

Connect to Seagate® Exos™ E 4U106 Guide

Application Note

July 2022

ANNOUNCEMENT

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NOTICES

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PREFACE

Executive Summary

This application note provides technical guidance for connecting to Seagate Exos E 4U106 JBOD building block, which is a fully redundant 4U JBOD disk enclosure, as expansion solutions of QSAN XCubeSAN series storage. The new expansion solutions expand the capacity of QSAN storage with high density.

Audience

This document is applicable for QSAN customers and partners who are interested in purchasing Seagate Exos E 4U106 as the expansion unit of XCubeSAN series. It assumes the reader is familiar with QSAN products and has general IT experience, including knowledge as a system or network administrator. If there is any question, please refer to the user manuals of products, or contact QSAN support for further assistance.

Technical Support

Do you have any questions or need help trouble-shooting a problem? Please contact QSAN Support, we will reply to you as soon as possible.

- Via the Web: https://www.qsan.com/technical_support
- Via Telephone: +886-2-77206355
- (Service hours: 09:30 - 18:00, Monday - Friday, UTC+8)
- Via Skype Chat, Skype ID: qsan.support
- (Service hours: 09:30 - 02:00, Monday - Friday, UTC+8, Summer time: 09:30 - 01:00)
- Via Email: support@qsan.com

Information, Tip, and Caution

This document uses the following symbols to draw attention to important safety and operational information.



INFORMATION

INFORMATION provides useful knowledge, definition, or terminology for reference.



TIP

TIP provides helpful suggestions for performing tasks more effectively.



CAUTION

CAUTION indicates that failure to take a specified action could result in damage to the system.

1. GUIDELINES

In response to the arrival of the 5G era, data will grow very rapidly. Our partnership with long-standing partner Seagate enables our joint enterprise customers to provide high density storage platforms with unprecedented low TCO. Seagate Exos E 4U106 is the datasphere's largest building block delivering industry-first capacity and density without sacrificing data access speed. Increase the amount of data that fits in a 4U rack by leveraging up to 106 of our high-capacity hard drives in a single enclosure that holds up to an unprecedented 1.7PB of business intelligence. With an overall maximum bandwidth of 36GB/s, you can access mission-critical and archival data with lightning speed.

1.1. Seagate Exos E 4U106 Installation Guide

Please refer to the Seagate Exos E 4U106 installation and maintenance guide which provides information about initial hardware installation and setup, as well as removal and installation of customer-replaceable units (FRUs) for the Seagate Exos E 4U106 enclosure.



INFORMATION

Document information:

- [Seagate Exos E 4U106 Hardware Installation and Maintenance Guide.](#)

1.2. Expansion Topology and Deployment

The following images illustrate some examples of deployment types for dual controller XCubeSAN series plus Seagate Exos E 4U106 expansion units. MPIO (MultiPath I/O) configurations are designed to provide HA (High Availability) data connections to ensure data consistency in the rare event of a failure in the host connectivity from a single path.

One XCubeSAN / One Seagate Exos E 4U106 / Dual Path

The following figure shows an example of an XCubeSAN series connected to a Seagate Exos E 4U106 using mini SAS HD to mini SAS HD cable (SAS 12G expansion cable, SFF-8644 to SFF-8644).

