

# K2

Storage  
SAN and Direct-Connect



## Cabling Guide



Affiliate with the N.V. KEMA in The Netherlands



# CERTIFICATE

Certificate Number: 510040.001

The Quality System of:

**Thomson Inc, and it's worldwide Grass Valley division affiliates DBA GRASS VALLEY**

**Headquarters**  
400 Providence Mine Rd  
Nevada City, CA 95959  
United States

15655 SW Greystone Ct.  
Beaverton, OR 97006  
United States

10 Presidential Way  
Suite 300  
Woburn, MA 01801  
United States

Kapittelweg 10  
4827 HG Breda  
The Netherlands

7140 Baymeadows Way  
Ste 101  
Jacksonville, FL 32256  
United States

2300 So. Decker Lake Blvd.  
Salt Lake City, UT 84119  
United States

Rue du Clos Courtel  
CS 31719  
35517 Cesson-Sevigné Cedex  
France

1 rue de l'Hautil  
Z.I. des Boutries BP 150  
78702 Conflans-Sainte  
Honorine Cedex  
France

Technopole Brest-Iroise  
Site de la Pointe du Diable  
CS 73808  
29238 Brest Cedex 3  
France

40 Rue de Bray  
2 Rue des Landelles  
35510 Cesson Sevigné  
France

Spinnereistrasse 5  
CH-5300 Turgi  
Switzerland

Brunnenweg 9  
D-64331 Weiterstadt  
Germany

Carl-Benz-Strasse 6-8  
67105 Schifferstadt  
Germany

Including its implementation, meets the requirements of the standard:

## ISO 9001:2008

Scope:

The design, manufacture and support of video and audio hardware and software products and related systems.

This Certificate is valid until: June 14, 2012  
This Certificate is valid as of: June 14, 2009  
Certified for the first time: June 14, 2000

H. Pierre Sallé  
President  
KEMA-Registered Quality

The method of operation for quality certification is defined in the KEMA General Terms And Conditions For Quality And Environmental Management Systems Certifications. Integral publication of this certificate is allowed.

**KEMA-Registered Quality, Inc.**  
4377 County Line Road  
Chalfont, PA 18914  
Ph: (215)997-4519  
Fax: (215)997-3809

**Accredited By:**  
ANAB

Experience you can trust.

# K2

Storage  
SAN and Direct-Connect

Cabling Guide

## Copyright

Copyright © Grass Valley, Inc. All rights reserved. Printed in the United States of America. Portions of software © 2000 – 2009, Microsoft Corporation. All rights reserved. This document may not be copied in whole or in part, or otherwise reproduced except as specifically permitted under U.S. copyright law, without the prior written consent of Grass Valley, Inc., P.O. Box 59900, Nevada City, California 95959-7900. This product may be covered by one or more U.S. and foreign patents.

## Disclaimer

Product options and specifications subject to change without notice. The information in this manual is furnished for informational use only, is subject to change without notice, and should not be construed as a commitment by Grass Valley, Inc. Grass Valley, Inc. assumes no responsibility or liability for any errors or inaccuracies that may appear in this publication.

## U.S. Government Restricted Rights Legend

Use, duplication, or disclosure by the United States 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 252.277-7013 or in subparagraph c(1) and (2) of the Commercial Computer Software Restricted Rights clause at FAR 52.227-19, as applicable. Manufacturer is Grass Valley, Inc., P.O. Box 59900, Nevada City, California 95959-7900 U.S.A.

## Trademarks and Logos

Grass Valley, K2, Aurora, Summit, Dyno, Solo, Infinity, Turbo, M-Series, Profile, Profile XP, NetCentral, NewsBrowse, NewsEdit, NewsQ, NewsShare, NewsQ Pro, and Media Manager are either registered trademarks or trademarks of Grass Valley, Inc. in the United States and/or other countries. Grass Valley, Inc. products are covered by U.S. and foreign patents, issued and pending. Additional information regarding Grass Valley, Inc. trademarks and other proprietary rights may be found at [www.thomsongrassvalley.com](http://www.thomsongrassvalley.com).

Other trademarks and logos used in this document are either registered trademarks or trademarks of the manufacturers or vendors of the associated products, such as Microsoft® Windows® operating system, Windows Media® player, Internet Explorer® internet browser, and SQL Server™. QuickTime and the QuickTime logo are trademarks or registered trademarks of Apple Computer, Inc., used under license therefrom.



## Revision Status

Rev Date	Description
03 September 2009	Initial release of the K2 Storage Cabling Guide - 071-8713-00

# Contents

---

<b>Chapter 1</b>	<b>Start with the K2 storage system diagram</b>	
	About custom K2 SANs .....	7
	Level 2 Basic K2 SAN .....	8
	Level 2 Redundant K2 SAN .....	9
	Level 3 Basic K2 SAN .....	10
	Level 3 Redundant K2 SAN .....	11
	Level 10 Basic K2 SAN .....	12
	Level 10 Redundant K2 SAN .....	13
	Level 20 Basic K2 SAN .....	14
	Level 20 Redundant K2 SAN .....	15
	Level 30 Basic K2 SAN .....	16
	Level 30 Redundant K2 SAN .....	17
	Level 35 Basic K2 SAN .....	18
	Level 35 Redundant K2 SAN .....	19
	Nearline 10 Basic K2 SAN .....	20
	Nearline 10 Redundant K2 SAN.....	21
	K2 client with direct-connect storage.....	22
<b>Chapter 2</b>	<b>Cable K2 devices</b>	
	Cable K2 client .....	24
	K2 Media Client for basic K2 SAN .....	24
	K2 Media Client for redundant K2 SAN .....	25
	K2 Summit Production Client for basic K2 SAN .....	25
	K2 Summit Production Client for redundant K2 SAN .....	26
	K2 Media Client with direct-connect storage .....	26
	K2 Summit Production Client with direct-connect storage.....	27
	Cable Gigabit Ethernet switch .....	28
	3400cl HP GigE switch for basic K2 SAN.....	28
	3400cl HP GigE switch for redundant K2 SAN .....	29
	2900 HP GigE switch for basic K2 SAN .....	29
	2900 HP GigE switch for redundant K2 SAN .....	30
	2900 HP GigE switch for basic nearline K2 SAN .....	30
	2900 HP GigE switch for redundant nearline K2 SAN.....	31
	Cable K2 Media Server .....	32
	Dell 2850 for basic K2 SAN .....	33
	Dell 2850 for redundant K2 SAN .....	33
	Dell 1950 GS for Level 10 basic K2 SAN .....	34
	Dell 1950 GS for Level 10 redundant K2 SAN .....	34
	Dell 1950 GS for Level 20 basic K2 SAN .....	35
	Dell 1950 GS for Level 20 redundant K2 SAN .....	35
	Dell 1950 GS for Level 35 basic K2 SAN .....	36
	Dell 1950 GS for Level 35 redundant K2 SAN .....	37
	Dell 2950 for basic K2 SAN .....	38
	Dell 2950 for redundant K2 SAN .....	38
	Dell 2950 for Level 3 basic K2 SAN .....	39
	Dell 2950 for Level 3 redundant K2 SAN.....	40
	Dell 2950 LS for basic K2 SAN.....	41
	Dell 2950 LS for redundant K2 SAN.....	41
	Dell R610 GS for Level 10 basic K2 SAN.....	42
	Dell R610 GS for Level 10 redundant K2 SAN.....	42
	Dell R610 GS for Level 20 basic K2 SAN.....	42
	Dell R610 GS for Level 20 redundant K2 SAN.....	43
	Dell R610 GS for Level 35 basic K2 SAN.....	43
	Dell R610 GS for Level 35 redundant K2 SAN.....	44
	Dell R710 LS for basic K2 SAN .....	44

Dell R710 LS for redundant K2 SAN ..... 45

Cable NH1 K2 Media Server ..... 46

    Dell 1950 NH1 for online K2 SAN ..... 46

    Dell 1950 NH1 for basic nearline K2 SAN ..... 46

    Dell 1950 NH1 for redundant nearline K2 SAN ..... 47

    Dell R610 NH1 for online K2 SAN ..... 47

    Dell R610 NH1 for basic nearline K2 SAN ..... 47

    Dell R610 NH1 for redundant nearline K2 SAN ..... 48

Cable NH1-10GE K2 Media Server ..... 49

    Dell 1950 NH1-10GE for online K2 SAN ..... 49

    Dell 1950 NH1-10GE for basic nearline K2 SAN ..... 49

    Dell 1950 NH1-10GE for redundant nearline K2 SAN ..... 50

    Dell R610 NH1-10GE for online K2 SAN ..... 50

    Dell R610 NH1-10GE for basic nearline K2 SAN ..... 50

    Dell R610 NH1-10GE for redundant nearline K2 SAN ..... 51

Cable K2 RAID ..... 52

    K2 RAID for Level 2 basic K2 SAN ..... 53

    K2 RAID for Level 2 redundant K2 SAN ..... 54

    K2 RAID for basic K2 SAN ..... 55

    K2 RAID for redundant K2 SAN ..... 56

    K2 RAID for Level 10 basic K2 SAN ..... 57

    K2 RAID for Level 10 redundant K2 SAN ..... 58

    K2 RAID for Level 20 basic K2 SAN ..... 59

    K2 RAID for Level 20 redundant K2 SAN ..... 60

    K2 RAID for Level 30 basic K2 SAN ..... 61

    K2 RAID for Level 30 redundant K2 SAN ..... 62

    K2 RAID for Level 35 basic K2 SAN ..... 63

    K2 RAID for Level 35 redundant K2 SAN ..... 64

    K2 RAID for Nearline 10 basic K2 SAN ..... 65

    K2 RAID for Nearline 10 redundant K2 SAN ..... 66

    K2 RAID for K2 client direct-connect storage ..... 67

**Chapter 3**

**For more information**

K2 Release Notes ..... 69

K2 Documentation CD ..... 69

On-line Help Systems ..... 70

NetCentral documentation ..... 70

Grass Valley Web Site ..... 70

Using the Dell Server documentation ..... 70

Grass Valley Product Support ..... 72

    Telephone Support ..... 72

---

# **Start with the K2 storage system diagram**

To follow cabling instructions for your K2™ Storage Area Network (SAN) or direct-connect storage K2 client, start with the system cabling diagram for your K2 system. Then follow the references below the system diagram to locate cabling instructions for the individual devices of your K2 system.

Refer to the *K2 Storage System Instruction Manual* or the *K2 SAN Installation and Configuration Guide* for more information on K2 SAN levels and devices. Refer to the *K2 System Guide* for more information on direct-connect K2 client storage.

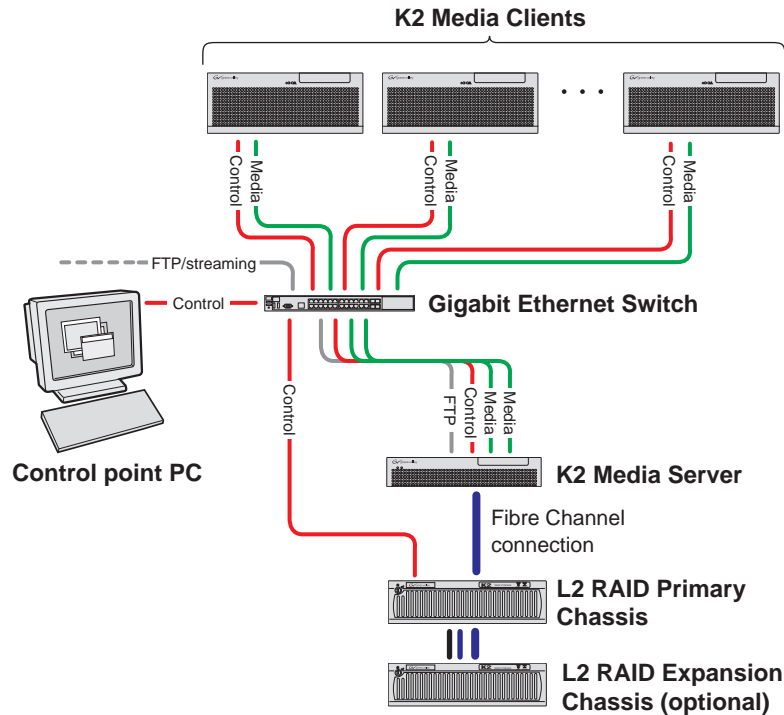
- [“Level 2 Basic K2 SAN” on page 8](#)
- [“Level 2 Redundant K2 SAN” on page 9](#)
- [“Level 3 Basic K2 SAN” on page 10](#)
- [“Level 3 Redundant K2 SAN” on page 11](#)
- [“Level 10 Basic K2 SAN” on page 12](#)
- [“Level 10 Redundant K2 SAN” on page 13](#)
- [“Level 20 Basic K2 SAN” on page 14](#)
- [“Level 20 Redundant K2 SAN” on page 15](#)
- [“Level 30 Basic K2 SAN” on page 16](#)
- [“Level 30 Redundant K2 SAN” on page 17](#)
- [“Level 35 Basic K2 SAN” on page 18](#)
- [“Level 35 Redundant K2 SAN” on page 19](#)
- [“Nearline 10 Basic K2 SAN” on page 20](#)
- [“Nearline 10 Redundant K2 SAN” on page 21](#)

## **About custom K2 SANs**

Custom systems are those that do not fit one of the pre-defined Level 2, 3, 10, 20, 30, 35, or nearline configurations. For example, a K2 SAN with Fibre Channel attached K2 clients is considered a custom system. Custom systems that are an extension of Level 2 or 3 are considered to be Level 4 systems. Custom systems that are an extension of Level 10, 20, or 30 are considered to be Level 40 systems. Only qualified Grass Valley personnel should attempt to design, install, and configure custom systems.

This document and the other documents in the K2 documentation set are intended for customers with one of the pre-defined SAN levels. While much of the information also applies to custom systems, consult your Grass Valley representative before using procedures on a custom system.

## Level 2 Basic K2 SAN

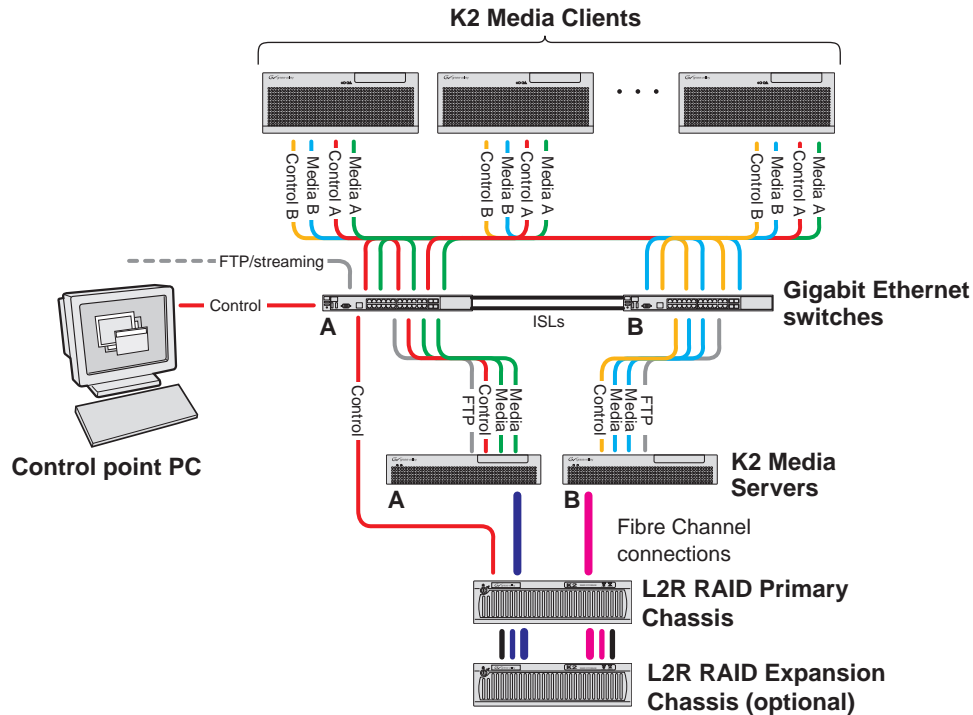


To cable this K2 SAN device...	Of this model or platform...	Turn to these instructions:
K2 client	K2 Media Client, including SDA-00, SD-00, and HD-00.	<a href="#">“K2 Media Client for basic K2 SAN” on page 24</a>
Gigabit Ethernet Switch	HP 3400cl series	<a href="#">“3400cl HP GigE switch for basic K2 SAN” on page 28</a>
	HP 2900 series	<a href="#">“2900 HP GigE switch for basic K2 SAN” on page 29</a>
K2 Media Server	Dell 2850	<a href="#">“Dell 2850 for basic K2 SAN” on page 33</a>
	Dell 2950	<a href="#">“Dell 2950 for basic K2 SAN” on page 38</a>
K2 RAID	Level 2 K2 RAID	<a href="#">“K2 RAID for Level 2 basic K2 SAN” on page 53</a>

This manual documents the default GigE switch configuration. Other configurations are available, depending on your port count and FTP bandwidth requirements. Refer to the *K2 Storage System Instruction Manual* or the *K2 SAN Installation and Configuration Guide* for more information.



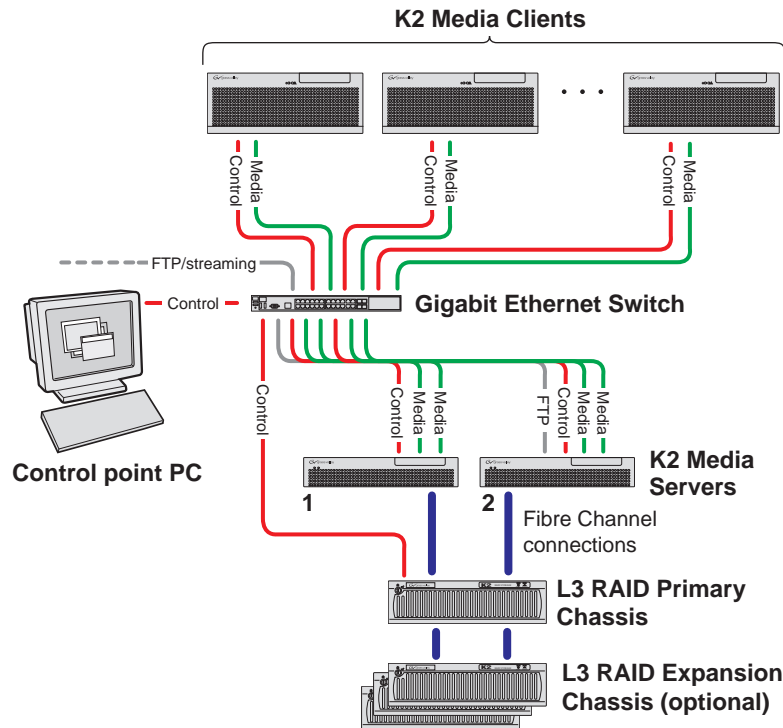
# Level 2 Redundant K2 SAN



To cable this K2 SAN device...	Of this model or platform...	Turn to these instructions:
K2 client	K2 Media Client, including SDA-00, SD-00, and HD-00.	<a href="#">“K2 Media Client for redundant K2 SAN” on page 25</a>
Gigabit Ethernet Switch	HP 3400cl series	<a href="#">“3400cl HP GigE switch for redundant K2 SAN” on page 29</a>
	HP 2900 series	<a href="#">“2900 HP GigE switch for redundant K2 SAN” on page 30</a>
K2 Media Server	Dell 2850	<a href="#">“Dell 2850 for redundant K2 SAN” on page 33</a>
	Dell 2950	<a href="#">“Dell 2950 for redundant K2 SAN” on page 38</a>
K2 RAID	Level 2 K2 RAID	<a href="#">“K2 RAID for Level 2 redundant K2 SAN” on page 54</a>

This manual documents the default GigE switch configuration. Other configurations are available, depending on your port count and FTP bandwidth requirements. Refer to the *K2 Storage System Instruction Manual* or the *K2 SAN Installation and Configuration Guide* for more information.

