

EonStor DS 3000 Series

High speed flexible storage delivers robust reliability and management

Turbo charged storage – DS 3000T Gen2

- Up to 1.3M IOPS and 5,500 MBps throughput
- High IOPS solutions ideal for database and VDI applications, while bandwidth enhances media editing and surveying jobs

SSD optimized

- SSD Cache and automated storage tiering
- Small form factor models for all-SSD arrays
- SSD drive wear indication

Data services

- Optional secure remote replication backs up data to offsite locations to ensure disaster recovery readiness
- Snapshot, volume copy/mirror, thin provisioning and more
- Compatible with self-encrypting drives (SED)
- Intelligent Drive Recovery (IDR) technology, including RAID 6, smart media scan and detect-clone-replace

High availability

- Dual controllers and redundant power supplies
- Fast failover performance and assured high data availability

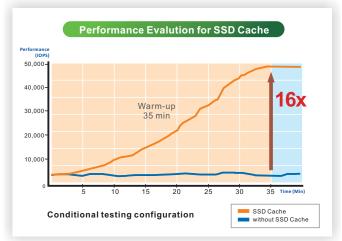
Multiple host options

- Choose from 8Gb/s or 16Gb/s Fibre Channel, 1Gb/s or 10Gb/s iSCSI or 6Gb/s or 12Gb/s SAS based on your needs and budget
- Hybrid host interfaces for diverse environments on one system lead to greater utility
- Optional onboard iSCSI ports can be added to any host interface type Modular components mean easy maintenance and future-proof upgrades

Fully featured storage systems for SAN and DAS environments, offered in diverse form factors from compact 2U to high density 4U. Make the most of high availability with dual controller models, and grow with powerful yet simple to deploy SMB and enterprise services. Fast performance, modular components, strong data integrity, friendly management, and extensive software bundles make these truly total solutions.

Ready for an SSD future

EonStor DS 3000 systems are designed for all-SSD storage and support large high speed SSD cache pools. SSD Cache speeds up read performance for priority data, and boosts cache pool capacities up to 3.2TB. As many as four SSDs per controller can be used, including SATA disks. In addition to faster read speeds, SSD Cache reduces performance impact compared to spin-drive caches with rapid warm up and less drive wear. Configuring and managing SSD Cache pooling is easy via the intuitive SANWatch UI.



* SSD Cache speeds up read performance by up to 16 times for frequently-accessed data stored in the cache pool.

* Actual performance gains can vary depending on customer applications.

Automated storage tiering optimizes storage performance and increases ROI by leveraging high speed SSD for expedited access to hot data while using affordable drives such as NL-SAS for archiving purposes.

To protect SSDs and the vital data they store, EonStor DS 3000 systems offer SSD wear level indication that provides users with accurate real time SSD health info.

DS 3000 Series



Intuitive system messages

• Tiered and easily actionable system notifications keep you informed and in control

User friendly management

- Exclusive SANWatch 3.0 browser-based interface makes management accessible from a single front end
- Proprietary RAIDWatch 3.0 provides RAID protection and powerful best practice facilities
- Support for intricate CLI editing

Energy saving design

- Efficient 80 PLUS power supplies
- Intelligent drive spin-down reduces energy draw by up to 60% while extending drive lifespan

High speed performance and flexible scalability

Discover new standards of storage performance with up to 1.3M IOPS and 5,500 MB/s throughput. EonStor DS 3000 systems are excellent platforms for database and VDI applications thanks to ample computing power, and their massive bandwidth serves to enhance media editing and surveying jobs, freeing you from bottlenecks. When looking to expand storage, up to an extra 360 drives can be connected easily using Infortrend JB 2000 or JB 2000-1 enclosures.

Advanced backup data integrity and storage services

Every EonStor DS 3000 system arrives with a full suite of premium data services. Thin provisioning augments your storage utilization from an average 30% to 80% so you get more room on your disk drives. For on demand backups, 128-target snapshot is included (upgradable to 4096 targets), alongside 64 replication pair volume mirror/copy (upgradable to 256).Remote replication ensures prompt and secure disaster recovery to offsite backup locations.

Infortrend IDR technology detects and repairs faulty sectors on drives before they progress into serious media errors, so that disastrous failures are avoided before they can potentially take down an entire storage network.

