s	3,300/3,200 MB/s	
Max 4K Random Read/Write	100,000/4,000 IOPS	360,000/40,000 IOPS	390,000/52,000 IOPS	395,000/60,000 IOPS	410,000/58,000 IOPS
Operating Temp.	-40°C to 85°C				
Hardware-Based PLP	-				
TCG Opal 2.01					
Conformal Coating and Underfill					
DWPD (JESD219 Enterprise)	1 @3 years				
MTBF	2 million hours				
Warranty	3 years				
Ordering Information	EXPA4R0240GB EXPA4R0480GB EXPA4R0960GB	EXPA4Q0480GB EXPA4Q0960GB EXPA4Q1920GB	EXPA4M0480GB EXPA4M0960GB EXPA4M1920GB EXPA4M3840GB EXPA4M7680GB	EXPA4E0960GB EXPA4E1920GB EXPA4E3840GB EXPA4E7680GB	EXPA4U0960GB EXPA4U1920GB EXPA4U3840GB EXPA4U7680GB EXPA4U0153TB



By request.



By default.

* Performance and specification parameters may vary depending on capacity and firmware setting.

Automotive PCIe Gen 5 SSD

PA5 Streaming Series

Automotive-rated PCIe storage for extreme temperature operation

Coming Soon



Form Factor	M.2 2280	E1.S	E3.S	U.2
Edition	Streaming(Standard)			
Flash Type	3D TLC			
Capacity	1.92TB ~ 7.68TB	1.92TB ~ 7.68TB	1.92TB ~ 15.36TB	
Input Voltage	3.3V ±5%	12V ±10%		
Power Consumption	Active <11W; Idle <2.5W	Active <13W; Idle <2.5W		
Max Seq. Read/Write	14.5/3.8 GB/s (burst 13.5GB/s)			
Max 4K Random Read/Write	2.5M/2.5M IOPS			
Operating Temp.	-40°C to 85°C			
Hardware-Based PLP				
TCG Opal 2.01				
DWPD (JESD219 Enterprise)	1 @3 years			
MTBF	2 million hours			
Warranty	3 years			
Ordering Information	EXPA5M1920GB EXPA5M3840GB EXPA5M7680GB	EXPA5E1920GB EXPA5E3840GB EXPA5E7680GB	EXPA5S1920GB EXPA5S3840GB EXPA5S7680GB EXPA5S0153TB	EXPA5U1920GB EXPA5U3840GB EXPA5U7680GB EXPA5U0153TB

* The above value is preliminary evaluation. The final product specifications shall prevail.

● By request.

● By default.

* Performance and specification parameters may vary depending on capacity and firmware setting.

Radiation-tolerant PCIe Gen 4 SSD



PR4 Series (v1)

Purpose designed radiation tolerant storage for radiation intensive environments

Form Factor	M.2 2242	M.2 2280	E1.S	U.2 (7mm)
Edition	Standard			
Flash Type	3D TLC			
Capacity	240GB ~ 1.92TB	240GB ~ 7.68TB	960GB ~ 7.68TB	960GB ~ 15.36TB
Input Voltage	3.3V ±5%		12V ±10%	
Power Consumption	Active <9.6W; Idle <1.7W			
Max Seq. Read/Write	2,450/2,450 MB/s	3,200/3,000 MB/s	3,300/3,200 MB/s	
Max 4K Random Read/Write	360,000/40,000 IOPS	390,000/52,000 IOPS	395,000/60,000 IOPS	410,000/58,000 IOPS
Operating Temp.	-40°C to 85°C			
Hardware-Based PLP	-			
PhoenixCore Features				
TCG Opal 2.01				
Conformal Coating and Underfill				
DWPD (JESD219 Enterprise)	1 @3 years			
MTBF	2 million hours			
Warranty	3 years			
Ordering Information	EXPR4Q0240GB EXPR4Q0480GB EXPR4Q0960GB EXPR4Q1920GB	EXPR4M0240GB EXPR4M0480GB EXPR4M0960GB EXPR4M1920GB EXPR4M3840GB EXPR4M7680GB	EXPR4E0960GB EXPR4E1920GB EXPR4E3840GB EXPR4E7680GB	EXPR4U0960GB EXPR4U1920GB EXPR4U3840GB EXPR4U7680GB EXPR4U0153TB

