OSP Copper Core Lay-up Diagrams

Mirror Image

Lay-up diagrams provide a cross-sectional view of the core construction. Where the core has 25 pairs or less, the individual pairs are represented. Cores between 25 and 200 pairs are constructed using a combination of unit and group assemblies with color-coded binders to create a cylindrical core. Cores larger than 200 pairs are constructed using 25-pair groups bound with color-coded binders to create unique 50- and 100-pair Super Units (SU).

There are two common core configurations for copper cables 1,200-pair and larger and constructed with 100-pair super-units. This document addresses one type, "Mirror Image" binder color coding based on Telcordia (Bell) Standards. This is used by regional Bell operating companies and their descendants. The second type is referred to as "Full Count" color coding and is traditionally used by the Independent Telco (non-Bell) market. For more information on "Full Count" binder color-coding, please see the **OSP Copper Core Lay-up Diagrams - Full Count** Technical Guideline.

COLOR KEY		
BL	=	Blue
O	=	Orange
G	=	Green
BR	=	Brown
S	=	Slate
W	=	White
R	=	Red
BK	=	Black
Y	=	Yellow
V	=	Violet

SPARE PAIR COLOR CODES	
1.	Red/White
2.	Black/White
3.	Yellow/White
4.	Violet/White
5.	Black/Red
6.	Yellow/Red
7.	Violet/Red
8.	Yellow/Black
9.	Violet/Black
10.	Viloet/Yellow
11.	Orange/Blue
12.	Green/Blue
13.	Brown/Blue

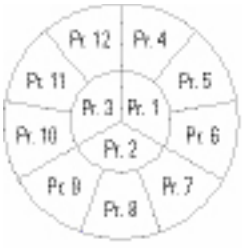
Helpful Information

1. A green binder identifies the first unit of each layer in a Mirror Image core. Locate the green binder of the layer and begin counting from that point.

   For example, a 1,200-pair core consists of two layers. The center layer (layer 1) contains Super Units 1, 2 and 3. Unit 1 is identified by a Green/Black binder. The outer layer contains Super Units 4, 5, 6, 7, 8, 9, 10, 11 and 12. Unit 4 is the first unit of the outer layer and is identified by a Green/Yellow binder.

2. Mirror Image cores may contain spare pairs. Information on spare pairs is included for informational purposes only.

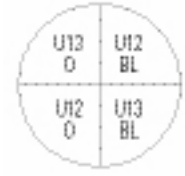
Unit Assemblies (U)



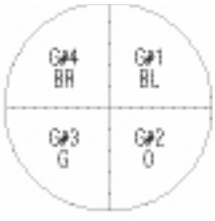
12-Pair Unit
U12

13-Pair Unit
U13

Super Unit Assemblies (SU)

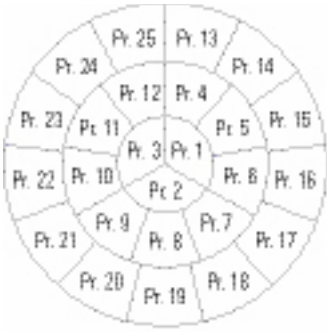


50-Pair Super Unit
SU50 or 2-U12 and 2-U13



100-Pair Super Unit
SU100 or 4-G25

Group Assemblies (G)