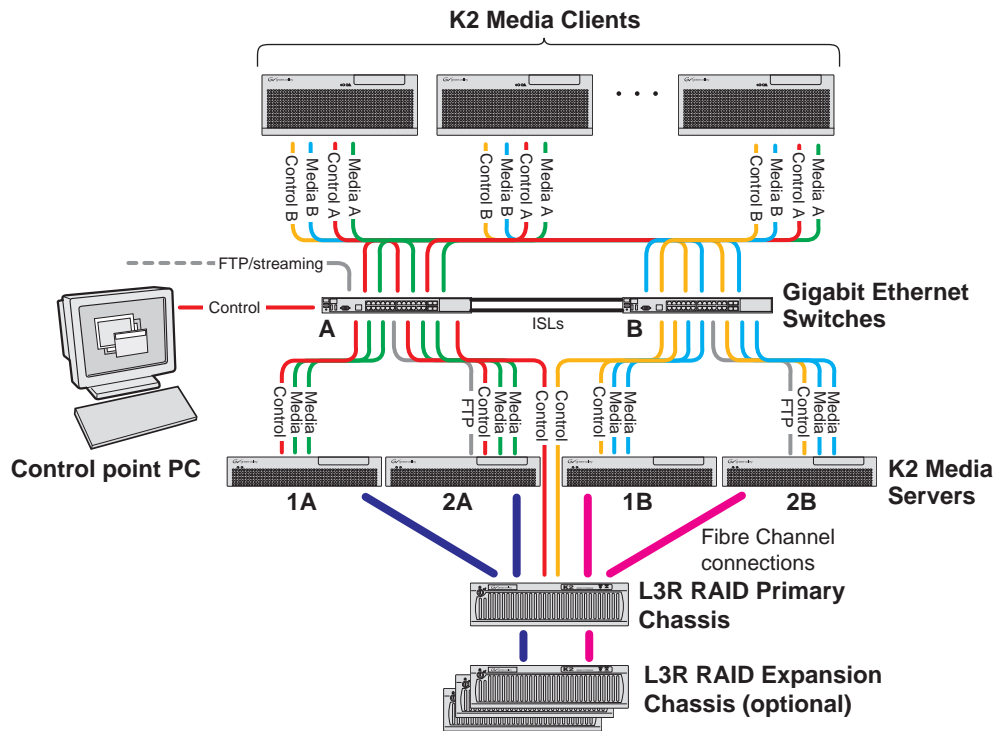
## Level 3 Basic K2 SAN



To cable this K2 SAN device...	Of this model or platform...	Turn to these instructions:
K2 client	K2 Media Client, including SDA-00, SD-00, and HD-00.	<a href="#">“K2 Media Client for basic K2 SAN” on page 24</a>
Gigabit Ethernet Switch	HP 3400cl series	<a href="#">“3400cl HP GigE switch for basic K2 SAN” on page 28</a>
	HP 2900 series	<a href="#">“2900 HP GigE switch for basic K2 SAN” on page 29</a>
K2 Media Server	Dell 2850	<a href="#">“Dell 2850 for basic K2 SAN” on page 33</a>
	Dell 2950	<a href="#">“Dell 2950 for Level 3 basic K2 SAN” on page 39</a>
K2 RAID	Level 3 K2 RAID	<a href="#">“K2 RAID for basic K2 SAN” on page 55</a>

This manual documents the default GigE switch configuration. Other configurations are available, depending on your port count and FTP bandwidth requirements. Refer to the *K2 Storage System Instruction Manual* or the *K2 SAN Installation and Configuration Guide* for more information.

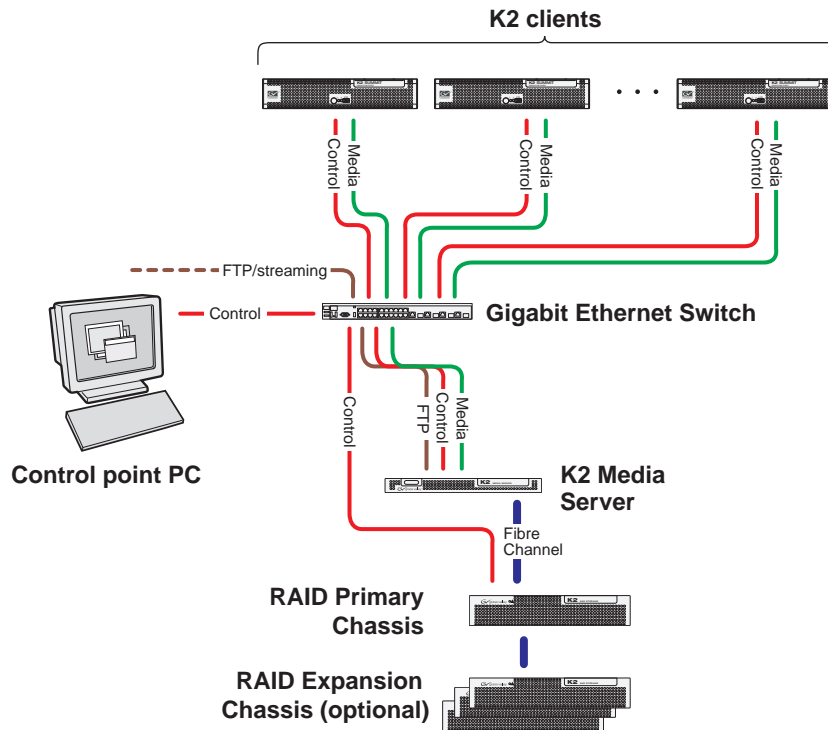
# Level 3 Redundant K2 SAN



To cable this K2 SAN device...	Of this model or platform...	Turn to these instructions:
K2 client	K2 Media Client, including SDA-00, SD-00, and HD-00.	<a href="#">“K2 Media Client for redundant K2 SAN” on page 25</a>
Gigabit Ethernet Switch	HP 3400cl series	<a href="#">“3400cl HP GigE switch for redundant K2 SAN” on page 29</a>
	HP 2900 series	<a href="#">“2900 HP GigE switch for redundant K2 SAN” on page 30</a>
K2 Media Server	Dell 2850	<a href="#">“Dell 2850 for redundant K2 SAN” on page 33</a>
	Dell 2950	<a href="#">“Dell 2950 for Level 3 redundant K2 SAN” on page 40</a>
K2 RAID	Level 3 K2 RAID	<a href="#">“K2 RAID for redundant K2 SAN” on page 56</a>

This manual documents the default GigE switch configuration. Other configurations are available, depending on your port count and FTP bandwidth requirements. Refer to the *K2 Storage System Instruction Manual* or the *K2 SAN Installation and Configuration Guide* for more information.

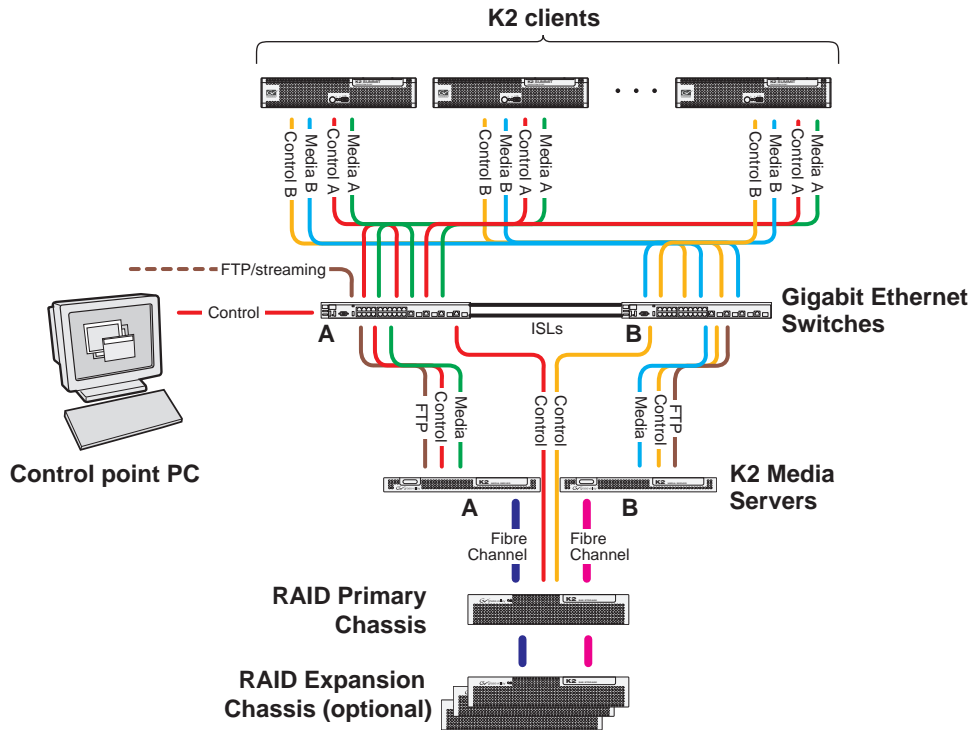
## Level 10 Basic K2 SAN



To cable this K2 SAN device...	Of this model or platform...	Turn to these instructions:
K2 client	K2 Media Client, including SDA-00, SD-00, and HD-00.	<a href="#">“K2 Media Client for basic K2 SAN” on page 24</a>
	K2 Summit Production Client	<a href="#">“K2 Summit Production Client for basic K2 SAN” on page 25</a>
Gigabit Ethernet Switch	HP 2900 series	<a href="#">“2900 HP GigE switch for basic K2 SAN” on page 29</a>
K2 Media Server	Dell 1950	<a href="#">“Dell 1950 GS for Level 10 basic K2 SAN” on page 34</a>
	Dell R610	<a href="#">“Dell R610 GS for Level 10 basic K2 SAN” on page 42</a>
K2 RAID	Level 10 K2 RAID	<a href="#">“K2 RAID for Level 10 basic K2 SAN” on page 57</a>

This manual documents the default GigE switch configuration. Other configurations are available, depending on your port count and FTP bandwidth requirements. Refer to the *K2 Storage System Instruction Manual* or the *K2 SAN Installation and Configuration Guide* for more information.

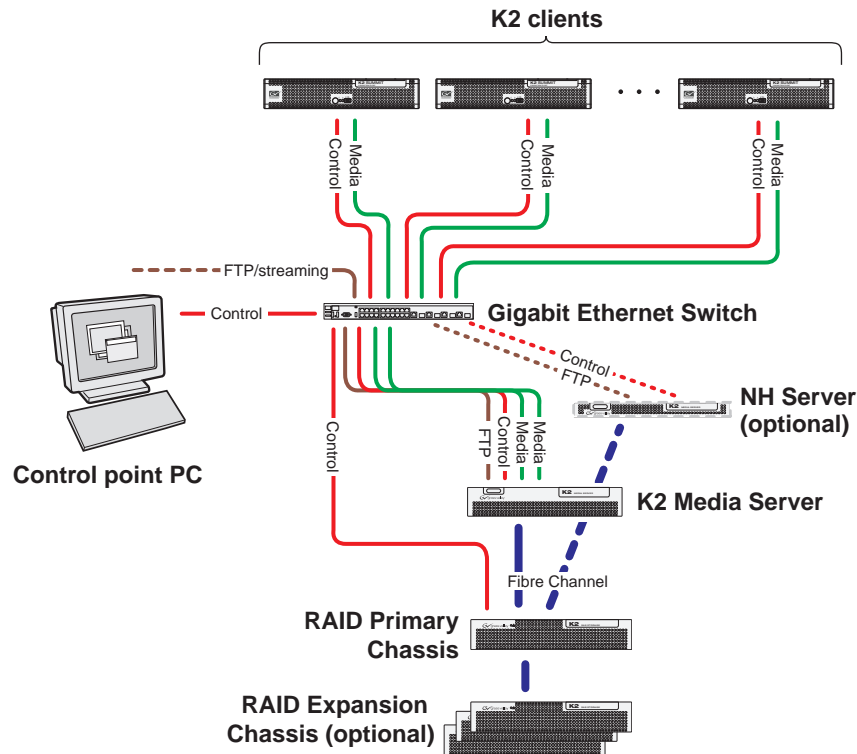
# Level 10 Redundant K2 SAN



To cable this K2 SAN device...	Of this model or platform...	Turn to these instructions:
K2 client	K2 Media Client, including SDA-00, SD-00, and HD-00.	<a href="#">“K2 Media Client for redundant K2 SAN” on page 25</a>
	K2 Summit Production Client	<a href="#">“K2 Summit Production Client for redundant K2 SAN” on page 26</a>
Gigabit Ethernet Switch	HP 2900 series	<a href="#">“2900 HP GigE switch for redundant K2 SAN” on page 30</a>
K2 Media Server	Dell 1950	<a href="#">“Dell 1950 GS for Level 10 redundant K2 SAN” on page 34</a>
	Dell R610	<a href="#">“Dell R610 GS for Level 10 redundant K2 SAN” on page 42</a>
K2 RAID	Level 10 K2 RAID	<a href="#">“K2 RAID for Level 10 redundant K2 SAN” on page 58</a>

This manual documents the default GigE switch configuration. Other configurations are available, depending on your port count and FTP bandwidth requirements. Refer to the *K2 Storage System Instruction Manual* or the *K2 SAN Installation and Configuration Guide* for more information.

## Level 20 Basic K2 SAN

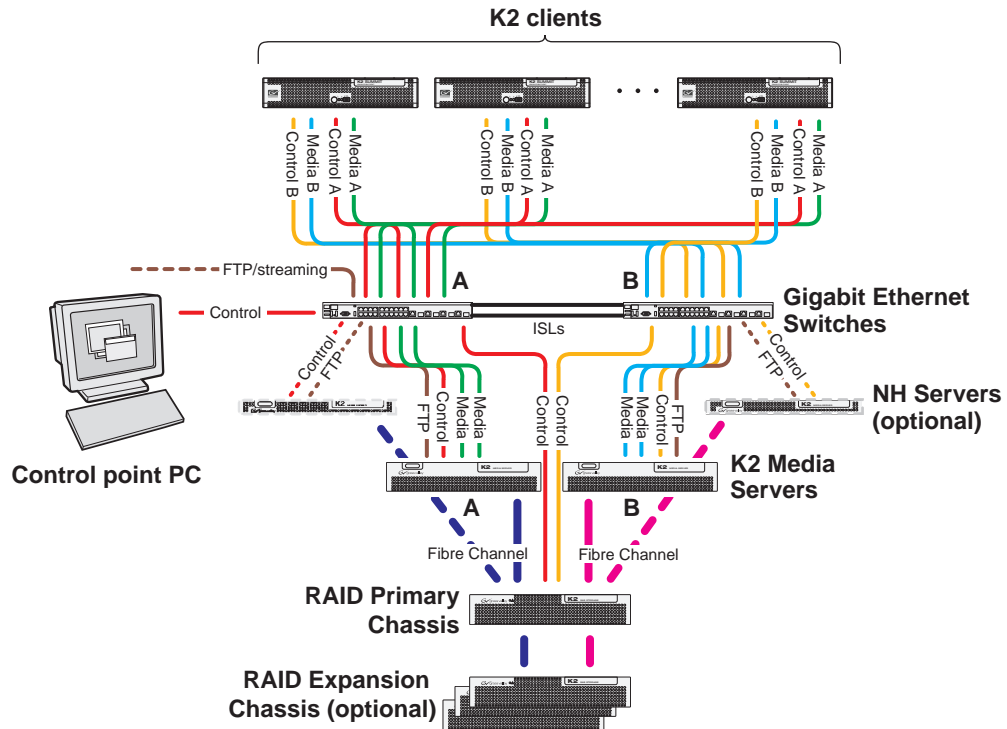


To cable this K2 SAN device...	Of this model or platform...	Turn to these instructions:
K2 client	K2 Media Client, including SDA-00, SD-00, and HD-00.	<a href="#">“K2 Media Client for basic K2 SAN” on page 24</a>
	K2 Summit Production Client	<a href="#">“K2 Summit Production Client for basic K2 SAN” on page 25</a>
Gigabit Ethernet Switch	HP 2900 series	<a href="#">“2900 HP GigE switch for basic K2 SAN” on page 29</a>
K2 Media Server	Dell 1950	<a href="#">“Dell 1950 GS for Level 20 basic K2 SAN” on page 35</a>
	Dell R610	<a href="#">“Dell R610 GS for Level 20 basic K2 SAN” on page 42</a>
NH1 K2 Media Server (optional)	Dell 1950	<a href="#">“Dell 1950 NH1 for online K2 SAN” on page 46</a>
	Dell R610	<a href="#">“Dell R610 NH1 for online K2 SAN” on page 47</a>
NH1-10GE K2 Media Server (optional)	Dell 1950	<a href="#">“Dell 1950 NH1-10GE for online K2 SAN” on page 49</a>
	Dell R610	<a href="#">“Dell R610 NH1-10GE for online K2 SAN” on page 50</a>
K2 RAID	Level 20 K2 RAID	<a href="#">“K2 RAID for Level 20 basic K2 SAN” on page 59</a>

This manual documents the default GigE switch configuration. Other configurations are available, depending on your port count and FTP bandwidth requirements. Refer to the *K2 Storage System Instruction Manual* or the *K2 SAN Installation and Configuration Guide* for more information.

Multiple NH servers must be of the same type, either all NH1-10GE or all NH1.

# Level 20 Redundant K2 SAN

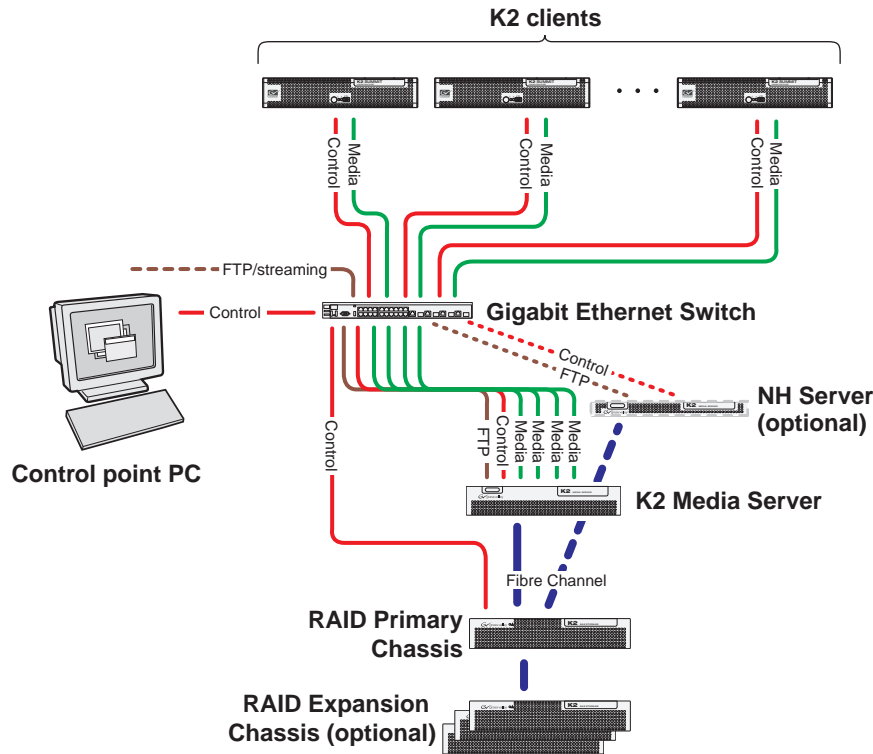


To cable this K2 SAN device...	Of this model or platform...	Turn to these instructions:
K2 client	K2 Media Client, including SDA-00, SD-00, and HD-00.	<a href="#">“K2 Media Client for redundant K2 SAN” on page 25</a>
	K2 Summit Production Client	<a href="#">“K2 Summit Production Client for redundant K2 SAN” on page 26</a>
Gigabit Ethernet Switch	HP 2900 series	<a href="#">“2900 HP GigE switch for redundant K2 SAN” on page 30</a>
K2 Media Server	Dell 1950	<a href="#">“Dell 1950 GS for Level 20 redundant K2 SAN” on page 35</a>
	Dell R610	<a href="#">“Dell R610 GS for Level 20 redundant K2 SAN” on page 43</a>
NH1 K2 Media Server (optional)	Dell 1950	<a href="#">“Dell 1950 NH1 for online K2 SAN” on page 46</a>
	Dell R610	<a href="#">“Dell R610 NH1 for online K2 SAN” on page 47</a>
NH1-10GE K2 Media Server (optional)	Dell 1950	<a href="#">“Dell 1950 NH1-10GE for online K2 SAN” on page 49</a>
	Dell R610	<a href="#">“Dell R610 NH1-10GE for online K2 SAN” on page 50</a>
K2 RAID	Level 20 K2 RAID	<a href="#">“K2 RAID for Level 20 redundant K2 SAN” on page 60</a>

This manual documents the default GigE switch configuration. Other configurations are available, depending on your port count and FTP bandwidth requirements. Refer to the *K2 Storage System Instruction Manual* or the *K2 SAN Installation and Configuration Guide* for more information.

Multiple NH servers must be of the same type, either all NH1-10GE or all NH1.

