# 600G2 Combination Modular Shelf Instructions
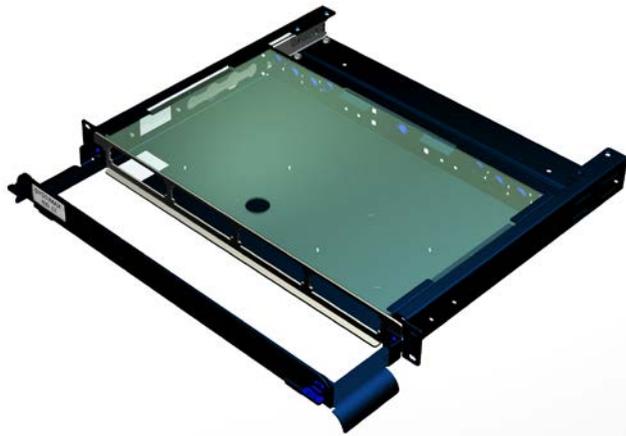# (Sliding and Fixed Versions)

General

The **SYSTIMAX®** 600G2 combination modular cassette shelves come equipped with a modular faceplate, a jumper-storage trough, and a polycarbonate top cover. The shelves are available in a 1U and 2U size and in a sliding and fixed configuration. The unpopulated 600G2 shelves are similar, but do not include a faceplate (which must be purchased separately). These shelves are intended for indoor use, but may be used outdoors in a suitable protective enclosure.

Ordering information is listed below:

Material ID	Part No.	Description
760028324	600G2-1U-MOD-SD	600G2 Modular 1U Shelf, sliding
760028332	600G2-1U-MOD-FX	600G2 Modular 1U Shelf, fixed
760032086	600G2-2U-MOD-SD	600G2 Modular 2U Shelf, sliding
760032094	600G2-2U-MOD-FX	600G2 Modular 2U Shelf, fixed
760033936	600G2-1U-UP-SD	600G2 Unpopulated 1U Shelf, sliding, w/o faceplate
760033928	600G2-1U-UP-FX	600G2 Unpopulated 1U Shelf, fixed, w/o faceplate
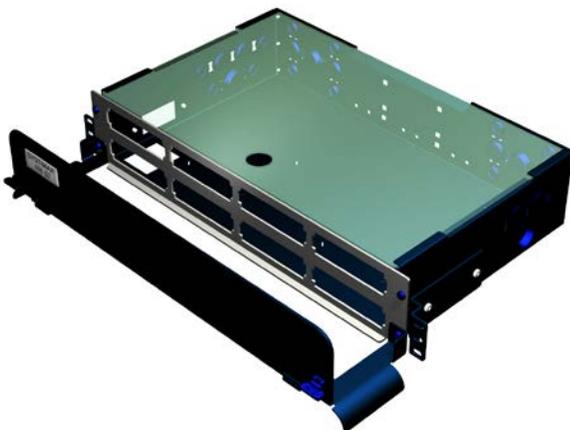
600G2-2U-MOD-FX Modular 2U Shelf   **600G2-1U-MOD-SD Modular 1U Shelf**

This product is covered by one or more of the following U.S. patents or their foreign equivalents:
5,923,807, 6,245,998.

For RoHS Inquiries:
CommScope Inc.
Corke Abbey, Bray
Co. Dublin, Ireland
Attn: Legal Department

How to Contact Us

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- For technical assistance:

  - Within the United States, contact your local account representative or technical support at 1-800-344-0223. Outside the United States, contact your local account representative or Authorized Business Partner.

  - Within the United States, report any missing/damaged parts or any other issues to **CommScope** Customer Claims at 1-866-539-2795. Outside the United States, contact your local account representative or Authorized Business Partner.

Tools Required

- Phillips-head screwdriver
- Isopropyl Alcohol (IPA)
- Lint-free cloth or tissues

Available Modular Cassettes (for use with Modular 600G2 Shelf)

