Flash Solutions

Ruggedized Industrial Flash Products
for Mission-Critical Applications

ATP's industrial flash products deliver dependable performance, efficient responsiveness, and long usage life to accomplish mission-critical tasks. Sturdy and built to withstand rigorous operating environments, ATP flash storage comes in different form factors such as 2.5" SSDs, M.2 embedded modules, mSATA, SlimSATA, CFast, CompactFlash, SD/microSD memory cards, and USB drives for enterprise and industrial applications. They support high-speed interfaces such as SATA 6 Gb/s and the latest NVMe™ protocol on a PCIe® 3.1 x4 interface for reliable, blazing-fast, and future-ready performance. ATP's latest flash offering is the automotive/industrial grade e.MMC, a managed NAND solution.

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Memory Cards
Small Cards, Big Performance for the Intelligent Edge

ATP memory cards meet the growing data storage needs of the Internet of Things (IoT) and industrial IoT by enabling the intelligent edge. These small and low-power yet powerful data collection solutions are excellent for gateways. They store huge amounts of data closer to the source, providing local intelligence and ensuring reliable operation even with limited or no Internet connection. Memory cards are also used as handy boot devices, conveniently storing the gateway operating system.

ATP industrial SD and microSD cards are the ideal storage format for industrial and automotive applications as they can be conveniently inserted into and easily removed from small host devices for convenient data transfer and storage expansion. ATP CFast cards combine the convenient and trusted format of CompactFlash with the speed, capacity and performance of SATA III, while maintaining backward compatibility with other SATA versions. CompactFlash cards in the original IDE/PATA interface continue to enjoy wide usage in industrial and embedded environments due to their durability and rugged build.

Key Differentiators*

- **ATP Joint Validation Service.**** Compatibility and function tests are conducted using client's host devices and systems to ensure compatibility.

- **Complete Coverage Rapid Diagnostic Test (RDT)** includes testing in extreme temperatures to ensure reliable operation from -40°C to 85°C. RDT covers all areas of the storage device including user, firmware and spare areas.

- **Heavy Duty Construction.** Whether manufactured using System in Package (SiP) or Surface Mount Technology (SMT), ATP memory cards are exceptionally robust, resistant to damaging elements such as dust (IP5X/IP6X), humidity/water (IPX7), electrostatic discharge (ESD), extreme temperature, shock/vibration, and more.

* May vary by product and project support.
** Value-added service

SD/SDHC/SDXC Cards

Key Features

- SD Life Monitor
- Advanced Wear Leveling
- SiP (System in Package)
- AutoRefresh technology
- Dynamic Data Refresh
- Power failure protection
- Industrial Temperature
- Joint Validation
- 100% MP Level Test

Product Name	SD/SDHC/SDXC				
Product Line	Premium			Superior	
Naming	S800Pi	S700Pi	S700Pi	S700Sc	S700Sc
Flash Type	SLC	iTemp SLC mode	iTemp 3D SLC mode	SLC mode	3D SLC mode
Density	512 MB to 8 GB	4 GB to 8 GB	8 GB to 32 GB	4 GB to 8 GB	8 GB to 32 GB
Performance — Sequential Read up to (MB/s)	70	76	98	76	98
Performance — Sequential Write up to (MB/s)	39	50	60	50	60
Interface	512 MB ~ 2 GB, HS mode 4 GB ~ 8 GB, UHS-I	UHS-I	UHS-I	UHS-I	UHS-I
Operating Temperature	-40°C to 85°C			-25°C to 85°C	
Reliability — TBW* (max.)	192 TB	128 TB	320 TB	128 TB	320 TB
Reliability — MTBF @ 25°C	>5,000,000 hours	>3,000,000 hours			
Reliability — Number of Insertions	20,000 (SDA spec minimum 10,000)				
Dimensions: L x W x H (mm)	32.0 x 24.0 x 2.1				

