Compatibility Matrix

Ultrastar® Data60

Firmware 3010-007

D018-000235-000

Revision 07

November 2022

The Western Digital System Integration Lab tested the Ultrastar Data60 for the following hardware components and operating systems to demonstrate functional compatibility. Other combinations of hardware and software are expected to function with this product family but have not been evaluated.

Newly qualified device models are listed by category on the right. To use this document, click on the provided link to be taken to a detailed listing of the compatibility information for that specific device type. Or scroll down to view details for all tested devices.

HBAs & RAID Adapters

- Adaptec 1100-8e
- Areca ARC-1886-8x, 1883x
- ATTO ExpressSAS H1280GT
- Broadcom 9300-8e, -4i4e, -16e
- Broadcom 9302-16e
- Broadcom 9305-16e
- Broadcom MegaRAID 9380-8e
- Broadcom 9400-16e, -8i8e, -8e
- Broadcom 9405w-16e
- Broadcom MegaRAID 9480-8i8e
- Broadcom 9500-8e, -16e
- Broadcom MegaRAID 9580-8i8e
- QNAP QXP-820S-B3408, QXP-1620S-B3616W

Drives

- Ultrastar DC HC550
- Ultrastar DC HC560
- Ultrastar DC HC570
- Ultrastar DC HC650

Cables

- Molex 106415-2103
- CS Electronics 12G-HD-4444/2M
- The Mate Company (TMC) C5555-2M
- Amphenol ICC (FCI) 601760008

1.1 HBA Compatibility

Adaptec 1100-8e

Table 1: Adaptec 1100-8e Interoperability Notes

	Linux	Windows
BIOS	N/A	N/A
Firmware	2.10[0]	2.10[0]
Driver	1.2.4.065	106.84.2.64
Operating System Support		
Microsoft® Windows	**2016** R1 x64 Server	Supported
	2019 R1 x64 Server	Supported
CentOS/RedHat® Enterprise Linux (RHEL)	**7.6** (x86_64) Kernel: 3.10.0-957	Not Supported
	8.0 (x86_64) Kernel: 4.18.0-80	Not Supported
	8.2 (x86_64) Kernel: 4.18.0-193	Not Supported
	8.3 (x86_64) Kernel: 4.18.0-240	Not Supported
	8.4 (x86_64) Kernel: 4.18.0-305	Not Supported
Ubuntu® Server	**16.04** Kernel: 4.4	Not Supported
	18.04 Kernel: 4.15	Not Supported
	20.04 Kernel: 5.4	Not Supported
Debian GNU/Linux	**9.8** Kernel: 4.9	Not Supported
	10 Kernel: 4.19	Not Supported
	11 Kernel: 5.10	Not Supported

Areca ARC-1886-8x, 1883x

Table 2: Areca ARC-1886-8x, 1883x Interoperability Notes

	Linux	Windows
BIOS	N/A	N/A
Firmware	1.58	1.58
Driver	1.50.0X.07	6.20.00.38
Operating System Support		
Microsoft® Windows	**2016** R1 x64 Server	Not Supported
	2019 R1 x64 Server	Supported
CentOS/RedHat® Enterprise Linux (RHEL)	**7.6** (x86_64) Kernel: 3.10.0-957	Not Supported
	8.0 (x86_64) Kernel: 4.18.0-80	Not Supported
	8.2 (x86_64) Kernel: 4.18.0-193	Not Supported
	8.3 (x86_64) Kernel: 4.18.0-240	Not Supported
	8.4 (x86_64) Kernel: 4.18.0-305	Supported
Ubuntu® Server	**16.04** Kernel: 4.4	Not Supported
	18.04 Kernel: 4.15	Not Supported
	20.04 Kernel: 5.4	Not Supported
Debian GNU/Linux	**8.10** Kernel: 3.16	Not Supported
	9.6 Kernel: 4.9	Not Supported
	9.8 Kernel: 4.9	Not Supported

