CrayLink™ Interconnect Addendum

Document Number 108-0174-001

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FCC Warning

The equipment described in this guide has been tested and found compliant with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energyand if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at their own expense.

VDE 0871/6.78

The equipment described in this guide has been tested to and is in compliance with the Level A limits per VDE 0871.

International Special Committee on Radio Interference (CISPR)

The equipment described in this guide has been tested to and is in compliance with the Class A limits per CISPR publication 22. Canadian Department of Communications Statement

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

Attention

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de Classe A prescrites dans le Reglement sur les Brouillage Radioelectrique etabli par le Ministere des Communications du Canada.

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Document Number 108-0174-001

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Table of Contents

List of Figures

List of Tables

Chapter 6

6. Installation

6.14 CrayLink™ Interconnect Addendum

This section updates the CrayLinkCrayLink interconnect information presented in the *Origin2000 and Onyx2 Deskside and Rackmount Installation Instructions* (Document Number 108-0155-002).

6.14.1 Changes in CrayLink Cabling Scheme

The CrayLink cabling scheme has changed in the following way:

- Horizontal cabling connections between rackmount chassis are now run from the bottom set of router ports (Link 3), NOT the middle set of router ports, as shown throughout the -002 version of the *Origin2000 and Onyx2 Deskside and Rackmount Installation Instructions*.
- The middle set of router ports (Link 2) are now used for Xpresslink connections.

6.14.2 CrayLink Cables

Four different CrayLink interconnect cables are now used to connect Origin2000 modules. Table 6-3 and Figure 6-23 provide part number, length, and color stripe information for each cable.

Table 6-3 CrayLink Cable Part Numbers, Lengths and Colors

Part Number (P/N)	Length				Color Stripe
	Inches	Feet	Centimeters	Meters	
018-0564-001	58”	4’10”	147 cm	1.47 m	red
018-0693-001	84”	7’	213 cm	1.13 m	green
018-0694-001	95”	7’10”	241 cm	2.41 m	white
018-0568-001	108”	9’	274 cm	2.74 m	yellow

6.14.3 CrayLink Cabling Configuration Illustrations

Figures 6-24 through 6-35 show two views of each configuration (16P, 24P, 32P, and 64P), both with and without Xpresslinks. The first view provides an overview of cabling runs, and the second shows the exact route the each CrayLink cable must follow. Refer to Table 6-4 to find the figures that illustrate the cabling configuration that you need.

Table 6-4 CrayLink Cabling Overview and Routing Illustrations

Figure	Configuration Shown	Note
Figure 6-23	CrayLink cables and router board ports	
Figure 6-24	16P cabling overview	
Figure 6-25	16P cabling routing	
Figure 6-26	16P with Xpresslinks cabling overview	Xpresslinks cross
Figure 6-27	16P with Xpresslinks cabling routing	Xpresslinks cross
Figure 6-28	24P with Xpresslinks cabling overview	Xpresslinks cross
Figure 6-29	24P with Xpresslinks cabling routing	Xpresslinks cross, keep top two comb slots unused
Figure 6-30	32P cabling overview	
Figure 6-31	32P cabling routing	Keep top two comb slots unused
Figure 6-32	32P with Xpresslinks cabling overview	Xpresslinks cross
Figure 6-33	32P with Xpresslinks cabling routing	Xpresslinks cross, keep top two comb slots unused, connect icon pairs in illustration
Figure 6-34	64P cabling overview	
Figure 6-35	64P cabling routing	Keep top two comb slots unused, connect icon pairs in illustration
FIgure 6-36	24P Onyx2 configuration with two graphics pipes	Link 2 CrayLink crossover

6.14.4 CrayLink Cabling Installation Procedure

As shown in Figure 6-23, each router board has three ports labeled Link 1, Link 2, and Link 3. The Origin modules shown in Figures 6-23 thorough 6-35 each have two router boards. Figure 6-23 shows a Router A and Router B to simplify textual descriptions.

1. Find the drawing set that applies to your installation.
2. Check to make sure that you have sufficient quantities of CrayLink cables, up and down bails, bail clips and comb covers to complete the installation.
3. Arrange the CrayLink cables into groups.
4. The 58” cables for the vertical cabling runs are installed first. Connect one end of the 58” cable to the Router A’s Link 1 router port on the upper module. String the cable vertically, and connect the other end of the cable to Router A’s Link 1 on the lower module. Repeat this procedure for each additional rackmount chassis.

Note: Leave the top two cable comb slots empty for future expansion.

5. The 84” or 108” cables for the diagonal Xpresslinks are installed next (if applicable). Check the illustrations showing Xpresslinks. Connect one end of the cable from Router A’s Link 2 port to Router B’s Link 2 port.

Note: Xpresslinks must crossover.

6. The 58” cables for the horizontal cabling runs on 32 P and 64 P configurations are installed last. Connect one end of the 58” cable to the Router A’s Link 3 router port on Rack 1. String the cable horizontally, and connect the other end of the cable to Router A’s Link 3 port on Rack 2. Repeat this procedure for each additional rackmount chassis.

