



NetApp components

FlexPod

NetApp
June 04, 2021

Table of Contents

- NetApp components 1
 - NetApp storage controller options 1
 - NetApp FAS 1
 - NetApp Ethernet expansion modules 2
 - NetApp disk shelves and disks 2
 - NetApp FAS 2
 - NetApp software licensing options 4
 - NetApp Support licensing options 4

NetApp components

NetApp storage controllers provide the storage foundation in the FlexPod Express architecture for both boot and application data storage. This section lists the different NetApp options in the FlexPod Express architecture.

NetApp storage controller options

NetApp FAS

Redundant AFF C190, AFF A220, or FAS2750 series controllers are required in the FlexPod Express architecture. The controllers run ONTAP software. When ordering the storage controllers, the preferred software version can be preloaded on the controllers. For ONTAP, the cluster can be deployed either with a pair of cluster interconnect switches or in a switchless cluster configuration.

The part numbers listed in the following table are for an empty controller. Different options and configurations are available based on the storage platform selected. Consult your sales representative for details about these additional components.

Storage controller	FAS part number	Technical specifications
FAS2750	Based on individual options chosen	https://www.netapp.com/us/products/storage-systems/hybrid-flash-array/fas2700.aspx
FAS2720	Based on individual options chosen	https://www.netapp.com/us/products/storage-systems/hybrid-flash-array/fas2700.aspx
AFF C190	Based on individual options chosen	https://www.netapp.com/us/products/entry-level-aff.aspx
AFF A220	Based on individual options chosen	https://www.netapp.com/us/documentation/all-flash-fas.aspx
FAS2620	Based on individual options chosen	http://www.netapp.com/us/products/storage-systems/fas2600/fas2600-tech-specs.aspx
FAS2650	Based on individual options chosen	http://www.netapp.com/us/products/storage-systems/fas2600/fas2600-tech-specs.aspx

E-Series storage

An HA pair of NetApp E2800 series controllers is required in the FlexPod Express architecture. The controllers run the SANtricity OS.

The part numbers listed in the following table are for an empty controller. Different options and configurations are available based on the storage platform selected. Consult your sales representative for details about these additional components.

Storage controller	Part number	Technical specifications
E2800	Based on individual options chosen	http://www.netapp.com/us/products/storage-systems/e2800/e2800-tech-specs.aspx

NetApp Ethernet expansion modules

NetApp FAS

The following table lists the NetApp FAS10GbE adapter options.

Component	Part number	Technical specifications
NetApp X1117A	X1117A-R6	https://library.netapp.com/ecm/ecm_download_file/ECMM1280307



The FAS2500 and 2600 series storage systems have onboard 10GbE ports.

The NetApp X1117A adapter is for FAS8020 storage systems.

E-Series storage

The following table lists the E-Series 10GbE adapter options.

Component	Part number
10GbE iSCSI/16Gb FC 4-port	X-56025-00-0E-C
10GbE iSCSI/16Gb FC 2-port	X-56024-00-0E-C



The E2824 series storage systems have onboard 10GbE ports.

The 10GbE iSCSI/16Gb FC 4-port host interface card (HIC) can be used for additional port density.

The onboard ports and the HIC can function as iSCSI adapters or FC adapters depending on the feature activated in SANtricity OS.

For more information about supported adapter options, see the Adapter section of [NetApp Hardware Universe](#).

NetApp disk shelves and disks

NetApp FAS

A minimum of one NetApp disk shelf is required for storage controllers. The NetApp shelf type selected determines which drive types are available within that shelf.

The FAS2700 and FAS2600 series of controllers are offered as a configuration that includes dual storage controllers plus disks housed within the same chassis. This configuration is offered with SATA or SAS drives; therefore, additional external disk shelves are not needed unless performance or capacity requirements dictate.

more spindles.



All disk shelf part numbers are for the empty shelf with two AC PSUs. Consult your sales representative for additional part numbers.

Disk drive part numbers vary according to the size and form factor of the disk you intend to purchase. Consult your sales representative for additional part numbers.

The following table lists the NetApp disk shelf options, along with the drives supported for each shelf type, which can be found on NetApp Hardware Universe. Follow the Hardware Universe link, select the version of ONTAP you are using, then select the shelf type. Under the shelf image, click Supported Drives to see the drives supported for specific versions of ONTAP and the disk shelves.

Disk shelf	Part number	Technical specifications
DS212C	DS212C-0-12	Disk Shelves and Storage Media Technical Specifications Supported Drives on NetApp Hardware Universe
DS224C	DS224C-0-24	Disk Shelves and Storage Media Technical Specifications Supported Drives on NetApp Hardware Universe
DS460C	DS460C-0-60	Disk Shelves and Storage Media Technical Specifications Supported Drives on NetApp Hardware Universe
DS2246	X559A-R6	Disk Shelves and Storage Media Technical Specifications Supported Drives on NetApp Hardware Universe
DS4246	X24M-R6	Disk Shelves and Storage Media Technical Specifications Supported Drives on NetApp Hardware Universe
DS4486	DS4486-144TB-R5-C	Disk Shelves and Storage Media Technical Specifications Supported Drives on NetApp Hardware Universe

E-Series storage

A minimum of one NetApp disk shelf is required for storage controllers that do not house any drives in their chassis. The NetApp shelf type selected determines which drive types are available within that shelf.

The E2800 series of controllers are offered as a configuration that includes dual storage controllers plus disks housed within a supported disk shelf. This configuration is offered with SSD or SAS drives.



Disk drive part numbers vary according to the size and form factor of the disk you intend to purchase. Consult your sales representative for additional part numbers.

The following table lists the NetApp disk shelf options and the drives supported for each shelf type, which can be found on NetApp Hardware Universe. Follow the Hardware Universe link, select the version of ONTAP you are using, then select the shelf type. Under the shelf image, click Supported Drives to see the drives supported for specific versions of ONTAP and the disk shelves.

Disk shelf	Part number	Technical specifications
DE460C	E-X5730A-DM-0E-C	Disk Shelves Technical Specifications Supported Drives on NetApp Hardware Universe
DE224C	E-X5721A-DM-0E-C	Disk Shelves Technical Specifications Supported Drives on NetApp Hardware Universe
DE212C	E-X5723A-DM-0E-C	Disk Shelves Technical Specifications Supported Drives on NetApp Hardware Universe

NetApp software licensing options

NetApp FAS

The following table lists the NetApp FAS software licensing options.

NetApp Software Licensing	Part Number	Technical Specifications
Base cluster license	Consult your NetApp sales team for more licensing information.	

E-Series storage

The following table lists the E-Series software licensing options.

NetApp software licensing	Part number	Technical specifications
Standard features	Consult your NetApp sales team for more licensing information.	
Premium features		

NetApp Support licensing options

SupportEdge Premium licenses are required, and the part numbers for those licenses vary based on the options selected in the FlexPod Express design.

NetApp FAS

The following table lists the NetApp support licensing options for NetApp FAS.

NetApp Support licensing	Part number	Technical specifications
SupportEdge Premium4 hours onsite; months: 36	CS-O2-4HR	http://www.netapp.com/us/support/supportedge.html

E-Series storage

The following table lists the NetApp support licensing options for E-Series storage.

NetApp Support licensing	Part number	Technical specifications
Hardware support Premium 4 hours onsite; months: 36	SVC-O2-4HR-E	http://www.netapp.com/us/support/supportededge.html
Software support	SW-SSP-O2-4HR-E	
Initial installation	SVC-INST-O2-4HR-E	

Copyright Information

Copyright © 2021 NetApp, Inc. All rights reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means-graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system-without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

Trademark Information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.