PR4 Series (v2)

Purpose designed radiation tolerant storage for radiation intensive environments



Form Factor	M.2 2280	
Edition	Standard	Max
Flash Type	3D TLC	pSLC
Capacity	960GB ~ 3.84TB	960GB
Input Voltage	3.3V ±5%	
Power Consumption	Active <9.6W; Idle <1.7W	
Max Seq. Read/Write	3,200/3,000 MB/s	
Max 4K Random Read/Write	390,000/52,000 IOPS	
Operating Temp.	-40°C to 85°C	
Hardware-Based PLP	-	
PhoenixCore Features	●	
TCG Opal 2.01	●	
Conformal Coating and Underfill	● (SpectraShield™ / SpectraSeal™)	
DWPD (JESD219 Enterprise)	1 @3 years	40 @3 years
MTBF	2 million hours	
Warranty	3 years	
3 rd -party Certification	ESCC 22900 TID (total dose) 25Krad / ESCC 25100 SEE (single-event effects) 37.5 MeV	
Ordering Information	EXPR4M0960GBRM1 EXPR4M1920GBRM1 EXPR4M3840GBRM1	EXPR4M0960GBRM1-0X

● By request.

● By default.

* Performance and specification parameters may vary depending on capacity and firmware setting.

BGA SSD High-performance, high capacity NVMe storage in compact footprint

Model	AR500
Series	Radiation
Flash Type	3D TLC
Capacity	128GB ~ 1TB
Input Voltage	PWR_1: 2.5V (2.35V~3.6V) / PWR_2: 1.2V (1.14V~1.26V) / PWR_3: 0.8V(0.76V~0.84V)
Power Consumption	Active <4W (1TB) Active <2.5W (128GB ~ 512GB) Idle <1W
Max Seq. Read/Write	4,200/1,580 MB/s
Max 4K Random Read/Write	398,000/197,000 IOPS
Operating Temp.	-40°C to 105°C (Tcase)
TBW	Max-2730TB
MTBF	2 million hours
Warranty	5 years
Ordering Information	EXP4L30128GZ8BGR00H EXP4L30256GZ9BGR00H EXP4L30512GZABGR00H EXP4L30001TZBBGR00H

eMMC Compact, reliable storage for consumer, industrial, and automotive applications



Model	EM300	EM500
Series	Industrial	Automotive
Flash Type	pSLC / 3D TLC	pSLC / 3D TLC
Capacity	pSLC: 4GB ~ 16GB TLC: 32GB ~ 128GB	pSLC: 4GB ~ 16GB TLC: 32GB ~ 256GB
AEC-Q100 Certification	-	Grade 2
Input Voltage	VCC = 2.7V~3.6V (typical 3.3V) / VCCQ = 1.7V~1.95V(typical 1.8V), 2.7V~3.6V (typical 3.3V)	
Power Consumption	Active <1W; Idle <0.1W	
Max Seq. Read/Write	295/210 MB/s	
Max 4K Random Read/Write	8,400/6,000 IOPS	
Operating Temp.	-40°C to 85°C	-40°C to 105°C
TBW	301TB	614TB
MTBF	2 million hours	
Warranty	3 years	
Ordering Information	EEMSA004GYMG-PI EEMSA008GYMG-PI EEMSA016GYMG-PI EEMSA032GYMG-I EEMSA064GYMG-I EEMSA128GYMG-I	EEMSA004GPMG-T EEMSA008GPMG-T EEMSA016GPMG-T EEMSA032GYMG-T EEMSA064GYMG-T EEMSA128GYMG-T EEMSA256GYMG-T

