

# Installation Guide

## GigaBIX Cross-Connect System

Version 04.00 2007 PX103453

*GigaBIX*

**BELDEN**

## GigaBIX Frame

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### General Information

The GigaBIX Frame provides termination and cross-connect facilities for feeder, riser, and equipment cables. The GigaBIX Frame may be used with GigaBIX mounts and QMBIX12E BIX Mounts (300-pair).

The GigaBIX Frame is a double-sided frame section with vertical-to-horizontal wire distribution on opposite sides. Installations are made up of one or more frame sections. GigaBIX Cross-Connect wire is used to do the cross-connections.

A single frame section accommodates a maximum of sixteen (16) GigaBIX mounts (eight on the equipment side, eight on the distribution side.)

The frame can terminate up to 1,152 4-pair cables for a cross-connecting capacity of 576 x 576 ports.

### References

AX102073 GigaBIX Frame

### Packaging and dimensions

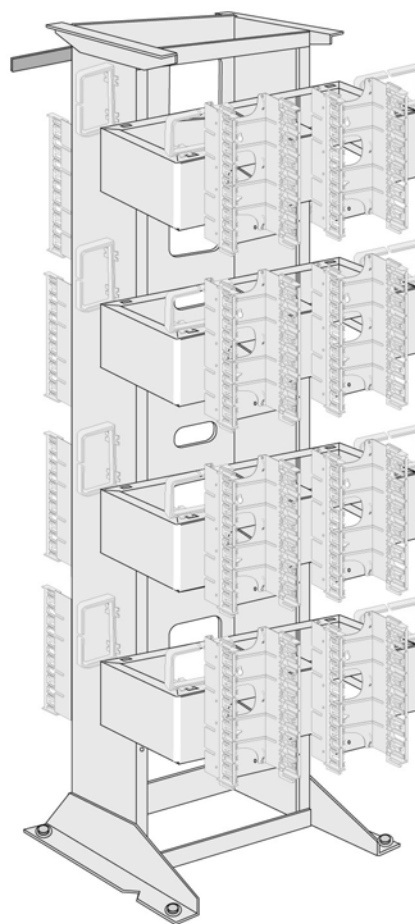
#### Frame section

The GigaBIX Frame section consists of (see figure 1):

- vertical upright (one)
- horizontal shelves (four)
- distribution rings (sixteen)
- ground bar (one)
- junction bar (one)

Upright and shelves individually packaged in cardboard boxes, unassembled.

-NXXCBFRA: 2084 x 559 x 494 mm  
(82 x 22 x 19.44 in.) 51.3 kg (113 lb)



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### Vertical upright

The vertical upright has floor-mounting holes at the base and four rack-mounting holes at the top. A notch is provided in the base for alignment purposes.

### Horizontal shelves

A maximum of four horizontal shelves can be attached to the vertical upright with two GigaBIX mounts attached to each shelf. Screws are provided with the frame to mount the distribution rings and the GigaBIX mounts on the shelves.

### Distribution rings

Distribution rings are mounted on both sides of the vertical upright, and at the rear of each horizontal shelf.

### Ground bar and junction bar

A copper ground bar is located at the top of the vertical upright (on the vertical side.) The ground bar has 1/4-20 threaded studs (with hex nuts) for attaching the GigaBIX frame and building ground wires. Ground continuity between frame sections is maintained by a junction bar that attaches between the ground bars of each extended GigaBIX distributing frame.

## Installation procedures - frame section and grounding

Procedures 1 and 2 provide step-by-step instructions for assembling the GigaBIX distribution frames.

### Frame section assembly procedure

Requirements for completing the frame section assembly process:

<b>Tools:</b>	7/16-inch socket nutdriver, screwdriver
<b>Material:</b>	Extended frame sections, (quantity as required) floor mounting hardware, cable racking
<b>References:</b>	Figures 2,3, and 4

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### Procedure 1: Frame section assembly

Step	Action
1.	Mark a line on the floor corresponding to the center line of the final position of the frame (figures 2 and 3.)
2.	Attach the frame to the floor with 3/8-inch diameter bolts, using the appropriate tools and local hardware. Position frames over center line using notches in base (figures 2 and 3.)
3.	Butt together all subsequent vertical uprights in the frame line-up using the notches in the base for frame alignment. Secure the vertical uprights to the floor.