## Level 30 Basic K2 SAN



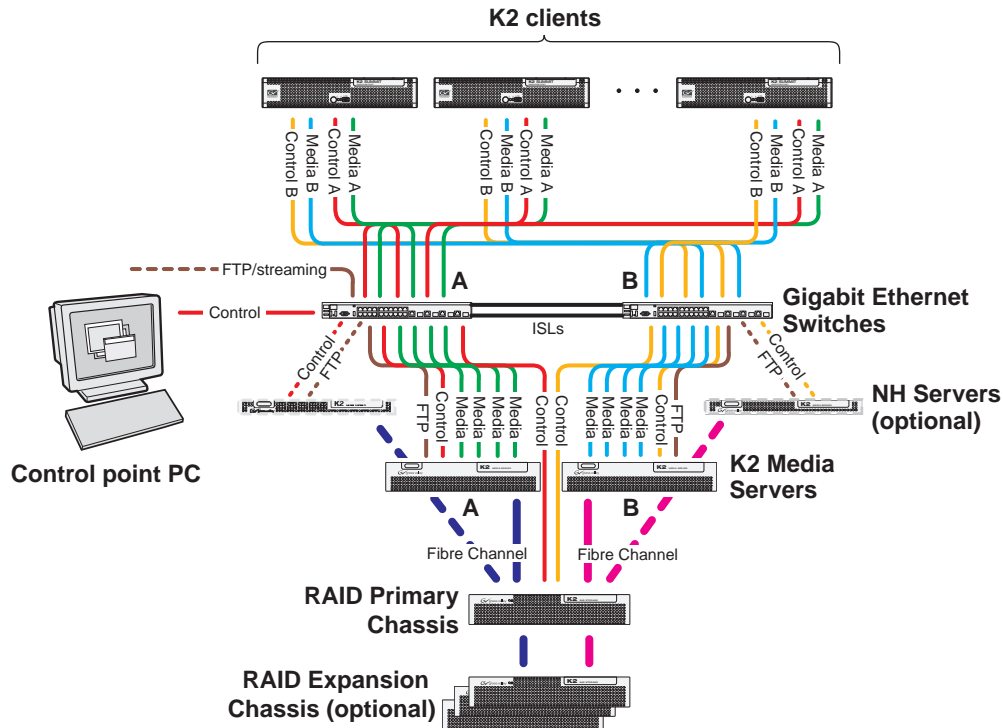
To cable this K2 SAN device...	Of this model or platform...	Turn to these instructions:
K2 client	K2 Media Client, including SDA-00, SD-00, and HD-00.	<a href="#">“K2 Media Client for basic K2 SAN” on page 24</a>
	K2 Summit Production Client	<a href="#">“K2 Summit Production Client for basic K2 SAN” on page 25</a>
Gigabit Ethernet Switch	HP 2900 series	<a href="#">“2900 HP GigE switch for basic K2 SAN” on page 29</a>
K2 Media Server	Dell 2950	<a href="#">“Dell 2950 LS for basic K2 SAN” on page 41</a>
	Dell R710	<a href="#">“Dell R710 LS for basic K2 SAN” on page 44</a>
NH1 K2 Media Server (optional)	Dell 1950	<a href="#">“Dell 1950 NH1 for online K2 SAN” on page 46</a>
	Dell R610	<a href="#">“Dell R610 NH1 for online K2 SAN” on page 47</a>
NH1-10GE K2 Media Server (optional)	Dell 1950	<a href="#">“Dell 1950 NH1-10GE for online K2 SAN” on page 49</a>
	Dell R610	<a href="#">“Dell R610 NH1-10GE for online K2 SAN” on page 50</a>
K2 RAID	Level 30 K2 RAID	<a href="#">“K2 RAID for Level 30 basic K2 SAN” on page 61</a>

This manual documents the default GigE switch configuration. Other configurations are available, depending on your port count and FTP bandwidth requirements. Refer to the *K2 Storage System Instruction Manual* or the *K2 SAN Installation and Configuration Guide* for more information.

Multiple NH servers must be of the same type, either all NH1-10GE or all NH1.



# Level 30 Redundant K2 SAN

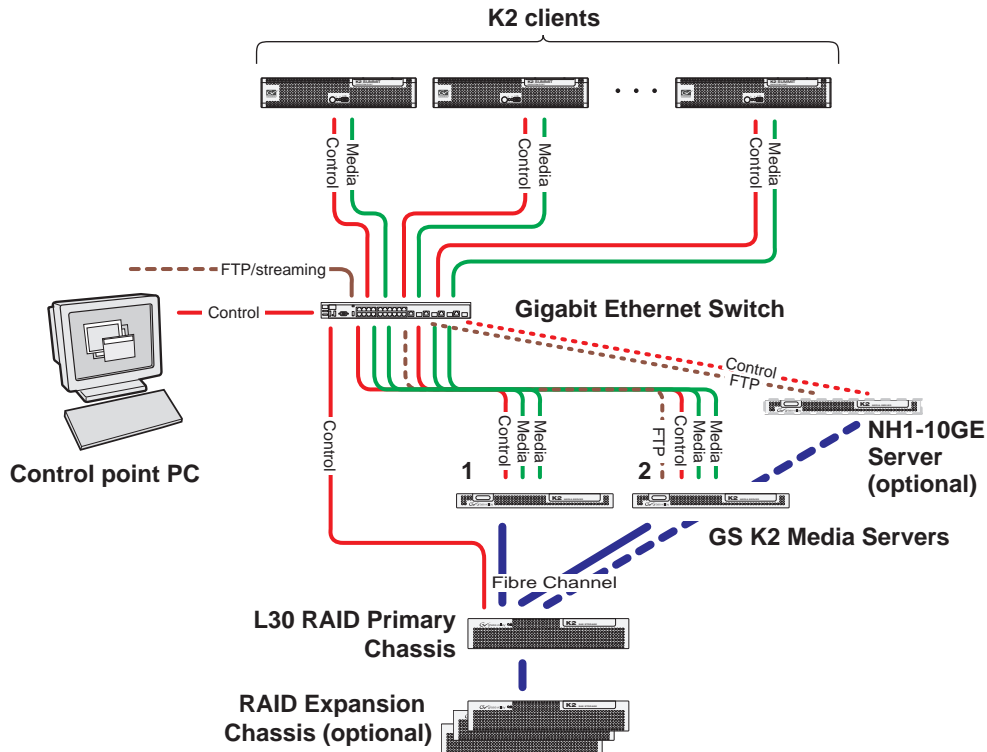


To cable this K2 SAN device...	Of this model or platform...	Turn to these instructions:
K2 client	K2 Media Client, including SDA-00, SD-00, and HD-00.	<a href="#">“K2 Media Client for redundant K2 SAN” on page 25</a>
	K2 Summit Production Client	<a href="#">“K2 Summit Production Client for redundant K2 SAN” on page 26</a>
Gigabit Ethernet Switch	HP 2900 series	<a href="#">“2900 HP GigE switch for redundant K2 SAN” on page 30</a>
K2 Media Server	Dell 2950	<a href="#">“Dell 2950 LS for redundant K2 SAN” on page 41</a>
	Dell R710	<a href="#">“Dell R710 LS for redundant K2 SAN” on page 45</a>
NH1 K2 Media Server (optional)	Dell 1950	<a href="#">“Dell 1950 NH1 for online K2 SAN” on page 46</a>
	Dell R610	<a href="#">“Dell R610 NH1 for online K2 SAN” on page 47</a>
NH1-10GE K2 Media Server (optional)	Dell 1950	<a href="#">“Dell 1950 NH1-10GE for online K2 SAN” on page 49</a>
	Dell R610	<a href="#">“Dell R610 NH1-10GE for online K2 SAN” on page 50</a>
K2 RAID	Level 30 K2 RAID	<a href="#">“K2 RAID for Level 30 redundant K2 SAN” on page 62</a>

This manual documents the default GigE switch configuration. Other configurations are available, depending on your port count and FTP bandwidth requirements. Refer to the *K2 Storage System Instruction Manual* or the *K2 SAN Installation and Configuration Guide* for more information.

Multiple NH servers must be of the same type, either all NH1-10GE or all NH1.

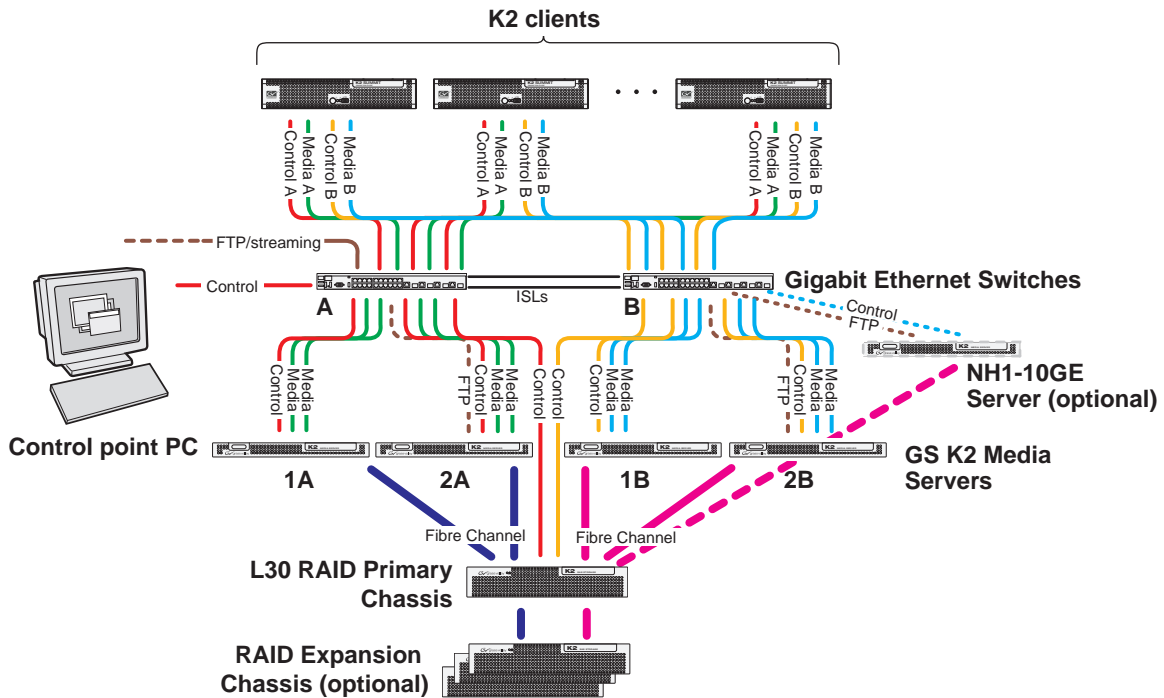
## Level 35 Basic K2 SAN



To cable this K2 SAN device...	Of this model or platform...	Turn to these instructions:
K2 client	K2 Media Client, including SDA-00, SD-00, and HD-00.	<a href="#">“K2 Media Client for basic K2 SAN” on page 24</a>
	K2 Summit Production Client	<a href="#">“K2 Summit Production Client for basic K2 SAN” on page 25</a>
Gigabit Ethernet Switch	HP 2900 series	<a href="#">“2900 HP GigE switch for basic K2 SAN” on page 29</a>
K2 Media Server	Dell 1950	<a href="#">“Dell 1950 GS for Level 35 basic K2 SAN” on page 36</a>
	Dell R610	<a href="#">“Dell R610 GS for Level 35 basic K2 SAN” on page 43</a>
NH1-10GE K2 Media Server (optional)	Dell 1950	<a href="#">“Dell 1950 NH1-10GE for online K2 SAN” on page 49</a>
	Dell R610	<a href="#">“Dell R610 NH1-10GE for online K2 SAN” on page 50</a>
K2 RAID	Level 35 K2 RAID	<a href="#">“K2 RAID for Level 35 basic K2 SAN” on page 63</a>

This manual documents the default GigE switch configuration. Other configurations are available, depending on your port count and FTP bandwidth requirements. Refer to the *K2 Storage System Instruction Manual* or the *K2 SAN Installation and Configuration Guide* for more information.

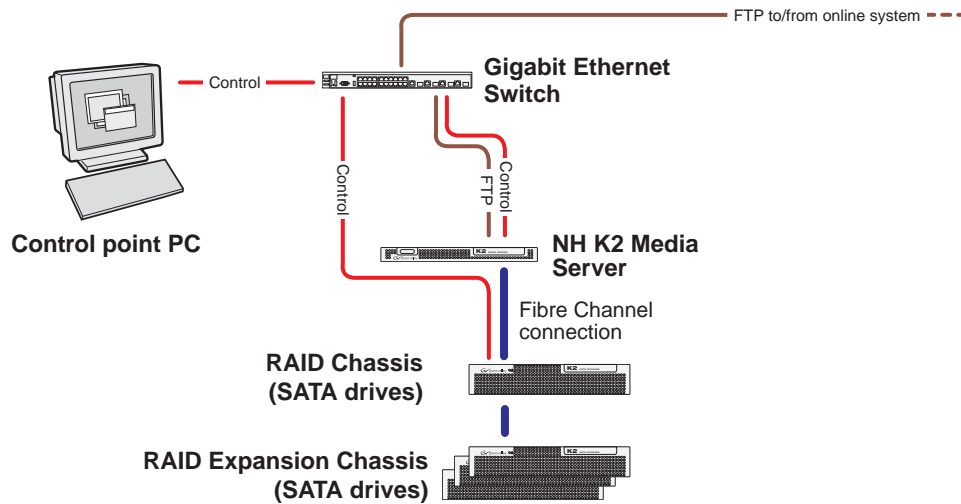
# Level 35 Redundant K2 SAN



To cable this K2 SAN device...	Of this model or platform...	Turn to these instructions:
K2 client	K2 Media Client, including SDA-00, SD-00, and HD-00.	<a href="#">“K2 Media Client for redundant K2 SAN” on page 25</a>
	K2 Summit Production Client	<a href="#">“K2 Summit Production Client for redundant K2 SAN” on page 26</a>
Gigabit Ethernet Switch	HP 2900 series	<a href="#">“2900 HP GigE switch for redundant K2 SAN” on page 30</a>
K2 Media Server	Dell 1950	<a href="#">“Dell 1950 GS for Level 35 redundant K2 SAN” on page 37</a>
	Dell R610	<a href="#">“Dell R610 GS for Level 35 redundant K2 SAN” on page 44</a>
NH1-10GE K2 Media Server (optional)	Dell 1950	<a href="#">“Dell 1950 NH1-10GE for online K2 SAN” on page 49</a>
	Dell R610	<a href="#">“Dell R610 NH1-10GE for online K2 SAN” on page 50</a>
K2 RAID	Level 35 K2 RAID	<a href="#">“K2 RAID for Level 35 redundant K2 SAN” on page 64</a>

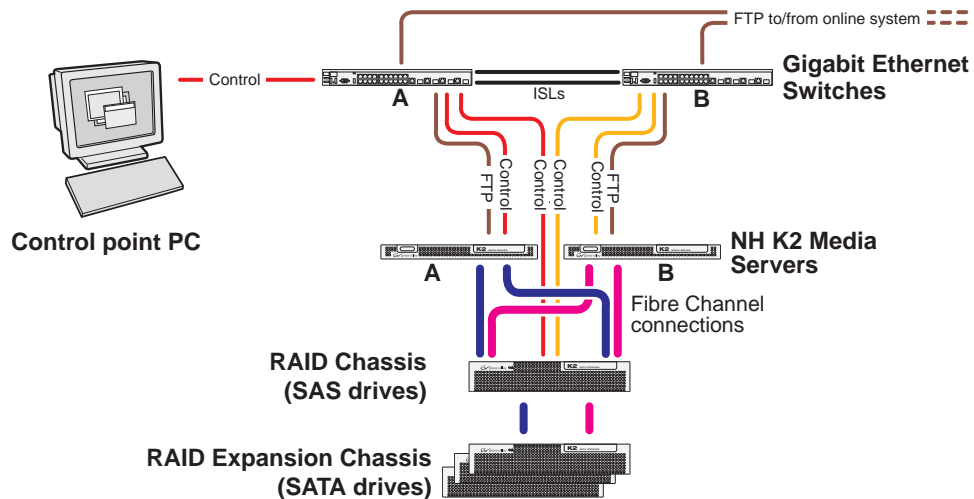
This manual documents the default GigE switch configuration. Other configurations are available, depending on your port count and FTP bandwidth requirements. Refer to the *K2 Storage System Instruction Manual* or the *K2 SAN Installation and Configuration Guide* for more information.

## Nearline 10 Basic K2 SAN



To cable this K2 SAN device...	Of this model or platform...	Turn to these instructions:
Gigabit Ethernet Switch	HP 2900 series	<a href="#">“2900 HP GigE switch for basic nearline K2 SAN” on page 30</a>
NH1 K2 Media Server	Dell 1950	<a href="#">“Dell 1950 NH1 for basic nearline K2 SAN” on page 46</a>
	Dell R610	<a href="#">“Dell R610 NH1 for basic nearline K2 SAN” on page 47</a>
NH1-10GE K2 Media Server	Dell 1950	<a href="#">“Dell 1950 NH1-10GE for basic nearline K2 SAN” on page 49</a>
	Dell R610	<a href="#">“Dell R610 NH1-10GE for basic nearline K2 SAN” on page 50</a>
K2 RAID	Level 10 K2 RAID	<a href="#">“K2 RAID for Nearline 10 basic K2 SAN” on page 65</a>

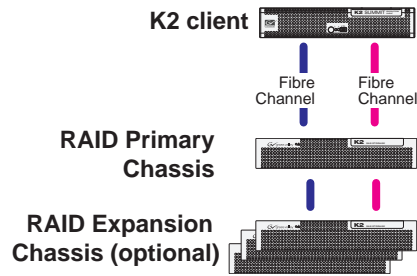
## Nearline 10 Redundant K2 SAN



To cable this K2 SAN device...	Of this model or platform...	Turn to these instructions:
Gigabit Ethernet Switch	HP 2900 series	<a href="#">“2900 HP GigE switch for redundant nearline K2 SAN” on page 31</a>
NH1 K2 Media Server	Dell 1950	<a href="#">“Dell 1950 NH1 for redundant nearline K2 SAN” on page 47</a>
	Dell R610	<a href="#">“Dell R610 NH1 for redundant nearline K2 SAN” on page 48</a>
NH1-10GE K2 Media Server	Dell 1950	<a href="#">“Dell 1950 NH1-10GE for redundant nearline K2 SAN” on page 50</a>
	Dell R610	<a href="#">“Dell R610 NH1-10GE for redundant nearline K2 SAN” on page 51</a>
K2 RAID	Level 10 K2 RAID	<a href="#">“K2 RAID for Nearline 10 redundant K2 SAN” on page 66</a>

Redundant NH servers must be of the same type, either both NH1-10GE or both NH1.

## K2 client with direct-connect storage



To cable this K2 device...	Of this model or platform...	Turn to these instructions:
K2 client	K2 Media Client, including SDA-00, SD-00, and HD-00.	<a href="#">“K2 Media Client with direct-connect storage” on page 26</a>
	K2 Summit Production Client	<a href="#">“K2 Summit Production Client with direct-connect storage” on page 27</a>
K2 RAID	Level 30 K2 RAID	<a href="#">“K2 RAID for K2 client direct-connect storage” on page 67</a>

---

## **Cable K2 devices**

As directed by the system diagram for your K2 storage, cable the individual devices of your K2 system using the instructions in the following sections.

- [“Cable K2 client” on page 24](#)
- [“Cable Gigabit Ethernet switch” on page 28](#)
- [“Cable K2 Media Server” on page 32](#)
- [“Cable NH1 K2 Media Server” on page 46](#)
- [“Cable NH1-10GE K2 Media Server” on page 49](#)
- [“Cable K2 RAID” on page 52](#)

## Cable K2 client

As directed by the system diagram for your K2 storage, cable the K2 client devices using the instructions in this section.

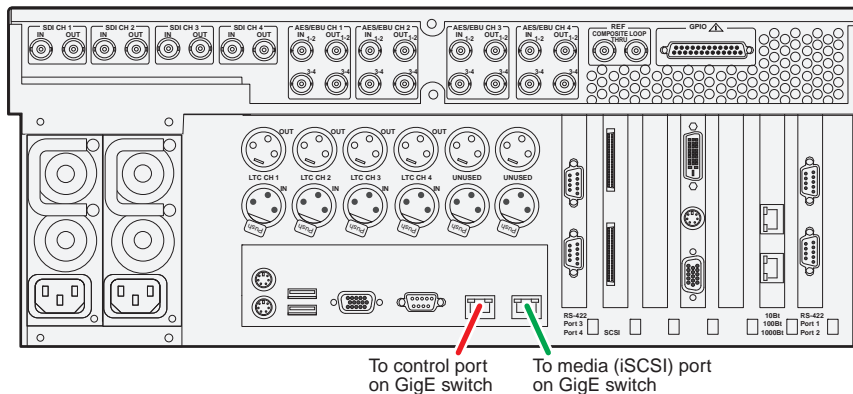
- “K2 Media Client for basic K2 SAN” on page 24
- “K2 Media Client for redundant K2 SAN” on page 25
- “K2 Summit Production Client for basic K2 SAN” on page 25
- “K2 Summit Production Client for redundant K2 SAN” on page 26
- “K2 Media Client with direct-connect storage” on page 26
- “K2 Summit Production Client with direct-connect storage” on page 27

### K2 Media Client for basic K2 SAN

These cabling instructions apply to the following:

- K2 Media Client on a basic (non-redundant) K2 SAN

K2 Media Client model SD-00 is shown. Other models have similar connections. Refer to each model’s *K2 Media Client Quick Start Guide* for additional cabling details.



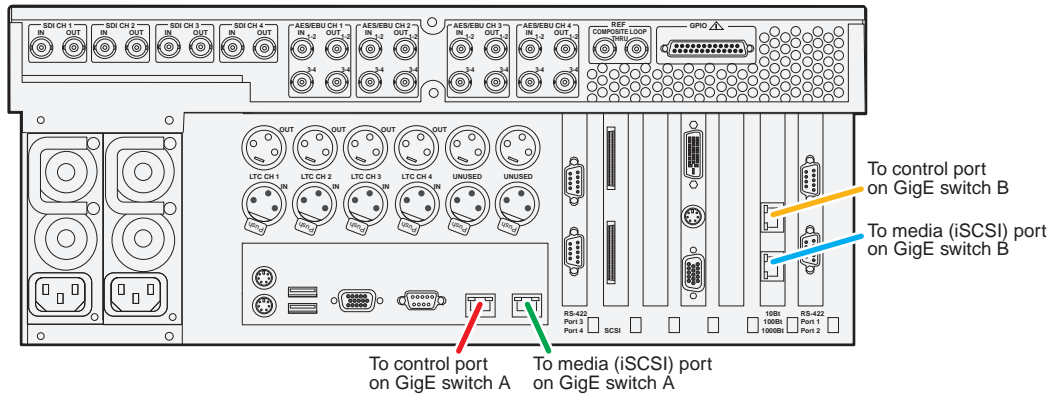


## K2 Media Client for redundant K2 SAN

These cabling instructions apply to the following:

- K2 Media Client on a redundant K2 SAN

K2 Media Client model SD-00 is shown. Other models have similar connections. Refer to each model's *K2 Media Client Quick Start Guide* for additional cabling details.