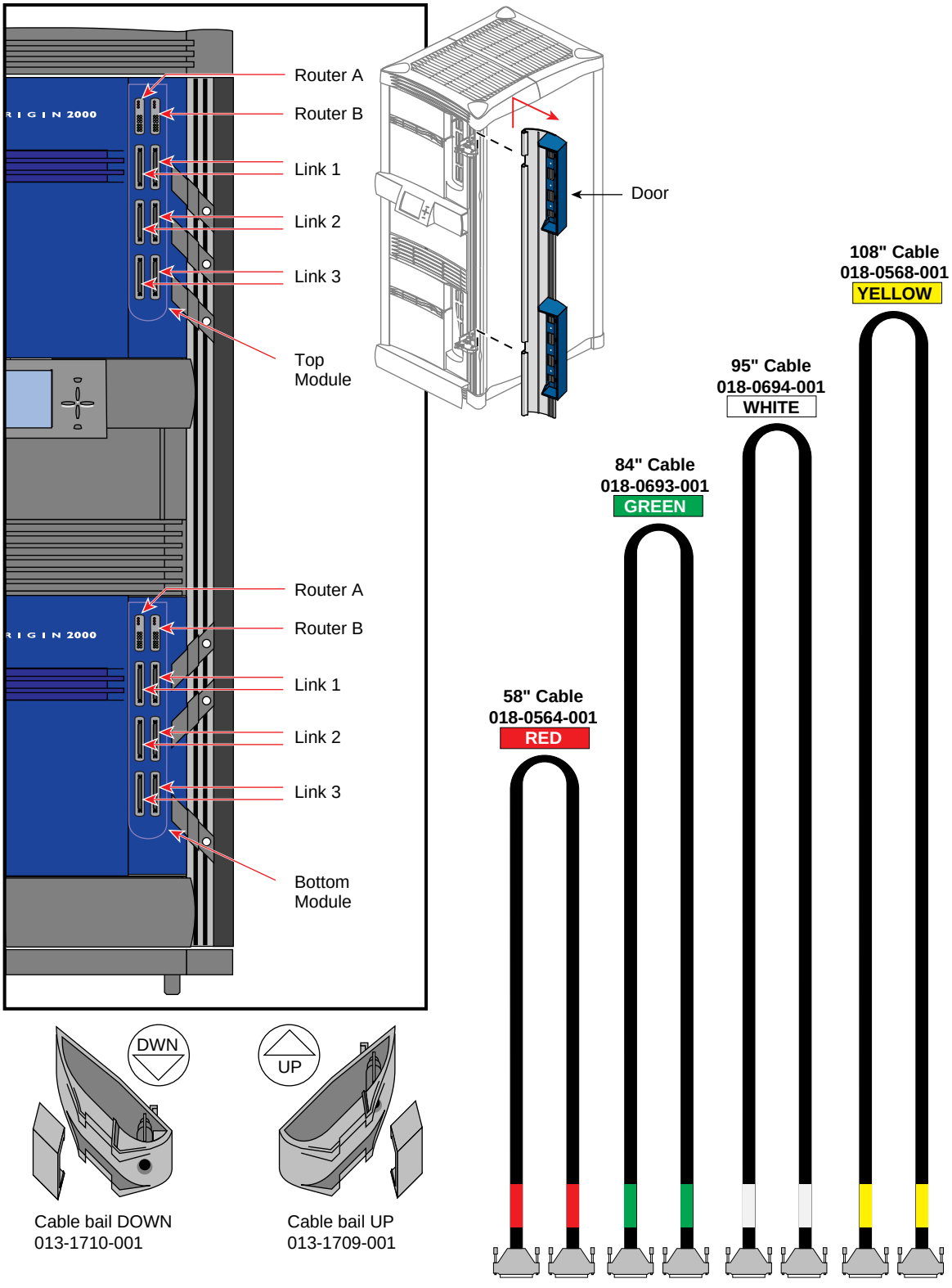


Figure 6-23 CrayLink Cables and Router Board Ports

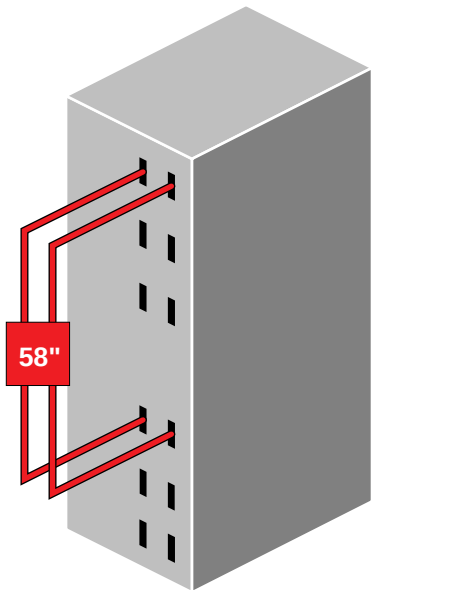
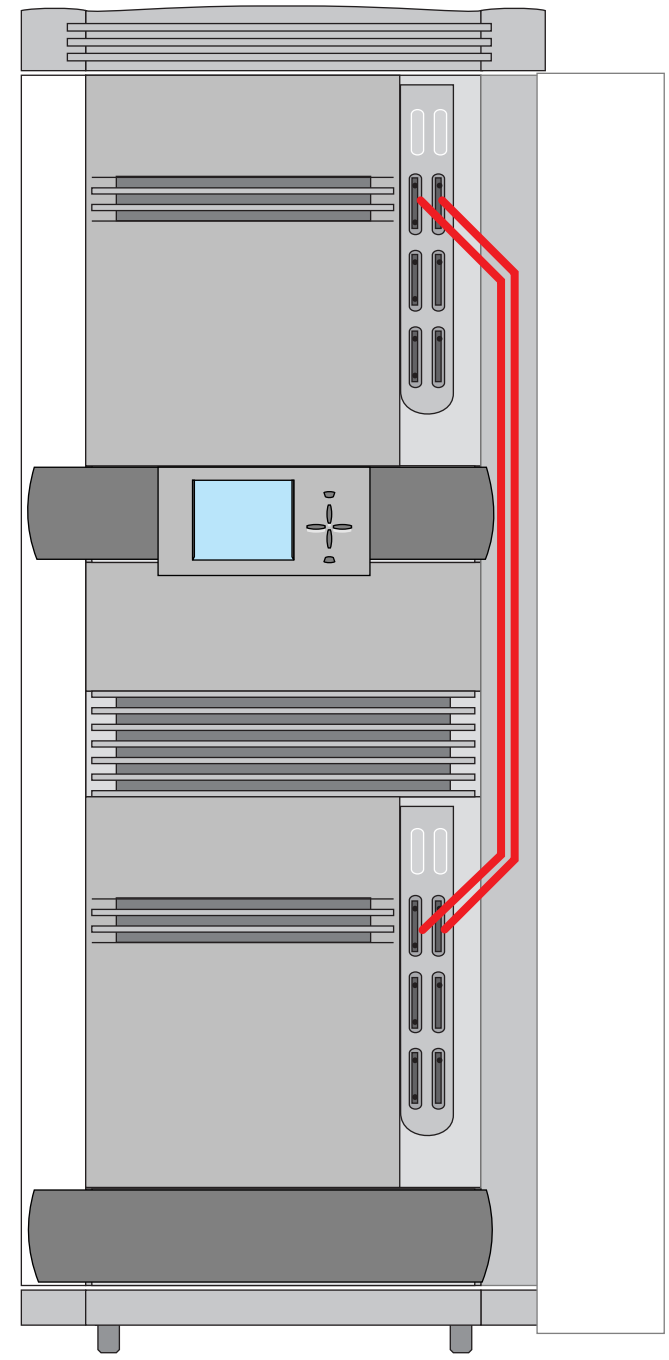