ATTO ExpressSAS® H1280GT

Table 3: ATTO ExpressSAS H1280GT Interoperability Notes

	Linux		Windows
BIOS	N/A		N/A
Firmware	FW version: 19.0.0.0 (14) Flash version: 2021_06_15		FW version: 19.0.0.0 (14) Flash version: 2021_06_15
Driver	1.02 (Full version: 1.02.0f1)		1.02 (Full version: 1.02.0f1)
Operating System Support			
Microsoft® Windows	**2016** R1 x64 Server		Not Supported
	2019 R1 x64 Server		Supported
CentOS/RedHat® Enterprise Linux (RHEL)	**7.6** (x86_64) Kernel: 3.10.0-957		Not Supported
	8.0 (x86_64) Kernel: 4.18.0-80		Not Supported
	8.2 (x86_64) Kernel: 4.18.0-193		Not Supported
	8.3 (x86_64) Kernel: 4.18.0-240		Supported
	8.4 (x86_64) Kernel: 4.18.0-305		Supported
Ubuntu® Server	**16.04** Kernel: 4.4		Not Supported
	18.04 Kernel: 4.15		Not Supported
	20.04 Kernel: 5.4		Not Supported
Debian GNU/Linux	**8.10** Kernel: 3.16		Not Supported
	9.6 Kernel: 4.9		Not Supported
	9.8 Kernel: 4.9		Not Supported

Note: As per the design of this adapter, disabling or resetting the PHYs connected from the expander/IOM to the adapter will cause the enclosure's drives to be dropped (unable to be discovered). Rebooting the enclosure or the attached host will allow the drives to be discovered again.

Broadcom 9300-8e, -4i4e, -16e

Table 4: Broadcom 9300-8e, -4i4e, -16e Interoperability Notes

	Linux	Windows
BIOS	08.37.00.00	08.37.00.00
Firmware	16.00.11.00	16.00.11.00
Driver	26.00.00.00-1 **CentOS/RHEL 8.0, 8.2, 8.3, 8.4**: 41.00.00.00-1	2.51.27.01

Operating System Support		
Microsoft® Windows	**2016** R1 x64 Server	Supported
	2019 R1 x64 Server	Supported
CentOS/RedHat® Enterprise Linux (RHEL)	**7.6** (x86_64) Kernel: 3.10.0-957	Supported
	8.0 (x86_64) Kernel: 4.18.0-80	Supported
	8.2 (x86_64) Kernel: 4.18.0-193	Supported
	8.3 (x86_64) Kernel: 4.18.0-240	Supported
	8.4 (x86_64) Kernel: 4.18.0-305	Supported
Ubuntu® Server	**16.04** Kernel: 4.4	Supported
	18.04 Kernel: 4.15	Supported
	20.04 Kernel: 5.4	Supported
Debian GNU/Linux	**9.8** Kernel: 4.9	Supported
	10 Kernel: 4.19	Supported
	11 Kernel: 5.10	Supported

Note: Using ScrutinyCLI (version 32 or later), changing the `Task Management Reset Type` on the HBA(s) from `Target Reset` to `I_T Nexus Reset` will increase the responsiveness of the topology during the event of a cable pull, IOM/ESM reset, or drive pull. See https://support-en.westerndigital.com/app/answers/detail/a_id/32058 for more details.

Important: Active Optical SAS cable support is limited to Broadcom 9300-, 9302-, and 9305-series HBAs.

Broadcom 9302-16e

Table 5: Broadcom 9302-16e Interoperability Notes

	Linux	Windows
BIOS	08.37.00.00	08.37.00.00
Firmware	16.00.11.00	16.00.11.00
Driver	26.00.00.00-1	2.51.26.00
Operating System Support		
Microsoft® Windows	**2016** R1 x64 Server	Supported
	2019 R1 x64 Server	Supported
CentOS/RedHat® Enterprise Linux (RHEL)	**7.6** (x86_64) Kernel: 3.10.0-957	Supported
	8.0 (x86_64) Kernel: 4.18.0-80	Supported
	8.2 (x86_64) Kernel: 4.18.0-193	Supported
	8.3 (x86_64) Kernel: 4.18.0-240	Supported
	8.4 (x86_64) Kernel: 4.18.0-305	Supported
Ubuntu® Server	**16.04** Kernel: 4.4	Supported
	18.04 Kernel: 4.15	Supported
	20.04 Kernel: 5.4	Supported
Debian GNU/Linux	**9.8** Kernel: 4.9	Not Supported
	10 Kernel: 4.19	Not Supported
	11 Kernel: 5.10	Not Supported

Note: Using ScrutinyCLI (version 32 or later), changing the `Task Management Reset Type` on the HBA(s) from `Target Reset` to `I_T Nexus Reset` will increase the responsiveness of the topology during the event of a cable pull, IOM/ESM reset, or drive pull. See https://support-en.westerndigital.com/app/answers/detail/a_id/32058 for more details.