Material ID	Product Number	Description
760027748	MODG2-12LC-LS-PT	G2 Modular Cassette, LC, MM, equipped w/ 12 **LazrSPEED**® Pigtails (Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua)
760031021	MODG2-12LC-MM-PT	G2 Modular Cassette, LC, MM, equipped w/ 12 **OptiSPEED**® Pigtails (Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua)
760031039	MODG2-12LC-SM-PT	G2 Modular Cassette, LC, SM, equipped w/ 12 **TeraSPEED**® Pigtails (Blue, Orange, Green, Brown, Slate, White, Red, Black, Yellow, Violet, Rose, Aqua)
760032235	MODG2-6ST-LS-PT-A	G2 Modular Cassette, **ST**®, MM, equipped w/ 6 **LazrSPEED** Pigtails, Type A (Blue, Orange, Green, Brown, Slate, White)
760034058	MODG2-6ST-LS-PT-B	G2 Modular Cassette, **ST**, MM, equipped w/ 6 **LazrSPEED** Pigtails, Type B (Red, Black, Yellow, Violet, Rose, Aqua)
760032250	MODG2-6ST-MM-PT-A	G2 Modular Cassette, **ST**, MM, equipped w/ 6 **OptiSPEED** Pigtails, Type A (Blue, Orange, Green, Brown, Slate, White)
760034066	MODG2-6ST-MM-PT-B	G2 Modular Cassette, **ST**, MM, equipped w/ 6 **OptiSPEED** Pigtails, Type B (Red, Black, Yellow, Violet, Rose, Aqua)
760032276	MODG2-6ST-SM-PT-A	G2 Modular Cassette, **ST**, SM, equipped w/ 6 **TeraSPEED** Pigtails, Type A (Blue, Orange, Green, Brown, Slate, White)
760034074	MODG2-6ST-SM-PT-B	G2 Modular Cassette, **ST**, SM, equipped w/ 6 **TeraSPEED** Pigtails, Type B (Red, Black, Yellow, Violet, Rose, Aqua)
760032227	MODG2-6SC-LS-PT-A	G2 Modular Cassette, SC, MM, equipped w/ 6 **LazrSPEED** Pigtails, Type A (Blue, Orange, Green, Brown, Slate, White)
760034082	MODG2-6SC-LS-PT-B	G2 Modular Cassette, SC, MM, equipped w/ 6 **LazrSPEED** Pigtails, Type B (Red, Black, Yellow, Violet, Rose, Aqua)
760032243	MODG2-6SC-MM-PT-A	G2 Modular Cassette, SC, MM, equipped w/ 6 **OptiSPEED** Pigtails, Type A (Blue, Orange, Green, Brown, Slate, White)
760034090	MODG2-6SC-MM-PT-B	G2 Modular Cassette, SC, MM, equipped w/ 6 **OptiSPEED** Pigtails, Type B (Red, Black, Yellow, Violet, Rose, Aqua)

Material ID	Product Number	Description
760032268	MODG2-6SC-SM-PT-A	G2 Modular Cassette, SC, SM, equipped w/ 6 **TeraSPEED** Pigtails, Type A (Blue, Orange, Green, Brown, Slate, White)
760034108	MODG2-6SC-SM-PT-B	G2 Modular Cassette, SC, SM, equipped w/ 6 **TeraSPEED** Pigtails, Type B (Red, Black, Yellow, Violet, Rose, Aqua)
760032136	MODG2-12LC-LS	G2 Modular Cassette, **LazrSPEED**, 12 LC, w/ adapters
760032144	MODG2-6SC-LS	G2 Modular Cassette, **LazrSPEED**, 6 SC, w/ adapters
760032151	MODG2-6ST-LS	G2 Modular Cassette, **LazrSPEED**, 6 **ST**®, w/ adapters
760032169	MODG2-12LC-MM	G2 Modular Cassette, **OptiSPEED**, 12 LC, w/ adapters
760032177	MODG2-6SC-MM	G2 Modular Cassette, **OptiSPEED**, 6 SC, w/ adapters
760032185	MODG2-6ST-MM	G2 Modular Cassette, **OptiSPEED**, 6 **ST**, w/ adapters
760032193	MODG2-12LC-SM	G2 Modular Cassette, **TeraSPEED**, 12 LC, w/ adapters
760032201	MODG2-6SC-SM	G2 Modular Cassette, **TeraSPEED**, 6 SC, w/ adapters
760032219	MODG2-6ST-SM	G2 Modular Cassette, **TeraSPEED**, 6 **ST**, w/ adapters

Available Faceplates (for use with Unpopulated 600G2 Shelf)