Easy upgrade modular host interface

Based on your needs and budget, select from 8Gb/s or 16Gb/s Fibre Channel, 1Gb/s or 10Gb/s iSCSI, or 6Gb/s or 12Gb/s SAS host interfaces. The wide choice offers great performance in more applications, with hybrid host interfaces available to deliver support for diverse environments on one system, for example Fibre Channel/SAS and onboard iSCSI. Host interface modules can be easily swapped and upgraded, making EonStor DS 3000 systems very future-proof.

User friendly maintenance

Clear and easy to act upon system status messages make troubleshooting simple even without elaborate IT support. Additionally, integrated smart media scan prevents data errors and corruption. It works in the background at all times without affecting system performance, keeping close tabs on your data to ensure its integrity.

Effortless management with exclusive tools

Proprietary SANWatch 3.0 browser-based user interface gives you a consolidated and highly accessible storage management front end. It is complemented by RAIDWatch 3.0, another exclusive Infortrend utility that allows you to implement best practices to enhance RAID array performance. Systems also ship with extensive CLI and command editing to ensure you get full supervision and oversight capabilities.











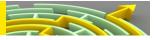
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High IOPS Solutions

Model name	DS 3012RT DS 3012GT		DS 3016F DS 30160		DS 3024RT DS 3024GT		DS 3024RTB DS 3024GTB		
Form factor	2U 12-bay LFF		3U 16-bay LF	-	4U 24-bay LFF		2U-24bay SFF		
Storage controller				Single or dual-redun					
Host connectivity (per controller)				2 x 16Gb FC ports 4 x 8Gb FC ports 2 x 10Gb iSCSI ports 4 x 1Gb iSCSI ports 2 x 6Gb SAS ports 2 x 12Gb SAS ports					
Onboard GbE ports (per controller)			4 x	1Gb iSCSI ports (Op	tional)				
Cache memory (per controller)				2GB, 4GB, 8GB or 1	6GB				
Max drives (per system)	12		16		24		24		
Max drives (via expansion enclosure)	312		316		324		360		
Expansion enclosure (JBOD)	JB 2012-1 JB 2048 JB 2060	JB 2012-1 JB 2016-1 JB 2048 JB 2048					JB 2024B JB 2012-1 JB 2048 JB 2016-1 JB 2060		
SAS expansion ports (per controller)				1 x 6Gb/s SAS 4x wi	de port				
Cache backup technologies ¹				BBU + Flash modul	e				
Supported drives ²	• 2.5" 10	TA/SAS SSI K RPM SAS K RPM SAS	HDD • 3.5" 7	5K RPM SAS HDD 200 RPM NL SAS HD 200 RPM SATA HDD	D		• 2.5" SATA/SAS SSD • 2.5" 10K RPM SAS HDD • 2.5" 15K RPM SAS HDD		
Power & Cooling	Power supply: Two redu Power consumption - DS 3012RT: 332 - DS 3012GT: 285 Heat dissipation (BTU/hor		Power consum - DS 3016RT: 4 - DS 3016GT: 4	ption 16	AC, 47-63Hz Power consumption - DS 3024RT: 573 - DS 3024GT: 504 Heat dissipation(BT		Power consumption - DS 3024RTB: 308 - DS 3024GTB: 276 Heat dissipation(BTU/hour): 1186		