Figure 6-24 16P Cabling Overview

16P configuration



58" CrayLink cable is P/N 018-0564-001

Figure 6-25 16P Cabling Routing

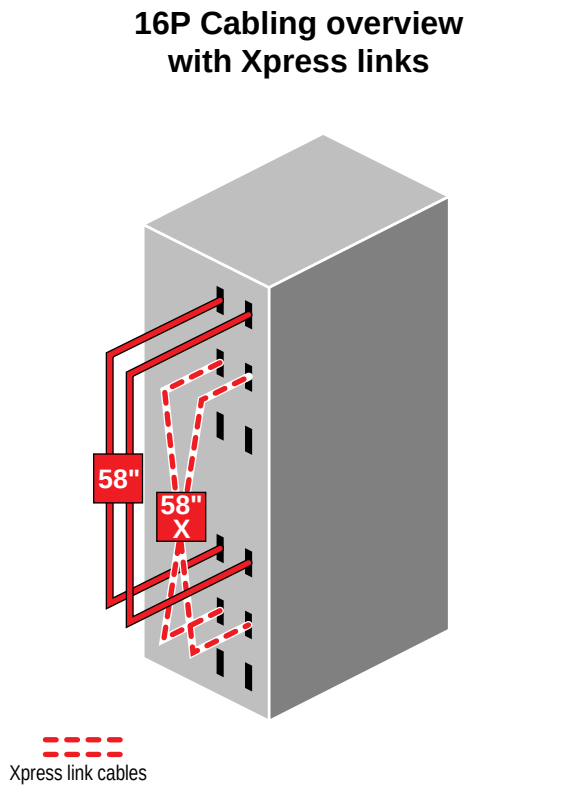