Material ID	Product Number	Description
760033894	600-12SC-SPLX	Panel, 12 Simplex SC (See Note)
760033886	600-24SC-SPLX	Panel, 24 Simplex SC (See Note)
760033878	600-24SC-DPLX	Panel, 12 Duplex SC (See Note)
760033910	600-12ST-SPLX	Panel, 12 Simplex **ST**
760033902	600-24ST-SPLX	Panel, 24 Simplex **ST**
760033860	600-48SC-DPLX	Panel, 24 Duplex SC (See Note)
760033852	600-24LC-SPLX	Panel, 24 Simplex LC (See Note)
760033845	600-48LC-DPLX	Panel, 48 Duplex LC (See Note)
760033894	600-12SC-SPLX	Panel, 12 Simplex SC (See Note)
760055996	600-96LC-DPLX	Panel, 96 Duplex LC (See Note)
760055998	600G2-96LC-DPLX-LS	Panel, equipped w/ 96 Duplex LC LS Adapters
760056051	600G2-96LC-DPLX-SM	Panel, equipped w/ 96 Duplex LC SM Adapters
760056044	600G2-96LC-DPLX-MM	Panel, equipped w/ 96 Duplex LC MM Adapters
760069336	600G2-96LC-DPLX-SM APC	Panel, equipped w/ 96 Duplex LC SM APC Adapters

Note: Adapters must be purchased separately

Available Accessories

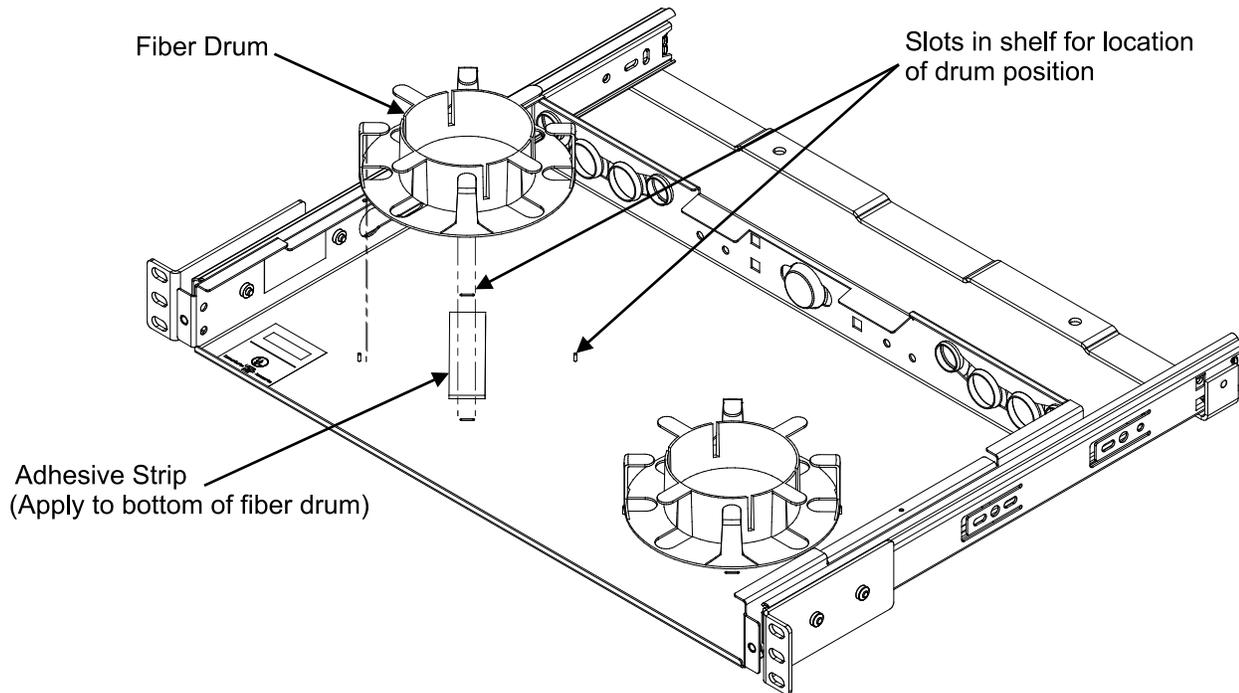| Material ID	Product Number	Description
760027516	RS-00	**RoloSplice**® (unpopulated, splice trays available separately)
760031849	RS-4AM-12SS	**RoloSplice**, 2U version, equipped w/ mechanical splice trays
760031856	RS-4AF-16SS	**RoloSplice**, 2U version, equipped w/ fusion splice trays
760039859	RS-2AM-12SS	**RoloSplice**, 1U version, equipped w/ mechanical splice trays
760039867	RS-2AF-16SS	**RoloSplice**, 1U version, equipped w/ fusion splice trays
760148502	360-LP-STACK-SPT	Stackable fusion splice tray kit
760032102	MODG2-BLANK	G2 modular blank panel bezel (package of 4)
760032110	MODG2-MGS	G2 modular MGS bezel (package of 4)
760039875	600-SRF	Liquid-tight cable fitting kit for small-diameter cables
760039883	600-23BRKT	Frame mounting bracket kit for 23" frames and ETSI frames
760056541	600G2-Fiber Drum Kit	Includes 2 fiber drums and mounting hardware
760055921	600G2-Cover	Metal (Security) top cover for shelf