	80 PLUS power supplies	s delivering	more than 80%	energy efficiency					
Green design RAID configurations	Intelligent multi-level dr RAID level 0, 1(0+1), 3 Up to 32 logical drives a	ive spin-do , 5, 6, 10, 3	wn 0, 50, 60						
Regulatory 4	Up to 2048 LUNs • Safety : UL, BSMI, CB • Electromagnetic Com		CE. BSMI. FCC.	KC					
	Local replication ³	Snapshot Volume co	opy/mirror	Snapshot images per system Standard licens Source volumes per system Standard licens Replication pairs per source volume Standard licens			e: 64 / advanced license: 256 e: 128 / advanced license: 4096 e: 16 / advanced license: 32 e: 4 / advanced license: 8 04 / advanced license: 8		
				Replication pairs per	-	e: 64 / advanced license: 256			
	Thin provisioning	llocated but unused storage spac							
Data services	Self-encrypting drives Unique factory encryption secures data plus makes deletion simple and complete Replications per source volume: 16								
	Remote replication ⁶			Replication pairs per	ation pairs per source volume: 4 ation pairs per system: 64) or four (4) storage tiers based on drive types				
	Automated storage tieri	ng ⁶	:	SD support Itomated data migration with scheduling options					
	SSD Cache (optional license)	 Suppor 	ts up to four SS mended DIMM 2GB Max. S	ess for random read- Ds per controller capacity per controll SD Cache Pool Size: 1 SD Cache Pool Size: 1	er for SSD Cache po 50GB DR	ol: AM:4GB Max.	SSD Cache Pool Size: 400GB SSD Cache Pool Size: 1.600GB		
Availability and reliability	Redundant, hot-swappa Multi-pathing support (CacheSafe technology: Port trunking / link aggr	able hardwa EonPath), d protects ca	are modules levice mapper s ached data duri	support ng power outages by					
Management	SANWatch managemen	t suite, emb	edded RAIDWa	tch, terminal via RS-	232C, Telnet/SSH, L	CD keypad panel			
Notification	Email, fax, LAN broadca	ast, SNMP t	raps, SMS						
OS support ²	Microsoft Windows Ser Linux, SUSE Linux Enter						e		
	Standard service			hardware/software covered under warra		one, web, and em	ail support		
Service and Support ⁵	Upgrade/extension option	ns	Replacement part dispatch on the next business day (up to 5 years) Advanced service: 24x7 phone, web, and email support + onsite diagnostics on the next business day (up to 5 years) Premium service: 24x7 phone, web, and email support + onsite diagnostics in 4 hours (up to 5 years) Extended standard service up to 5 years						
1 FonStor DS 3000G models: BBII + flash	nodulo optional and not includ			•	our local sales represent				