Product Name	SD/SDHC/SDXC				
Product Line	Superior				Value
Naming	S600Si	S600Sc	S600Sia	S600Sc	S600Vc
Flash Type	iTemp MLC / 3D TLC	MLC	iTemp 3D TLC	3D TLC	3D TLC
Density	8 GB to 256 GB**	8 GB to 128 GB**	32 GB to 256 GB	32 GB to 256 GB	32 GB to 128 GB
Performance — Sequential Read up to (MB/s)	98	96	98	98	100
Performance — Sequential Write up to (MB/s)	64	61	64	64	78
Interface	UHS-I				
Operating Temperature	-40°C to 85°C	-25°C to 85°C	-40°C to 85°C	-25°C to 85°C	-25°C to 85°C
Reliability — TBW* (max.)	154 TB	154 TB	154 TB	154 TB	36 TB
Reliability — MTBF @ 25°C	>2,000,000 hours				>1,000,000 hours
Reliability — Number of Insertions	20,000 (SDA spec minimum 10,000)				
Dimensions: L x W x H (mm)	32.0 x 24.0 x 2.1				

* Under highest Sequential write value. May vary by density, configuration and applications.
** By project support.

Technologies & Add-On Services*										
Product Line — Premium	Δ	●	●	●	Δ	●	●	●	●	Δ
Product Line — Superior	Δ	●	●	●	●	●	Δ	●	●	Δ
Product Line — Value			●					●		

* Please refer to pages 41-43.   Δ: Customization option available on a project basis.

* For Security-related features and configurations, please refer to page 9.

microSD/microSDHC/microSDXC Cards

Key Features

- SD Life Monitor
- Advanced Wear Leveling
- SiP (System in Package)
- AutoRefresh technology
- Dynamic Data Refresh
- Power failure protection
- Industrial temperature
- Joint Validation
- 100% MP Level Test

Product Name		microSD/microSDHC/microSDXC				
Product Line		Premium			Superior	
Naming		S800Pi	S700Pi	S700Pi	S700Sc	S700Sc
Flash Type		SLC	iTemp SLC mode	iTemp 3D SLC mode	SLC mode	3D SLC mode
Density		512 MB to 8 GB	4 GB to 16 GB	8 GB to 64 GB	4 GB to 16 GB	8 GB to 64 GB
Performance	Sequential Read up to (MB/s)	80	76	98	76	98
	Sequential Write up to (MB/s)	39	54	62	54	62
Interface		512 MB~2 GB, HS mode 4 GB~8 GB, UHS-I	UHS-I		UHS-I	
Operating Temperature		-40°C to 85°C			-25°C to 85°C	
Reliability	TBW* (max.)	192 TB	256 TB	640 TB	256 TB	640 TB
	MTBF @ 25°C	>5,000,000 hours	>3,000,000 hours			
	Number of Insertions	20,000 (SDA spec minimum 10,000)				
Dimensions: L x W x H (mm)		15.0 x 11.0 x 1.0				

Product Name		microSD/microSDHC/microSDXC				
Product Line		Superior				Value
Naming		S600Si	S600Sc	S600Sia	S600Sc	S600Vc
Flash Type		iTemp MLC / 3D TLC	MLC	iTemp 3D TLC	3D TLC	3D TLC
Density		8 GB to 256 GB	8 GB to 32 GB	32 GB to 256 GB	32 GB to 256 GB	32 GB to 128 GB
Performance	Sequential Read up to (MB/s)	98	68	98	98	100
	Sequential Write up to (MB/s)	61	24	61	61	78
Interface		UHS-I				
Operating Temperature		-40°C to 85°C	-25°C to 85°C	-40°C to 85°C	-25°C to 85°C	-25°C to 85°C
Reliability	TBW* (max.)	154 TB	39 TB	154 TB	154 TB	36 TB
	MTBF @ 25°C	>2,000,000 hours				>1,000,000 hours
	Number of Insertions	20,000 (SDA spec minimum 10,000)				
Dimensions: L x W x H (mm)		15.0 x 11.0 x 1.0				

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

Technologies & Add-On Services*											
Product Line	Premium	Δ	●	●	●	Δ	●	●	●	●	Δ
	Superior	Δ	●	●	●	●	●	Δ	●	●	Δ
	Value			●					●		

* Please refer to pages 41-43.   Δ: Customization option available on a project basis.