Important: Active Optical SAS cable support is limited to Broadcom 9300-, 9302-, and 9305-series HBAs.

Broadcom 9305-16e

Table 6: Broadcom 9305-16e Interoperability Notes

	Linux	Windows
BIOS	08.37.00.00	08.37.00.00
Firmware	16.00.12.00	16.00.12.00
Driver	26.00.00.00-1	2.51.24.00
Operating System Support		
Microsoft® Windows	**2016** R1 x64 Server	Supported
	2019 R1 x64 Server	Supported
CentOS/RedHat® Enterprise Linux (RHEL)	**7.6** (x86_64) Kernel: 3.10.0-957	Supported
	8.0 (x86_64) Kernel: 4.18.0-80	Supported
	8.2 (x86_64) Kernel: 4.18.0-193	Supported
	8.3 (x86_64) Kernel: 4.18.0-240	Supported
	8.4 (x86_64) Kernel: 4.18.0-305	Supported
Ubuntu® Server	**16.04** Kernel: 4.4	Supported
	18.04 Kernel: 4.15	Supported
	20.04 Kernel: 5.4	Supported
Debian GNU/Linux	**9.8** Kernel: 4.9	Not Supported
	10 Kernel: 4.19	Not Supported
	11 Kernel: 5.10	Not Supported

Note: Using ScrutinyCLI (version 32 or later), changing the `Task Management Reset Type` on the HBA(s) from `Target Reset` to `I_T Nexus Reset` will increase the responsiveness of the topology during the event of a cable pull, IOM/ESM reset, or drive pull. See https://support-en.westerndigital.com/app/answers/detail/a_id/32058 for more details.

Important: Active Optical SAS cable support is limited to Broadcom 9300-, 9302-, and 9305-series HBAs.

Broadcom MegaRAID 9380-8e

Table 7: Broadcom MegaRAID 9380-8e Interoperability Notes

	Linux	Windows
BIOS	N/A	N/A
Firmware	24.21.0-0148	24.21.0-0148
Driver	07.719.04.00-1	06.714.18.00
Operating System Support		
Microsoft® Windows	**2016** R1 x64 Server	Supported
	2019 R1 x64 Server	Supported
CentOS/RedHat® Enterprise Linux (RHEL)	**7.6** (x86_64) Kernel: 3.10.0-957	Supported
	8.0 (x86_64) Kernel: 4.18.0-80	Supported
	8.2 (x86_64) Kernel: 4.18.0-193	Supported
	8.3 (x86_64) Kernel: 4.18.0-240	Supported
	8.4 (x86_64) Kernel: 4.18.0-305	Supported
Ubuntu® Server	**16.04** Kernel: 4.4	Supported
	18.04 Kernel: 4.15	Supported
	20.04 Kernel: 5.4	Supported
Debian GNU/Linux	**9.8** Kernel: 4.9	Not Supported
	10 Kernel: 4.19	Not Supported
	11 Kernel: 5.10	Not Supported

Broadcom 9400-16e, -8i8e, -8e

Table 8: Broadcom 9400-16e, -8i8e, -8e Interoperability Notes

	Linux	Windows
BIOS	09.23.00.00	09.23.00.00
Firmware	22.00.00.00	22.00.00.00
Driver	41.00.00.00-1	2.61.41.00
Operating System Support		
Microsoft® Windows	**2016** R1 x64 Server	Supported
	2019 R1 x64 Server	Supported
CentOS/RedHat® Enterprise Linux (RHEL)	**7.6** (x86_64) Kernel: 3.10.0-957	Supported
	8.0 (x86_64) Kernel: 4.18.0-80	Supported
	8.2 (x86_64) Kernel: 4.18.0-193	Supported
	8.3 (x86_64) Kernel: 4.18.0-240	Supported
	8.4 (x86_64) Kernel: 4.18.0-305	Supported
Ubuntu® Server	**16.04** Kernel: 4.4	Supported
	18.04 Kernel: 4.15	Supported
	20.04 Kernel: 5.4	Supported
Debian GNU/Linux	**9.8** Kernel: 4.9	Not Supported
	10 Kernel: 4.19	Supported
	11 Kernel: 5.10	Supported

Note: Using ScrutinyCLI (version 32 or later), changing the `Task Management Reset Type` on the HBA(s) from `Target Reset` to `I_T Nexus Reset` will increase the responsiveness of the topology during the event of a cable pull, IOM/ESM reset, or drive pull. See https://support-en.westerndigital.com/app/answers/detail/a_id/32058 for more details.