 EonStor DS 3000G models: BBU + flash module optional and not included by default.
 For the latest compatibility details, refer to our official website for the latest Compatibility Matrix.
 Standard functions come default with EonStor DS systems. Advanced functions are available with optional Check with your local sales representative for complete details.
 All EonStor DS systems ship with standard service. Extended service terms may vary by region.
 Remote replication and automated storage tiering functions are available with optional license. licenses.

High IOPS Solutions



Model name	DS 3048RT DS 3048GT			DS 3060RT DS 3060GT			
Form factor	4U 48-bay LFF			4U 60-bay LFF			
Storage controller	40 40 Buy El 1	Sii	ngle or dual-redundan				
Host connectivity (per controller)		2) 4) 2) 4) 2)	<pre><166b FC ports <86b FC ports <106b iSCSI ports (S <16b iSCSI ports <66b SAS ports <126b SAS ports</pre>				
Onboard GbE ports (per controller)		2 :	x 1Gb iSCSI ports				
Cache memory (per controller)		20	B, 4GB, 8GB or 16GB				
Max drives (per system)	48			60			
Max drives (via expansion enclosure)	336			360			
Expansion enclosure (JBOD)	JB 2048			JB 2060			
SAS expansion ports (per controller)		1)	k 6Gb/s SAS 4x wide p	oort			
Cache backup technologies ¹		В	BU + Flash module				
Supported drives ²	• 2.! • 2.!	5" SAS SSD 5" SATA SSD (DS 30480 5" 10K RPM SAS HDD	GT/3060GT only)	• 2.5" 15K RPM SA • 3.5" 7200 RPM N • 3.5" 7200 RPM S			
Power & Cooling	Power supply: Three Voltage and Frequence Power consumption - DS 3048RT: 775 - DS 3048GT: 645 Heat dissipation (BTL	y: 100-240VAC, 47-63	Hz	Voltage and Frequence Power consumpt - DS 3060RT: 97 - DS 3060GT: 89	7		
Green design		lies delivering more tha	n 80% energy efficien	су			
RAID configurations		, 3, 5, 6, 10, 30, 50, 60 s and 64 partitions per					
Regulatory ⁴	• Safety : UL, BSMI,	CB, EAC ompatibility : CE, BSMI	, FCC, KC				
	Local replication ³	Snapshot Volume copy/mirror	Snapshot images po Snapshot images po Source volumes per Replication pairs per Replication pairs per	Standard license: 64 / advanced license: 256 Standard license: 128 / advanced license: 4096 Standard license: 16 / Advanced License: 32 Standard license: 4 / advanced license: 8 Standard license: 64 / advanced license: 256			
	Thin provisioning	" Just-in-time" cap	acity allocation optimi	zes storage utilizatior	n and eliminates allocated but unused storage spac		
Data comisso	Self-encrypting drive	s Unique factory end			simple and complete		
Data services	Remote Replication ⁶		Replication per source volume: 16 Replication pairs per source volume: 4 Replication pairs per system: 64				
	Automated Storage T	iering ⁶	Two (2) or four (4) storage tiers based on drive types SSD supports Automated data migration with scheduling options				
	SSD Cache (optional license)		SSDs per controller	ller for SSD Cache po :150GB DI	,		
Availability and reliability	Multi-pathing suppor CacheSafe technolog	pable hardware modul t (EonPath), device ma y: protects cached dat gregation (IEEE 802.3a	pper support a during power outage	es by flushing data in ame	to flash memory		
Management	SANWatch managem	ent suite, embedded RA	AIDWatch, terminal vi	a RS-232C, Telnet/SS	SH, LCD keypad panel		
Notification	Email, fax, LAN broa	lcast, SNMP traps, SMS	S				
OS support ²		Server 2008 / 2008 R2 / terprise, Sun Solaris, N			er-V, Red Hat Enterprise XenServer		
	Standard service		ed hardware/software re covered under warr		hone, web, and email support		
Service and Support $^{\mathrm{5}}$	Upgrade/extension op	Advanced s tions Premium se	ervice: 24x7 phone, w (up to 5 years) rvice: 24x7 phone, w	rt dispatch on the next business day (up to 5 years) ce: 24x7 phone, web, and email support + onsite diagnostics on the next business day (up to 5 years) e: 24x7 phone, web, and email support + onsite diagnostics in 4 hours (up to 5 years) ard service up to 5 years			

For the latest compatibility details, refer to our official website for the latest Compatibility Matrix.
 Standard functions come default with EonStor DS systems. Advanced functions are available with optional licenses.

All EonStor DS systems ship with standard service. Extended service terms may vary by region.
 Remote replication and automated storage tiering functions are available with optional license.