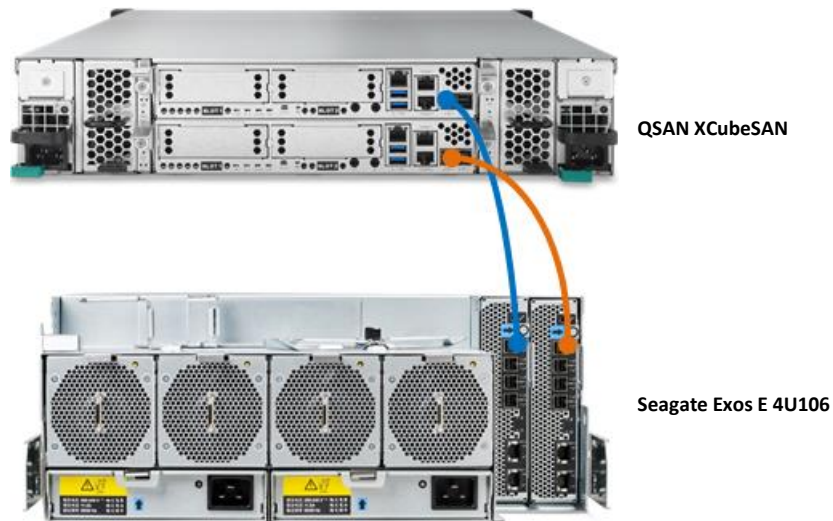


Figure 1-1 One XCubeSAN / One Seagate Exos E 4U106 / Dual Path



CAUTION

Seagate Exos E 4U106 does not support SAS 12G expansion cable with Wake-on-SAS.

One XCubeSAN / Two Seagate Exos E 4U106 / Dual Path

The following figure shows an example of an XCubeSAN series connected to a Seagate Exos E 4U106 using mini SAS HD to mini SAS HD cable (SAS 12G expansion cable, SFF-8644 to SFF-8644) which is in turn connected to the second Seagate Exos E 4U106 using mini SAS HD to mini SAS HD cable (SAS 12G expansion cable, SFF-8644 to SFF-8644).

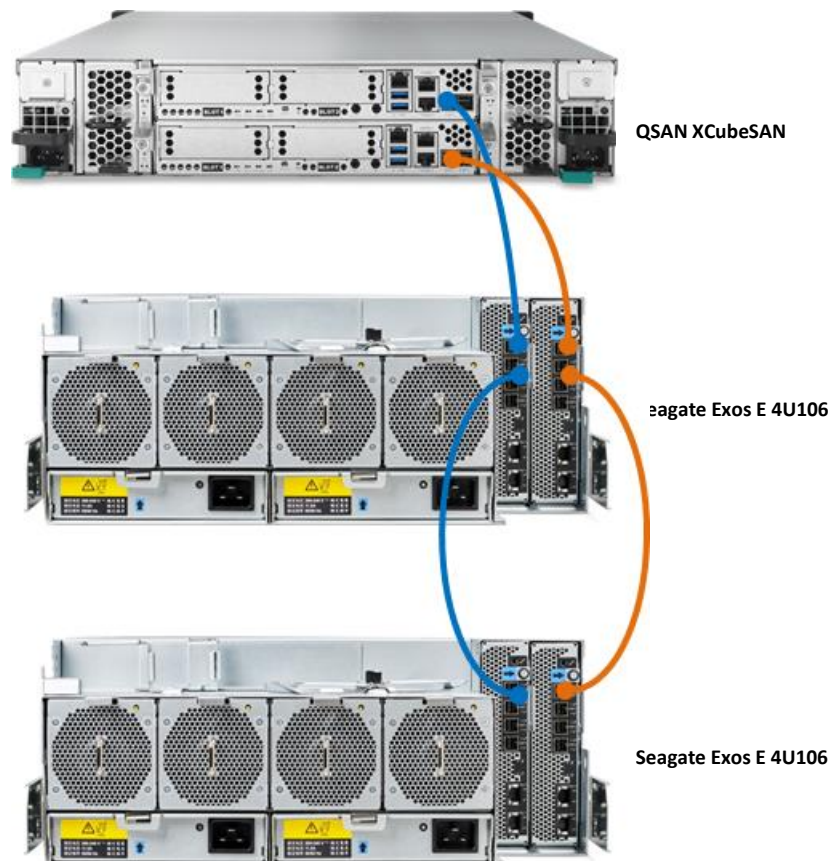


Figure 1-2 One XCubeSAN / Two Seagate Exos E 4U106 / Dual Path

One XCubeSAN / One XCubeDAS / One Seagate Exos E 4U106 / Dual Path

The following figure shows an example of an XCubeSAN series connected to an XCubeDAS XD5300 series which is in turn connected to the second Seagate Exos E 4U106 using mini SAS HD to mini SAS HD cable (SAS 12G expansion cable, SFF-8644 to SFF-8644).