Broadcom 9405w-16e

Table 9: Broadcom 9405w-16e Interoperability Notes

	Linux	Windows
BIOS	09.23.00.00	09.23.00.00
Firmware	22.00.00.00	22.00.00.00
Driver	41.00.00.00-1	2.61.41.00
Operating System Support		
Microsoft® Windows	**2016** R1 x64 Server	Supported
	2019 R1 x64 Server	Supported
CentOS/RedHat® Enterprise Linux (RHEL)	**7.6** (x86_64) Kernel: 3.10.0-957	Supported
	8.0 (x86_64) Kernel: 4.18.0-80	Supported
	8.2 (x86_64) Kernel: 4.18.0-193	Supported
	8.3 (x86_64) Kernel: 4.18.0-240	Supported
	8.4 (x86_64) Kernel: 4.18.0-305	Supported
Ubuntu® Server	**16.04** Kernel: 4.4	Supported
	18.04 Kernel: 4.15	Supported
	20.04 Kernel: 5.4	Supported
Debian GNU/Linux	**9.8** Kernel: 4.9	Not Supported
	10 Kernel: 4.19	Not Supported
	11 Kernel: 5.10	Not Supported

Note: Using ScrutinyCLI (version 32 or later), changing the `Task Management Reset Type` on the HBA(s) from `Target Reset` to `I_T Nexus Reset` will increase the responsiveness of the topology during the event of a cable pull, IOM/ESM reset, or drive pull. See https://support-en.westerndigital.com/app/answers/detail/a_id/32058 for more details.

Broadcom MegaRAID 9480-8i8e

Table 10: Broadcom MegaRAID 9480-8i8e Interoperability Notes

	Linux	Windows
BIOS	N/A	N/A
Firmware	51.19.0-4234	51.19.0-4234
Driver	07.719.04.00-1	7.719.06.00
Operating System Support		
Microsoft® Windows	**2016** R1 x64 Server	Supported
	2019 R1 x64 Server	Supported
CentOS/RedHat® Enterprise Linux (RHEL)	**7.6** (x86_64) Kernel: 3.10.0-957	Supported
	8.0 (x86_64) Kernel: 4.18.0-80	Supported
	8.2 (x86_64) Kernel: 4.18.0-193	Supported
	8.3 (x86_64) Kernel: 4.18.0-240	Supported
	8.4 (x86_64) Kernel: 4.18.0-305	Supported
Ubuntu® Server	**16.04** Kernel: 4.4	Supported
	18.04 Kernel: 4.15	Supported
	20.04 Kernel: 5.4	Supported
Debian GNU/Linux	**9.8** Kernel: 4.9	Not Supported
	10 Kernel: 4.19	Not Supported
	11 Kernel: 5.10	Not Supported

Broadcom 9500-8e, -16e

Table 11: Broadcom 9500-8e, -16e Interoperability Notes

	Linux	Windows
BIOS	N/A	N/A
Firmware	22.00.00.00	22.00.00.00
Driver	41.00.00.00-1	2.61.41.00
Operating System Support		
Microsoft® Windows	**2016** R1 x64 Server	Not Supported
	2019 R1 x64 Server	Supported
CentOS/RedHat® Enterprise Linux (RHEL)	**7.6** (x86_64) Kernel: 3.10.0-957	Supported
	8.0 (x86_64) Kernel: 4.18.0-80	Supported
	8.2 (x86_64) Kernel: 4.18.0-193	Supported
	8.3 (x86_64) Kernel: 4.18.0-240	Supported
	8.4 (x86_64) Kernel: 4.18.0-305	Supported
Ubuntu® Server	**16.04** Kernel: 4.4	Supported
	18.04 Kernel: 4.15	Supported
	20.04 Kernel: 5.4	Supported
Debian GNU/Linux	**9.8** Kernel: 4.9	Not Supported
	10 Kernel: 4.19	Not Supported
	11 Kernel: 5.10	Not Supported

Note: Using ScrutinyCLI (version 32 or later), changing the `Task Management Reset Type` on the HBA(s) from `Target Reset` to `I_T Nexus Reset` will increase the responsiveness of the topology during the event of a cable pull, IOM/ESM reset, or drive pull. See https://support-en.westerndigital.com/app/answers/detail/a_id/32058 for more details.