* For Security-related features and configurations, please refer to page 9.

CompactFlash Cards

Key Features
- Global wear leveling and bad block management
- AutoRefresh technology
- PowerProtector
- Power saving mode
- S.M.A.R.T support

Product Name	CompactFlash Card		
Product Line	Premium	Superior	
Naming	I800Pi	I700Sc	I600Sc
Flash Type	SLC	SLC mode	MLC
Density	512 MB to 32 GB	8 GB to 16 GB	16 GB to 32 GB
Performance — Sequential Read up to (MB/s)	61	110	108
Performance — Sequential Write up to (MB/s)	55	80	46
Interface	UDMA 0~4	UDMA 0~6	
Operating Temperature	-40°C to 85°C	0°C to 70°C	
Endurance — TBW* (max.)	1,280 TB	128 TB	38 TB
Endurance — DWPD* (max.)	22.4	11.2	1.7
Reliability — MTBF @ 25°C	>5,000,000 hours	>2,000,000 hours	
Reliability — Number of Insertions	10,000 minimum		
Dimensions: L x W x H (mm)	36.4 x 42.8 x 3.3		

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

Technologies & Add-On Services*								
Product Line — Premium	●	●	●	●	●	●	Δ	Δ
Product Line — Superior	●		●	●	●		Δ	Δ

* Please refer to pages 41-43.   Δ: Customization option available on a project basis.
* For Security-related features and configurations, please refer to page 9.

CFast Cards

Key Features
- Advanced wear leveling algorithm
- Bad block management
- AutoRefresh technology
- PowerProtector
- S.M.A.R.T support

Product Name	CFast Card		
Product Line	Premium	Superior	
Naming	A800Pi	A600Si	A600Sc
Flash Type	SLC	iTemp MLC	MLC
Density	8 GB to 32 GB	16 GB to 128 GB	16 GB to 128 GB
Performance — Sequential Read up to (MB/s)	500	510	510
Performance — Sequential Write up to (MB/s)	300	175	175
Performance — Random Read IOPS up to	35,800	29,400	29,400
Interface	SATA III 6 Gb/s		
Operating Temperature	-40°C to 85°C	-40°C to 85°C	0°C to 70°C
Endurance — TBW* (max.)	2,667 TB	267 TB	320 TB
Endurance — DWPD* (max.)	46.8	2.9	3.5
Endurance — MTBF @ 25°C	>2,000,000 hours		
Reliability Number of Insertions	10,000 minimum		
Dimensions: L x W x H (mm)	36.4 x 42.8 x 3.6		

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

Technologies & Add-On Services*									
Product Line — Premium	●	●	●	●	●	●	●	Δ	Δ
Product Line — Superior	●	●	●	●	●	●	Δ	Δ	Δ

* Please refer to pages 41-43.   Δ: Customization option available on a project basis.
* For Security-related features and configurations, please refer to page 9.

# Solid State Drives and Modules

Reliable Storage Solutions for the Data Era

ATP's embedded storage solutions deliver reliable performance and efficient responsiveness for mission-critical as well as time-critical applications in an era where billions of devices are creating astounding amounts of data. Whether data goes to the cloud or stays at the edge, ATP solid state drives (SSDs) and modules feature the latest technologies in different form factors and capacities with specifications to meet the diverse and rigorous requirements of industrial applications. ATP flash storage products are built for different workloads, usage scenarios, operating environments and platforms. Hard-wired for sustained operation in wide temperatures (-40°C to 85°C) and other environmental challenges, they are guaranteed to deliver outstanding performance, rugged durability, and many years of reliable performance. They support the latest high-speed NVMe™ protocol on a PCIe® 3.1 x4 interface as well as proven interfaces such as SATA 6 Gb/s and USB. Various form factors include the 2.5" SSDs, M.2, mSATA, SlimSATA and eUSB modules.