Technical Specific	Jalions								
Model name	DS 3012R DS 3012G	DS 3 DS 3		DS 3024R DS 3024G		DS 3024RB DS 3024GB			
Form factor	2U 12-bay LFF	3U 16-I	ay LFF	4U 24-bay LFF	:	2U 24-bay SFF			
Storage controller			Single or dual-redunda	nt					
Host connectivity (per controller)		2 x 16Gb FC ports 4 x 8Gb FC ports 2 x 10Gb iSCSI ports (SFP + or RJ-45) 4 x 1Gb iSCSI ports 2 x 6Gb SAS ports 2 x 12Gb SAS ports							
Onboard GbE ports (per controller)			4 x 1Gb iSCSI ports (Op	otional)					
Cache memory (per controller)			2GB, 4GB, 8GB or 16G	В					
Max drives (per system)	12	16		24		24			
Max drives (via expansion enclosure)	312	316		324		360			
Expansion enclosure (JBOD)	JB 2012-1 JB 2048 JB 2060	JB 2010 JB 2040 JB 2060	3	JB 2016-1 JB 2048 JB 2060		JB 2012-1 JB 2024B JB 2016-1 JB 2048 JB 2060			
SAS expansion ports (per controller)			1 x 6Gb/s SAS 4x wide p	oort					
Cache backup technologies ¹			BBU + Flash module						
Supported drives ²	• 2.5" 10		5" 7200 RPM NL SAS HDE 5" 7200 RPM SATA HDD 5" 15K RPM SAS HDD)		• 2.5" SATA/SAS SSD • 2.5" 10K RPM SAS HDD • 2.5" 15K RPM SAS HDD			
Power & Cooling	Power consumption - DS 3012R: 332 - DS 3012G: 285	Power c - DS 30 - DS 30	ge and Frequency: 100-2 onsumption 16R: 416 16G: 416 sipation(BTU/hour): 1186	Power consum - DS 3024R: 57 - DS 3024G: 50	ption 73	Power consumption - DS 3024RB: 308 - DS 3024GB: 276 Heat dissipation (BTU/hour): 11			
Green design		plies delivering more	than 80% energy efficient						
RAID configurations), 3, 5, 6, 10, 30, 50, es and 64 partitions p							
Regulatory 4	• Safety : UL, BSMI • Electromagnetic C	, CB, EAC ompatibility:CE, BS	MI, FCC, KC						
	Local replication ³	Snapshot	Snapshot images per s Snapshot images per s Source volumes per sy	ystem	Standard license	64 / advanced license: 256 : 128 / advanced license: 4096 : 16 / advanced license: 32			
		Volume copy/mirror	Replication pairs per so Replication pairs per sy			: 4 / advanced license: 8 : 64 / advanced license: 256			
	Thin provisioning "Just-in-time" capacity allocation optimizes storage utilization and eliminates allocated but unused storage space.								
	Self-encrypting drives Unique factory encryption secures data plus makes deletion simple and complete								
Data services	Remote replication ⁶		Replications per source Replication pairs per so Replication pairs per sy	ource volume: 4					
	Automated storage tiering ⁶ Two (2) or four (4) storage tiers based on drive types SSD support Automated data migration with scheduling options								
	SSD Cache (optional license)	 Supports up to fou Recommended DI DRAM:2GB Ma 	access for random read-i ır SSDs per controller VM capacity per controlle x. SSD Cache Pool Size:1 x. SSD Cache Pool Size: 8	er for SSD Cache 50GB	pool: DRAM:4GB Max	P . SSD Cache Pool Size: 400GB . SSD Cache Pool Size: 1,600GI			
Availability and reliability	Multi-pathing suppo CacheSafe technolo				into flash memory				
Management	SANWatch manager	nent suite, embedded	RAIDWatch, terminal via I	RS-232C, Telnet/	SSH, LCD keypad p	anel			
Notification	Email, fax, LAN broa	dcast, SNMP traps, S	MS						
OS support ²			2 / 2012 / 2012 R2, Micro , Mac OS X, HP-UX, IBM A			rprise			
	Standard service	3-year lim	ted hardware/software w are covered under warran	arranty and 8x5 p		ail support			
Service and Support $^{\rm S}$	Upgrade/extension o	otions Advanced Premium s	(up to 5 years)	b, and email supp), and email supp	oort + onsite diagn	ostics on the next business day stics in 4 hours (up to 5 years)			

4. Check with your local sales representative for complete details.5. All EonStor DS systems ship with standard service. Extended service terms may vary by region.6. Remote replication and automated storage tiering functions are available with optional license.

EonStor DS 3000G models: BBU + flash module optional and not included by default.
 For the latest compatibility details, refer to our official website for the latest Compatibility Matrix.
 Standard functions come default with EonStor DS systems. Advanced functions are available with optional licenses.