Broadcom MegaRAID 9580-8i8e

Table 12: Broadcom MegaRAID 9580-8i8e Interoperability Notes

	Linux	Windows
BIOS	N/A	N/A
Firmware	52.19.0-4233	52.19.0-4233
Driver	07.719.04.00-1	7.719.06.00
Operating System Support		
Microsoft® Windows	**2016** R1 x64 Server	Not Supported
	2019 R1 x64 Server	Supported
CentOS/RedHat® Enterprise Linux (RHEL)	**7.6** (x86_64) Kernel: 3.10.0-957	Supported
	8.0 (x86_64) Kernel: 4.18.0-80	Supported
	8.2 (x86_64) Kernel: 4.18.0-193	Supported
	8.3 (x86_64) Kernel: 4.18.0-240	Supported
	8.4 (x86_64) Kernel: 4.18.0-305	Supported
Ubuntu® Server	**16.04** Kernel: 4.4	Supported
	18.04 Kernel: 4.15	Supported
	20.04 Kernel: 5.4	Supported
Debian GNU/Linux	**9.8** Kernel: 4.9	Not Supported
	10 Kernel: 4.19	Not Supported
	11 Kernel: 5.10	Not Supported

QNAP QXP-820S-B3408, QXP-1620S-B3616

Table 13: QNAP QXP-820S-B3408, QXP-1620S-B3616W Interoperability Notes

	Linux	Windows
BIOS	N/A	N/A
Firmware	18.00.00.00	N/A
Driver	41.00.00.00	N/A
Operating System Support		
Microsoft® Windows	**2016** R1 x64 Server	Not Supported
	2019 R1 x64 Server	Not Supported
CentOS/RedHat® Enterprise Linux (RHEL)	**7.6** (x86_64) Kernel: 3.10.0-957	Not Supported
	8.0 (x86_64) Kernel: 4.18.0-80	Not Supported
	8.2 (x86_64) Kernel: 4.18.0-193	Not Supported
	8.3 (x86_64) Kernel: 4.18.0-240	Not Supported
	8.4 (x86_64) Kernel: 4.18.0-305	Not Supported
Ubuntu® Server	**16.04** Kernel: 4.4	Not Supported
	18.04 Kernel: 4.15	Supported
	20.04 Kernel: 5.4	Not Supported
Debian GNU/Linux	**9.8** Kernel: 4.9	Not Supported
	10 Kernel: 4.19	Not Supported
	11 Kernel: 5.10	Not Supported

1.2 Cable Compatibility

Active Cables

Active cables can be used for both direct (host-to-enclosure) and daisy-chain (enclosure-to-enclosure) connections.

Important: Active Optical SAS cable support is limited to Broadcom 9300-, 9302-, and 9305-series HBAs.

Note: MegaRAID adapters do not support the use of active SAS cables. If your configuration requires the use of MegaRAID adapters, passive cables must be used.

Table 14: Approved Active Optical HD Mini-SAS to HD Mini-SAS Cables

Length	Manufacturer	Vendor Part Number
3m	Amphenol ICC (FCI)	FOHHB23P00003[1]
	Molex	106415-2103
4m	Amphenol ICC (FCI)	FOHHB23P00004
5m	Amphenol ICC (FCI)	FOHHB23P00005
	Molex	106415-2105
6m	Amphenol ICC (FCI)	FOHHB23P00006
10m	Molex	106415-2110

Passive Cables

Passive cables should only be used for direct (host-to-enclosure) connections.

Table 15: Approved Passive HD Mini-SAS to HD Mini-SAS Cables

Length	Manufacturer	Vendor Part Number
2m	Amphenol ICC (FCI)	601760006
		10117949-2020LF
	CS Electronics	12G-HD-4444/2M
	Data Storage Cables (DSC)	C5555-2M
	Molex	1110751002
	The Mate Company (TMC)	C5555-2M

1. Listed FOHHB23P00xxx cables are compatible, beginning with FW 2052-003.

Length	Manufacturer	Vendor Part Number
3m	Amphenol ICC (FCI)	601760008
		10117949-4030LF
	CS Electronics	12G-HD-4444/3M
	Molex	1110751003