Figure 6-26 16P with Xpresslinks Cabling Overview

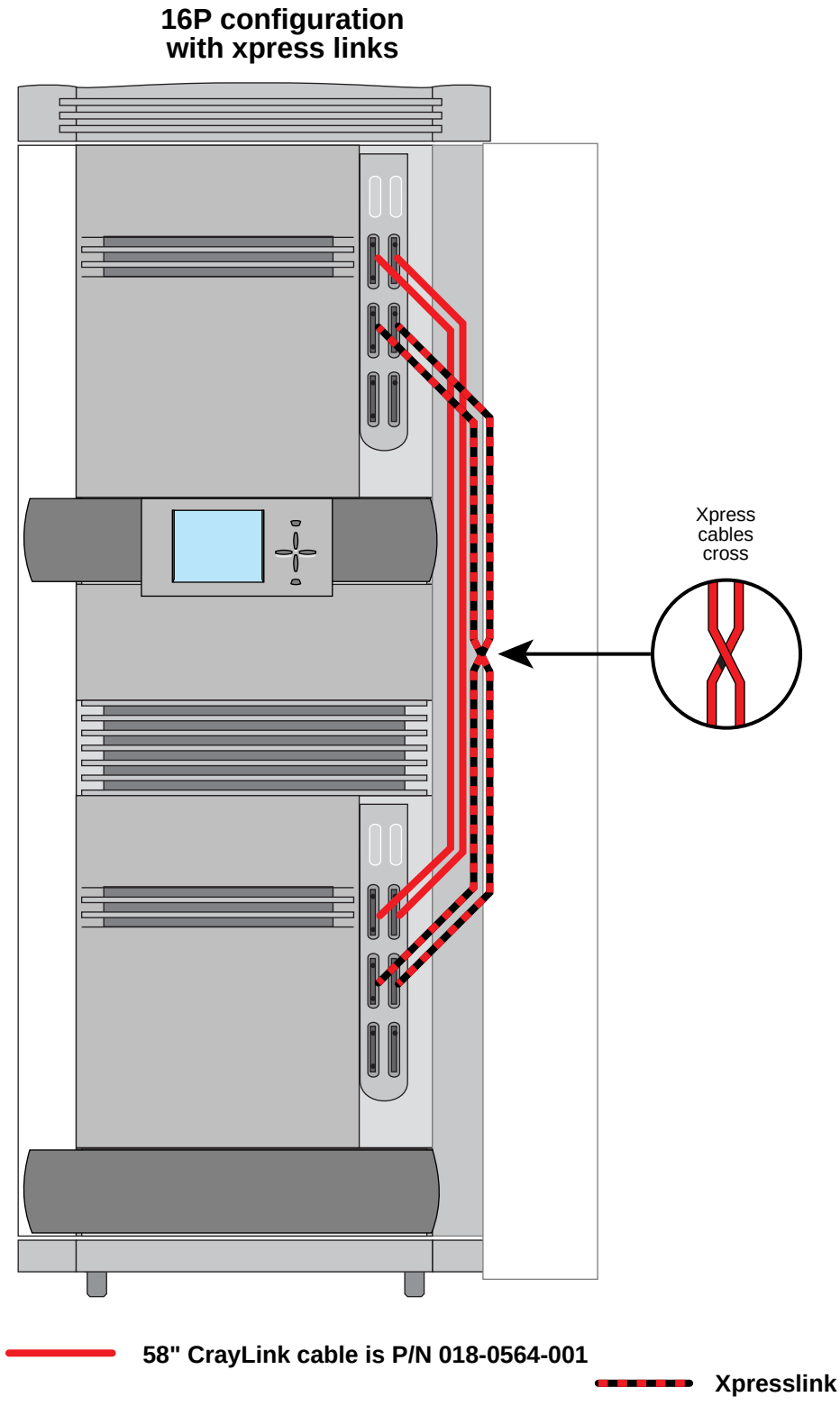


Figure 6-27 16P with Xpresslinks Cabling Routing

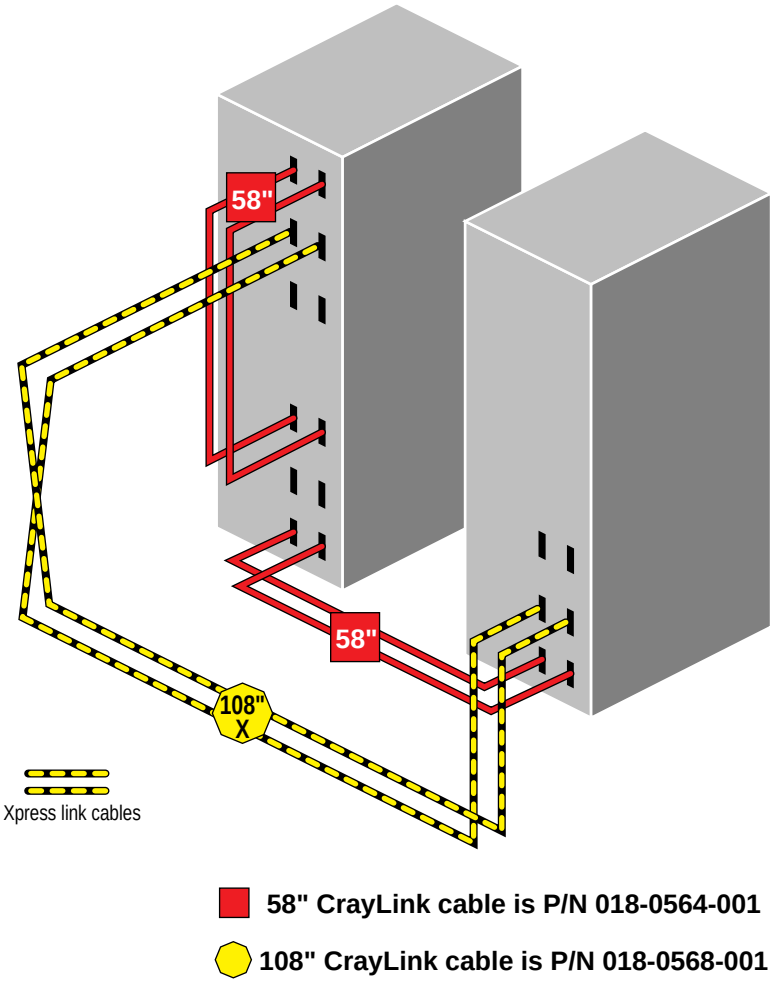