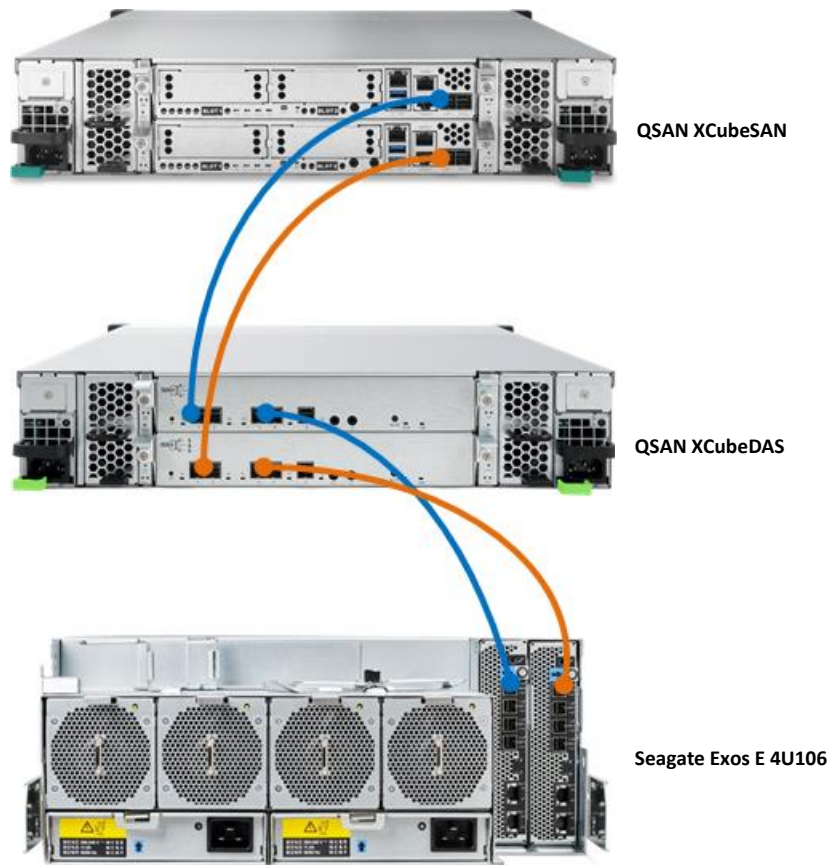


Figure 1-3 One XCubeSAN / One XCubeDAS / One Seagate Exos E 4U106 / Dual Path



TIP

If you have multiple XCubeDAS and Seagate Exos E 4U106 as the expansion units of XCubeSAN series, connect XCbueDAS series models before Seagate Exos E 4U106.

1.3. Cautions and Limitations

List the following cautions and limitations. You should be aware of the purchase and installation of Seagate Exos E 4U106.

1. QSAN storage does not support firmware update for Seagate Exos E 4U106.
2. Seagate Exos E 4U106 does not support SAS 12G expansion cable with Wake-on-SAS.
3. If you have multiple XCubeDAS and Seagate Exos E 4U106 as the expansion units of XCubeSAN series, connect XCubeDAS series models before Seagate Exos E 4U106.
4. If you are experiencing poor performance when connecting to Seagate Exos E 4U106, you can try shorter length cables, such as 1.5M.

2. APPENDIX

2.1. Apply To

- XEVO firmware 2.2.0 and above.
- SANOS firmware 1.4.3 and above.
- Seagate Exos E 4U106 firmware version: 524A
 - FW version: **524A**

2.2. Reference

Seagate Exos E 4U106

- [Seagate Exos E 4U106 Datasheet](#)
- [Seagate Exos E 4U106 Hardware Installation and Maintenance Guide](#)