1.3 Drive Compatibility

Ultrastar DC HC310, 6TB HDD with 3.5" Drive Carrier

Table 16: DC HC310 Part / Model Numbers

Sector Size	SATA		SAS		
	SE	TCG	SE	TCG	TCG-FIPS
512e	1EX1189 / HUS726T6TAL-E604	1EX1188 / HUS726T6TAL-E601	1EX1185 / HUS726T6TAL-5204	1EX1184 / HUS726T6TAL-5201	1EX1853 / HUS726T6TAL-5205
4Kn	1EX1187 / HUS726T6TAL-N604	1EX1186 / HUS726T6TAL-N601	1EX1183 / HUS726T6TAL-4204	1EX1182 / HUS726T6TAL-4201	1EX1852 / HUS726T6TAL-4205

Ultrastar DC HC320, 8TB HDD with 3.5" Drive Carrier

Table 17: DC HC320 Part / Model Numbers

Sector Size	SATA			SAS		
	SE	SED	TCG	SE	TCG	TCG-FIPS
512e	1EX1227 / HUS728T8TAL-E604	1EX1226 / HUS728T8TAL-E601		1EX1223 / HUS728T8TAL-5204	1EX1222 / HUS728T8TAL-5201	1EX1343 / HUS728T8TAL-5205
4Kn	1EX1225 / HUS728T8TAL-N604		1EX1224 / HUS728T8TAL-N601	1EX1221 / HUS728T8TAL-4204	1EX1220 / HUS728T8TAL-4201	1EX1342 / HUS728T8TAL-4205

Ultrastar DC HC330, 10TB HDD with 3.5" Drive Carrier

Table 18: DC HC330 Part / Model Numbers

Sector Size	SATA		SAS		
	SE	SED	SE	TCG	TCG-FIPS
512e	1EX2440 / WUS721010AL-E604	1EX2441 / WUS721010AL-E601	1EX2435 / WUS721010AL-5204	1EX2436 / WUS721010AL-5201	1EX2437 / WUS721010AL-5205
4Kn	1EX2438 / WUS721010AL-N604	1EX2439 / WUS721010AL-N601	1EX2432 / WUS721010AL-4204	1EX2433 / WUS721010AL-4201	1EX2434 / WUS721010AL-4205

Ultrastar DC HC510, 10TB HDD with 3.5" Drive Carrier

Table 19: DC HC510 Part / Model Numbers

Sector Size	SATA			SAS			
	SE	ISE	SED	SE	ISE	TCG	TCG-FIPS
512e	1EX0499 / HUH721010AL-E604	1EX0497 / HUH721010AL-E600	1EX0498 / HUH721010AL-E601	1EX0487 / HUH721010AL-5204	1EX0485 / HUH721010AL-5200	1EX0486 / HUH721010AL-5201	1EX1341 / HUH721010AL-5205
4Kn	1EX0496 / HUH721010AL-N604	1EX0494 / HUH721010AL-N600	1EX0495 / HUH721010AL-N601	1EX0484 / HUH721010AL-4204	1EX0482 / HUH721010AL-4200	1EX0483 / HUH721010AL-4201	1EX1340 / HUH721010AL-4205

Ultrastar DC HC520, 12TB HDD with 3.5" Drive Carrier

Table 20: DC HC520 Part / Model Numbers

Sector Size	SATA			SAS			
	SE	ISE	SED	SE	ISE	TCG	TCG-FIPS
512e	1EX1015 / HUH721212AL-E604	1EX1013 / HUH721212AL-E600	1EX1014 / HUH721212AL-E601	1EX1009 / HUH721212AL-5204	1EX1007 / HUH721212AL-5200	1EX1008 / HUH721212AL-5201	1EX1338 / HUH721212AL-5205
4Kn	1EX1012 / HUH721212AL-N604	1EX1010 / HUH721212AL-N600	1EX1011 / HUH721212AL-N601	1EX1006 / HUH721212AL-4204	1EX1004 / HUH721212AL-4200	1EX1005 / HUH721212AL-4201	1EX1339 / HUH721212AL-4205