Figure 6-28 24P with Xpresslinks Cabling Overview

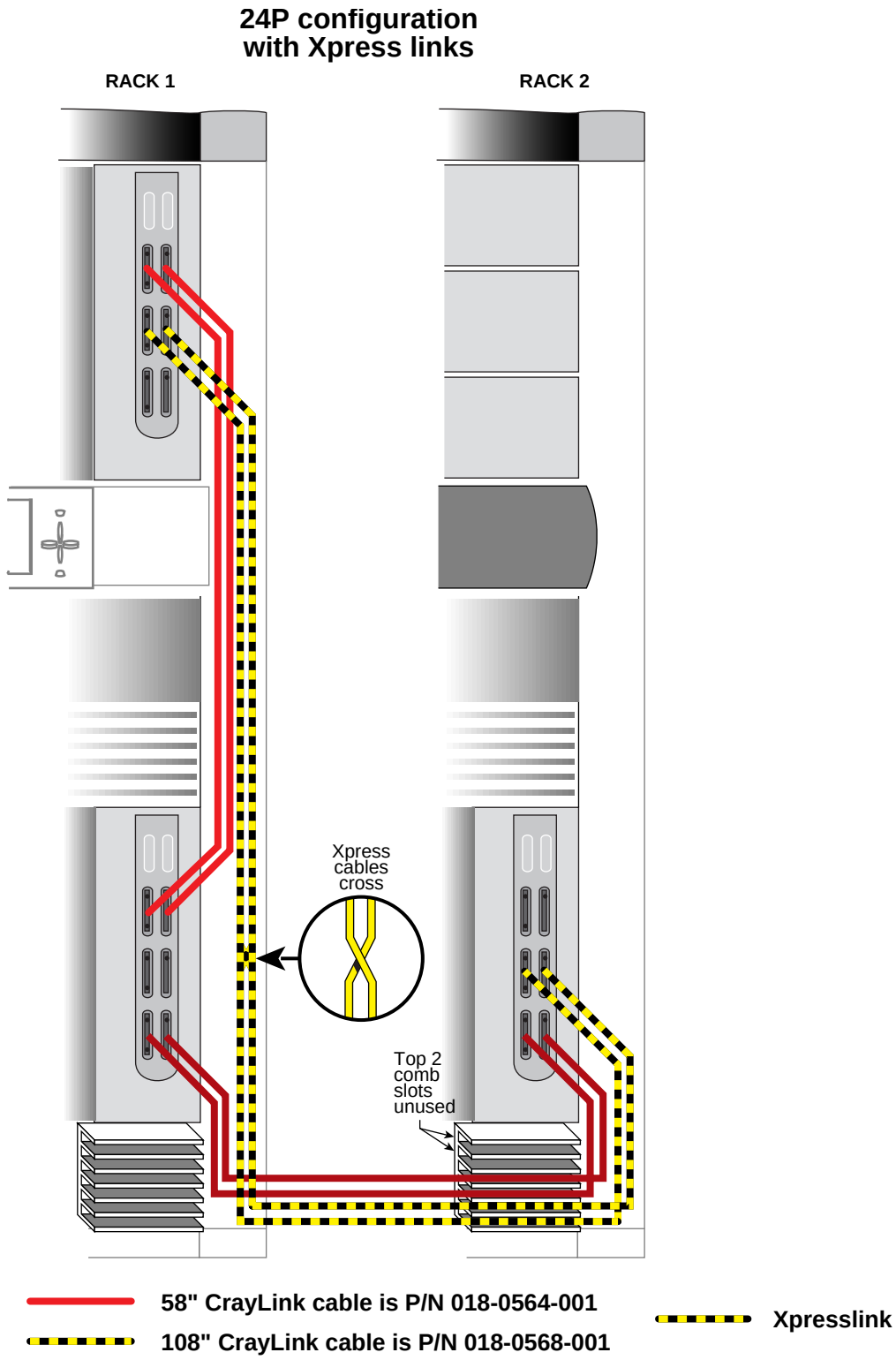


Figure 6-29 24P with Xpresslinks Cabling Routing

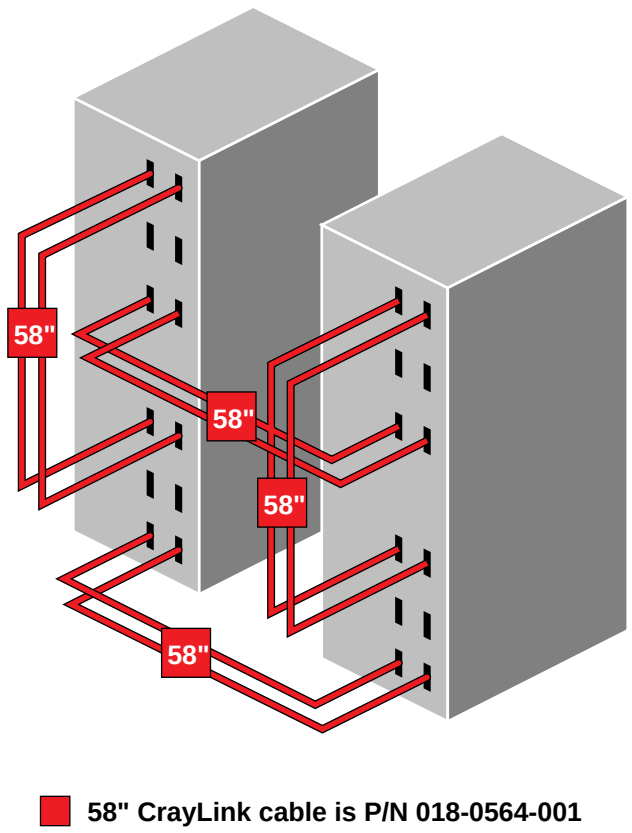