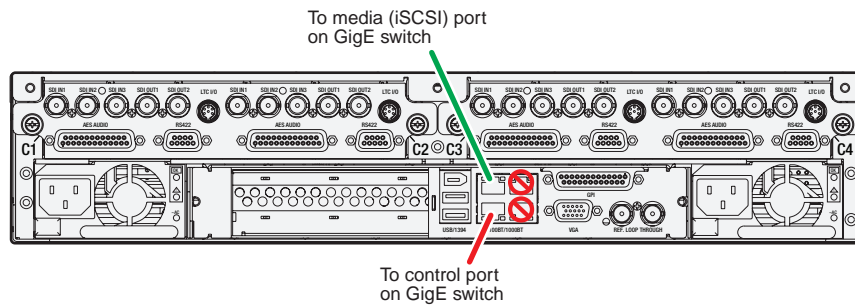


## K2 Summit Production Client for basic K2 SAN

These cabling instructions apply to the following:

- K2 Summit Production Client on a basic (non-redundant) K2 SAN

Refer to the *K2 Summit Production Client Quick Start Guide* for additional cabling details.

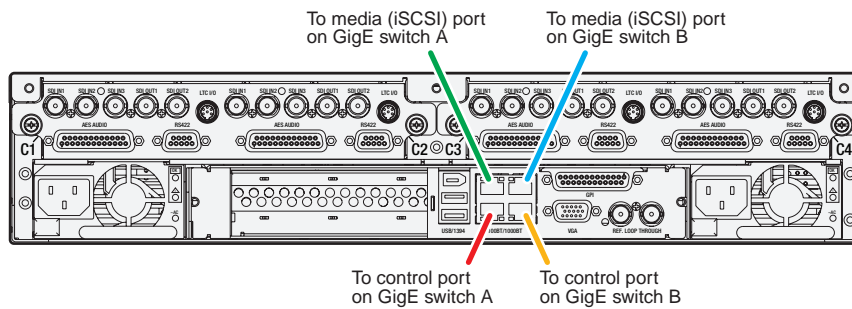


## K2 Summit Production Client for redundant K2 SAN

These cabling instructions apply to the following:

- K2 Summit Production Client on a redundant K2 SAN

Refer to the *K2 Summit Production Client Quick Start Guide* for additional cabling details.



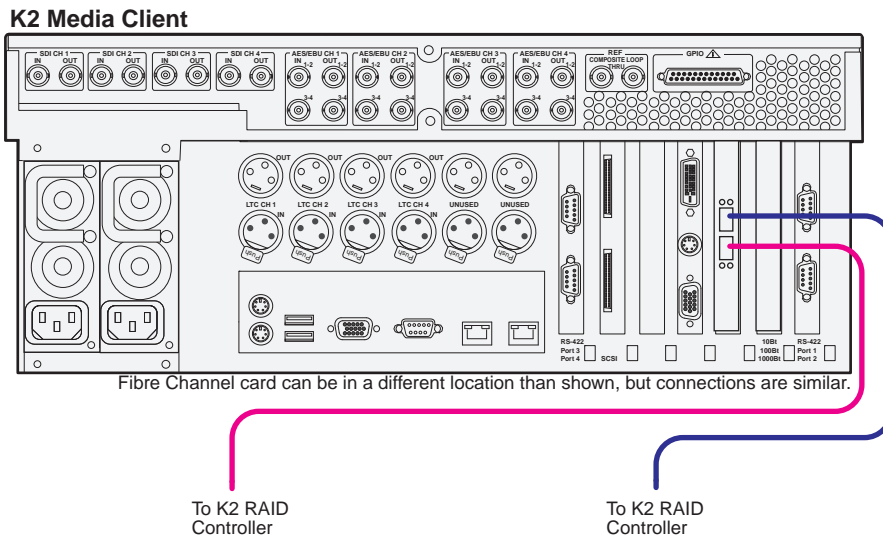
## K2 Media Client with direct-connect storage

These cabling instructions apply to the following:

- K2 Media Client with direct-connect K2 RAID storage

Refer to the *K2 Media Client System Guide* for additional information about direct-connect storage.

K2 Media Client model SD-00 is shown. Other models have similar connections. Refer to each model's *K2 Media Client Quick Start Guide* for additional cabling details.



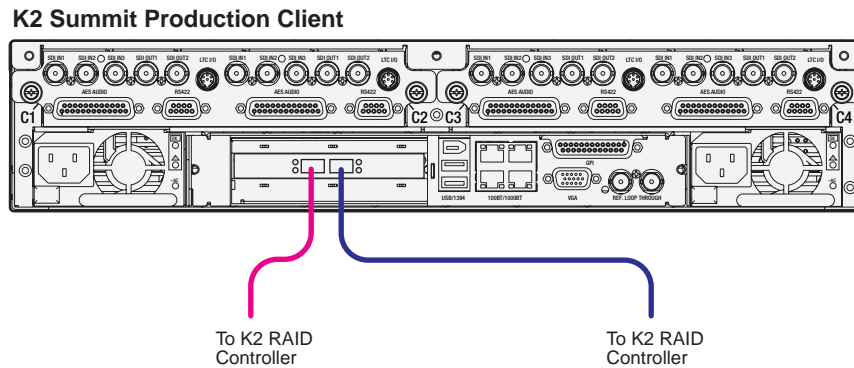
## **K2 Summit Production Client with direct-connect storage**

These cabling instructions apply to the following:

- K2 Summit Production Client with direct-connect K2 RAID storage

Refer to the *K2 System Guide* for additional information about direct-connect storage.

Refer to the *K2 Summit Production Client Quick Start Guide* for additional cabling details.



## Cable Gigabit Ethernet switch

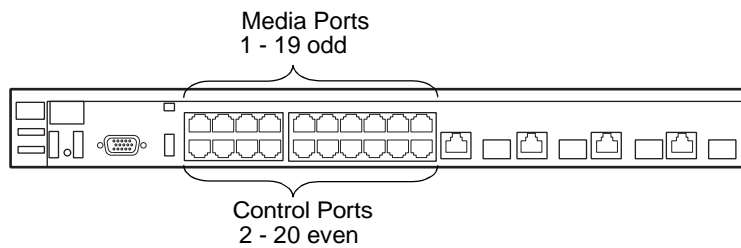
As directed by the system diagram for your K2 SAN's level, cable the switch or switches for your K2 SAN using the instructions in this section.

- “3400cl HP GigE switch for basic K2 SAN” on page 28
- “3400cl HP GigE switch for redundant K2 SAN” on page 29
- “2900 HP GigE switch for basic K2 SAN” on page 29
- “2900 HP GigE switch for redundant K2 SAN” on page 30
- “2900 HP GigE switch for basic nearline K2 SAN” on page 30
- “2900 HP GigE switch for redundant nearline K2 SAN” on page 31

### 3400cl HP GigE switch for basic K2 SAN

These cabling instructions apply to the following:

- HP 3400cl series Gigabit Ethernet switch on a basic (non-redundant) online K2 SAN.



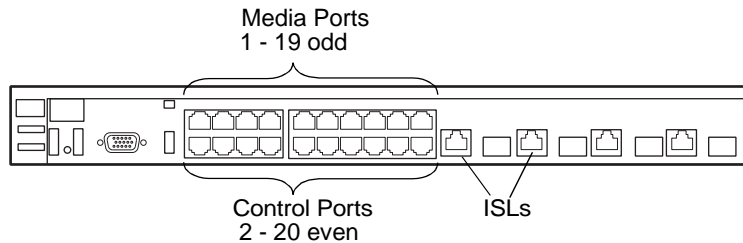
To the media ports make one connection from each K2 Media Client or other iSCSI client and two connections from the media server.

To the control ports make a connection from each K2 Media Client or other iSCSI client, from the media server, from the RAID storage chassis, and from the control point PC.

## 3400cl HP GigE switch for redundant K2 SAN

These cabling instructions apply to the following:

- HP 3400cl series Gigabit Ethernet switch on a redundant online K2 SAN.



To the media ports on switch A, make one media connection from each K2 Media Client or other iSCSI client and make two connections from media server A.

To the media ports on switch B, make the second media connection from each K2 Media Client or other iSCSI client and make two connections from media server B.

To the control ports on switch A, make one control connection from each K2 Media Client or other iSCSI client, from media server A, from the RAID storage chassis, and from the control point PC.

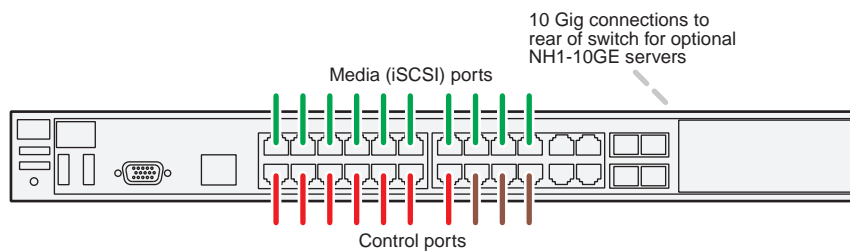
To the control ports on switch B, make the second control connection from each K2 Media Client or other iSCSI client and the control connection from media server B.

Interconnect switch A and switch B with two 10 Gig ISLs.

## 2900 HP GigE switch for basic K2 SAN

These cabling instructions apply to the following:

- HP 2900 series Gigabit Ethernet switch on a basic (non-redundant) online K2 SAN.



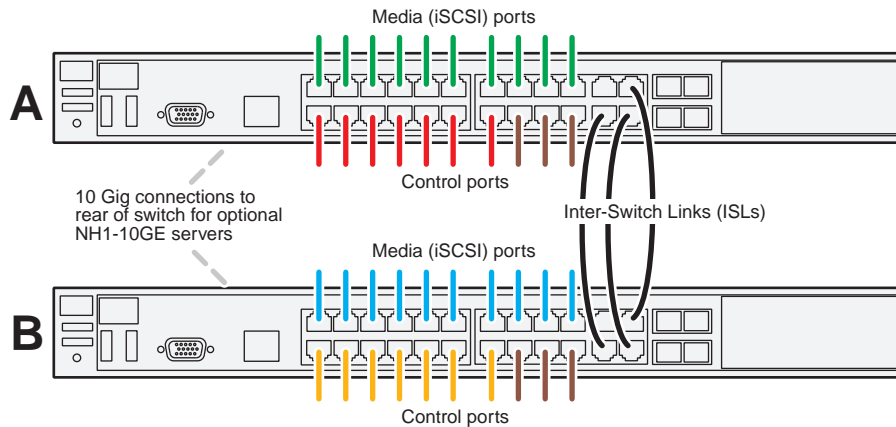
Control ports are for control connections from K2 clients, Aurora products, automation, etc., as well as FTP connections from Grass Valley and 3rd party systems.

**NOTE:** NH1-10GE server not supported on Level 10 K2 SAN.

## 2900 HP GigE switch for redundant K2 SAN

These cabling instructions apply to the following:

- HP 2900 series Gigabit Ethernet switch on a basic (non-redundant) online K2 SAN.



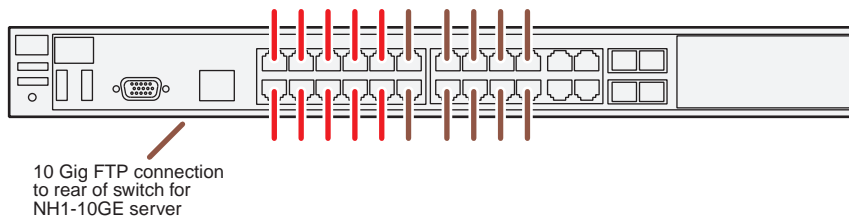
Control ports are for control connections from K2 clients, Aurora products, automation, etc., as well as FTP connections from Grass Valley and 3rd party systems.

**NOTE:** NH1-10GE server not supported on Level 10 K2 SAN.

## 2900 HP GigE switch for basic nearline K2 SAN

These cabling instructions apply to the following:

- HP 2900 series Gigabit Ethernet switch on a basic (non-redundant) nearline K2 SAN.

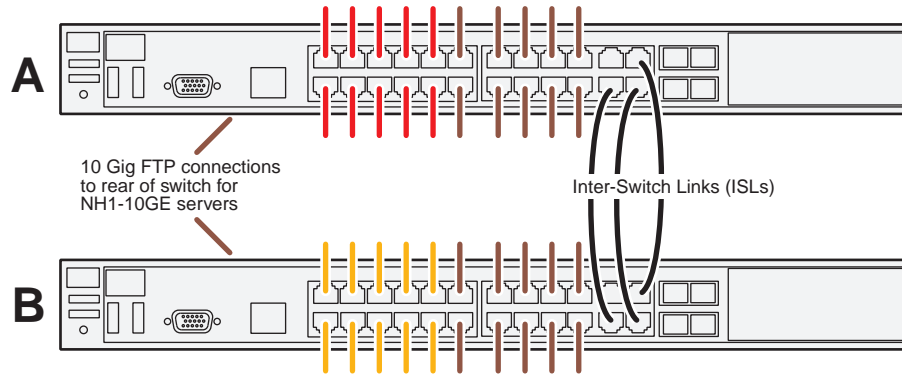


Ports are for control connections as well as FTP connections from Grass Valley and 3rd party systems.

## 2900 HP GigE switch for redundant nearline K2 SAN

These cabling instructions apply to the following:

- HP 2900 series Gigabit Ethernet switch on a redundant nearline K2 SAN.



Ports are for control connections as well as FTP connections from Grass Valley and 3rd party systems.

## Cable K2 Media Server

As directed by the system diagram for your K2 SAN's level, cable the K2 Media Server or Servers for your K2 SAN using the instructions in this section.

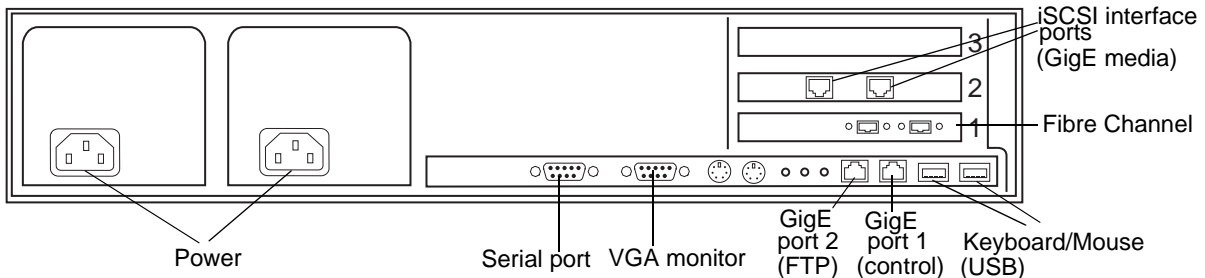
- “Dell 2850 for basic K2 SAN” on page 33
- “Dell 2850 for redundant K2 SAN” on page 33
- “Dell 1950 GS for Level 10 basic K2 SAN” on page 34
- “Dell 1950 GS for Level 10 redundant K2 SAN” on page 34
- “Dell 1950 GS for Level 20 basic K2 SAN” on page 35
- “Dell 1950 GS for Level 20 redundant K2 SAN” on page 35
- “Dell 1950 GS for Level 35 basic K2 SAN” on page 36
- “Dell 1950 GS for Level 35 redundant K2 SAN” on page 37
- “Dell 2950 for basic K2 SAN” on page 38
- “Dell 2950 for redundant K2 SAN” on page 38
- “Dell 2950 for Level 3 basic K2 SAN” on page 39
- “Dell 2950 for Level 3 redundant K2 SAN” on page 40
- “Dell 2950 LS for basic K2 SAN” on page 41
- “Dell 2950 LS for redundant K2 SAN” on page 41
- “Dell R610 GS for Level 10 basic K2 SAN” on page 42
- “Dell R610 GS for Level 10 redundant K2 SAN” on page 42
- “Dell R610 GS for Level 20 basic K2 SAN” on page 42
- “Dell R610 GS for Level 20 redundant K2 SAN” on page 43
- “Dell R610 GS for Level 35 basic K2 SAN” on page 43
- “Dell R610 GS for Level 35 redundant K2 SAN” on page 44
- “Dell R710 LS for basic K2 SAN” on page 44
- “Dell R710 LS for redundant K2 SAN” on page 45



## Dell 2850 for basic K2 SAN

These cabling instructions apply to the following:

- Dell 2850 PowerEdge Server on a basic (non-redundant) online K2 SAN.



Connect the two iSCSI interface adapters to media ports on the GigE switch.

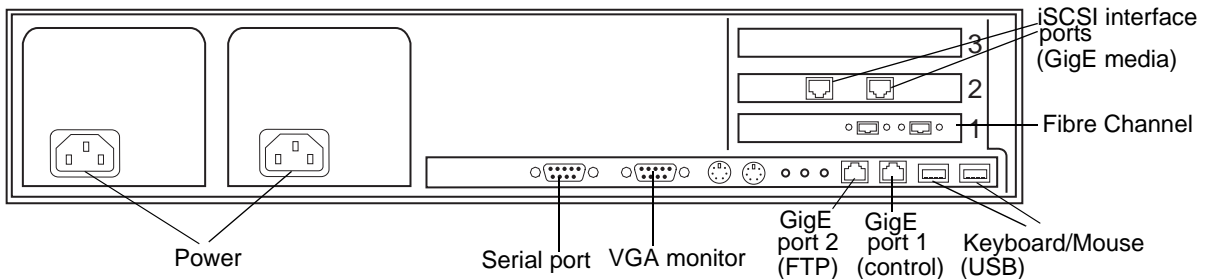
Connect the motherboard GigE port 1 and GigE port 2 to control ports on the GigE switch.

Connect one of the Fibre Channel ports to the RAID storage device.

## Dell 2850 for redundant K2 SAN

These cabling instructions apply to the following:

- Dell 2850 PowerEdge Server on a redundant online K2 SAN.



Connect the two iSCSI interface adapters to media ports on the GigE switch.

Connect the motherboard GigE port 1 and GigE port 2 to control ports on the GigE switch.

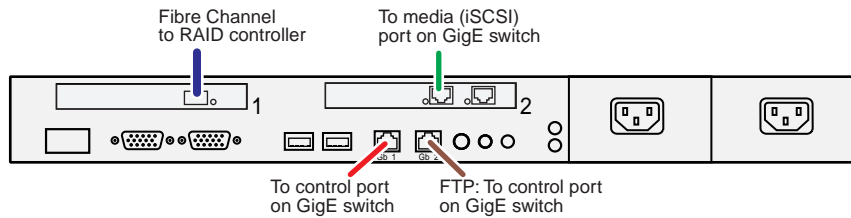
Connect one of the Fibre Channel ports to the RAID storage device.

Make a direct connection between the serial ports of the two redundant servers. For Level 3 redundant, connect server 1A to server 1B, and connect server 2A to server 2B.

## Dell 1950 GS for Level 10 basic K2 SAN

These cabling instructions apply to the following:

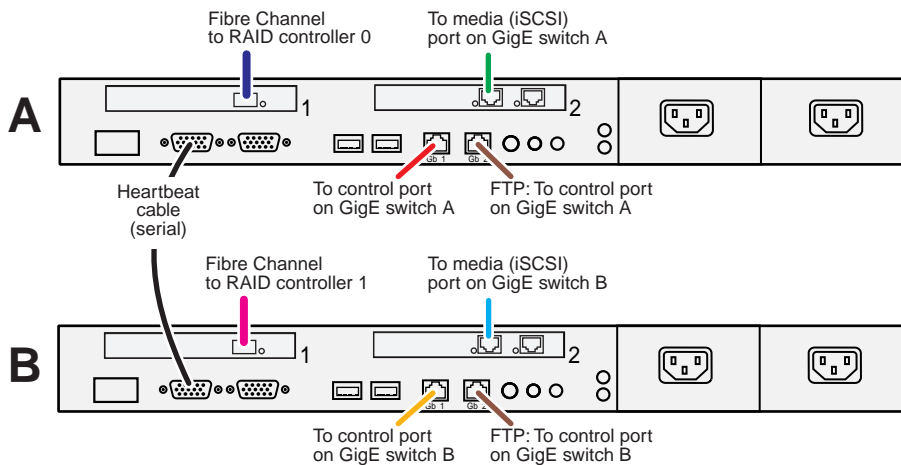
- Dell 1950 PowerEdge Server on a Level 10 basic (non-redundant) K2 SAN.



## Dell 1950 GS for Level 10 redundant K2 SAN

These cabling instructions apply to the following:

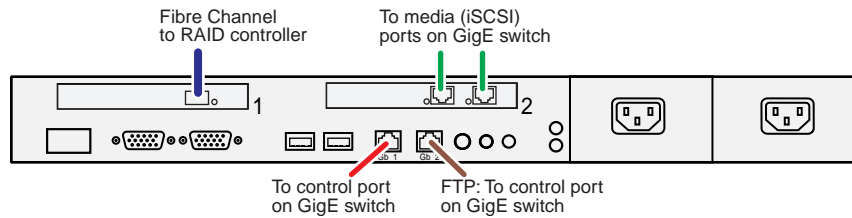
- Dell 1950 PowerEdge Server on a Level 10 redundant K2 SAN.