**Note:** Shimming of the base of the upright may be required for correct alignment if the floor is uneven.

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### Procedure 1: Frame section assembly (cont'd.)

- | Step | Action   |
|------|--|
| 4.   | Install the junction bars between ground bars on each frame (figure 4.)  |
| 5.   | <b>Horizontal shelves:</b> Secure each shelf to the horizontal side of the upright using four 10-32 x 3/8-inch machine screws (maximum four shelves per upright.) See figure 3.  |
| 6.   | <b>Distribution rings:</b> Install distribution rings on each shelf in the left and right front positions (see figure 3) using 10-32 x 3/8-inch machine screws. Install four distribution rings on each side of the vertical upright (see figure 3) using 10-32 x 3/8-inch machine screws. |
| 7.   | Install five 1/4-20 hex nuts (supplied) on the five threaded ground bar studs (see figure 4.)  |
| 8.   | Install the <b>GigaBIX mounts</b> (not supplied) using two 10-32 x 0.500 inch machine screws (see figure 3.)   |
| 9.   | <b>Cable racking:</b> Install cable rack supports, J-bolts, and cable racking according to standard practices (see figure 3) (optional).   |
| 10.  | <b>End Kit</b> (optional)  |

### Grounding procedures

The following are needed for frame grounding (see steps one and two) and GigaBIX mount grounding (see steps three and four):

- |                   |   |
|-------------------|---|
| <b>Tools:</b>     | 7/16-inch socket nutdriver  |
| <b>Material:</b>  | Ground wire (quantity, type, and size as required by local practice.) |
| <b>Reference:</b> | Figure 4.   |

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### Procedure 2: Grounding

- | Step | Action  |
|------|---|
| 1.   | Verify that all ground and junction bars in the frame line-up are in place and securely fastened.   |
| 2.   | Ground the frame to the building ground according to local practices, using one of the ground studs on the ground bar.  |
| 3.   | Ground the GigaBIX mounts to the frame using the ground studs on the ground bar and instructions (publication numbers PX103504 and PX103453) in the 300-pair GigaBIX mount installation practice. |
| 4.   | Ground the input cable sheath, if applicable, using suitable bond clamp according to local practice.  |