Figure 6-30 32P Cabling Overview

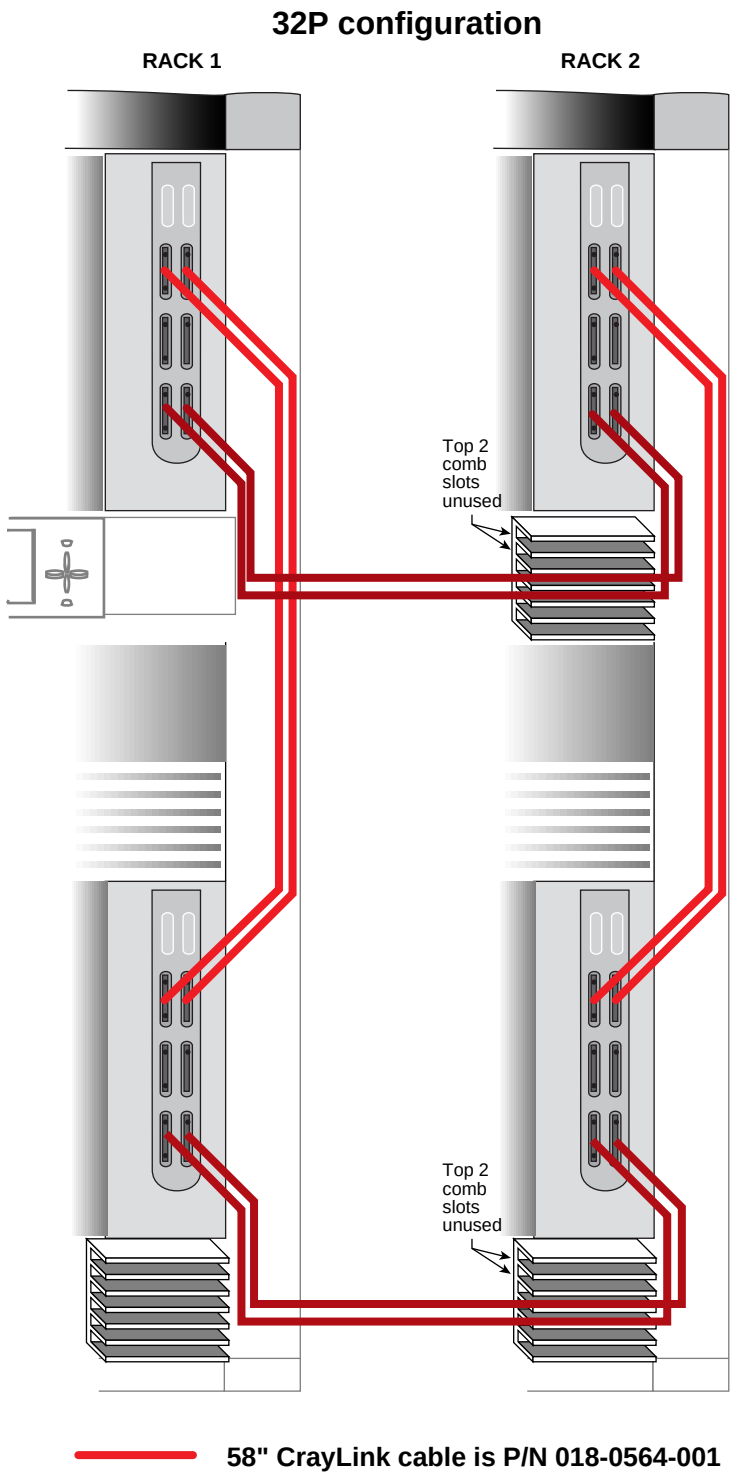


Figure 6-31 32P Cabling Routing

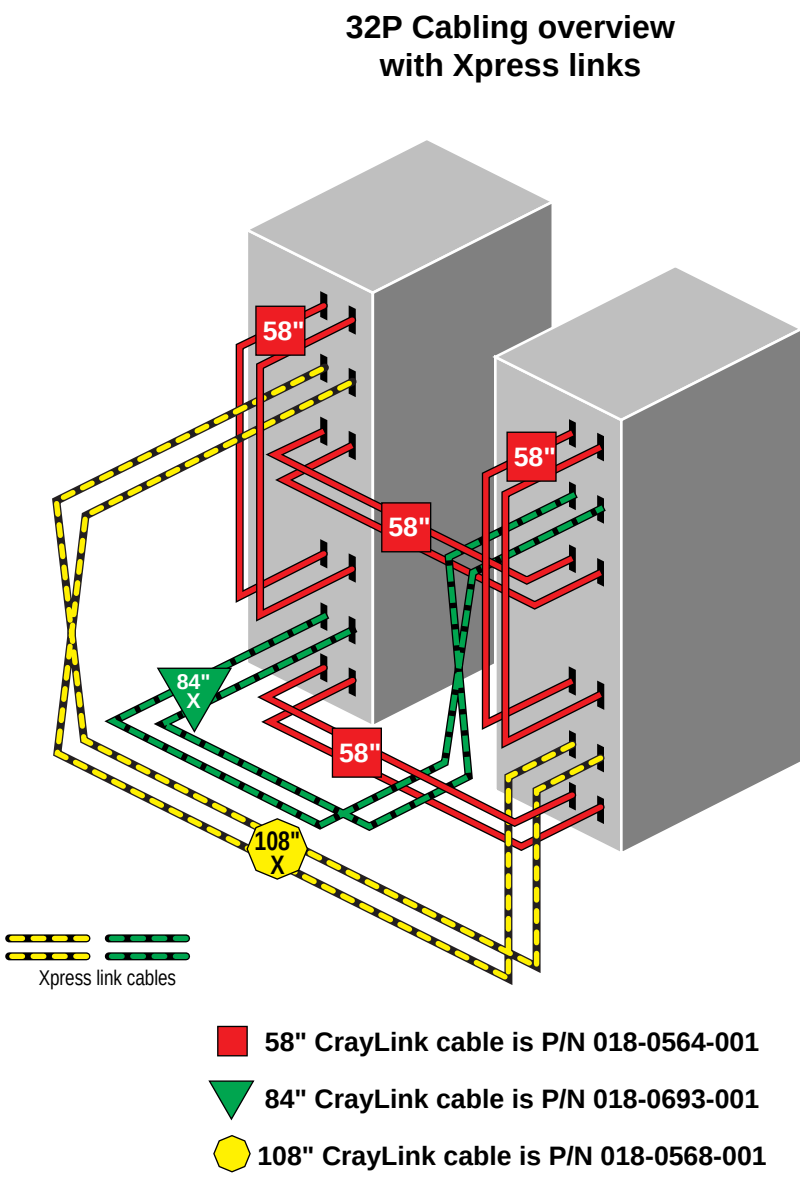


Figure 6-32 32P with Xpresslinks Cabling Overview