BGA SSD High-performance, high capacity NVMe storage in compact footprint



Model	AS100	AS300	AS500
Series	Commercial	Industrial	Automotive
Flash Type	3D TLC		
Capacity	128GB ~ 1TB		
AEC-Q100 Certification	-	-	Grade 2
SR-IOV	-	-	●
TCG Opal 2.01	-	-	●
Input Voltage	PWR_1: 2.5V (2.35V~3.6V) / PWR_2: 1.2V (1.14V~1.26V) / PWR_3: 0.8V(0.76V~0.84V)		
Power Consumption	Active <4W (1TB) Active <2.5W (128GB ~ 512GB) Idle <1W		
Max Seq. Read/Write	4,200/1,580 MB/s		
Max 4K Random Read/Write	398,000/197,000 IOPS		
Operating Temp.	0°C to 70°C	-40°C to 85°C	-40°C to 105°C (Tcase)
TBW	Max-2730TB		
MTBF	2 million hours		
Warranty	5 years	3 years	
Ordering Information	EXP4L20128GXFBGC00H EXP4L20256GX2BGC00H EXP4L20512GX3BGC00H EXP4L20001TXUBGC00H	EXP4L30128GZ8BGI00H EXP4L30256GZ9BGI00H EXP4L30512GZABGI00H EXP4L30001TZBBGI00H	EXP4L30128GZ8BGT00H EXP4L30256GZ9BGT00H EXP4L30512GZABGT00H EXP4L30001TZBBGT00H EXP4L30128GZ8BGT00H-0G EXP4L30256GZ9BGT00H-0G EXP4L30512GZABGT00H-0G EXP4L30001TZBBGT00H-0G

● By request.

● By default.

microSD Cards

Removable storage solutions for consumer, industrial, and automotive applications



Model	microSD100	microSD300	microSD500
Series	Commercial	Industrial	Automotive
Flash Type	3D TLC	pSLC / 3D TLC	pSLC / 3D TLC
Interface	SD 6.0 microSDXC/microSDHC UHS-I		
Capacity	64GB / 128GB	pSLC: 8GB / 16GB TLC: 32GB ~ 256GB	pSLC: 8GB / 16GB TLC: 32GB ~ 256GB
Input Voltage	2.7~3.6V		
Max Seq. Read/Write	90/80 MB/s		
Operating Temp.	-25°C to 85°C	-40°C to 85°C	-40°C to 105°C
TBW (Max)	300TB	610TB	610TB
MTBF	2 million hours		
Warranty	3 years		
Ordering Information	EX64GUSDV30-CD9 EX128GUSDV30-CD9	EX8GUSDV30-PIDE EX16GUSDV30-PIDE EX32GUSDV30-IDE EX64GUSDV30-IDE EX128GUSDV30-IDE EX256GUSDV30-IDE	EX8GUSDV30-PTDE EX16GUSDV30-PTDE EX32GUSDV30-TDE EX64GUSDV30-TDE EX128GUSDV30-TDE EX256GUSDV30-TDE

SD Cards

Removable high capacity storage solutions for consumer, industrial applications



Model	SD110	SD300
Series	Commercial	Industrial
Flash Type	3D TLC	pSLC / 3D TLC
Interface	SD 6.0 SDXC/SDHC UHS-I	
Capacity	128GB ~ 1TB	pSLC: 8GB / 16GB TLC: 32GB ~ 512GB
Input Voltage	2.7~3.6V	
Max Seq. Read/Write	90/80 MB/s	
Operating Temp.	-25°C to 85°C	-40°C to 85°C
TBW (Max)	2,400TB	1,210TB
MTBF	2 million hours	
Warranty	3 years	
Ordering Information	EX128GSDV30-CDA EX256GSDV30-CDH EX512GSDV30-CDH EX001TSDV30-CDH	EX8GSDV30-PIDE EX16GSDV30-PIDE EX32GSDV30-IDE EX64GSDV30-IDE EX128GSDV30-IDE EX256GSDV30-IDE

CFexpress Type B Card

Rugged, high-performance removable storage for demanding industrial environment



Model	CFB400	CFB300
Flash Type	3D TLC	
Interface	PCIe 4.0 x 2	PCIe 3.0 x 2
Capacity	1TB	128GB ~ 1TB
Input Voltage	3.3V ±5%	
Power Consumption	Active <4.5W; Idle <0.8W	Active <3.5W; Idle <0.8W
Max Seq. Read/Write	3,500/1,500 MB/s	1,800/1,500 MB/s
Max 4K Random Read/Write	370,000/170,000 IOPS	200,000/180,000 IOPS
Operating Temp.	-40°C to 85°C	
TBW	600TB	
MTBF	2 million hours	
Warranty	3 years	
Ordering Information	EXPC4SB001TB-I	EXPC3S128GB-I EXPC3S256GB-I EXPC3S512GB-I EXPC3S001TB-I