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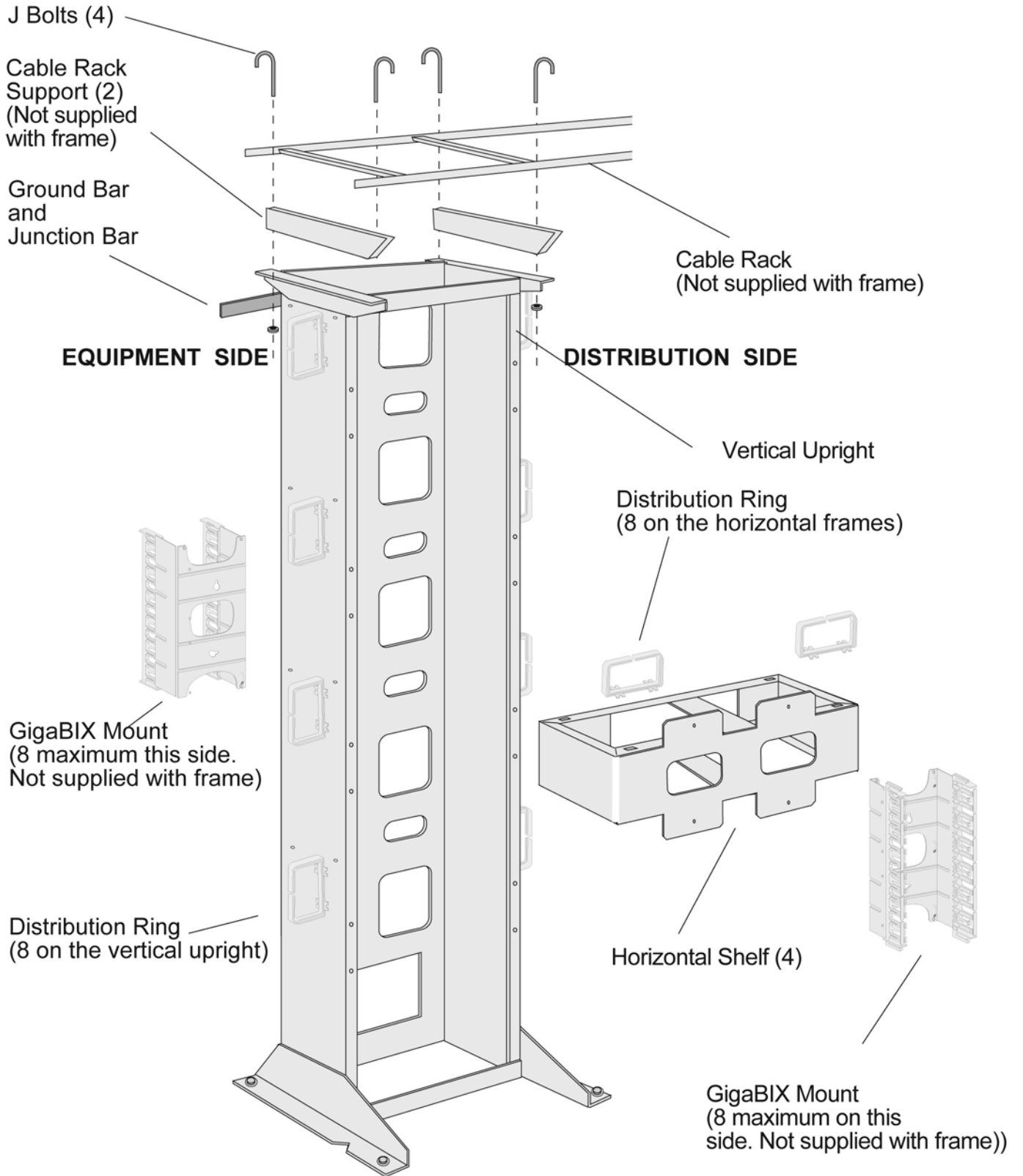
### Parts List

<b>GigaBIX Frame</b>	AX102073	
Hardware kit	PX103449	1
GigaBIX Horizontal Shelf, Black	PX103448	4
GigaBIX Vertical Upright Assy, Black	PX103438	1
<b>GigaBIX Frame Hardware Kit</b>	PX103449	
Installation Sheet (English)	PX103453	1
Installation Sheet (French)	PX103504	1
Junction Bar	PX103452	1
Nut Hex, .250-20 UNC WSHR	P0543659	9
Ground Bar	P0596542	1
Screw, .500 10-32 (4 per bag)	MX100116	25
Distribution Ring, Black	PX103450	16
<b>End Kit (optional)</b>	AX102082	
Distribution Ring	PX103450	8
Base	PX103461	8
Screw, .500 10-32 (4 per bag)	MX100116	4
<b>Overhead Kit (optional)</b>	AX102145	
Nut Hex, .375-16 UNC	MX101261	4
J-Bolt	PX103533	4
Cable Rack Support	PX103532	2