Key Differentiators*

- **I-Temp Support.** ATP industrial SSDs can withstand extreme temperatures from -40°C to 85°C, enabling them to operate reliably even in extremely cold or hot operating environments.

- **High-Performance, High-Density Storage in Compact Form Factors.** ATP M.2, SlimSATA and mSATA modules deliver power-packed performance and massive storage capacity in lean footprints, making them ideal for space-restricted systems such as embedded/IPCs, point-of-sale (POS), and networking systems.

- **MCU-Based Power Loss Protection (PLP).*** NVMe modules and select SATA SSDs feature a completely new design of the PLP array, which utilizes a new power management IC (PMIC) and new firmware-programmable MCU (microcontroller unit). Integrated into its latest PLP technology, ATP PowerProtector 4, the new MCU design allows the PLP array to perform intelligently in various temperatures, power glitches and charge states. ATP's PLP mechanism prevents data loss during any power failure event by ensuring that the last read/write/erase command is completed, and data is stored safely in non-volatile flash memory. ATP SSDs with PowerProtector use tantalum capacitors, which have minimal sensitivity to temperature and humidity, assuring high reliability and endurance even in harsh environments.

- **End-to-End Data Path Protection.** ATP industrial SSDs incorporate End-to-End Data Path Protection technology to ensure the integrity of data during transfers from the host system to the storage device and back by detecting and correcting errors on multiple transfer points.

* May vary by product and project support.
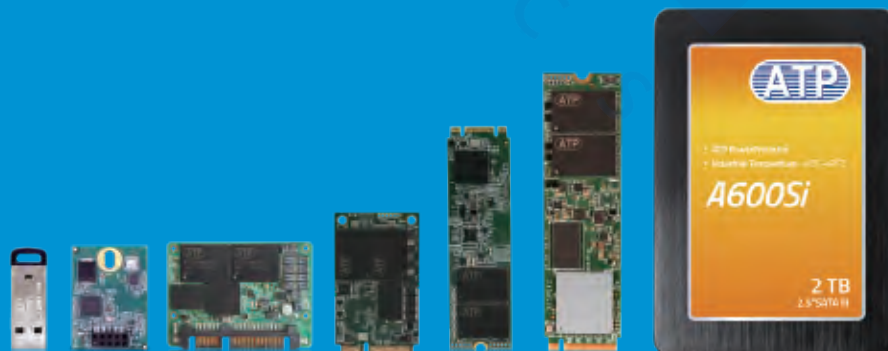
M.2 NVMe

Key Features

- Superior Read/Write performance
- LDPC & RAID Data Recovery for error correction
- Dynamic Thermal Throttling
- Global wear leveling
- TRIM function support
- End-to End Data Protection
- MCU-based Power Protector 4 (May vary by product and project support.)

Product Name		M.2 NVMe	
		2280-D2-M	
Product Line		Superior	
Naming		N600Si	N600Sc
Flash Type		I-Temp 3D TLC	C-Temp 3D TLC
Density		120 GB to 1920 GB	
Performance	Sequential Read up to (MB/s)	3,280	
	Sequential Write up to (MB/s)	3,050	
	Random Read IOPS (4K, QD32)	211,200	
Interface		PCIe Gen3 Interface, x4 Lanes	
Operating Temperature		-40°C to 85°C	0°C to 70°C
Endurance	TBW* (max.)	5,120 TB	
	DWPD* (max.)	3.7	
Reliability MTBF @ 25°C		>2,000,000 hours	
Dimensions: L x W x H (mm)		80.0 x 22.0 x 3.5	

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

Technologies & Add-On Services*												
Product Line	Superior	●	Δ	●	●	●	Δ	●	Δ	Δ	●	●

* Please refer to pages 41-43.   Δ: Customization option available on a project basis.

* For Security-related features and configurations, please refer to page 9.

M.2 SATA

Key Features
- Global wear leveling
- TRIM function support
- Static Data Refresh and Idle Clean F/W algorithm
- Firmware live update
- MCU-based Power Protector 4 (May vary by product and project support.)