CFast Card

Rugged removable storage for demanding industrial environment



Model	CFS300
Flash Type	3D TLC
Interface	SATA-III, 6.0Gb/s
Capacity	128GB ~ 1TB
Input Voltage	3.3V ±5%
Power Consumption	Active <3W; Idle <0.9W
Max Seq. Read/Write	520/520 MB/s
Max 4K Random Read/Write	85,000/70,000 IOPS
Operating Temp.	-40°C to 85°C
TBW	600TB
MTBF	2 million hours
Warranty	3 years
Ordering Information	EXSD3X128GB-I EXSD3X256GB-I EXSD3X512GB-I EXSD3X001TB-I

What sets Exascend apart?

Customer-Centric Service Model

Exascend delivers customer delight through dedicated collaboration and support throughout the product lifecycle. Our commitment extends beyond technical expertise to seamless supply chain management, forging long-term partnerships built on satisfaction and success.

Full-Spectrum Applications

Exascend storage solutions deliver performance, reliability, and durability across full-spectrum of applications, from high-performance data centers, to challenging environments of industrial and automotive systems, and mission-critical demands of low Earth orbit.

Market-Leading Capacity & Form Factor Range

Exascend offers the highest capacity and most diverse form factors of storage products, addressing the full range of customer needs, ensuring there is a solution for every application scenario.

Application-Optimized Solutions

Leveraging advanced engineering and proprietary technologies, our application-optimized solutions tailor performance, power, thermal, reliability, and features to meet the precise requirements of each application, positioning us as the leader in adaptable, high-performance storage.

Automotive-Grade Reliability

Exascend products meet AEC-Q100 Grade 2/3 quality standards. We're IATF 16949 certified and Automotive SPICE® compliant, ensuring superior quality and reliability.

Supply Chain Longevity Support

We provide long development cycle support and maintain reliable, strategic relationships with suppliers. Our dedicated longevity program ensures continuous extended support, minimizing supply chain disruptions.

Aerospace and mission critical

Exascend delivers aerospace and mission-critical solutions engineered for absolute reliability in extreme temperatures, harsh environments, and radiation exposure. Featuring our proprietary PhoenixCore™ architecture—a self-healing design resilient against radiation-induced data corruption—ensuring consistent, reliable performance even in the most challenging conditions.

Deployed in rugged computing, UAVs, aircraft, satellites, and other mission-critical systems, our TAA-compliant solutions provide secure, high-capacity, and high-performance data storage. We also provide extensive customization options, including custom form factors, ruggedization, and secure data purging, to meet the most demanding requirements.

Featured Technology



Radiation Tolerant Design



PhoenixCore self-healing architecture



Ruggedize against shock and vibration



Automotive-grade reliability



Automotive temperature up to -40 – 105



Data encryption and purge



Recommended products

NVMe SSD: PR4 (v2)



- PCIe 4.0 / NVMe 1.4
- 3D TLC / pSLC
- Up to 3840GB capacity
- Up to 3,200 MB/s Seq. R/W
- Op. Temp -40°C to 85°C
- Radiation-Tolerant
- SpectraShield™
- SpectraSeal™
- ESCC 22900 TID 25 Krad
- ESCC 25100 SEE 37.5 MeV

BGA SSD: AR500



- PCIe Gen4 x4 / NVMe 1.4
- 291-ball BGA. M.2 1620.
- 3D TLC NAND
- 128GB to 1TB
- Op. temp -40°C to 105°C (Tcase)
- DRAM-less with HMB



eMMC: EM500



- e.MMC 5.1, 153-ball FBGA
- 3D TLC NAND
- Up to 256GB capacity
- Up to 295 MB/s performance
- Op. temp -40°C to 105°C
- Customizable firmware
- AEC-Q100 Certified



Automotive

Exascend leverages over 15 years of industry expertise to provide flexible, application-optimized solutions for automotive customers. We offer end-to-end support from technical expertise to extended product life cycle supply chain management. Our focus is on technology enablement, exploration, and co-development. Exascend actively partners with SoC suppliers to guarantee compatibility and enhance the AVL / QVL ecosystem.