Technical Specifications



	Model name	DS 3048R DS 3048G				DS 3060R					
	Farm factor	4U 48-bay LFF			DS 3060G						
Stor	Form factor					4U 60-bay LFF or dual-redundant					
Host connectivity (p	-	2 x 16Gb FC ports 4 x 8Gb FC ports 2 x 10Gb iSCSI ports (SFP + or RJ-45) 4 x 1Gb iSCSI ports 2 x 6Gb SAS ports 2 x 12Gb SAS ports 2 x 12Gb SAS ports									
Onboard GbE ports (p	er controller)				1Gb iSCSI ports						
Cache memory (p	er controller)		2 x 160 16051 ports 2GB, 4GB, 8GB or 16GB								
Max drives	(per system)	48				6	0				
Max drives (via expansion	on enclosure)	336				3	60				
Expansion encl	osure (JBOD)	JB 2048				JI	B 2060				
SAS expansion ports (p	er controller)			1 x	6Gb/s SAS 4x wid	e port					
Cache backup te	echnologies ¹				BBU + Flash mod						
Supț	ported drives ²	• 2	2.5" SAS SSI 2.5" SATA SS 2.5" 10K RPI	D (DS 3048G	/3060G only)	• 3.5" 7	• 2.5" 15K RPM SAS HDD • 3.5" 7200 RPM NL SAS HDD • 3.5" 7200 RPM SATA HDD (DS 3048G/3060G only)				
		Power supply: Th Voltage and Frequ		240VAC, 47-63	3Hz		11.5	wo redundant 1600W Juency: 200-240VAC			
Pov	wer & Cooling	Power consumpt - DS 3048R: 775 - DS 3048G: 645 Heat dissipation(2938		- -	ower consump DS 3060R: 977 DS 3060G: 891 eat dissipation	,			
	Green design	Intelligent multi-l	evel drive sp	oin-down	an 80% energy eff	ciency					
RAID co	onfigurations	RAID level 0, 1 (0+1), 3, 5, 6, 10, 30, 50, 60 Up to 32 logical drives and 64 partitions per logical volume Up to 2048 LUNs									
	Regulatory ⁴	 Safety : UL, BS Electromagneti 			I. FCC. KC						
			Snapsho		Snapshot images per source volume Snapshot images per system		Standard license: 64 / advanced license: 25 Standard License: 128 / advanced license: 4				
		Local replication [°]	Volume	copy/mirror	Source volumes per system Replication pairs per source volume Replication pairs per system		Standard license: 16 / advanced license: 32 Standard license: 4 / advanced license: 8 Standard license: 64 / advanced license: 25				
		Thin provisioning "Just-in-time" capacity allocation optimizes storage utilization and eliminates allocated						cated but unused storage			
		Self-encrypting of	drives Uni	que factory en				n simple and comple	te		
U	ata services	Remote replication ⁶			Replications per source volume: 16 Replication pairs per source volume: 4 Replication pairs per system: 64						
		Automated storage tiering ⁶			Two (2) or four (4) storage tiers based on drive types SSD support Automated data migration with scheduling options						
		SSD Cache (optional license)	 Accelerating data access for random read-intensive environments, such as OLTP Supports up to four SSDs per controller Recommended DIMM capacity per controller for SSD Cache pool: DRAM:2GB Max. SSD Cache Pool Size:150GB DRAM:4GB Max. SSD Cache Pool Size: DRAM:8GB Max. SSD Cache Pool Size: 800GB DRAM:16GB Max. SSD Cache Pool Size: 								
Availability a	nd reliability		oport (EonPa ology: prote	ith), device ma cts cached dat			flushing data ir	nto flash memory			
	Vanagement	SANWatch management suite, embedded RAIDWatch, terminal via RS-232C, Telnet/SSH, LCD keypad panel						el			
	Notification	Email, fax, LAN b	roadcast, SN	IMP traps, SM	IS						
	OS support ²			, Sun Solaris, I	Mac OS X, HP-UX,	IBM AIX,	VMware, Citrix				
Service and Support $^{\rm 5}$		Standard Service 3-year limited hardware/software warranty and 8x5 phone, web, and email support (Batteries are covered under warranty for 2 years)									
		Advanced se Upgrade/extension Options Premium ser			t part dispatch on the next business day (up to 5 years) ervice: 24x7 phone, web, and email support + onsite diagnostics on the next business d (up to 5 years) rvice: 24x7 phone, web, and email support + onsite diagnostics in 4 hours (up to 5 years) and and service up to 5 years						
 EonStor DS 3000G models: For the latest compatibility d Standard functions come de optional licenses. 	letails, refer to our c fault with EonStor E	official website for the OS systems. Advanced	latest Compat d functions are	ult. tibility Matrix. e available with	4. Check v 5. All Eon 6. Remote	vith your lo Stor DS sys replicatior	cal sales represe tems ship with st and automated s	storage tiering functions	ed service terms may vary by are available with optional lic		
n and specification declared	-			-							
	Asia Desifie (T	inoi Taiwan) C	hina (Beijing, G	China)	Japan (Tokyo, Ja	ipan)	America	S (Sunnyvale, CA, USA)	EMEA (Basingstoke, UK		
Infortrend	Asia Pacific (Ta Infortrend Tec Tel: +886-2-2226-0	hnology, Inc. Ir		chnology, Ltd.	Tel:+81-3-5730-65	an, Inc.		nd Corporation	Tel:+44-1256-305-220		

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