Product Name	M.2						
	2242 D2-B-M						
Product Line	Premium		Superior				Value
Naming	A800Pi	A700Pi	A600Si	A600Sc	A600Si	A600Sc	A600Vc
Flash Type	SLC	iTemp SLC mode	iTemp MLC	MLC	iTemp 3D TLC	3D TLC	3D TLC
Density	8 GB to 64 GB	60 GB to 120GB	16 GB to 64 GB	16 GB to 64 GB	120 GB to 480 GB	120 GB to 480 GB	32 GB to 128 GB
Performance Sequential Read up to (MB/s)	530	560	440	440	560	560	560
Performance Sequential Write up to (MB/s)	400	500	80	80	440	440	420
Performance Random Read IOPS up to	76,000	100,000	38,400	38,400	100,000	100,000	68,000
Interface	SATA III 6 Gb/s						
Operating Temperature	-40°C to 85°C	-40°C to 85°C	-40°C to 85°C	0°C to 70°C	-40°C to 85°C	0°C to 70°C	0°C to 70°C
Endurance TBW* (max.)	5,333 TB	4,500 TB	145.5 TB	174.6 TB	1,396 TB	1,396 TB	147.7 TB
Endurance DWPD* (max.)	77.9	20	3.1	3.8	4.0	4.0	1.6
Reliability MTBF @ 25°C	>2,000,000 hours						
Dimensions: L x W x H (mm)	42.0 x 22.0 x 3.5						42.0 x 22.0 x 3.2

Product Name	M.2			
	2280 D2-B-M			**2280 S2-B-M**
Product Line	Premium	Superior		Value
Naming	A700Pi	A600Si	A600Sc	A600Vc
Flash Type	iTemp SLC mode	iTemp 3D TLC	3D TLC	3D TLC
Density	60 GB to 240 GB	120 GB to 960 GB		32 GB to 256 GB
Performance Sequential Read up to (MB/s)	560	560		560
Performance Sequential Write up to (MB/s)	500	440		440
Performance Random Read IOPS up to	100,000	100,000		69,000
Interface	SATA III 6 Gb/s			
Operating Temperature	-40°C to 85°C	-40°C to 85°C	0°C to 70°C	0°C to 70°C
Endurance TBW* (max.)	9,000 TB	2,792 TB	2,792 TB	295.4 TB
Endurance DWPD* (max.)	20	4.0	4.0	1.6
Reliability MTBF @ 25°C	>2,000,000 hours			
Dimensions: L x W x H (mm)	80.0 x 22.0 x 3.5	80.0 x 22.0 x 3.35		80.0 x 22.0 x 2.2

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

Technologies & Add-On Services*										
Product Line	Premium	●	●	●	●	●	●	●	Δ	Δ
	Superior	●	●	●	●	●	●	Δ	Δ	Δ
	Value	●		●	●	●				

* Please refer to pages 41-43.   Δ: Customization option available on a project basis.

* For Security-related features and configurations, please refer to page 9.

2.5" SSDs

Key Features

- Global wear leveling
- TRIM function support
- Static Data Refresh and Idle Clean F/W algorithm
- Firmware live update
- MCU-based Power Protector 4 (May vary by product and project support.)
- Write protect disabled/enabled
- NSA-compliant Secure Erase

Product Name		2.5" SSD			
Product Line		Premium		Superior	
Naming		A800Pi	A700Pi	A600Si	A600Sc
Flash Type		SLC	iTemp SLC mode	iTemp MLC	MLC
Density		8 GB to 256 GB	60 GB to 480 GB	64 GB	
Performance	Sequential Read up to (MB/s)	520	540	440	
	Sequential Write up to (MB/s)	420	500	80	
	Random Read IOPS up to	76,000	100,000	38,400	
Interface		SATA III 6 Gb/s			
Operating Temperature		-40°C to 85°C		-40°C to 85°C	0°C to 70°C
Endurance	TBW* (max.)	21,333 TB	18,000 TB	145.5 TB	174.6 TB
	DWPD* (max.)	77.9	20	3.1	3.8
Reliability	MTBF @ 25°C	>2,000,000 hours			
	Number of Insertions	10,000 minimum			
Dimensions: L x W x H (mm)		100.0 x 69.9 x 9.2	100.0 x 69.9 x 7 / 9.2	100.0 x 69.9 x 9.2	