25-Pair Group
G25

Core Configurations

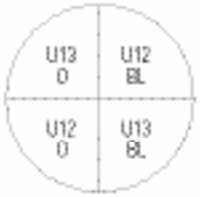
6-Pair Core

12-Pair Core

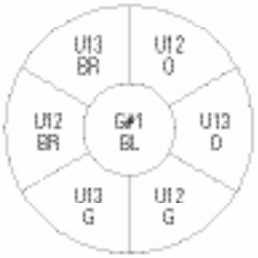
18-Pair Core

25-Pair Core

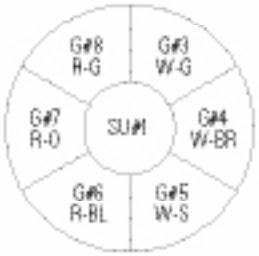
37-Pair Core
2-U12 and 1-U13



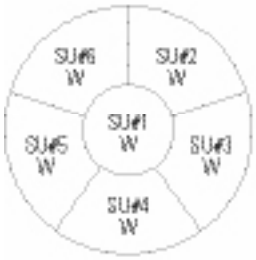
50-Pair Core
2-U12 and 2-U13



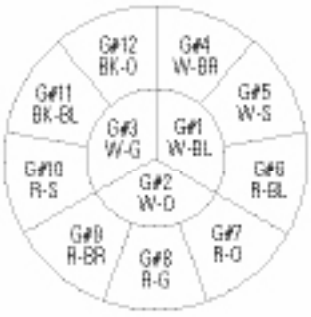
100-Pair Core
1-G25, 3-U12 and 3-U13



200-Pair Core
1-SU50 and 6-G25

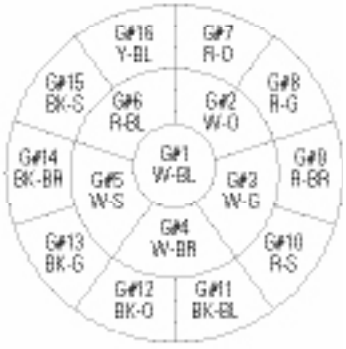


300-Pair Core
6-SU50

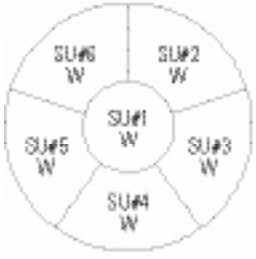


300-Pair Core Alternate
12-G25

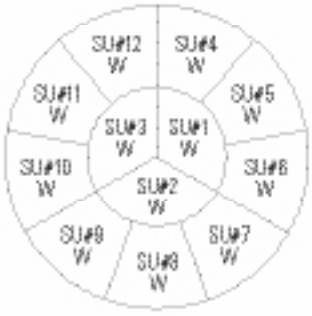
400-Pair Core
1-SU100 and 6-SU50



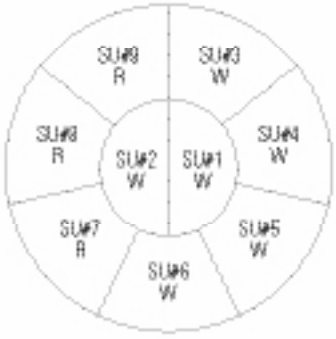
400-Pair Core Alternate
16-G25



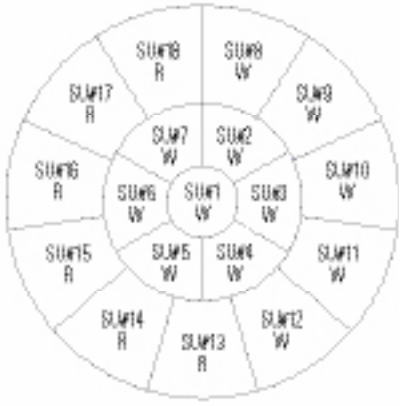
600-Pair Core
6-SU100



600-Pair Core Alternate
12-SU50

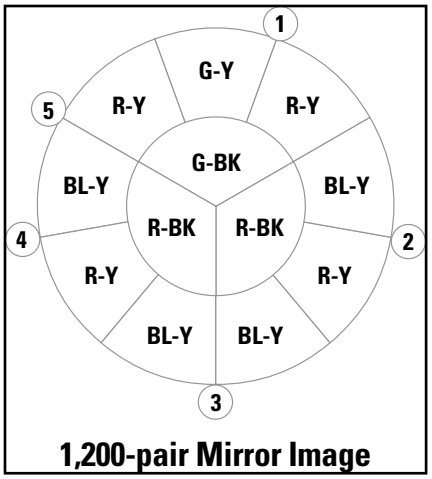


900-Pair Core
9-SU100

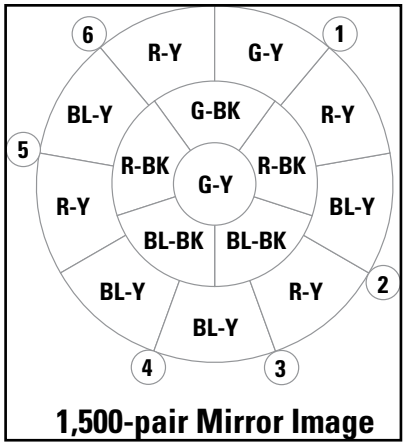


900-Pair Core Alternate
18-SU50

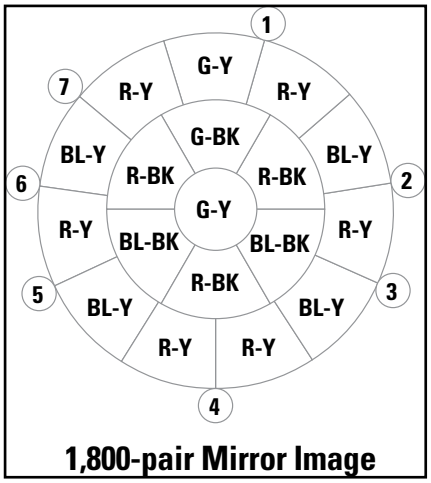
Core Configurations continued...