# GigaBIX Cross-Connect Frame

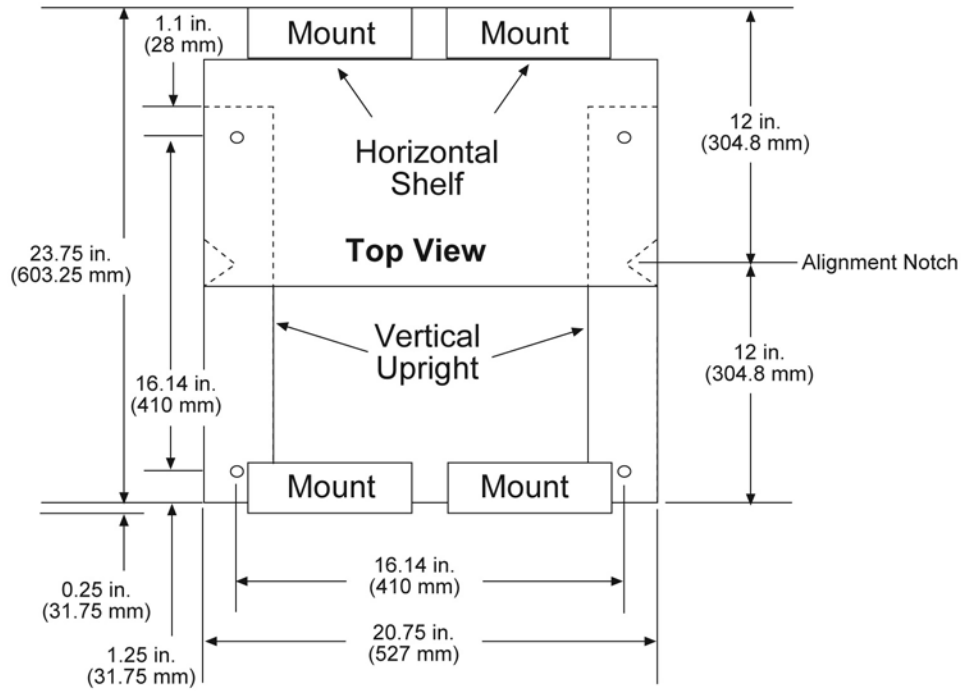
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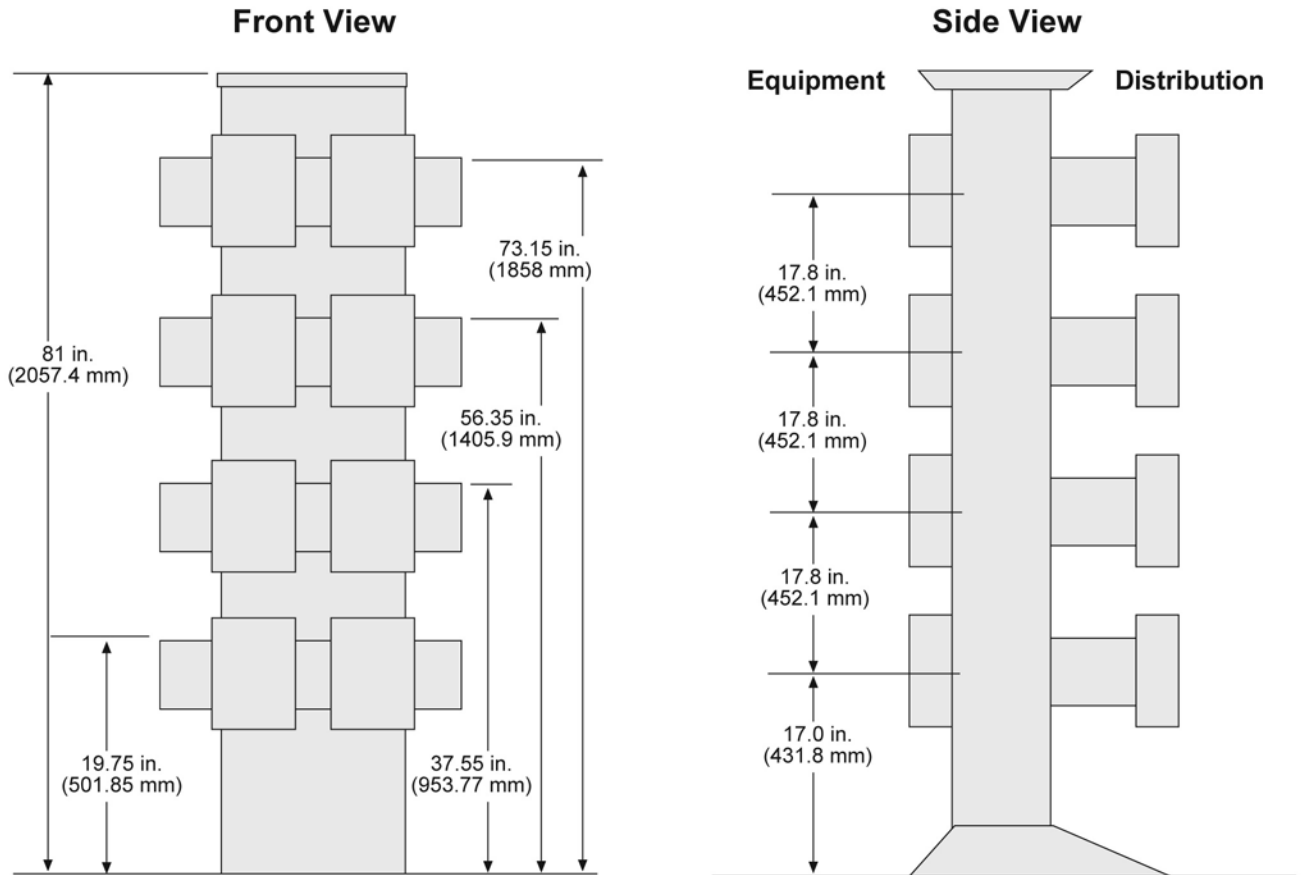