Product Name		2.5" SSD		
Product Line		Superior		Value
Naming		A600Si	A600Sc	A600Vc
Flash Type		iTemp 3D TLC	3D TLC	3D TLC
Density		120 GB to 1920 GB		32 GB to 512 GB
Performance	Sequential Read up to (MB/s)	560		560
	Sequential Write up to (MB/s)	480		440
	Random Read IOPS up to	100,000		72,000
Interface		SATA III 6 Gb/s		
Operating Temperature		-40°C to 85°C	0°C to 70°C	0°C to 70°C
Endurance	TBW* (max.)	5,585 TB		590.8 TB
	DWPD* (max.)	4.0		1.6
Reliability	MTBF @ 25°C	>2,000,000 hours		
	Number of Insertions	10,000 minimum		
Dimensions: L x W x H (mm)		100.0 x 69.9 x 7 / 9.2		100.0 x 69.9 x 7.0

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

Technologies & Add-On Services*										
Product Line	Premium	●	●	●	●	●	●	●	Δ	Δ
	Superior	●	●	●	●	●	●	Δ	Δ	Δ
	Value	●		●	●	●				

* Please refer to pages 41-43.   Δ: Customization option available on a project basis.

* For Security-related features and configurations, please refer to page 9.

mSATA

Key Features

- Global wear leveling
- TRIM function support
- AutoRefresh and Idle Clean F/W algorithm
- Firmware live update
- MCU-based Power Protector 4 (May vary by product and project support.)

Product Name		mSATA			
Product Line		Premium		Superior	
Naming		A800Pi	A700Pi	A600Si	A600Sc
Flash Type		SLC	iTemp SLC mode	iTemp MLC	MLC
Density		8 GB to 128 GB	60 GB to 120 GB	16 GB to 64 GB	
Performance	Sequential Read up to (MB/s)	530	560	440	
	Sequential Write up to (MB/s)	430	500	80	
	Random Read IOPS up to	76,000	100,000	38,400	
Interface		SATA III 6 Gb/s			
Operating Temperature		-40°C to 85°C		-40°C to 85°C	0°C to 70°C
Endurance	TBW* (max.)	10,667 TB	4,500 TB	145.5 TB	174.6 TB
	DWPD* (max.)	77.9	20	3.1	3.8
Reliability MTBF @ 25°C		>2,000,000 hours			
Dimensions: L x W x H (mm)		50.8 x 29.85 x 3.5			

Product Name		mSATA		
Product Line		Superior		Value
Naming		A600Si	A600Sc	A600Vc
Flash Type		iTemp 3D TLC	3D TLC	3D TLC
Density		120 GB to 480 GB		32 GB to 512 GB
Performance	Sequential Read up to (MB/s)	560		560
	Sequential Write up to (MB/s)	440		420
	Random Read IOPS up to	100,000		72,000
Interface		SATA III 6 Gb/s		
Operating Temperature		-40°C to 85°C	0°C to 70°C	0°C to 70°C
Endurance	TBW* (max.)	1,396 TB		590.8 TB
	DWPD* (max.)	4.0		1.6
Reliability MTBF @ 25°C		>2,000,000 hours		
Dimensions: L x W x H (mm)		50.8 x 29.85 x 3.5		50.8 x 29.85 x 3.5

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

Technologies & Add-On Services*										
Product Line	Premium	●	●	●	●	●	●	●	Δ	Δ
	Superior	●	●	●	●	●	●	Δ	Δ	Δ
	Value	●		●	●	●				

* Please refer to pages 41-43.   Δ: Customization option available on a project basis.

* For Security-related features and configurations, please refer to page 9.