Featured Technology



Ruggedize against shock and vibration



Operating temperature up to -40 – 105



Dual Power Loss Protection (PLP)



Automotive-grade reliability



Adaptive Thermal Control



TCG OPAL 2.1 Data Security

Recommended products



NVMe SSD: PA5



- PCIe 5.0 / NVMe 2.1
- 3D TLC
- Up to 15.36TB capacity
- Up to 14.5 GB/s sustained performance
- Op. Temp -40°C to 85°C
- Conformal Coating
- Underfill featured
- Superior resistance to contaminants and humidity



NVMe SSD: PA4



- PCIe 4.0 / NVMe 1.4
- 3D TLC / pSLC
- Up to 15.36TB capacity
- Up to 3,300 MB/s sustained performance
- Op. Temp -40°C to 85°C
- Conformal Coating
- Underfill featured
- Superior resistance to contaminants and humidity



NVMe SSD: SA4



- SATA 6Gb/s | 3D TLC / pSLC
- Up to 15.36TB capacity
- Up to 560 MB/s read and 535 MB/s write speeds
- Op. Temp -40°C to 85°C
- Conformal Coating
- Underfill featured
- Superior resistance to contaminants and humidity



BGA SSD: AS500



- PCIe Gen4 x4 / NVMe 1.4
- 291-ball BGA, M.2 1620.
- 3D TLC NAND
- 128GB to 1TB
- Op. temp -40°C to 105°C (Tcase)
- DRAM-less with HMB
- Built-in SR-IOV
- AEC-Q100 Certified



eMMC: EM500



- e.MMC 5.1, 153-ball FBGA
- 3D TLC NAND
- Up to 256GB capacity
- Up to 295 MB/s performance
- Op. temp -40°C to 105°C
- Customizable firmware



microSD card: microSD500



- SD 6.0
- 3D TLC NAND
- Up to 256GB capacity
- Up to 90 MB/s performance
- Op. temp -40°C to 105°C
- V30/A2 speed class. IP67
- AEC-Q100 Certified

Edge computing

Edge computing applications require storage that can process and manage massive amounts of data in real-time while operating in decentralized, often harsh environments. Exascend delivers cutting-edge storage products that combine high-speed performance, low latency, and robust endurance to ensure uninterrupted operation at the edge.

With customizable features, advanced security, ruggedization and robust endurance, Exascend enables businesses to build future-ready edge infrastructure that seamlessly supports the growing demands of modern applications.

Featured Technology



Ruggedize against humidity, shock and vibration



Adaptive Thermal Control



TCG OPAL 2.1 Data Security



Industrial temperature up to -40 – 85



Enhanced Power Efficiency



Dual Power Loss Protection (PLP)

Recommended products



NVMe SSD: PE5



- PCIe 5.0 / NVMe 2.1
- 3D TLC
- Up to 15.36TB capacity
- Up to 14.5 GB/s sustained performance
- Op. temp 0°C to 70°C

NVMe SSD: PE4



- PCIe 4.0 / NVMe 1.4
- 3D TLC / pSLC
- Up to 15.36TB capacity
- Up to 3,500 MB/s sustained performance
- Op. temp 0°C to 70°C

NVMe SSD: PI4



- PCIe 4.0 / NVMe 1.4
- 3D TLC / pSLC
- Up to 15.36TB capacity
- Up to 3,300 MB/s sustained performance
- Op. temp -40°C to 85°C

e.MMC: EM300



- e.MMC 5.1, 153-ball FBGA
- 3D TLC NAND
- Up to 128GB capacity
- Up to 295 MB/s performance
- Op. temp -40°C to 85°C

SD Card: SD300



- SD 6.0
- 3D TLC NAND
- 8GB / 16GB (pSLC)
- 32GB to 256GB (TLC)
- Up to 90 MB/s performance
- Op. Temp -40°C to 85°C

microSD Card: microSD300



- SD 6.0
- 3D TLC NAND
- 8GB / 16GB (pSLC)
- 32GB to 256GB (TLC)
- Up to 90 MB/s performance
- Op. Temp -40°C to 85°C

Server and data Center

Data centers are the core hubs for powering AI and machine learning (ML) with large datasets. The growing demand for real-time data processing and analytics presents significant challenges, further complicated by the demand for scalability, availability, and security.