**Figure 1**

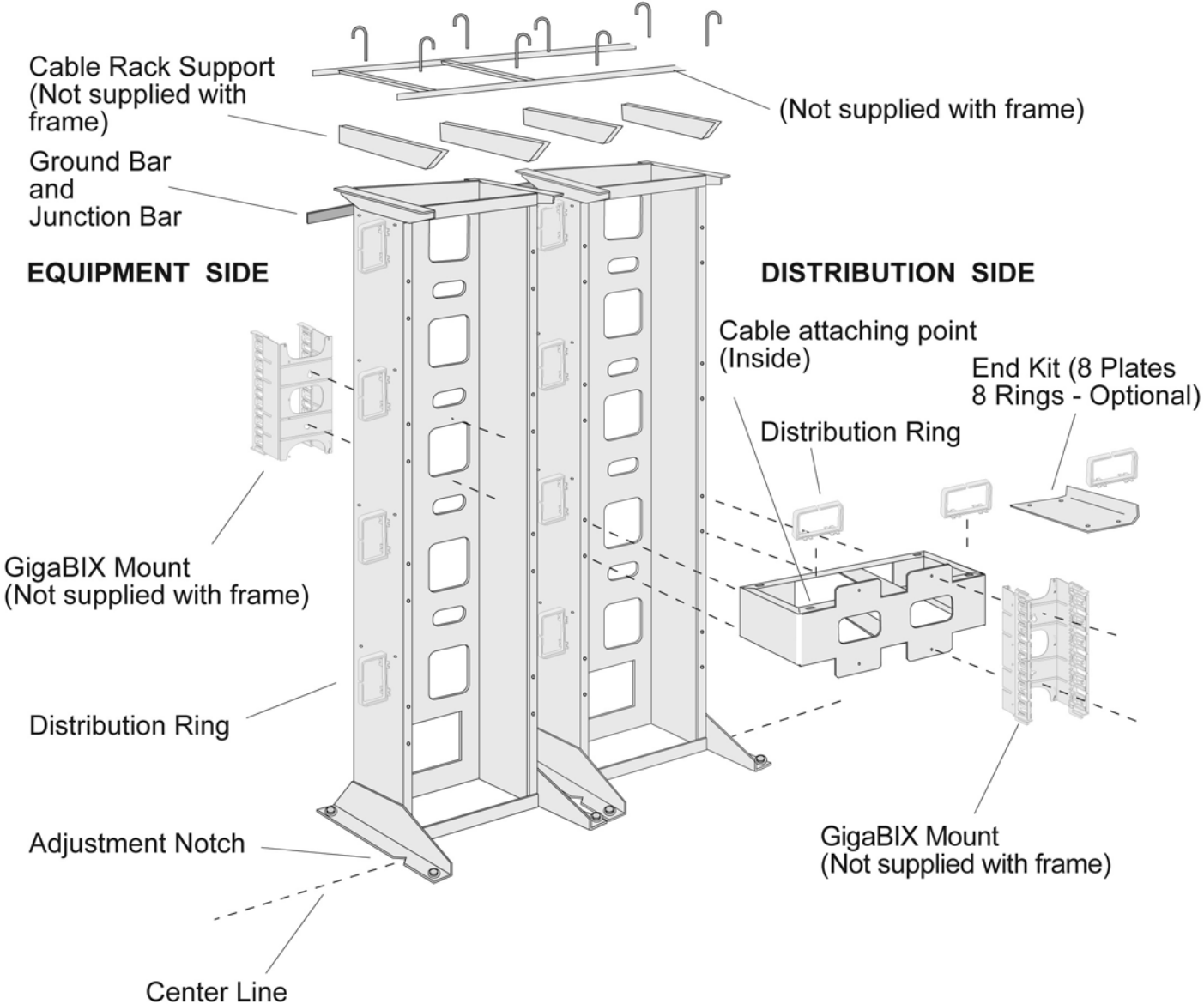
# GigaBIX Cross-Connect Frame Overall Dimensions