SlimSATA

Key Features

- Global wear leveling
- TRIM function support
- AutoRefresh and Idle Clean F/W algorithm
- Firmware live update
- PowerProtector

Product Name		SlimSATA		
Product Line		Premium	Superior	
Naming		A800Pi	A600Si	A600Sc
Flash Type		SLC	iTemp MLC	MLC
Density		8 GB to 128 GB	16 GB to 64 GB	16 GB to 64 GB
Performance	Sequential Read up to (MB/s)	530	400	400
	Sequential Write up to (MB/s)	430	80	80
	Random Read IOPS up to	76,000	38,400	38,400
Interface		SATA III 6 Gb/s		
Operating Temperature		-40°C to 85°C	-40°C to 85°C	0°C to 70°C
Endurance	TBW* (max.)	10,667 TB	145.5 TB	174.6 TB
	DWPD* (max.)	77.9	3.1	3.8
Reliability MTBF @ 25°C		>2,000,000 hours		
Dimensions: L x W x H (mm)		54.0 x 39.0 x 4.0		

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

Technologies & Add-On Services*											
Product Line	Premium	●	●	●	●	●	●	●	Δ	Δ	
	Superior	●	●	●	●	●	●	Δ	Δ	Δ	

* Please refer to pages 41-43.   Δ: Customization option available on a project basis.

* For Security-related features and configurations, please refer to page 9.

eUSB

Key Features
- Global wear leveling
- PowerProtector

Product Name	eUSB		
Product Line	Premium	Superior	Superior
Naming	B800Pi	B600Sc	B600Sc
Flash Type	SLC	MLC	MLC
Density	1 GB to 32 GB	8 GB to 32 GB	16 GB to 64 GB
Performance — Sequential Read up to (MB/s)	30	25	44
Performance — Sequential Write up to (MB/s)	25	19	17
Interface	Compatible with USB 2.0 (480 Mbps)		
Operating Temperature	-40°C to 85°C	0°C to 70°C	
Endurance — TBW* (max.)	1,280 TB	38.4 TB	76.8 TB
Endurance — DWPD* (max.)	37.4	1.7	1.7
Reliability — MTBF @ 25°C	>5,000,000 hours	>2,000,000 hours	
Reliability — Number of Insertions	10,000 minimum		
Dimensions: L x W x H (mm)	36.9 x 26.6 x 9.5		
Connector Pin Pitch**	2.54 mm**	2.54 mm / 2.00 mm	

* Under highest Sequential write value. May vary by density, configuration and applications.
** By project support pitch 2.00mm.

Technologies & Add-On Services*							
Product Line — Premium	●	●	●	●	●	Δ	Δ
Product Line — Superior	●	●	●	Δ		Δ	Δ

* Please refer to pages 41-43.   Δ: Customization option available on a project basis.
* For Security-related features and configurations, please refer to page 9.

NANODURA

Key Features
- Global wear leveling
- Bad block management algorithm
- High reliability
- Hot swap supported

Product Name	NANODURA	
Product Line	Premium	Superior
Naming	B800Pi	B600Sc
Flash Type	SLC	MLC
Density	512 MB to 8 GB	8 GB to 16 GB
Performance — Sequential Read up to (MB/s)	21	25
Performance — Sequential Write up to (MB/s)	16	18
Interface	Compatible with USB 2.0 (480 Mbps)	
Operating Temperature	-40°C to 85°C	0°C to 70°C
Endurance — TBW* (max.)	192 TB	19.2 TB
Endurance — DWPD* (max.)	13.5	1.7
Reliability — MTBF @ 25°C	>5,000,000 hours	>2,000,000 hours
Reliability — Number of Insertions	10,000 minimum	
Dimensions: L x W x H (mm)	34.0 x 12.2 x 4.5	

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

Technologies & Add-On Services*				
Product Line — Premium	●	●	●	●
Product Line — Superior	●	●	Δ	●

* Please refer to pages 41-43.   Δ: Customization option available on a project basis.
* For Security-related features and configurations, please refer to page 9.