## Dell 1950 GS for Level 20 basic K2 SAN

These cabling instructions apply to the following:

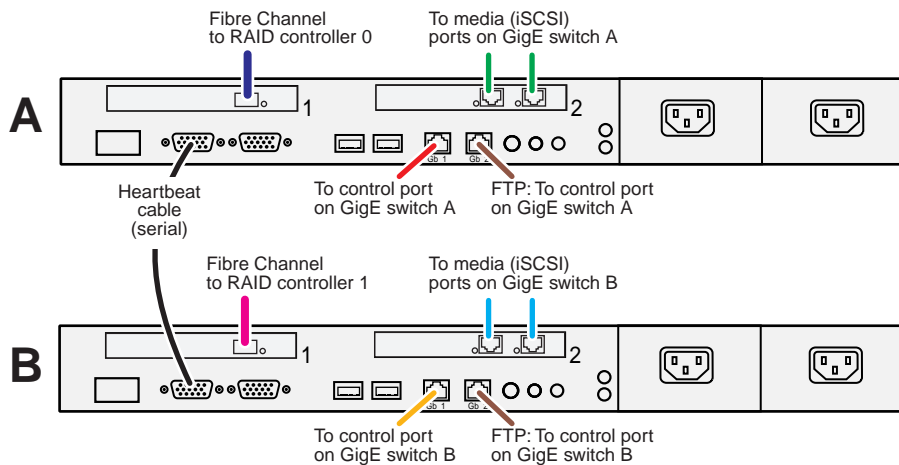
- Dell 1950 PowerEdge Server on a Level 20 basic (non-redundant) K2 SAN.



## Dell 1950 GS for Level 20 redundant K2 SAN

These cabling instructions apply to the following:

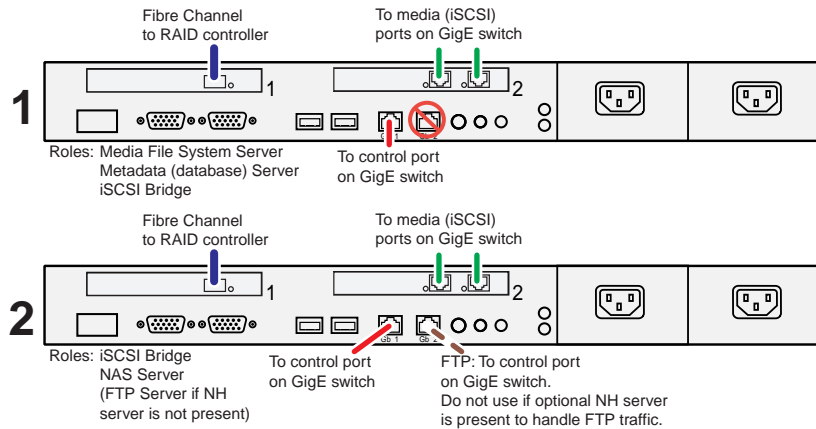
- Dell 1950 PowerEdge Server on a Level 20 redundant K2 SAN.



## Dell 1950 GS for Level 35 basic K2 SAN

These cabling instructions apply to the following:

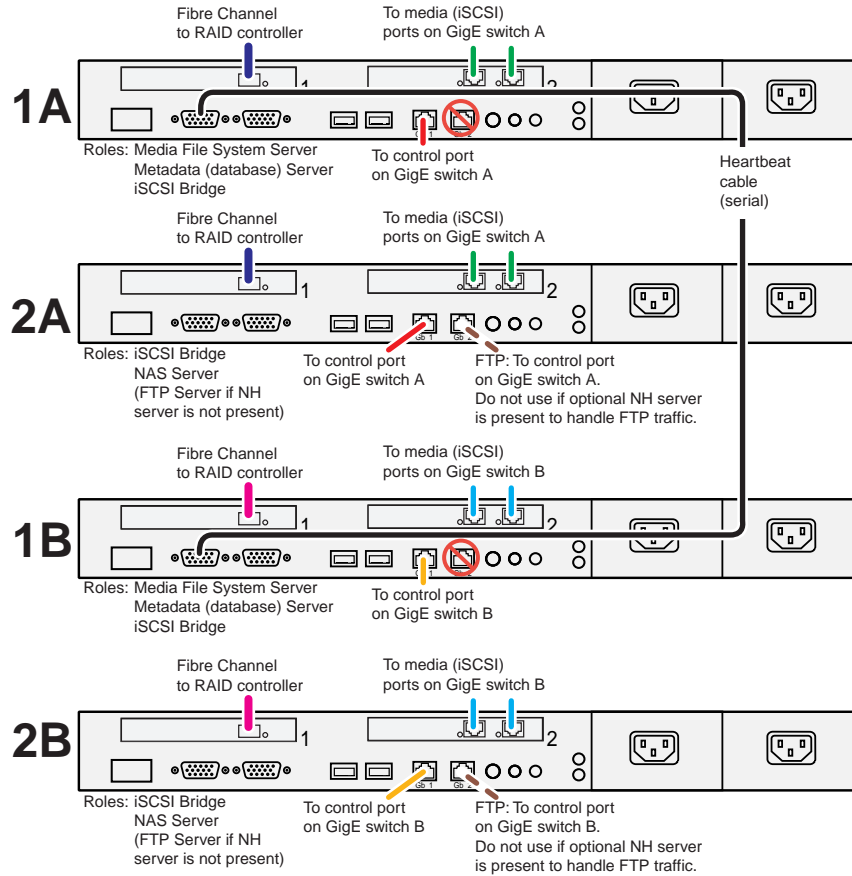
- Dell 1950 PowerEdge Server on a Level 35 basic (non-redundant) K2 SAN.



## Dell 1950 GS for Level 35 redundant K2 SAN

These cabling instructions apply to the following:

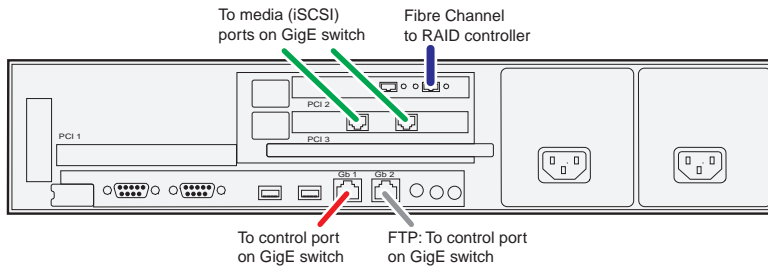
- Dell 1950 PowerEdge Server on a Level 35 redundant K2 SAN.



## Dell 2950 for basic K2 SAN

These cabling instructions apply to the following:

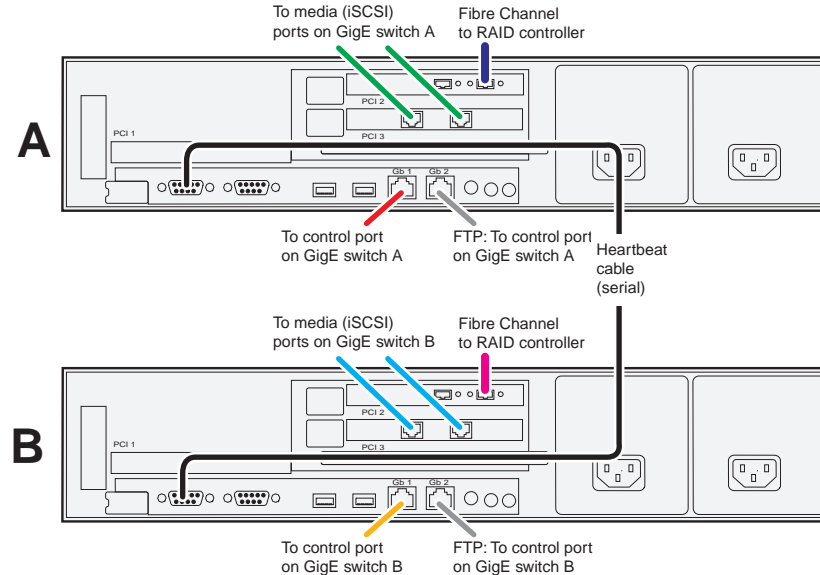
- Dell 2950 PowerEdge Server with two iSCSI interface adapters (TOEs) on a basic (non-redundant) online K2 SAN.



## Dell 2950 for redundant K2 SAN

These cabling instructions apply to the following:

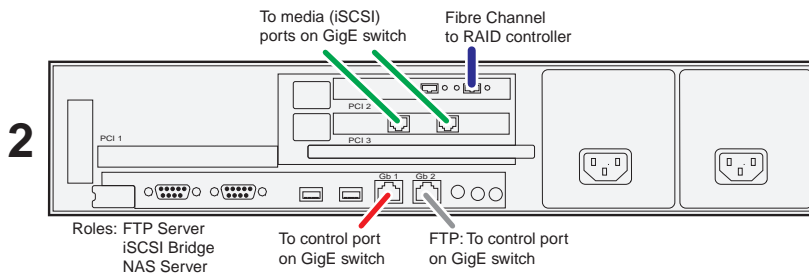
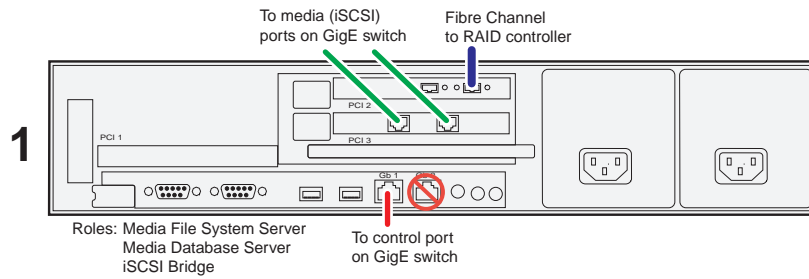
- Dell 2950 PowerEdge Server with two iSCSI interface adapters (TOEs) on a redundant online K2 SAN.



## Dell 2950 for Level 3 basic K2 SAN

These cabling instructions apply to the following:

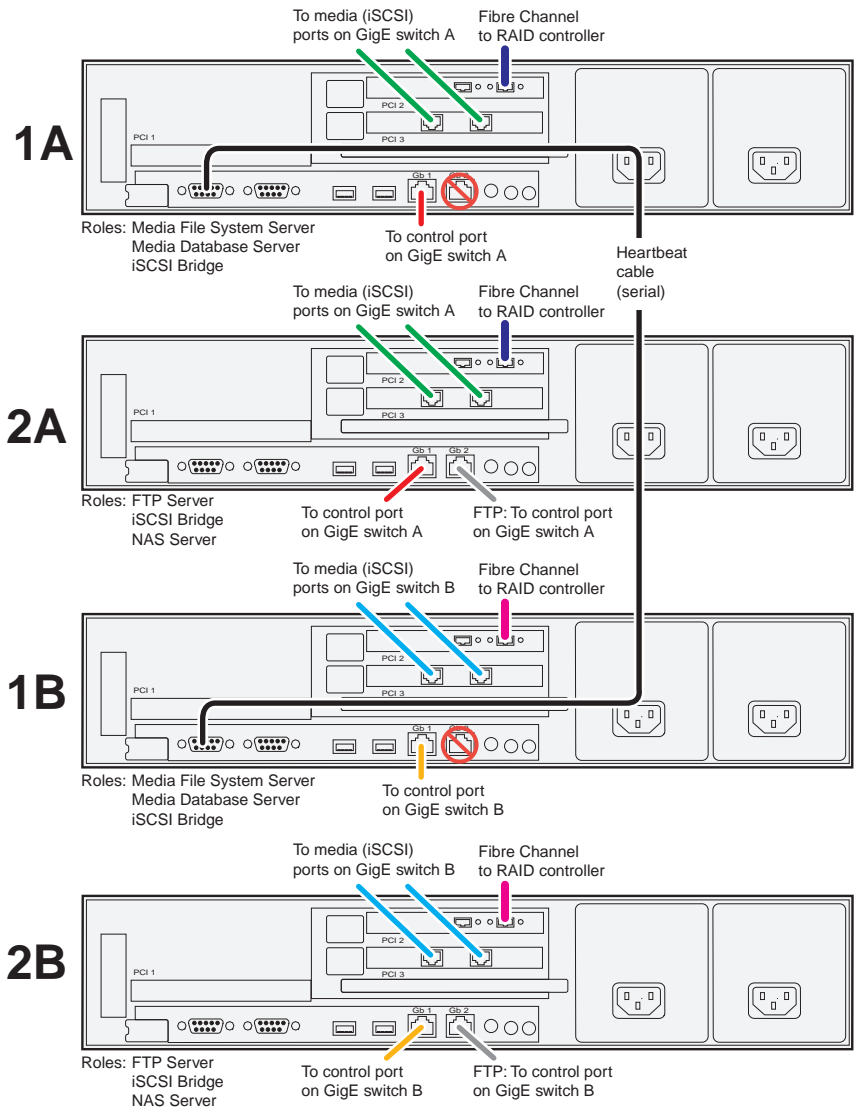
- Dell 2950 PowerEdge Server with two iSCSI interface adapters (TOEs) on a Level 3 basic (non-redundant) K2 SAN.



## Dell 2950 for Level 3 redundant K2 SAN

These cabling instructions apply to the following:

- Dell 2950 PowerEdge Server with two iSCSI interface adapters (TOEs) on a Level 3 redundant K2 SAN.

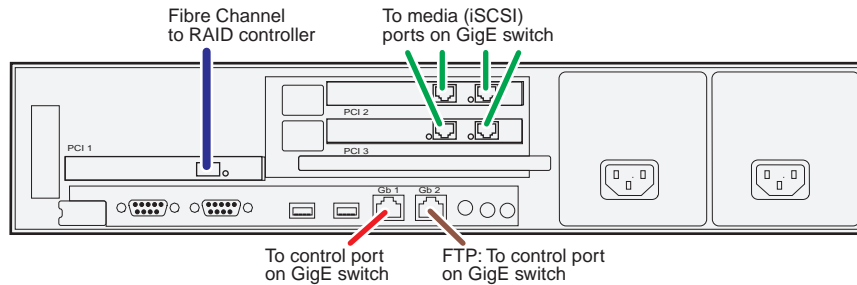




## Dell 2950 LS for basic K2 SAN

These cabling instructions apply to the following:

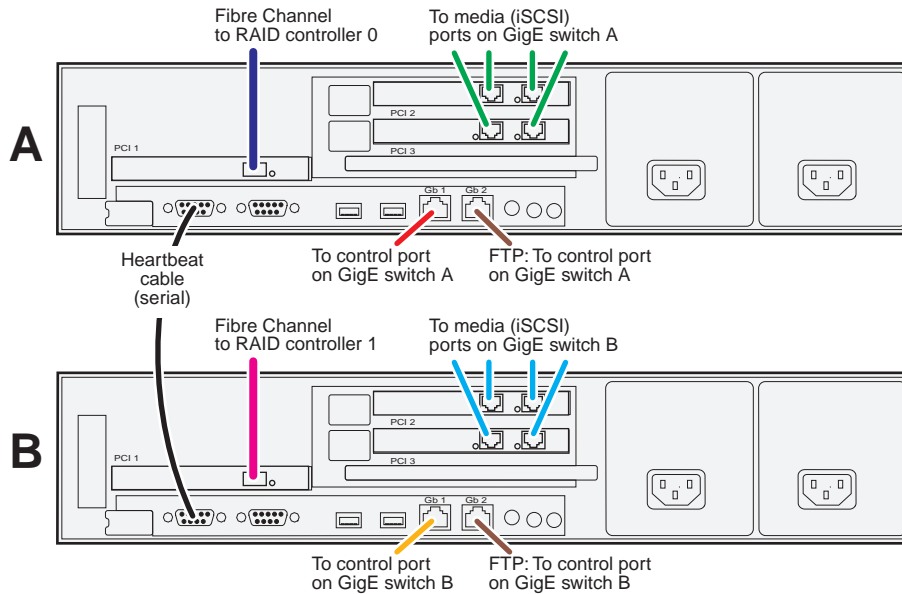
- Dell 2950 PowerEdge Server with four iSCSI interface adapters (TOEs) on a basic (non-redundant) online K2 SAN.



## Dell 2950 LS for redundant K2 SAN

These cabling instructions apply to the following:

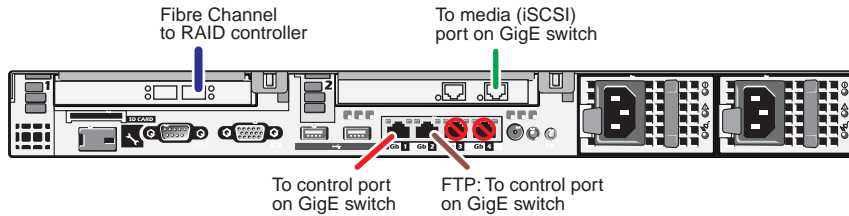
- Dell 2950 PowerEdge Server with four iSCSI interface adapters (TOEs) on a redundant online K2 SAN.



## Dell R610 GS for Level 10 basic K2 SAN

These cabling instructions apply to the following:

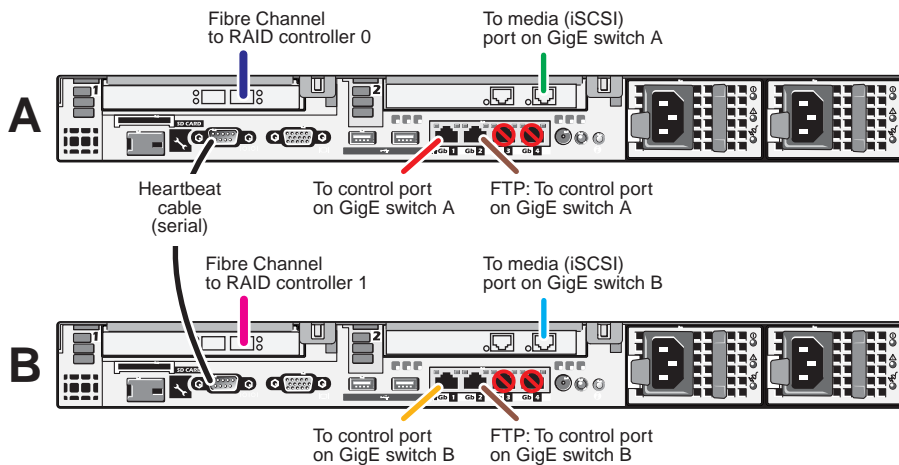
- Dell R610 PowerEdge Server on a Level 10 basic (non-redundant) K2 SAN.



## Dell R610 GS for Level 10 redundant K2 SAN

These cabling instructions apply to the following:

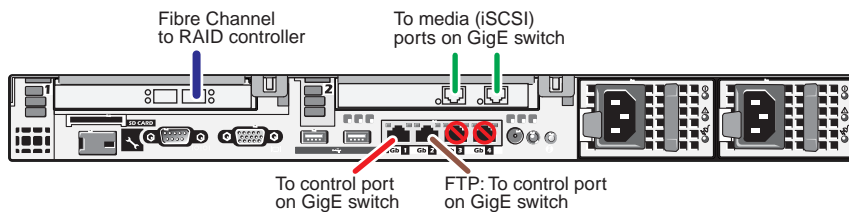
- Dell 1950 PowerEdge Server on a Level 10 redundant K2 SAN.



## Dell R610 GS for Level 20 basic K2 SAN

These cabling instructions apply to the following:

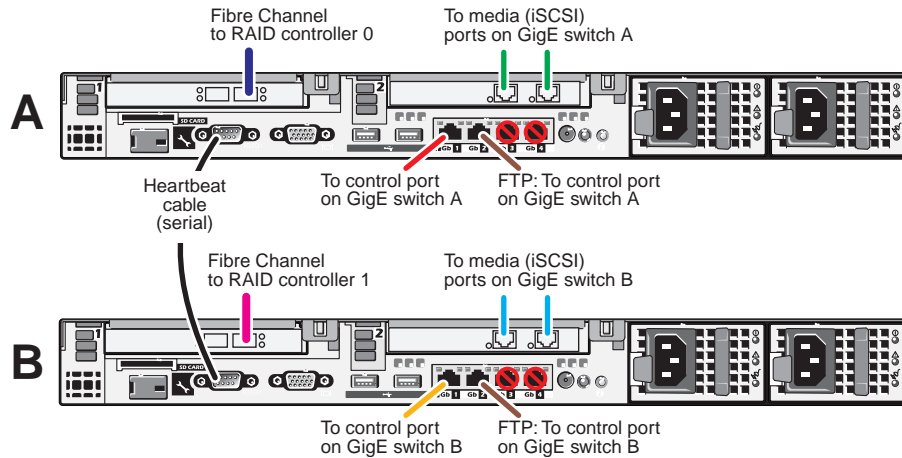
- Dell R610 PowerEdge Server on a Level 20 basic (non-redundant) K2 SAN.



## Dell R610 GS for Level 20 redundant K2 SAN

These cabling instructions apply to the following:

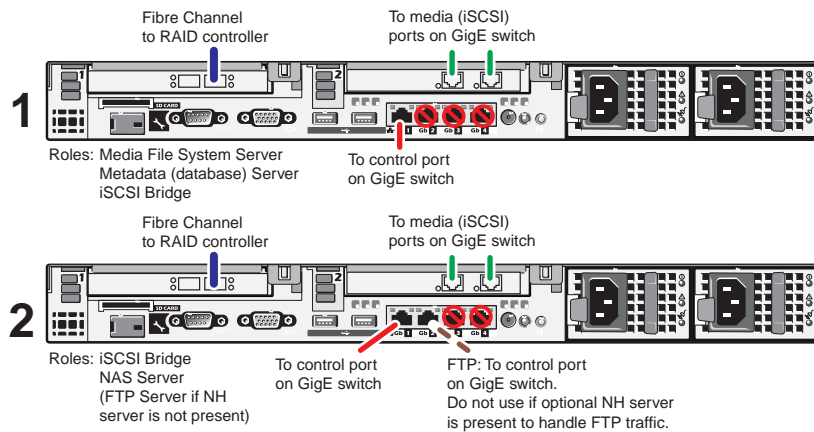
- Dell 1950 PowerEdge Server on a Level 20 redundant K2 SAN.