Exascend addresses these challenges with cutting-edge enterprise PCIe Gen 5 NVMe and legacy SATA SSDs, offering unmatched performance, efficiency, and capacities ranging from 240GB to 15.36TB. Our in-house developed solutions are available in a wide variety of form factors, including M.2, E1.S (EDSFF), and 2.5-inch (U.2 and U.3), ensuring seamless integration into diverse data center architectures.

Featured Technology



Performance and Latency Optimized for AI Machine Learning



Wide range capacity support
240 GB – 15.36 TB



Enhanced Power Efficiency



PCIe Gen 5 and Legacy SATA support



TCG OPAL 2.1 Data Security



Adaptive Thermal Control



Recommended products

NVMe SSD: PD5



- PCIe 5.0 / NVMe 2.1
- 3D TLC
- Up to 30.72TB capacity
- Up to 14 GB/s sustained performance
- Up to 3.4M IOPS 4K random read

NVMe SSD: PE5



- PCIe 5.0 / NVMe 2.1
- 3D TLC
- Up to 15.36TB capacity
- Up to 14.5 GB/s sustained performance
- Op. temp 0°C to 70°C

NVMe SSD: PE4



- PCIe 4.0 / NVMe 1.4
- 3D TLC / pSLC
- Up to 15.36TB capacity
- Up to 3,500 MB/s sustained performance

SATA SSD: SE4



- SATA 6.0Gb/s
- 3D TLC / pSLC
- Up to 15.36TB capacity
- Up to 560 MB/s sustained performance

Medical

Medical equipment and devices rely on precise, reliable, and secure data storage to power advanced diagnostics, imaging, and patient monitoring systems. The growing demand for real-time data processing, data analysis, and robust security presents unique challenges in the medical field.

Exascend's reliable, high-performance storage solutions are the beating heart of modern healthcare technology. Our storage solutions are meticulously engineered to meet the uncompromising demands of life-critical medical devices and systems. Exascend empowers medical devices to push the boundaries of diagnosis, and treatment in an increasingly data-driven medical landscape.

Featured Technology



Industrial temperature -40 - 85



Wide range capacity support
240 GB – 15.36 TB



TCG OPAL 2.1 Data Security



Enhanced Power Efficiency



Adaptive Thermal Control



Dual Power Loss Protection (PLP)



Recommended products

NVMe SSD: PI5



- PCIe 5.0 / NVMe 2.1
- 3D TLC
- Up to 15.36TB capacity
- Up to 14.5 GB/s sustained performance
- Op. temp -40°C to 85°C

NVMe SSD: PI4



- PCIe 4.0 / NVMe 1.4
- 3D TLC / pSLC
- Up to 15.36TB capacity
- Up to 3,300 MB/s sustained performance
- Op. temp -40°C to 85°C

SATA SSD: SI4



- SATA 6 Gb/s
- 3D TLC / pSLC
- Up to 15.36TB capacity
- Up to 560 MB/s sustained performance
- Op. temp -40°C to 85°C

NVMe SSD: PE4



- PCIe 4.0 / NVMe 1.4
- 3D TLC / pSLC
- Up to 15.36TB capacity
- Up to 3,500 MB/s sustained performance

SATA SSD: SE4



- SATA 6.0Gb/s
- 3D TLC / pSLC
- Up to 15.36TB capacity
- Up to 560 MB/s sustained performance

NVMe SSD: PR4 (v1)



- PCIe 4.0 / NVMe 1.4
- 3D TLC / pSLC
- Up to 15.36TB capacity
- Up to 3,300 MB/s sustained performance
- Op. Temp -40°C to 85°C
- Conformal Coating
- Underfill featured



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