Parts List

Check parts against the parts list below:

| Quantity	Description
1	Tray assembly (fixed or sliding) with 19-inch (483mm) rack mounting brackets
1	Front-mounted jumper trough with flip-down door
1	Polycarbonate top cover
1	Label sheet
4	#12-24 x 3/8-inch screws for 19-inch (483mm) and 23-inch (584mm) rack mounting
4	M6 x 12mm screws for ETSI rack mounting
1	Instruction sheet
2	Liquid-tight strain relief fittings (black)

⚠ CAUTIONS

- Disconnected optical components may emit invisible optical radiation that can damage your eyes. Never look directly into an optical component that may have a laser coupled to it. Serious and permanent retinal damage is possible. If accidental exposure to laser radiation is suspected, consult a physician for an eye examination.

- Wearing safety glasses during installation of this shelf is recommended. Although standard safety glasses provide no protection from potential optical radiation, they offer protection from accidental airborne hardware and cleaning solvents.

Step 1 – Install Fiber Drums (for Unpopulated Versions of Shelf)

Fiber Drum

Slots in shelf for location
of drum position

Adhesive Strip
(Apply to bottom of fiber drum)

1. Wipe bottom surface of drums and floor of shelf with isopropyl alcohol (IPA) and a lint-free cloth or tissue to clean and degrease.

2. Peel off paper backing from one side of adhesive strip and apply to base of fiber drum.

3. Remove paper backing from remaining side of adhesive strip.

4. Locate pattern of four slots on floor of shelf. Orient outer spokes of fiber drum to align with these slots, lower drum and press firmly to create good adhesion.

    Note: Drum location and orientation is important to prevent interference between drums, adapters and **RoloSplice** (optional).

5. Repeat items 1-4 for remaining drum, if desired.

Step 2 – Mount Shelf to Rack and Install Faceplate (for Unpopulated Shelf Only) and Trough (Fixed and Sliding Versions)

1/4 turn fastener

Faceplate

Door

Trough

12-24 screw (4 places)

Faceplate screw (2 places)
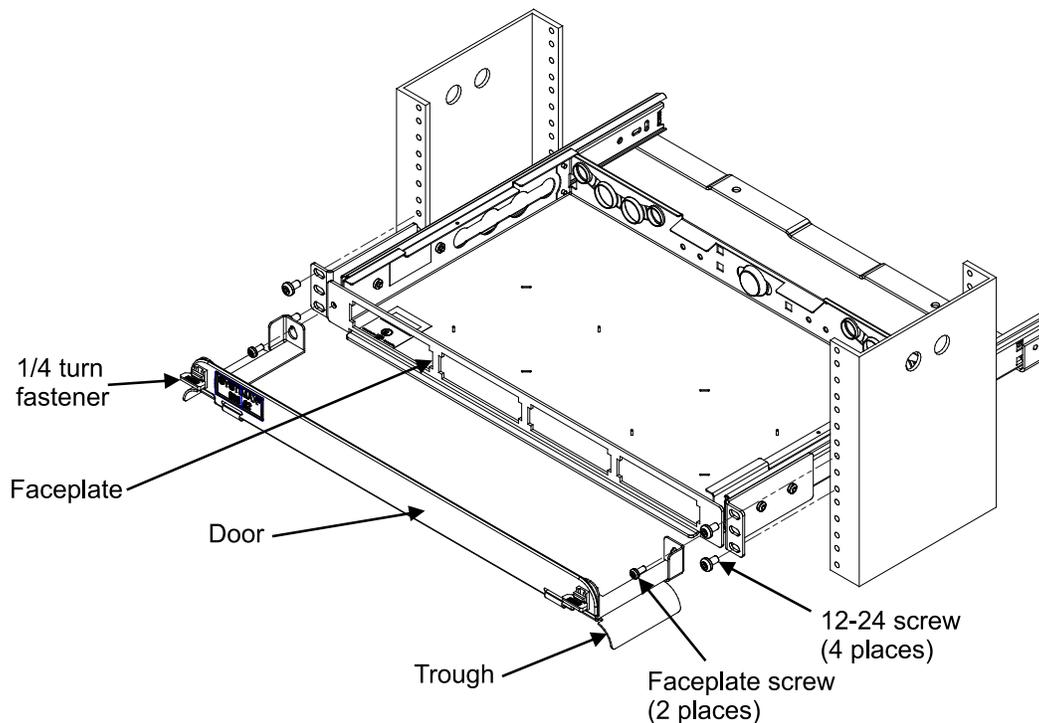
1. Determine the rack size and desired mounting location.
   - For 19-inch (483mm) rack – Mount shelf to rack using the pre-installed mounting brackets and four #12-24 x 3/8-inch screws (provided).
   - For 23-inch (584mm) rack – Use the 600-23BRKT accessory kit (available separately) and install two conversion brackets to the pre-installed mounting brackets, using the four #10-32 x 3/8 inch conversion screws included in the accessory kit. One conversion bracket and two screws per side. Mount the shelf to the rack using four #12-24 x 3/8-inch screws (provided as part of the basic shelf).
   - For ETSI rack – Use the 600-23BRKT accessory kit (available separately) and install one conversion bracket to either of the pre-installed mounting brackets, using two of the four #10-32 x 3/8 inch conversion screws included in the accessory kit. The shelf will not be centered when mounted in the rack. Mount the shelf to the rack using four M6 x 12mm screws (provided as part of the basic shelf).