## Dell R610 GS for Level 35 basic K2 SAN

These cabling instructions apply to the following:

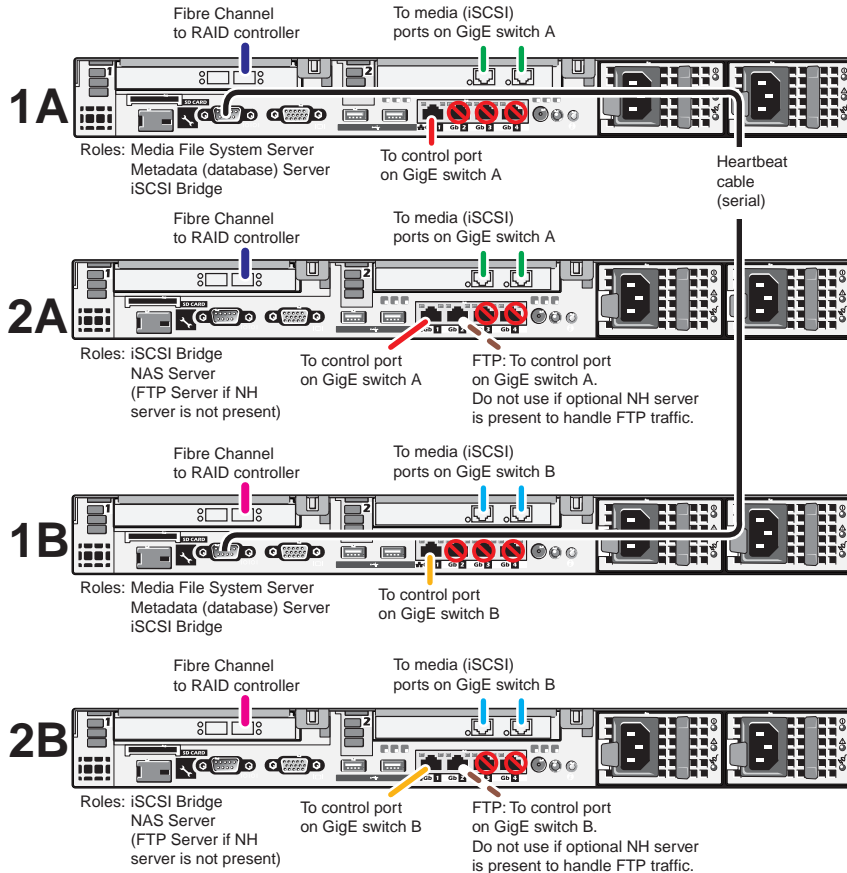
- Dell R610 PowerEdge Server on a Level 35 basic (non-redundant) K2 SAN.



## Dell R610 GS for Level 35 redundant K2 SAN

These cabling instructions apply to the following:

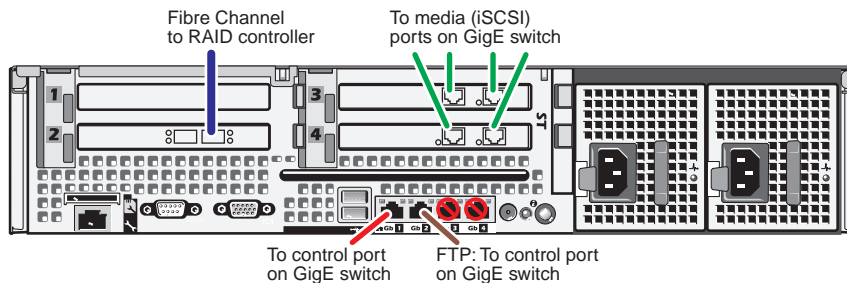
- Dell R610 PowerEdge Server on a Level 35 redundant K2 SAN.



## Dell R710 LS for basic K2 SAN

These cabling instructions apply to the following:

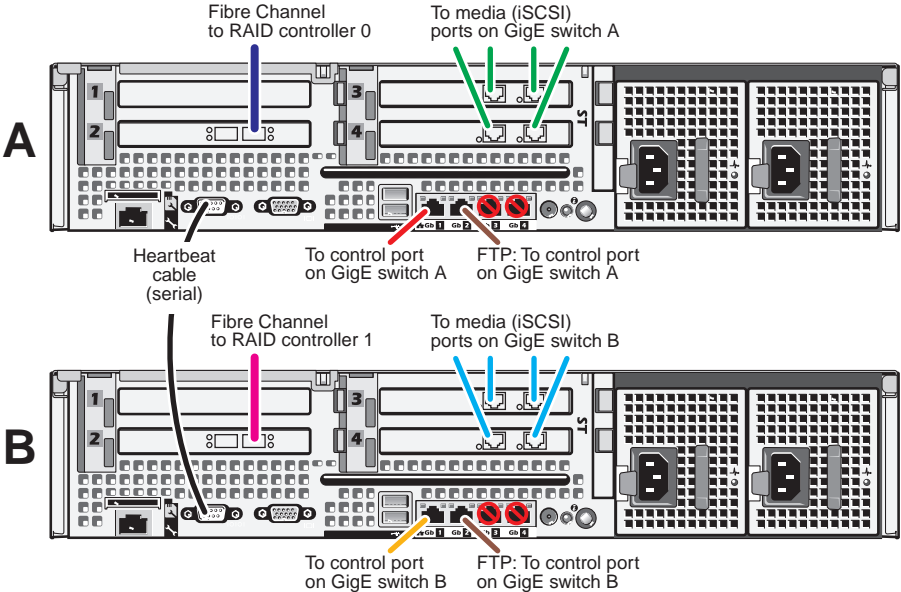
- Dell R710 PowerEdge Server on a basic (non-redundant) online K2 SAN.



## Dell R710 LS for redundant K2 SAN

These cabling instructions apply to the following:

- Dell R710 PowerEdge Server on a redundant online K2 SAN.



## Cable NH1 K2 Media Server

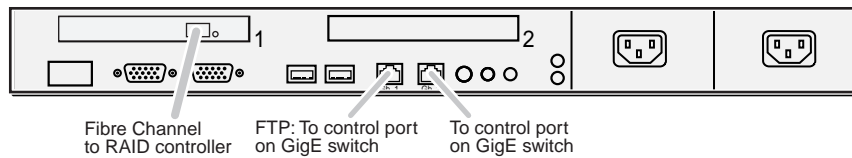
As directed by the system diagram for your K2 SAN's level, cable the NH-1 K2 Media Server or Servers for your K2 SAN using the instructions in this section.

- “Dell 1950 NH1 for online K2 SAN” on page 46
- “Dell 1950 NH1 for basic nearline K2 SAN” on page 46
- “Dell 1950 NH1 for redundant nearline K2 SAN” on page 47
- “Dell R610 NH1 for online K2 SAN” on page 47
- “Dell R610 NH1 for redundant nearline K2 SAN” on page 48

### Dell 1950 NH1 for online K2 SAN

These cabling instructions apply to the following:

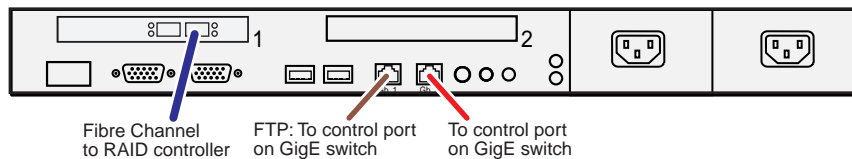
- Dell 1950 PowerEdge Server NH1 on an online K2 SAN.



### Dell 1950 NH1 for basic nearline K2 SAN

These cabling instructions apply to the following:

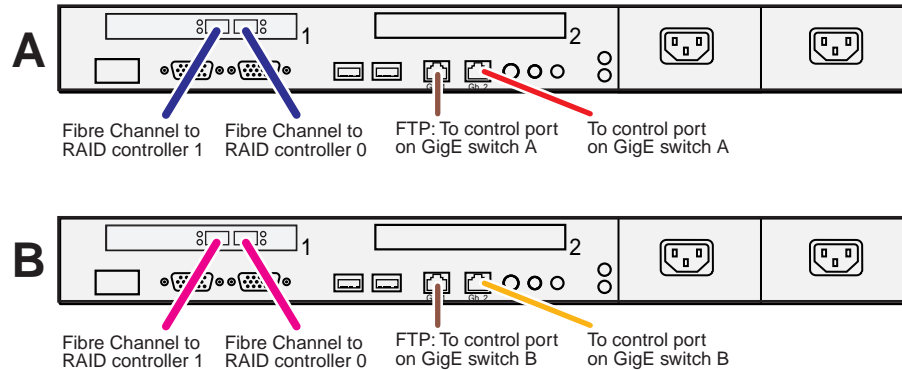
- Dell 1950 PowerEdge Server NH1 on a basic (non-redundant) nearline K2 SAN.



## Dell 1950 NH1 for redundant nearline K2 SAN

These cabling instructions apply to the following:

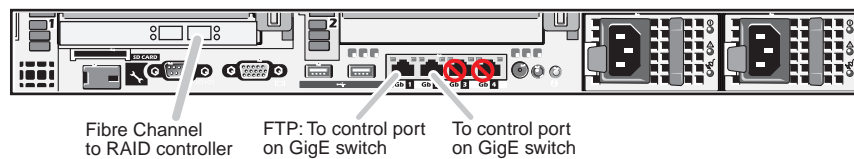
- Dell 1950 PowerEdge Server NH1 on a redundant nearline K2 SAN.



## Dell R610 NH1 for online K2 SAN

These cabling instructions apply to the following:

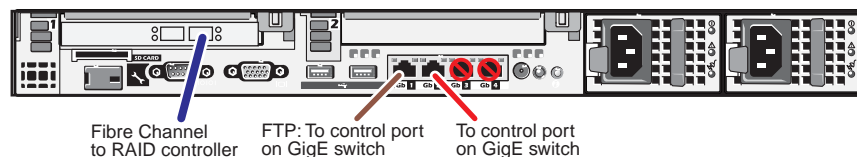
- Dell R10 PowerEdge Server NH1 on an online K2 SAN.



## Dell R610 NH1 for basic nearline K2 SAN

These cabling instructions apply to the following:

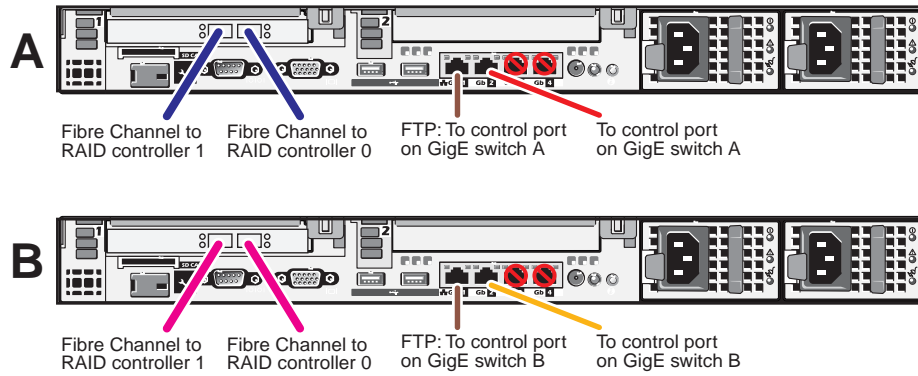
- Dell R10 PowerEdge Server NH1 on a basic (non-redundant) nearline K2 SAN.



## Dell R610 NH1 for redundant nearline K2 SAN

These cabling instructions apply to the following:

- Dell R10 PowerEdge Server NH1 on a redundant nearline K2 SAN.





## Cable NH1-10GE K2 Media Server

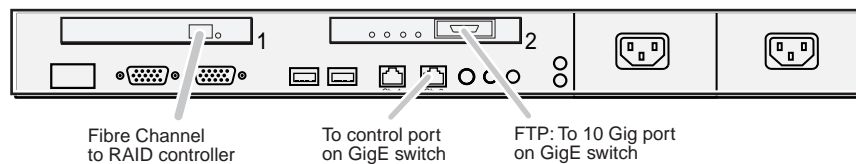
As directed by the system diagram for your K2 SAN's level, cable the NH1-10GE K2 Media Server or Servers for your K2 SAN using the instructions in this section.

- “Dell 1950 NH1-10GE for online K2 SAN” on page 49
- “Dell 1950 NH1-10GE for basic nearline K2 SAN” on page 49
- “Dell 1950 NH1-10GE for redundant nearline K2 SAN” on page 50
- “Dell R610 NH1-10GE for online K2 SAN” on page 50
- “Dell R610 NH1-10GE for basic nearline K2 SAN” on page 50
- “Dell R610 NH1-10GE for redundant nearline K2 SAN” on page 51

### Dell 1950 NH1-10GE for online K2 SAN

These cabling instructions apply to the following:

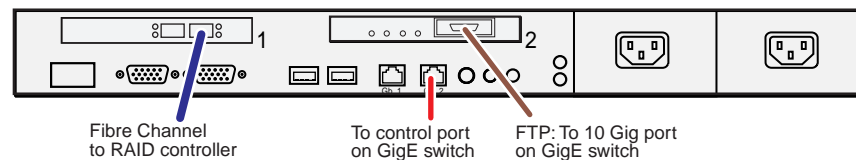
- Dell 1950 PowerEdge Server NH1-10GE on an online K2 SAN.



### Dell 1950 NH1-10GE for basic nearline K2 SAN

These cabling instructions apply to the following:

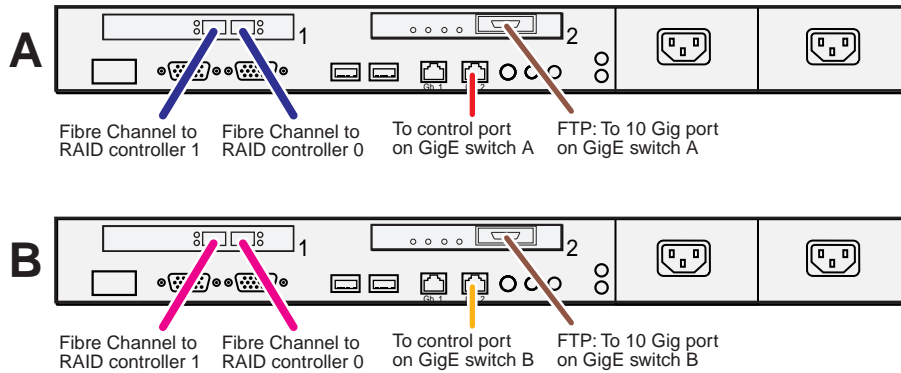
- Dell 1950 PowerEdge Server NH1-10GE on a basic (non-redundant) nearline K2 SAN.



## Dell 1950 NH1-10GE for redundant nearline K2 SAN

These cabling instructions apply to the following:

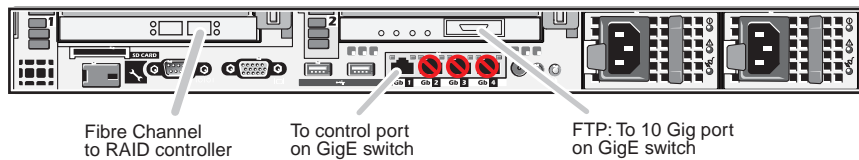
- Dell 1950 PowerEdge Server NH1-10GE on a redundant nearline K2 SAN.



## Dell R610 NH1-10GE for online K2 SAN

These cabling instructions apply to the following:

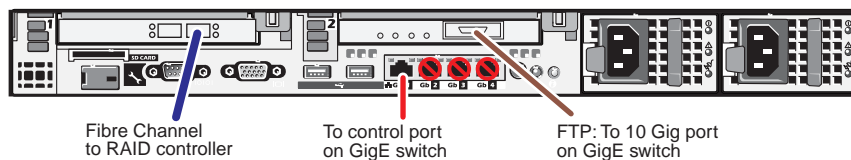
- Dell R610 PowerEdge Server NH1-10GE on an online K2 SAN.



## Dell R610 NH1-10GE for basic nearline K2 SAN

These cabling instructions apply to the following:

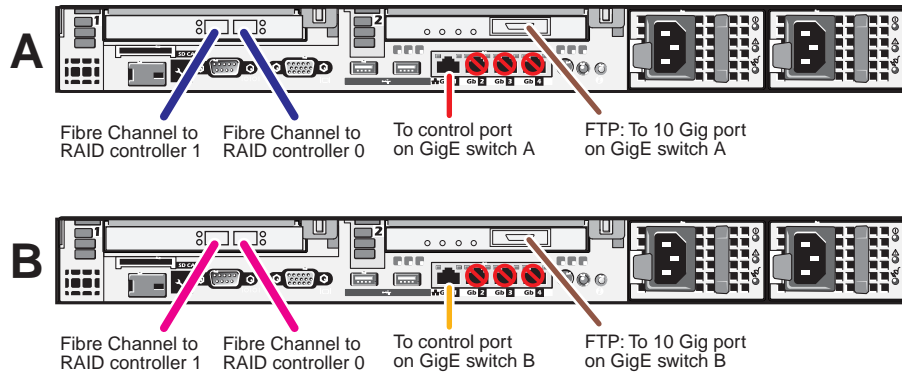
- Dell R610 PowerEdge Server NH1-10GE on a basic (non-redundant) nearline K2 SAN.



## Dell R610 NH1-10GE for redundant nearline K2 SAN

These cabling instructions apply to the following:

- Dell R610 PowerEdge Server NH1-10GE on a redundant nearline K2 SAN.



## Cable K2 RAID

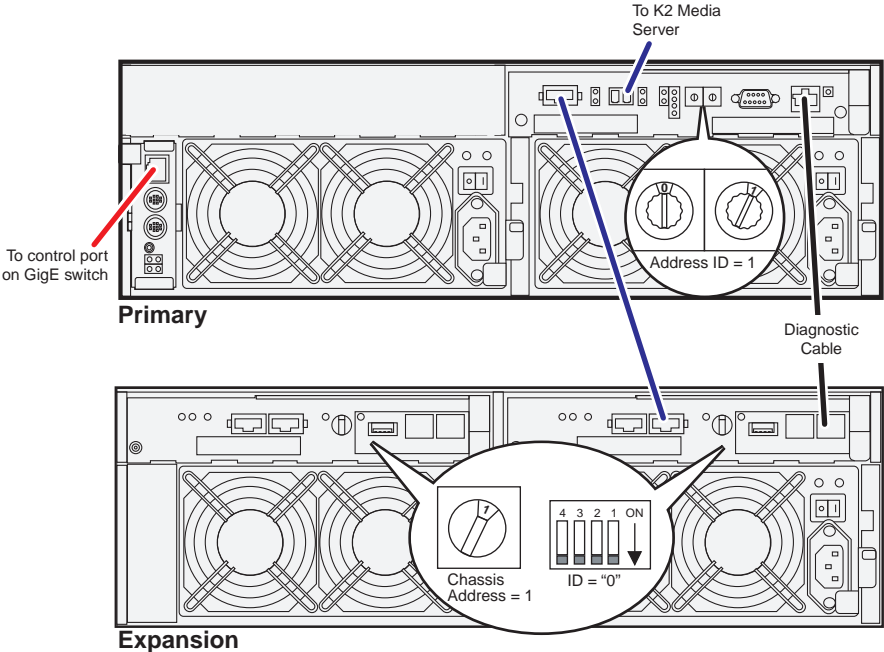
As directed by the system diagram for your K2 storage, cable the K2 RAID devices using the instructions in this section.

- “K2 RAID for Level 2 basic K2 SAN” on page 53
- “K2 RAID for Level 2 redundant K2 SAN” on page 54
- “K2 RAID for basic K2 SAN” on page 55
- “K2 RAID for redundant K2 SAN” on page 56
- “K2 RAID for Level 10 basic K2 SAN” on page 57
- “K2 RAID for Level 10 redundant K2 SAN” on page 58
- “K2 RAID for Level 20 basic K2 SAN” on page 59
- “K2 RAID for Level 20 redundant K2 SAN” on page 60
- “K2 RAID for Level 30 basic K2 SAN” on page 61
- “K2 RAID for Level 30 redundant K2 SAN” on page 62
- “K2 RAID for Level 35 basic K2 SAN” on page 63
- “K2 RAID for Level 35 redundant K2 SAN” on page 64
- “K2 RAID for Nearline 10 basic K2 SAN” on page 65
- “K2 RAID for Nearline 10 redundant K2 SAN” on page 66
- “K2 RAID for K2 client direct-connect storage” on page 67

### K2 RAID for Level 2 basic K2 SAN

These cabling instructions apply to the following:

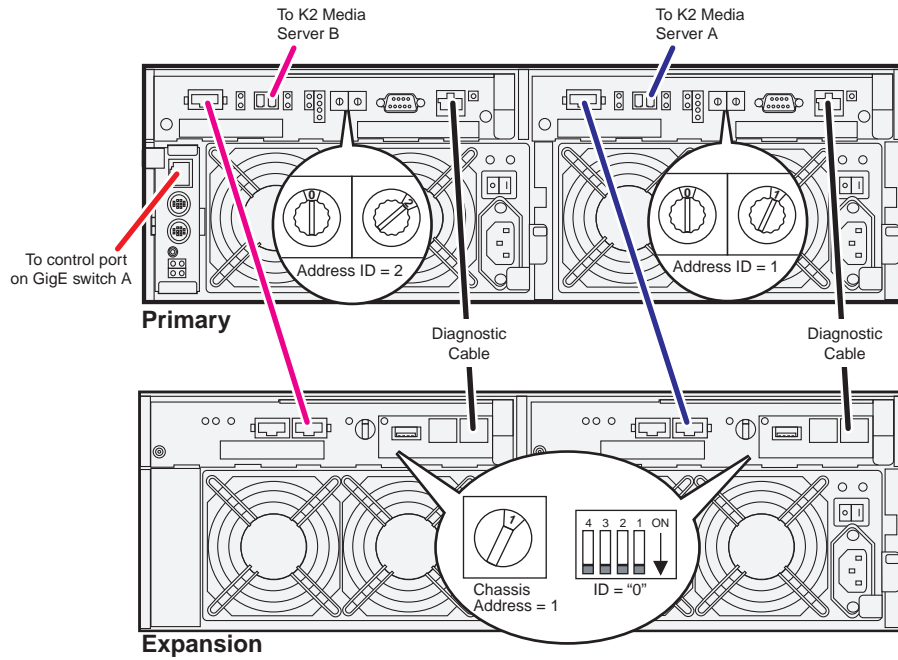
- Level 2 (NEC 1300) K2 RAID on a Level 2 basic (non-redundant) K2 SAN.