Ultrastar DC HC530, 14TB HDD with 3.5" Drive Carrier

Table 21: DC HC530 Part / Model Numbers

Sector Size	SATA		SAS			
	SE	SED	SE	ISE	TCG	TCG-FIPS
512e	1EX1793 / WUH721414AL-E604	1EX1794 / WUH721414AL-E6L1	1EX1791 / WUH721414AL-5204	1EX1583 / WUH721414AL-5200	1EX1792 / WUH721414AL-5201	1EX1855 / WUH721414AL-5205
4Kn	1EX1790 / WUH721414AL-N604		1EX1788 / WUH721414AL-4204		1EX1789 / WUH721414AL-4201	1EX1854 / WUH721414AL-4205

Ultrastar DC HC550, 16TB HDD with 3.5" Drive Carrier

Table 22: DC HC550 Part / Model Numbers

Sector Size	SATA		SAS		
	SE	SED	SE	TCG	TCG-FIPS
512e	1EX2476 / WUH721816AL-E604	1EX2477 / WUH721816AL-E601	1EX2473 / WUH721816AL-5204	1EX2474 / WUH721816AL-5201	1EX2475 / WUH721816AL-5205

Ultrastar DC HC550, 18TB HDD with 3.5" Drive Carrier

Table 23: DC HC550 Part / Model Numbers

Sector Size	SATA		SAS		
	SE	SED	SE	TCG	TCG-FIPS
512e	1EX2481 / WUH721818AL-E604	1EX2482 / WUH721818AL-E601	1EX2478 / WUH721818AL-5204	1EX2479 / WUH721818AL-5201	1EX2480 / WUH721818AL-5205

Ultrastar DC HC560, 20TB HDD with 3.5" Drive Carrier

Table 24: DC HC560 Part / Model Numbers

Sector Size	SATA		SAS	
	SE	SED	SE	TCG
512e	1EX2909 / WUH722020BL-E604	1EX2910 / WUH722020BL-E601	1EX2906 / WUH722020BL-5204	1EX2907 / WUH722020BL-5201

Ultrastar DC HC570, 22TB HDD with 3.5" Drive Carrier

Table 25: DC HC570 Part / Model Numbers

Sector Size	SATA		SAS	
	SE	SED	SE	TCG
512e	1EX2966/ WUH722222AL-E604	1EX2967/ WUH722222AL-E601	1EX2963/ WUH722222AL-5204	1EX2964/ WUH722222AL-5201

Ultrastar DC HC650, 20TB HDD with 3.5" Drive Carrier

Table 26: DC HC650 Part / Model Numbers

Sector Size	SATA		SAS	
	SE	SED	SE	TCG
4Kn	1EX2719 / WSH722020AL-N604	1EX2720 / WSH722020AL-N601	1EX2716 / WSH722020AL-4204	1EX2717 / WSH722020AL-4201

Caution: Ultrastar DC HC650 drives are only compatible with the OSs and HBAs listed in the following table:

OS	Kernel	HBA	HBA FW	HBA Driver
Ubuntu 18.04	4.15.0-76-generic	9400-8e	15.00.01.00	34.00.00.00
		9405-16e		
Ubuntu 20.04	5.4.0-47-generic	9400-8e		
		9405-16e		

1.4 nTAA SKUs for Fully Populated Configurations

Table 27: Fully Populated Configurations

Capacity	Drive Type	Sector Size	SATA			SAS			
			SE	SED	ISE	SE	ISE	TCG	TCG-FIPS
1320TB	HC570	512e	1ES2203	1ES2204		1ES2063		1ES2198	
1200TB	HC560	512e	1ES2135	1ES2136		1ES2143		1ES2144	
1080TB	HC550	512e	1ES1871	1ES1872		1ES1865		1ES1866	
960TB	HC550	512e	1ES1881	1ES1882		1ES1875		1ES1876	
840TB	HC530	512e	1ES1466	1ES1467		1ES1464		1ES1465	1ES1947
		4Kn	1ES1463			1ES1461		1ES1462	
720TB	HC520	512e	1ES0370		1ES0368	1ES0364	1ES0362	1ES0363	
		4Kn	1ES0367		1ES0365	1ES0361	1ES0359	1ES0360	
600TB	HC330	512e	1ES1835	1ES1834		1ES1827		1ES1822	
		4Kn	1ES1836	1ES1837		1ES1824		1ES1825	
480TB	HC320	512e	1ES1241	1ES1240		1ES1237		1ES1236	
		4Kn	1ES1239	1ES1238		1ES1235		1ES1234	
360TB	HC320	512e	1ES1164	1ES1163		1ES1160		1ES1159	
		4Kn	1ES1162	1ES1161		1ES1158		1ES1157	
240TB	HC310	512e				1ES1645		1ES1646	1ES1647
		4Kn				1ES1560		1ES1643	1ES1644