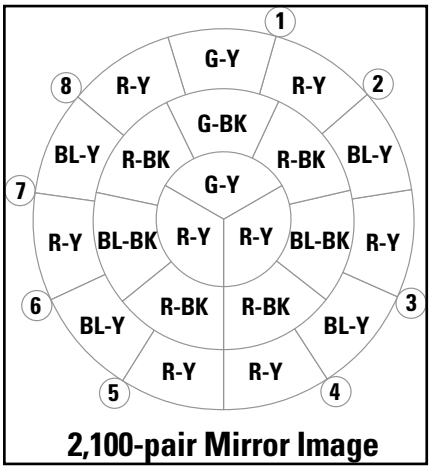
1,200-pair Mirror Image



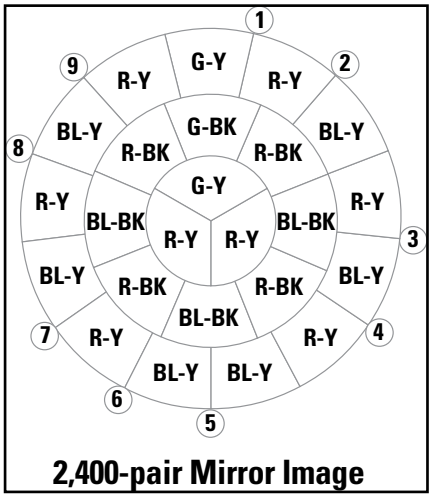
1,500-pair Mirror Image



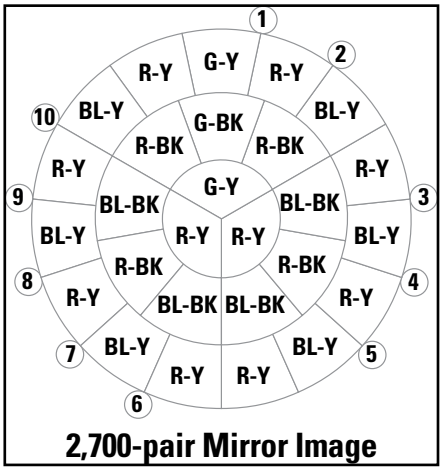
1,800-pair Mirror Image



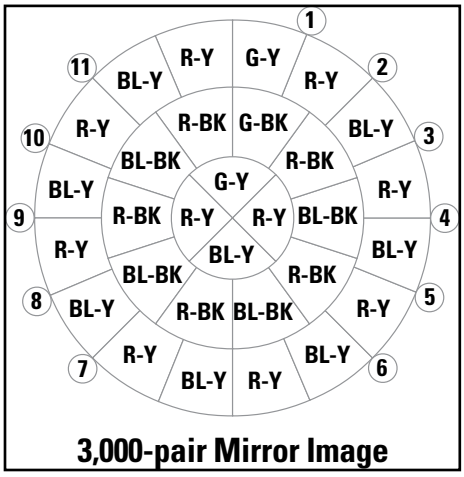
2,100-pair Mirror Image



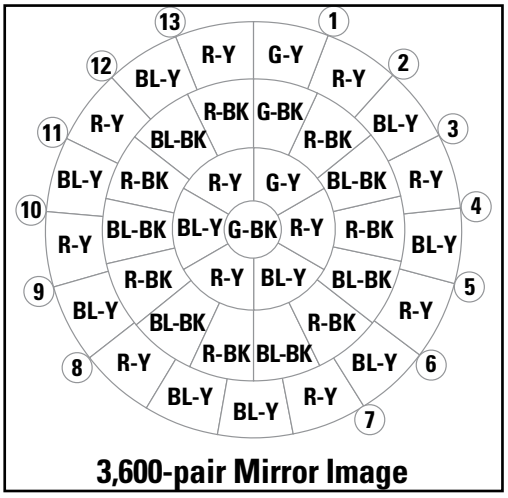
2,400-pair Mirror Image



2,700-pair Mirror Image



3,000-pair Mirror Image



3,600-pair Mirror Image