**Figure 2**

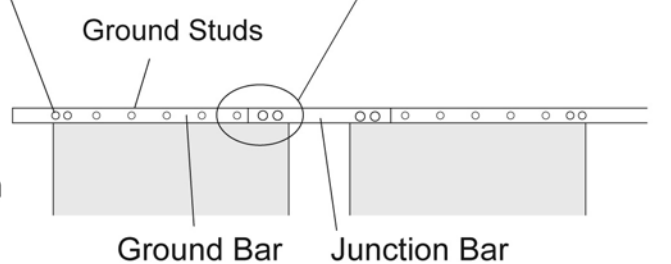
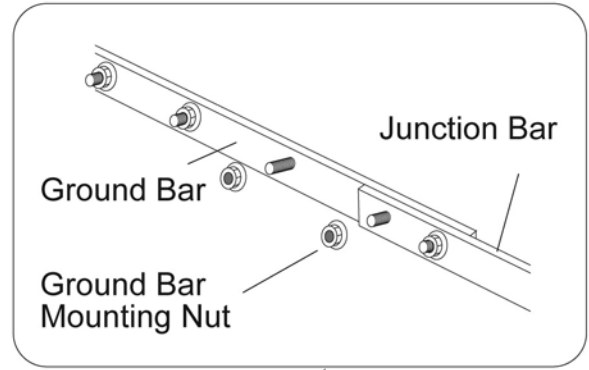
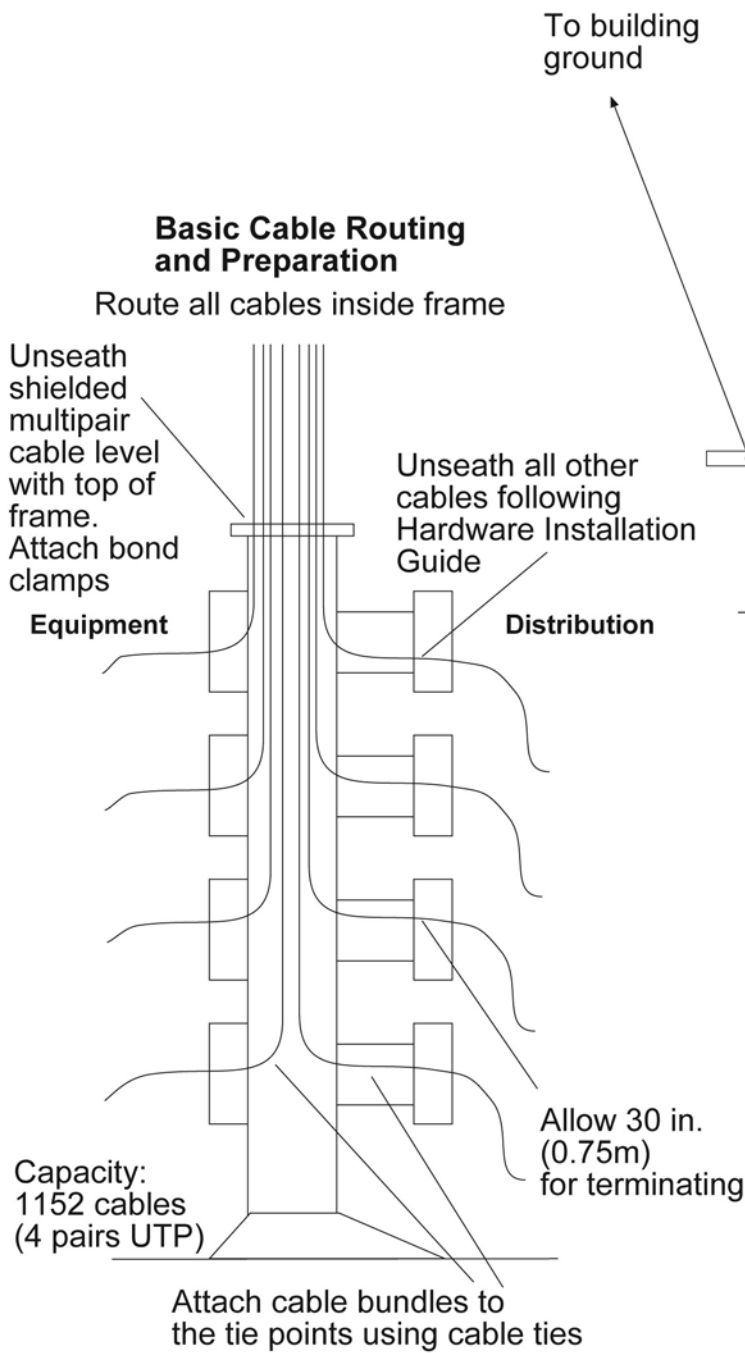


**GigaBIX Cross-Connect Frame  
Extended GigaBix Distribution  
Frame Assembly Procedure**



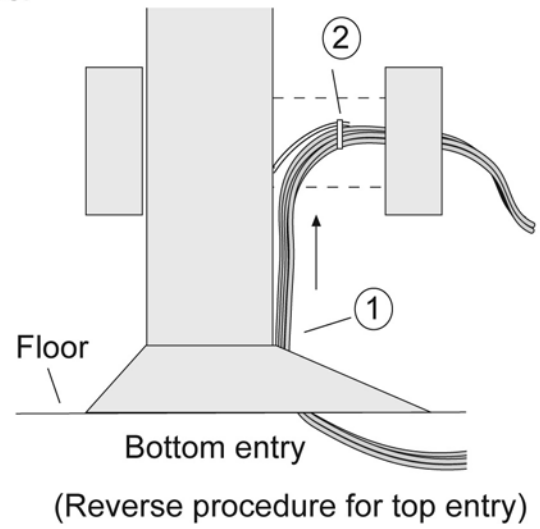
**Figure 3**

**Figure 4**  
**Grounding Procedures**



**Installer's Tip to reduce cable congestion**

When using 4800 LX cable, 1. Route the cable bundles intended for the first mount, **outside frame upright**. 2. Attach bundle to bracket inside shelf using Velcro strips.



For additional technical information on or our other connectivity products, call 1-800-858-7954

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