1.5 nTAA SKUs for Partially Populated Configurations

Table 28: Partially Populated Configurations

Capacity	Drive Type	Sector Size	SATA			SAS			
			SE	SED	ISE	SE	ISE	TCG	TCG-FIPS
528TB	HC570	512e	1ES2205	1ES2206		1ES2200		1ES2201	
480TB	HC560	512e	1ES2146	1ES2147		1ES2148		1ES2149	
432TB	HC550	512e	1ES1873	1ES1874		1ES1868		1ES1869	
384TB	HC550	512e	1ES1883	1ES1884		1ES1878		1ES1879	
336TB	HC530	512e	1ES1473	1ES1474		1ES1471		1ES1472	1ES1948
		4Kn	1ES1470			1ES1468		1ES1469	
288TB	HC520	512e	1ES0400		1ES0398	1ES0394	1ES0392	1ES0393	
		4Kn	1ES0397		1ES0395	1ES0391	1ES0389	1ES0390	
240TB	HC330	512e	1ES1838	1ES1839		1ES1828		1ES1829	
		4Kn	1ES1840	1ES1841		1ES1831		1ES1832	
192TB	HC320	512e	1ES1249	1ES1248		1ES1245		1ES1244	
		4Kn	1ES1247	1ES1246		1ES1243		1ES1242	
144TB	HC310	512e	1ES1173	1ES1172		1ES1169		1ES1168	
		4Kn	1ES1171	1ES1170		1ES1167		1ES1166	
96TB	HC310	512e				1ES1651		1ES1652	1ES1653
		4Kn				1ES1648		1ES1649	1ES1650

1.6 TAA SKUs for Fully Populated Configurations

Table 29: Fully Populated Configurations

Capacity	Drive Type	Sector Size	SATA			SAS			
			SE	SED	ISE	SE	ISE	TCG	TCG-FIPS
1320TB	HC570	512e	1ES2223	1ES2209		1ES2224		1ES2207	
1200TB	HC560	512e	1ES2225	1ES2183		1ES2226		1ES2181	
1080TB	HC550	512e	1ES2227	1ES2098		1ES2228		1ES2096	1ES2097
960TB	HC550	512e	1ES2229	1ES2095		1ES2230		1ES2093	1ES2094
840TB	HC530	512e	1ES2231	1ES2092		1ES2232		1ES2090	1ES2091
720TB	HC520	512e	1ES2233	1ES2127		1ES2234		1ES2124	1ES2125

1.7 nTAA SKUs for Scale-Up Modules

Table 30: 12-Pack nTAA Scale-Up Modules

Capacity	Drive Type	Sector Size	SATA			SAS			
			SE	SED	ISE	SE	ISE	TCG	TCG-FIPS
264TB	HC570	512e	1EX2961	1EX2962		1EX2958		1EX2959	
240TB	HC560	512e	1EX2904	1EX2905		1EX2901		1EX2902	
216TB	HC550	512e	1EX2491	1EX2492		1EX2488		1EX2489	1EX2490
		4Kn				1EX2785			
192TB	HC550	512e	1EX2486	1EX2487		1EX2483		1EX2484	1EX2485
168TB	HC530	512e	1EX1847	1EX1848		1EX1845		1EX1846	
		4Kn	1EX1844			1EX1842		1EX1843	
144TB	HC520	512e	1EX0553		1EX0551	1EX0547	1EX0545	1EX0546	
		4Kn	1EX0550		1EX0548	1EX0544	1EX0542	1EX0543	
120TB	HC330	512e	1EX2460	1EX2461		1EX2455		1EX2456	
		4Kn	1EX2458	1EX2459		1EX2452		1EX2453	
96TB	HC320	512e	1EX1243	1EX1242		1EX1239		1EX1238	
		4Kn	1EX1241	1EX1240		1EX1237		1EX1236	
72TB	HC310	512e	1EX1213	1EX1212		1EX1209		1EX1208	
		4Kn	1EX1211	1EX1210		1EX1207		1EX1206	
48TB	HC310	512e				1EX2250		1EX2251	1EX2252
		4Kn				1EX2247		1EX2248	1EX2249

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