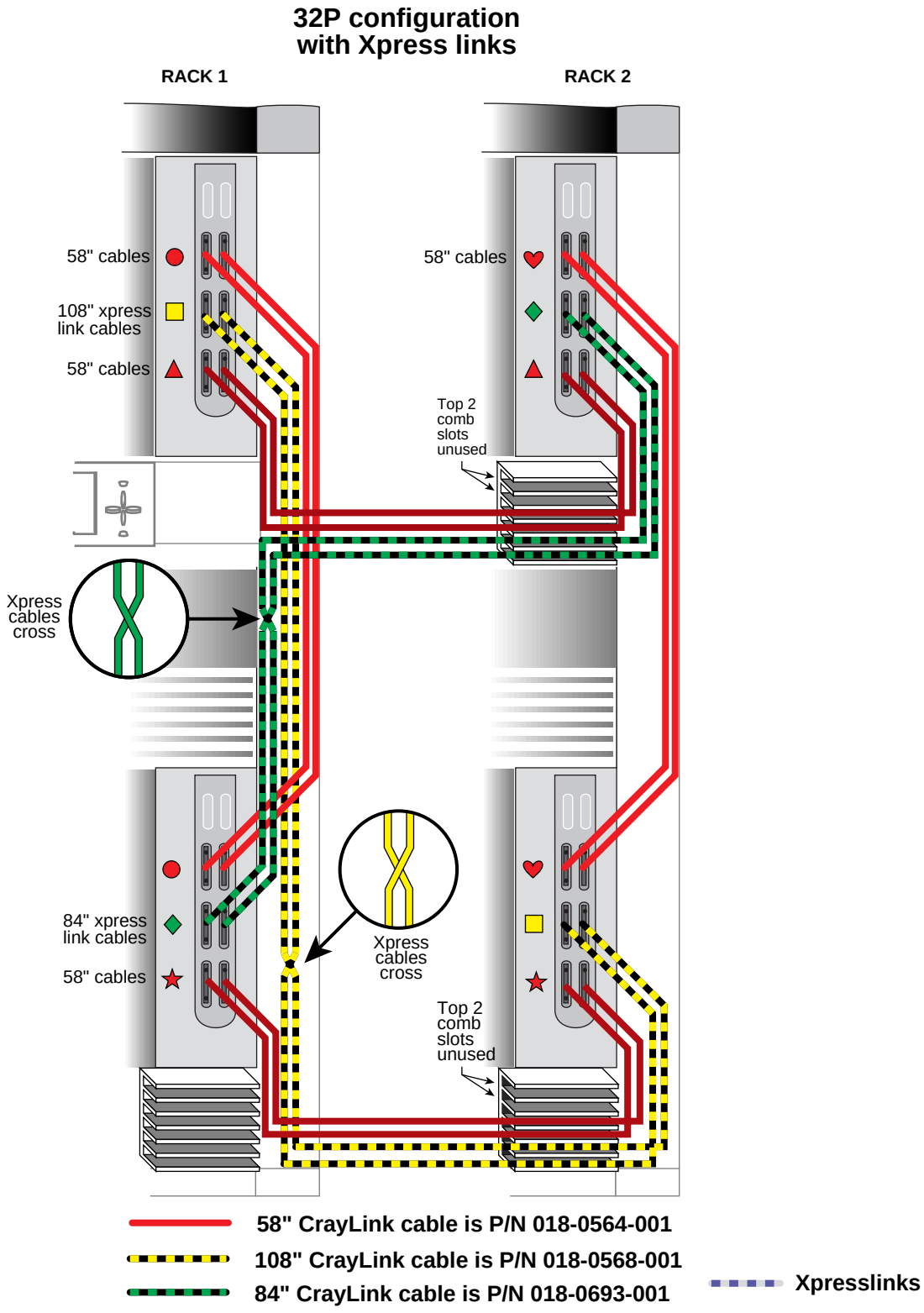


Figure 6-33 32 P with Xpresslinks Cabling Routing

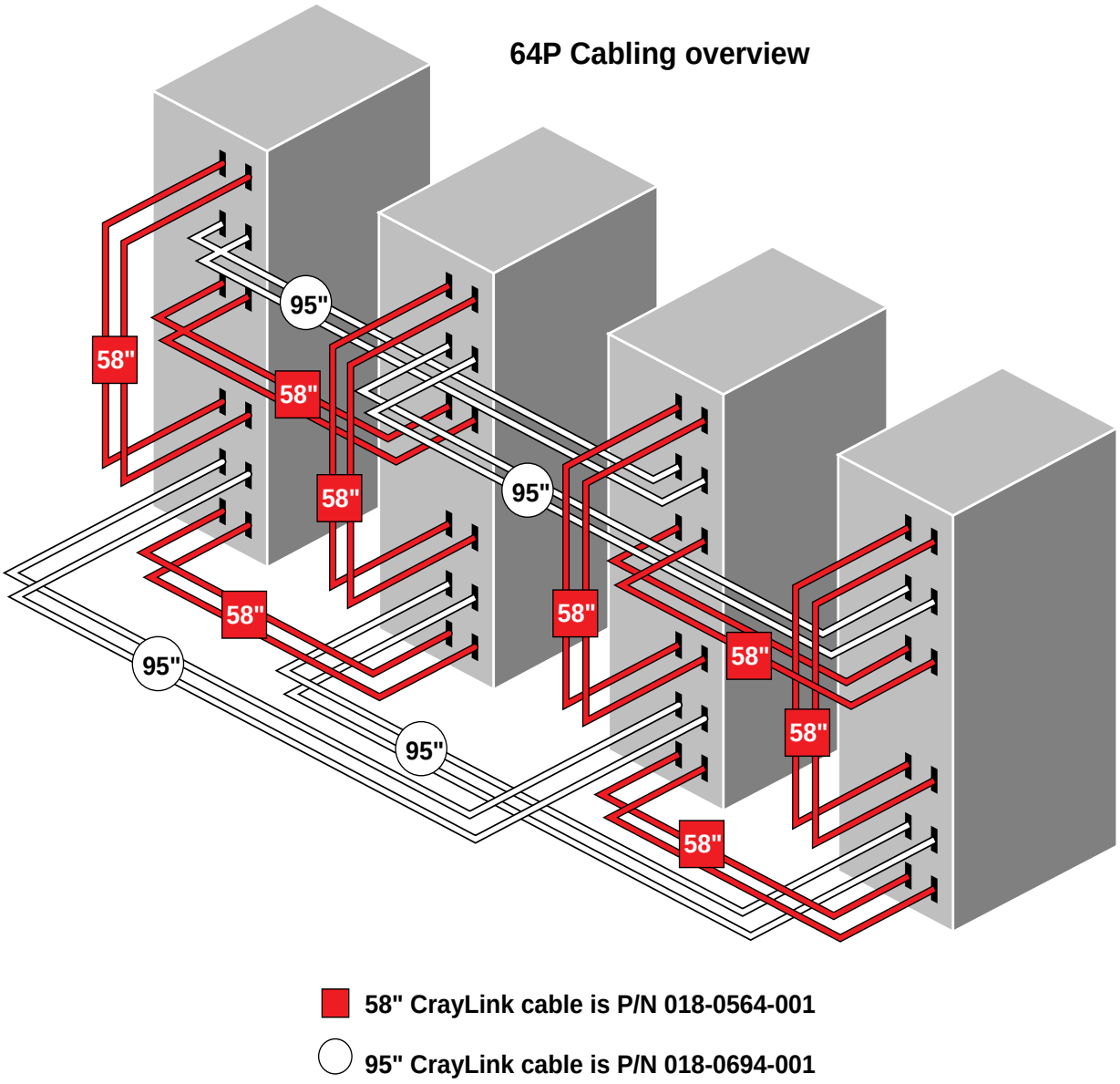


Figure 6-34 64P Cabling Overview