## K2 RAID for Level 2 redundant K2 SAN

These cabling instructions apply to the following:

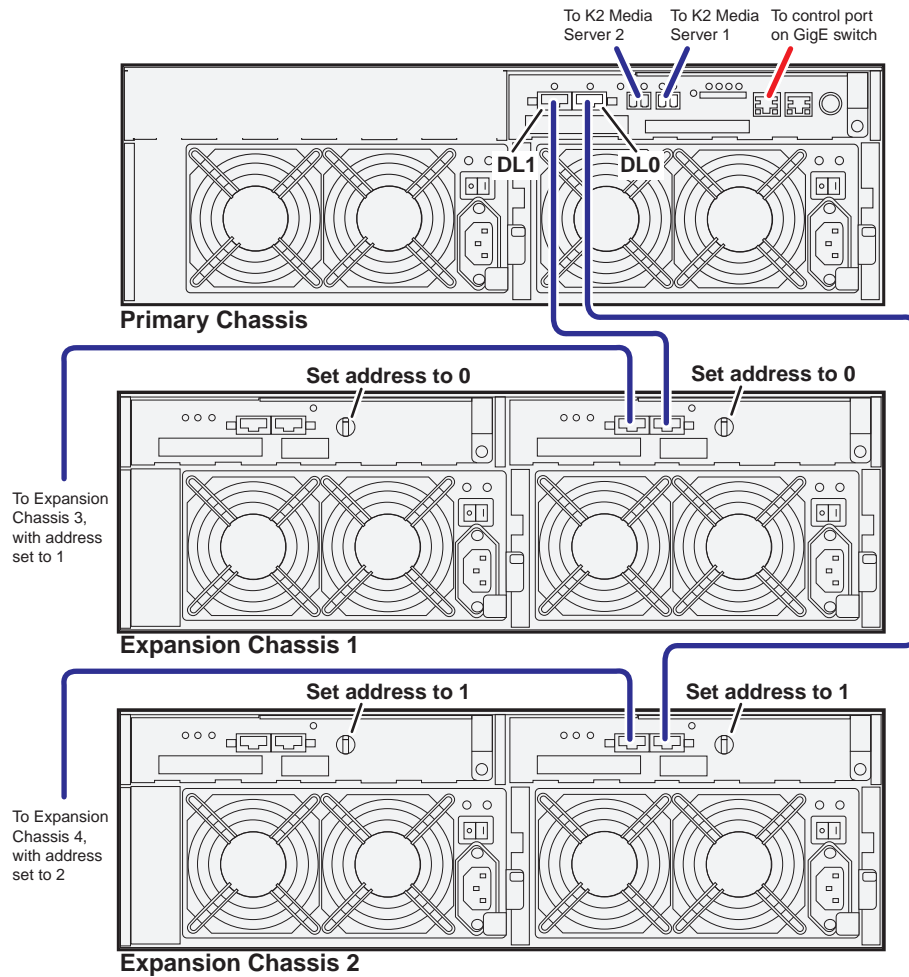
- Level 2 (NEC 1300) K2 RAID on a Level 2 redundant K2 SAN.



## K2 RAID for basic K2 SAN

These cabling instructions apply to the following:

- Level 3 (NEC 1400) K2 RAID on a Level 3 basic (non-redundant) K2 SAN.



The cable/address pattern, extended for additional Expansion Chassis, is as follows:

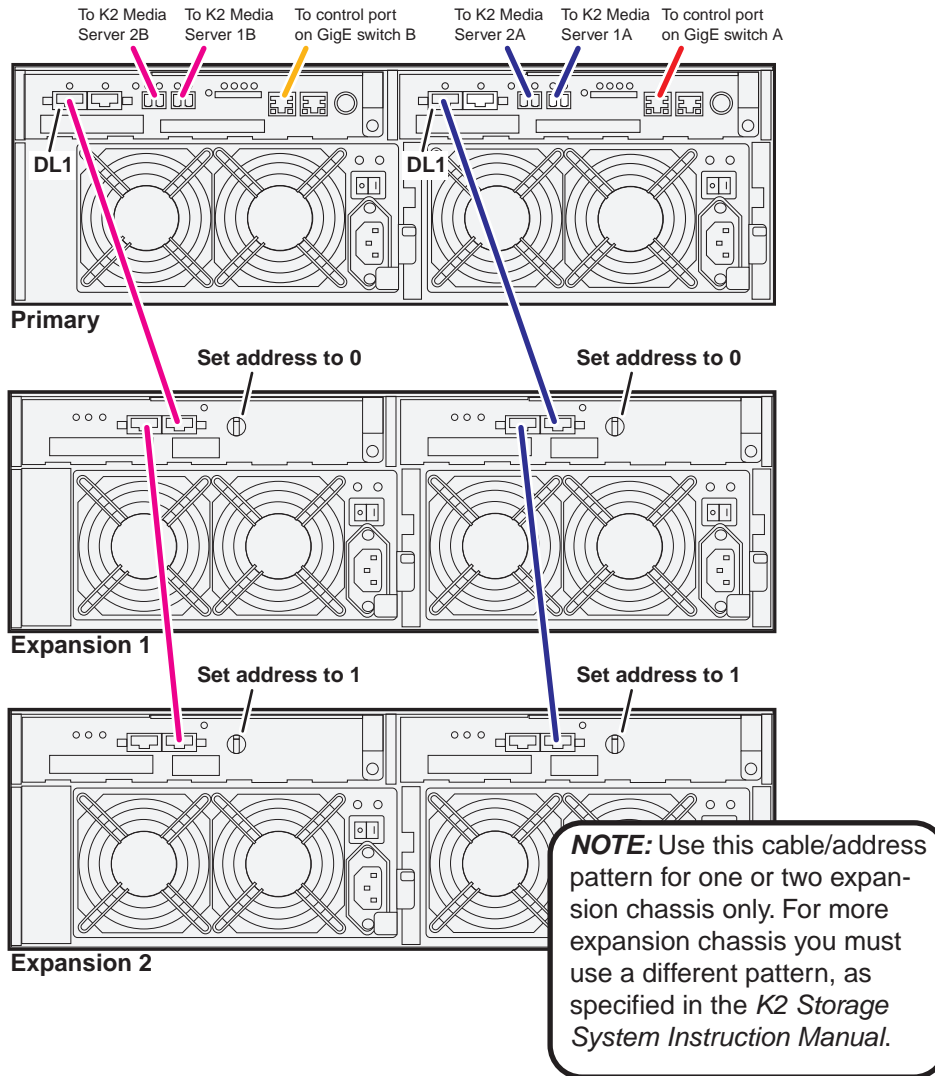
Expansion Chassis #	Connect to...	Set address to...
1	DL1	0
2	DL0	1
3	DL1	1
4	DL0	2
5	DL1	2
6	DL0	3
7	DL1	3

For more information, refer to the *K2 Storage System Instruction Manual*.

## K2 RAID for redundant K2 SAN

These cabling instructions apply to the following:

- Level 3 (NEC 1400) K2 RAID on a Level 3 redundant K2 SAN.

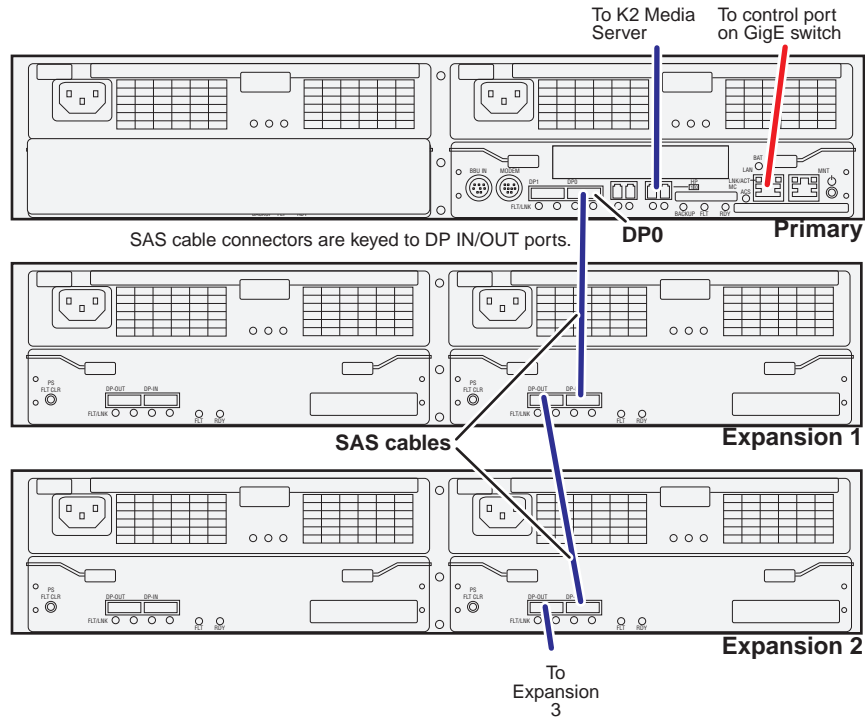




## K2 RAID for Level 10 basic K2 SAN

These cabling instructions apply to the following:

- Level 10 K2 RAID (Condor with CL1 controller) on a Level 10 basic (non-redundant) K2 SAN.

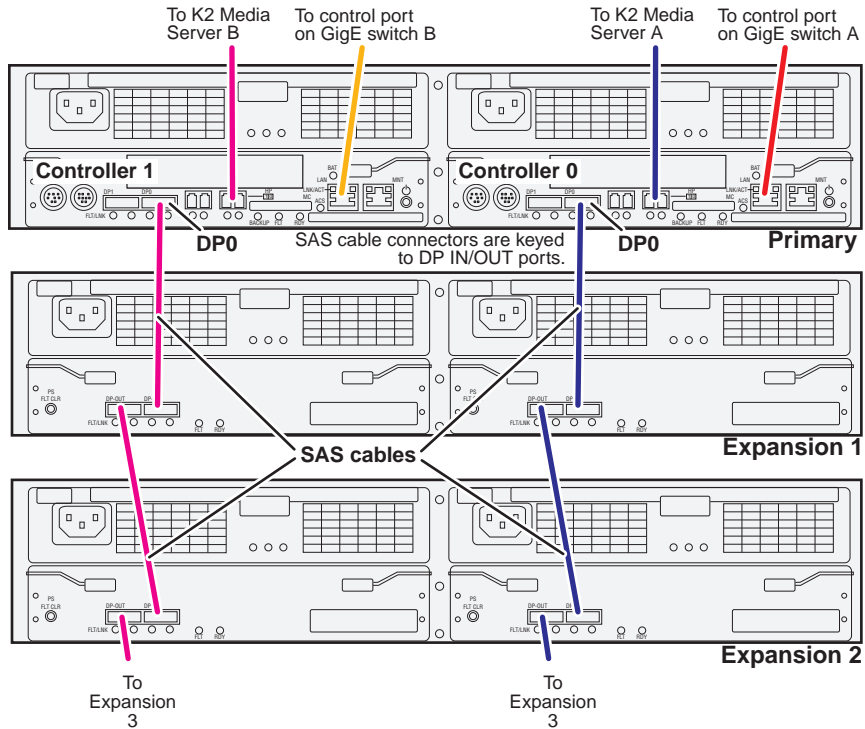


Continue this cable pattern for additional Expansion Chassis.

## K2 RAID for Level 10 redundant K2 SAN

These cabling instructions apply to the following:

- Level 10 K2 RAID (Condor with CL1 controllers) on a Level 10 redundant K2 SAN.

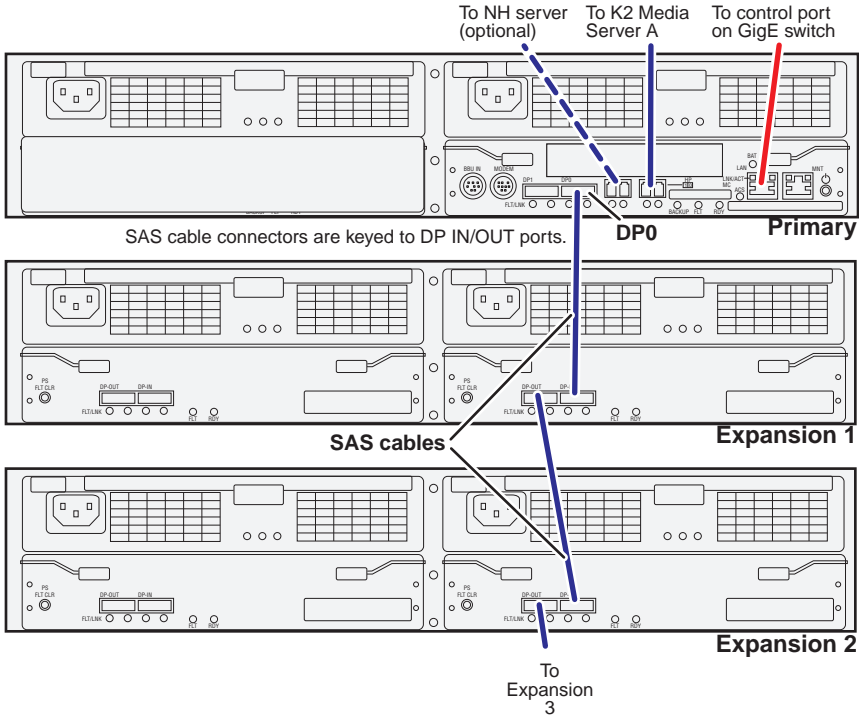


Continue this cable pattern for additional Expansion Chassis.

## K2 RAID for Level 20 basic K2 SAN

These cabling instructions apply to the following:

- Level 20 K2 RAID (Condor with CL1 controller) on a Level 20 basic (non-redundant) K2 SAN.

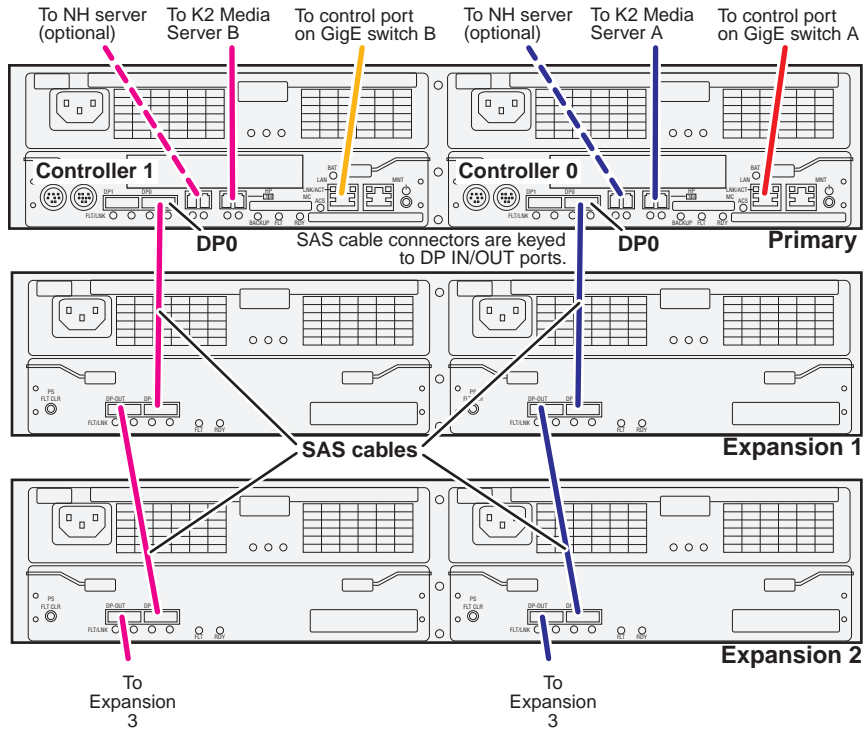


Continue this cable pattern for additional Expansion Chassis.

## K2 RAID for Level 20 redundant K2 SAN

These cabling instructions apply to the following:

- Level 20 K2 RAID (Condor with CL1 controllers) on a Level 20 redundant K2 SAN.

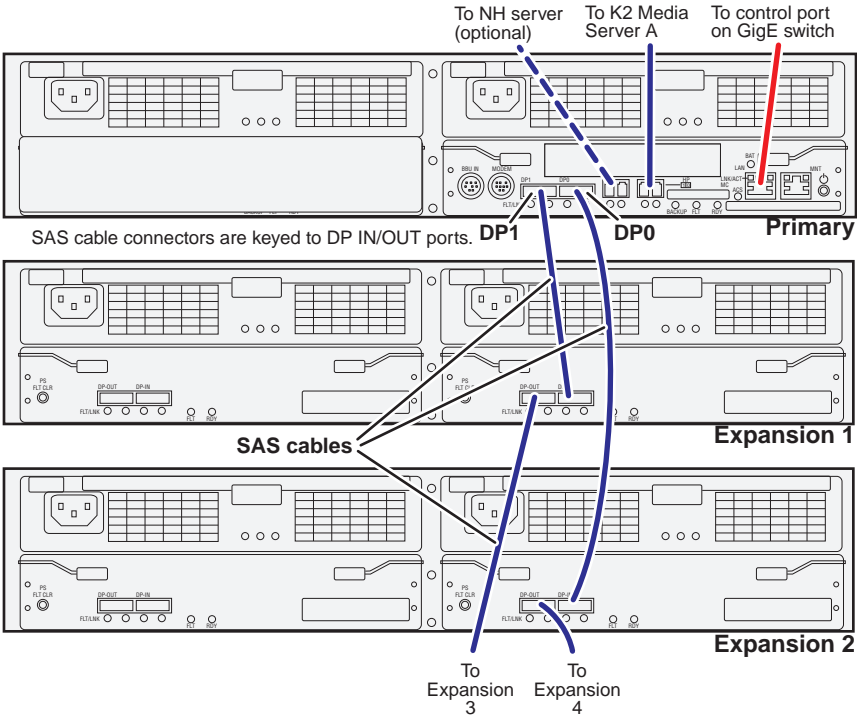


Continue this cable pattern for additional Expansion Chassis.

### K2 RAID for Level 30 basic K2 SAN

These cabling instructions apply to the following:

- Level 30 K2 RAID (Condor with CL2 controller) on a Level 30 basic (non-redundant) K2 SAN.

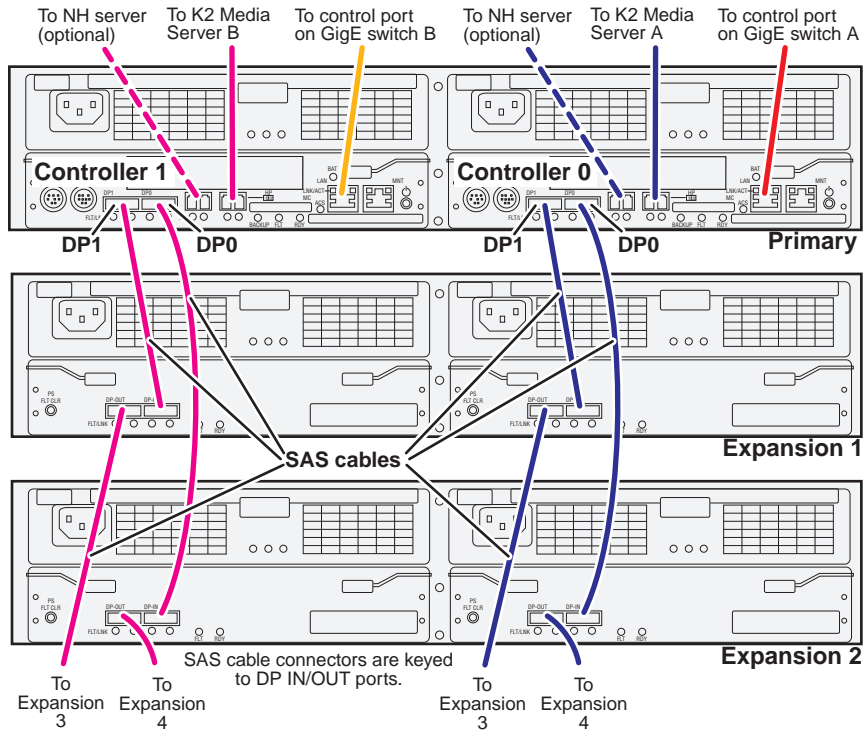


Continue this cable pattern for additional Expansion Chassis.