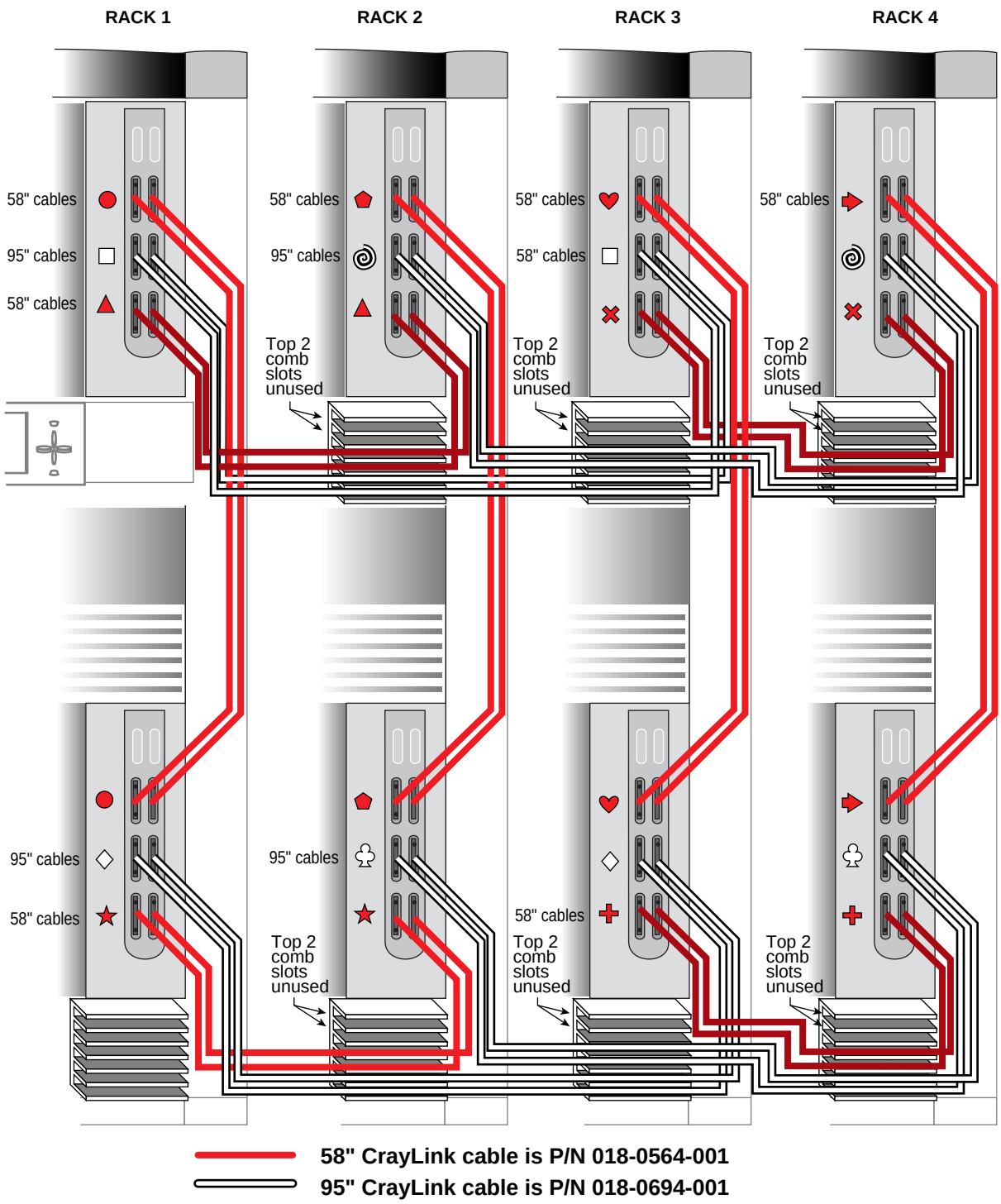


Figure 6-35 64P Cabling Routing

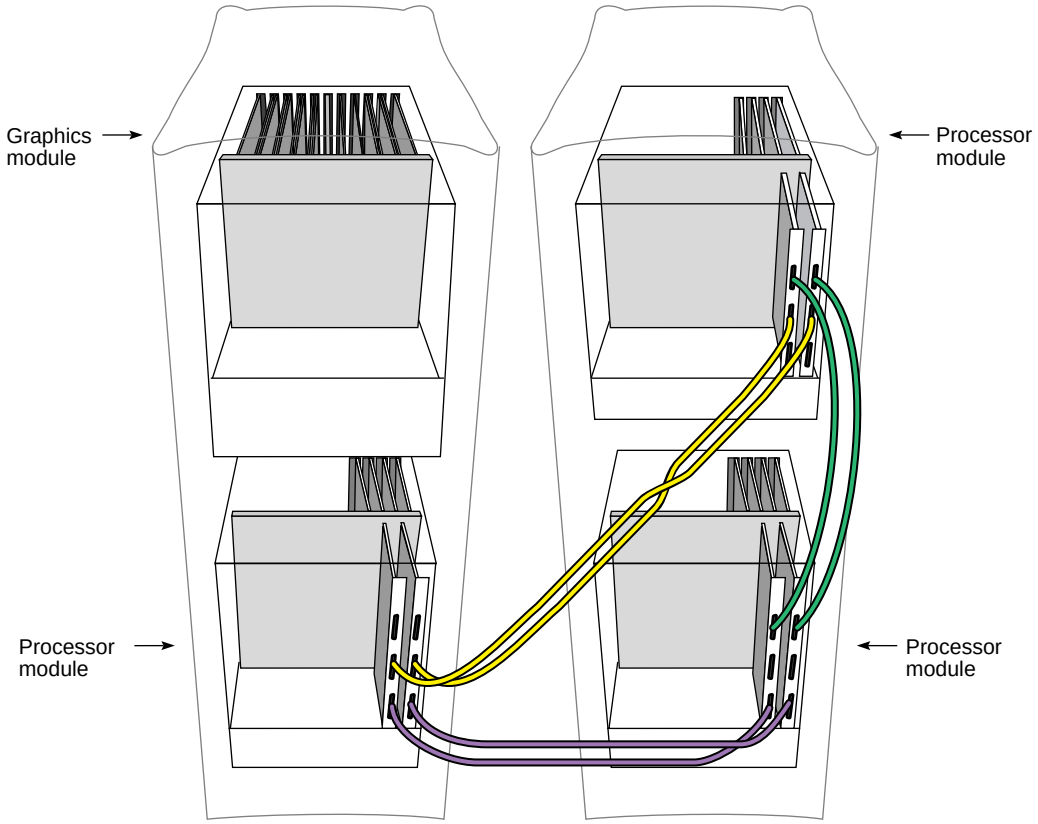


Figure 6-36 24P Onyx2 Configuration with Two Graphics Pipes