## K2 RAID for Level 30 redundant K2 SAN

These cabling instructions apply to the following:

- Level 30 K2 RAID (Condor with CL2 controllers) on a Level 30 redundant K2 SAN.

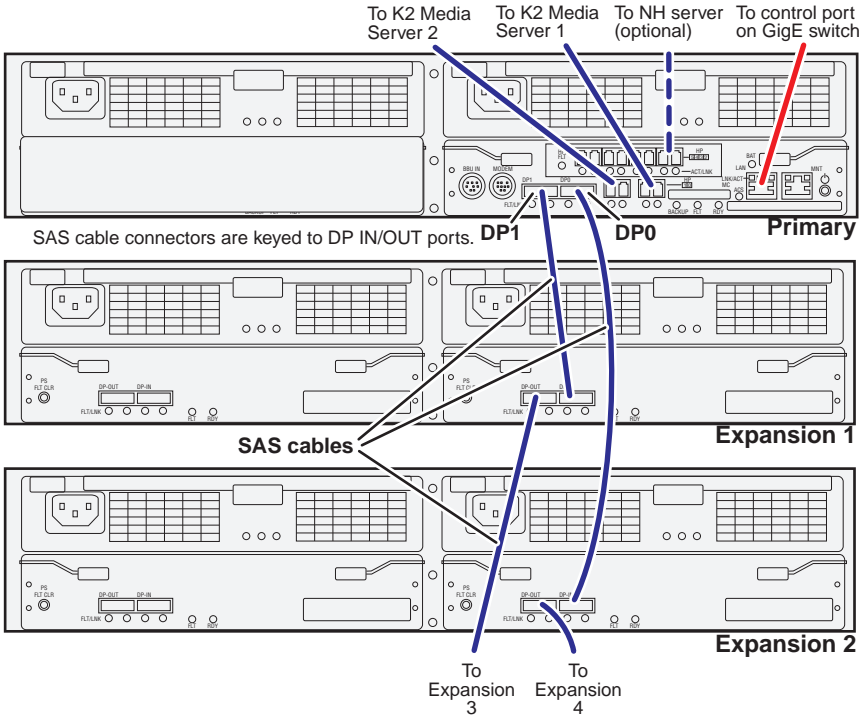


Continue this cable pattern for additional Expansion Chassis.

## K2 RAID for Level 35 basic K2 SAN

These cabling instructions apply to the following:

- Level 35 K2 RAID (Condor with CL2 controller with expansion FC ports) on a Level 35 basic (non-redundant) K2 SAN.

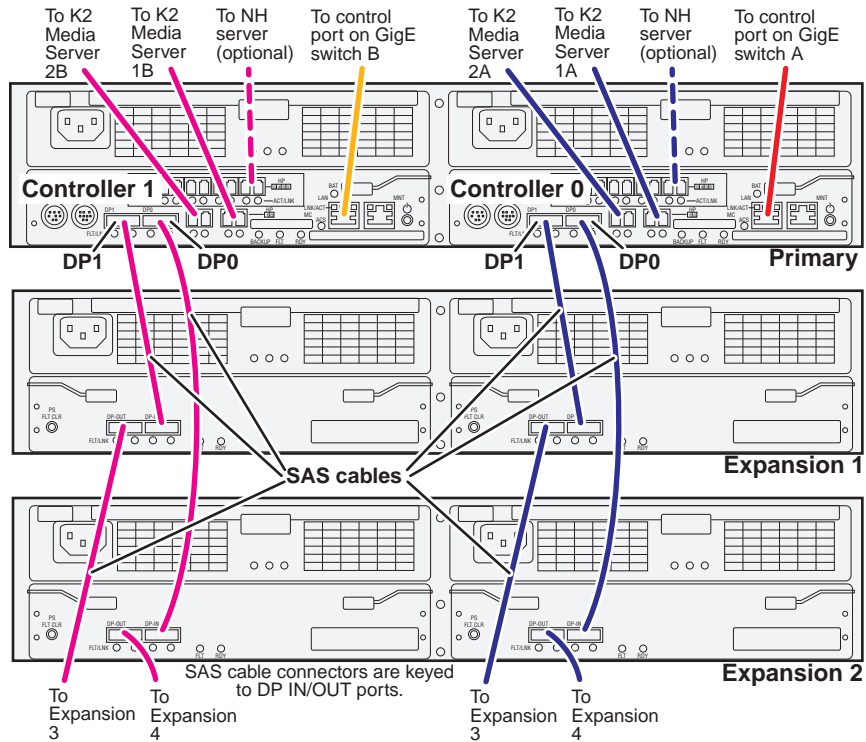


Continue this cable pattern for additional Expansion Chassis.

## K2 RAID for Level 35 redundant K2 SAN

These cabling instructions apply to the following:

- Level 35 K2 RAID (Condor with CL2 controllers with expansion FC ports) on a Level 35 redundant K2 SAN.



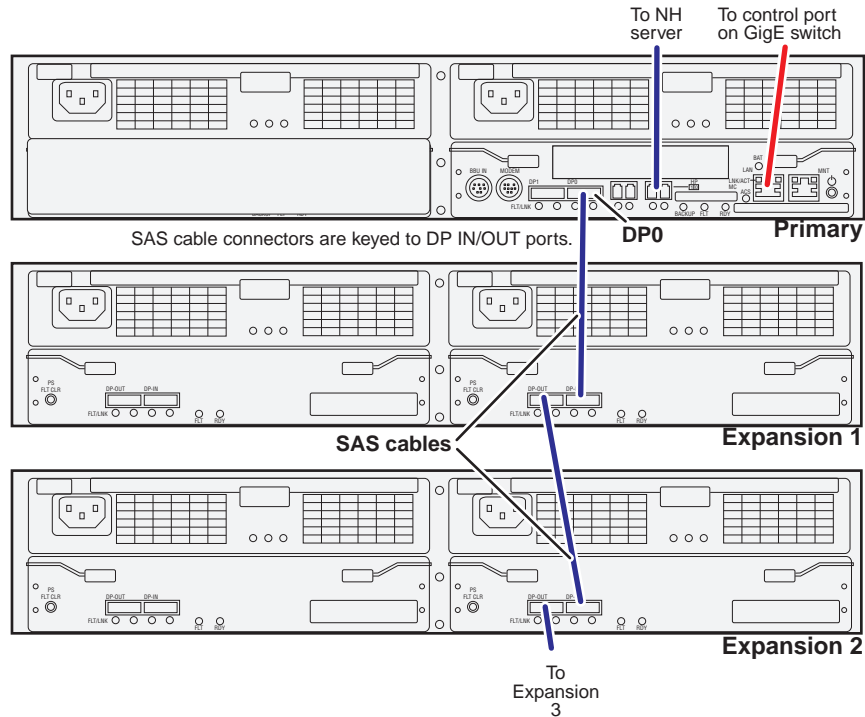
Continue this cable pattern for additional Expansion Chassis.



## K2 RAID for Nearline 10 basic K2 SAN

These cabling instructions apply to the following:

- Lx0 K2 RAID (Condor with CL1 controller) on a Nearline 10 basic (non-redundant) K2 SAN.

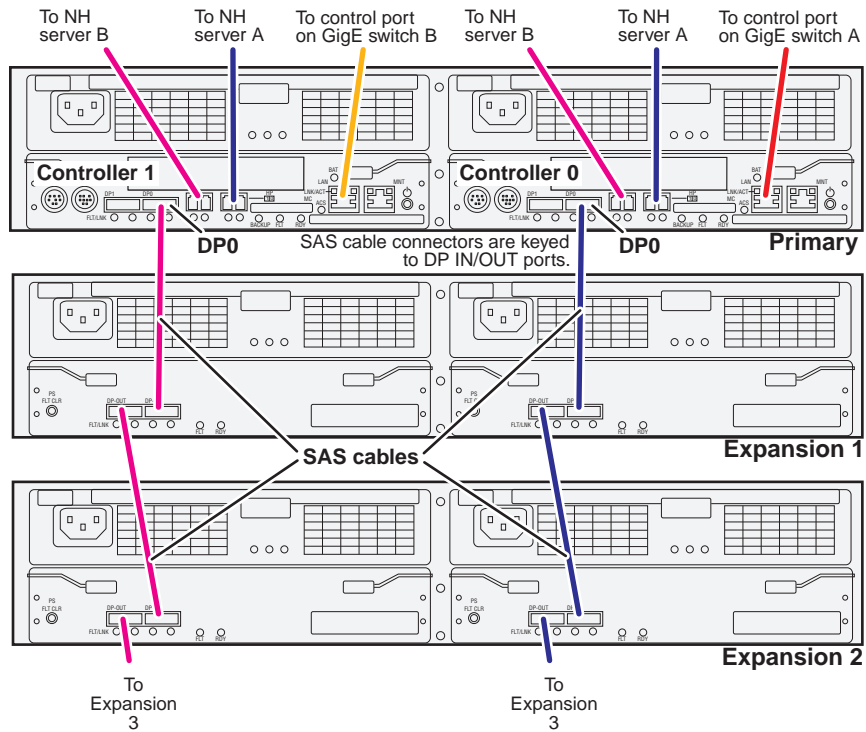


Continue this cable pattern for additional Expansion Chassis.

## K2 RAID for Nearline 10 redundant K2 SAN

These cabling instructions apply to the following:

- Lx0 K2 RAID (Condor with CL1 controllers) on a Nearline 10 redundant K2 SAN.

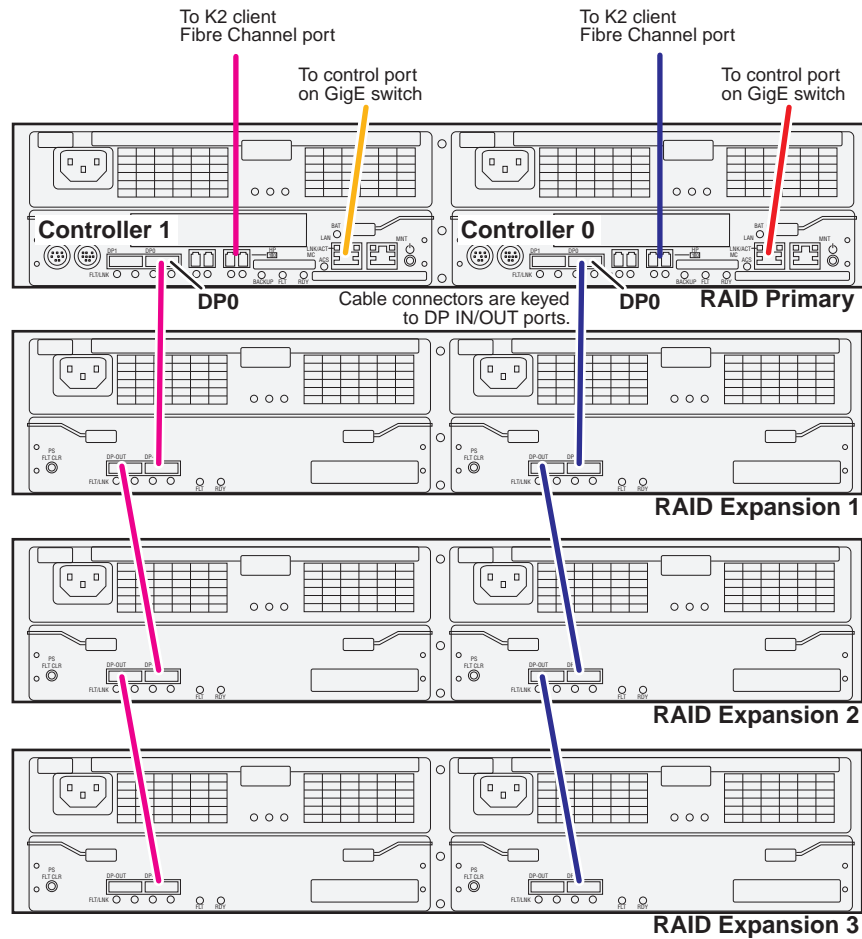


Continue this cable pattern for additional Expansion Chassis.

## K2 RAID for K2 client direct-connect storage

These cabling instructions apply to the following:

- K2 RAID (Condor) providing direct-connect storage for a K2 Media Client or K2 Summit Production Client.





---

## ***For more information***

Refer to product documentation and if necessary access Grass Valley Support information to complete the installation of your K2 SAN.

- “K2 Release Notes” on page 69
- “K2 Documentation CD” on page 69
- “On-line Help Systems” on page 70
- “NetCentral documentation” on page 70
- “Grass Valley Web Site” on page 70
- “Using the Dell Server documentation” on page 70
- “Grass Valley Product Support” on page 72

### **K2 Release Notes**

The K2 Release Notes contain the latest information about the software shipped on your system. The release notes include software upgrade instructions, software specifications and requirements, feature changes from the previous releases, and any known problems. Because release notes contain the latest information, they are printed out and included in the K2 product shipping box, rather than included in the Documentation CD-ROM. You should always check the Grass Valley Website to determine if there is an updated version of release notes available.

### **K2 Documentation CD**

Except for the release notes, the full set of support documentation, including this manual, is available on the K2 Documentation CD that you receive with your K2 products. You can find the Documentation CD packaged in K2 product shipping boxes.

The Documentation CD-ROM includes the following:

- **K2 SAN Installation and Service Manual** (for version 7.x systems) or **K2 Storage System Instruction Manual** (for version 3.x systems) — Contains installation, configuration, and maintenance procedures for shared storage options.
- **K2 SAN Cabling Guide** — Contains diagrams for cabling the devices of the K2 SAN.
- **RAID Instruction Manuals** — There is an Instruction Manual for each type of RAID storage device that can be a part of a K2 SAN. These manuals contain procedures for configuring and servicing the device.
- **K2 System Guide** — Contains the product specifications and instructions for modifying system settings.
- **Quick Start Guides** — The Quick Start Guides for K2 Media Client or K2 Summit Production Client models provide step-by-step installation instructions for basic installation and operation.

- **User Manual** — Provides instructions for configuring and operating the media channels of product.
- **Service Manual** — The Service Manual for the K2 Media Client or K2 Summit Production Client contains information on servicing and maintenance.
- **Fibre Channel Switch Installation Manual** — Contains information on configuring and servicing the Fibre Channel switch.
- **SiteConfig User Manual** — Contains information on using SiteConfig, Grass Valley's system management tool, for network configuration and software deployment.

## On-line Help Systems

**K2 AppCenter Help** — In the AppCenter user interface menu bar select **Help**, then choose **AppCenter Help Topics** from the drop-down menu.

**SiteConfig Help** — In the SiteConfig user interface menu bar select **Help**, then choose **SiteConfig Help Topics** from the drop-down menu.

**NetCentral Help** — From the NetCentral interface select **Help | NetCentral Help Topics**.

## NetCentral documentation

The NetCentral product has its own documentation set, described as follows:

- **NetCentral Quick Start Guide** — Provides an overview of the installation process to quickly set up and run NetCentral.
- **NetCentral Installation Guide** — Identifies requirements and procedures to correctly set up servers and devices, as well as provides detailed instructions to install and configure NetCentral software.
- **NetCentral User Guide** — Describes how to use the NetCentral Manager to monitor devices.
- **NetCentral Help** — From the NetCentral interface access on-line help. Select **Help | NetCentral Help Topics**.

## Grass Valley Web Site

This public Web site contains all the latest manuals and documentation, and additional support information. Use the following URL.

<http://www.grassvalley.com>.

## Using the Dell Server documentation

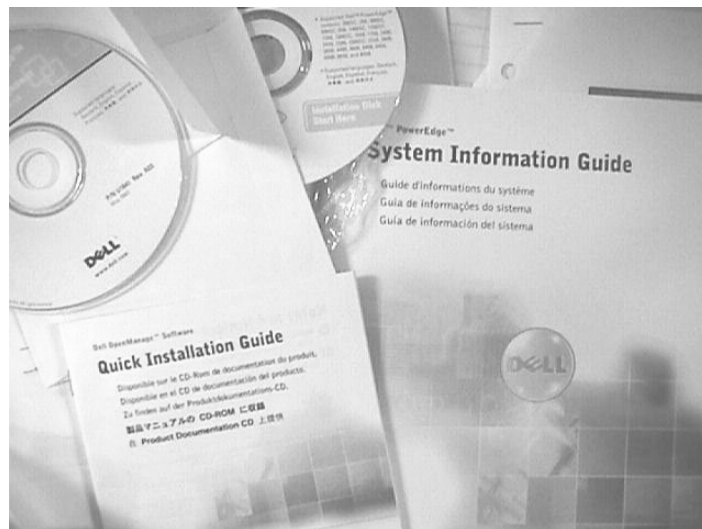
This manual contains all of the information you need to install the K2 SAN, however, a full set of Dell server documentation has been provided on the *Dell Product Documentation* CD-ROM. The Dell server documentation applies to the K2 Media Server. Refer to the documents on this CD-ROM only as required by procedures in this manual.

Information referenced on the *Dell Product Documentation* CD-ROM includes, but is not limited to:

- Unpacking and rack-mounting the K2 Media Server
- Important safety and regulatory information
- K2 Media Server Status indicators, messages, and error codes
- Troubleshooting help for the K2 Media Server hardware.



**CAUTION:** Do not use the Dell Quick Installation Guide provided with the Dell CD-ROM package. This guide includes instructions for using the OpenManage software CD-ROM to install an operating system. The K2 Media Server comes fully configured and is ready for installation. To begin installation, refer to one of the installation chapters in this manual.



## Grass Valley Product Support

For technical assistance, to check on the status of a question, or to report new issue, contact Grass Valley Product Support via e-mail, the Web, or by phone or fax.

### Web Technical Support

To access support information on the Web, visit the product support Web page on the Grass Valley Web site. You can download software or find solutions to problems.

**World Wide Web:** <http://www.grassvalley.com/support/>

**Technical Support E-mail Address:** [gvtechsupport@grassvalley.com](mailto:gvtechsupport@grassvalley.com).

### Telephone Support

Use the following information to contact Product Support by phone.

### International Support Centers

Our international support centers are available 24 hours a day, 7 days a week.

Support Center	Toll free	In country
France	+800 80 80 20 20	+33 1 48 25 20 20
United States	+1 800 547 8949	+1 530 478 4148

### Authorized Local Support Representative

A local support representative may be available in your country. To locate a support center during normal local business hours, refer to the following list. This list is regularly updated on the website for Thomson Grass Valley Product Support (<http://www.grassvalley.com/support/contact/phone/>).

After-hours local phone support is also available for warranty and contract customers.

Region	Country	Telephone
<b>Asia</b>	China	+86 10 5883 7575
	Hong Kong, Taiwan, Korea, Macau	+852 2531 3058
	Japan	+81 3 6848 5561
	Southeast Asia - Malaysia	+603 7492 3303
	Southeast Asia - Singapore	+65 6379 1769
	Indian Subcontinent	+91 11 515 282 502 +91 11 515 282 504
<b>Pacific</b>	Australia, New Zealand	+61 1300 721 495
<b>Central America, South America</b>	All	+55 11 5509 3440
<b>North America</b>	North America, Mexico, Caribbean	+1 800 547 8949 +1 530 478 4148



Region	Country	Telephone
Europe	UK, Ireland, Israel	+44 118 923 0499
	Benelux – Netherlands	+31 (0) 35 62 38 421
	Benelux – Belgium	+32 (0) 2 334 90 30
	France	+800 80 80 20 20 +33 1 48 25 20 20
	Germany, Austria, Eastern Europe	+49 6150 104 444
	Belarus, Russia, Tadjhikistan, Ukraine, Uzbekistan	+7 095 258 09 20 +33 (0) 2 334 90 30
	Nordics (Norway, Sweden, Finland, Denmark, Iceland)	+45 40 47 22 37
	Southern Europe – Italy	+39 02 24 13 16 01 +39 06 87 20 35 42
	Southern Europe – Spain	+34 91 512 03 50
	Middle East, Near East, Africa	Middle East
Near East and Africa		+800 80 80 20 20 +33 1 48 25 20 20



## END-OF-LIFE PRODUCT RECYCLING NOTICE

Grass Valley's innovation and excellence in product design also extends to the programs we've established to manage the recycling of our products. Grass Valley has developed a comprehensive end-of-life product take back program for recycle or disposal of end-of-life products. Our program meets the requirements of the European Union's WEEE Directive, the United States Environmental Protection Agency, and U.S. state and local agencies.

Grass Valley's end-of-life product take back program assures proper disposal by use of Best Available Technology. This program accepts any Grass Valley branded equipment. Upon request, a Certificate of Recycling or a Certificate of Destruction, depending on the ultimate disposition of the product, can be sent to the requester.

Grass Valley will be responsible for all costs associated with recycling and disposal, including freight. However, you are responsible for the removal of the equipment from your facility and packing the equipment to make it ready for pickup.



For further information on the Grass Valley product take back system please contact Grass Valley at + 800 80 80 20 20 or +33 1 48 25 20 20 from most other countries. In the U.S. and Canada please call 800-547-8949 or 530-478-4148, and ask to be connected to the EH&S Department. Additional information concerning the program can be found at: [www.thomsongrassvalley.com/environment](http://www.thomsongrassvalley.com/environment)