Faceplate (For Unpopulated Shelf)

Note: For the modular shelf, the faceplate is already attached to the shelf and no additional installation is necessary.

1. Remove the two screws located at the front of the shelf and insert the appropriate faceplate as shown above. Reuse the same screws to secure the faceplate to the shelf.
2. Install the individual adapters into the faceplate prior to fiber installation.

Trough

1. Rotate the two 1/4-turn fittings on trough door until the door disengages, then remove door from trough.
2. **For a 1U shelf**, loosen the faceplate mounting screws approximately 3 to 4 turns (**for a 2U shelf**, loosen only the two bottom screws), then position the trough so that the heads of the front panel screws extend through the keyholes in the trough.

3. Using the keyhole feature, slide the trough mounting brackets onto the screws. Hold the trough in place and tighten the screws using a screwdriver. It may be helpful to use a long screwdriver and insert screwdriver through the square holes used to mount the 1/4-turn fittings for the door.

4. Re-install the door when finished.

Step 3 – Determine Method to Secure Fiber Cable to Shelf

Note: This shelf is designed for direct connection of fiber cables using cable glands inserted into the cable entry slots provided or alternatively, using hose clamps. Another method for securing fiber cables is the use of optional rack mounted brackets, which is not covered here. See instruction sheet 860380781 for using rack mounted brackets.
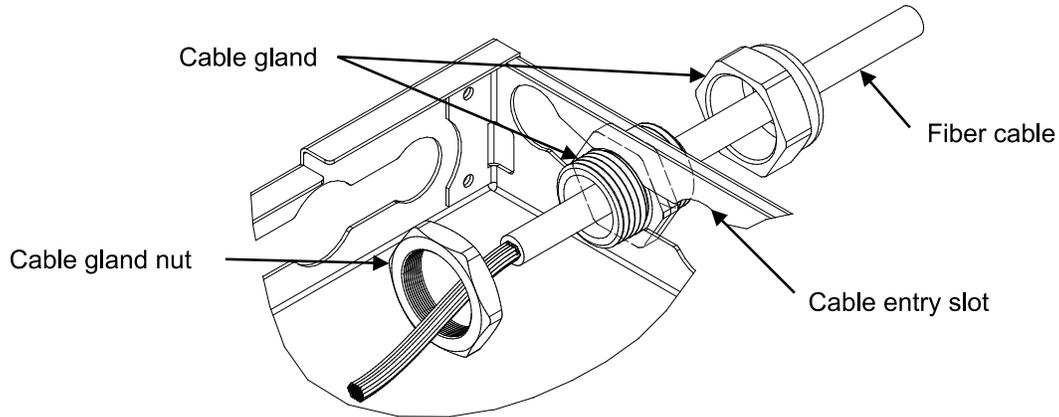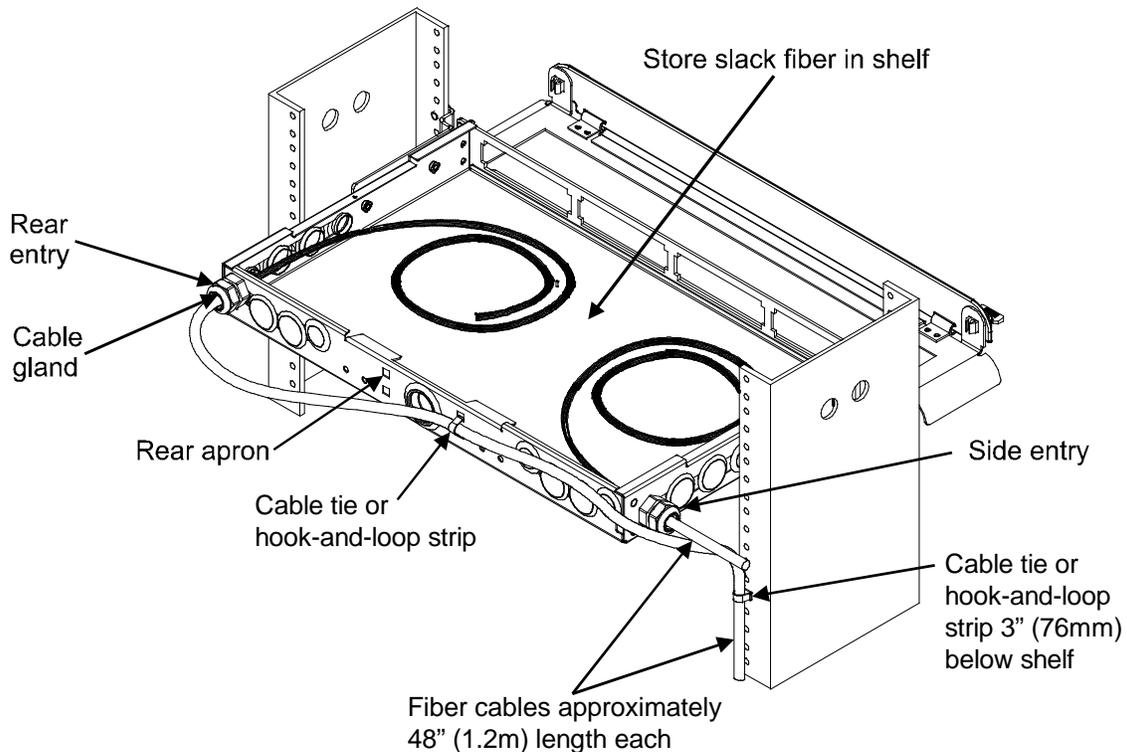

Cable Gland Method (Preferred)
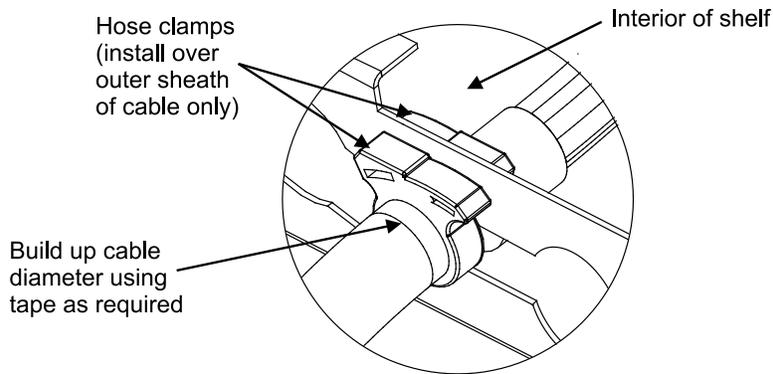
Hose Clamp Method (Alternate)

Note: For smaller diameter cables, the 600-SRF kit (ordered separately) provides two liquid-tight fittings with a smaller inside diameter. The smaller diameter fittings would be more appropriate for these cables.

Step 4A – Route and Secure Fiber Cable (Fixed Shelf)


Note: These instructions cover only the cable gland method of securing fiber cables to the shelf.

1. Loosely secure fiber cable to equipment rack upright approximately 3 inches (76mm) above or below shelf, using cable tie or hook-and-loop strip. Leave approximately 48-inch (2.1m) length of cable to route into shelf.

2. Fiber cables may enter shelf from either right side, left side or rear apron. Carefully loop fiber cable to rear of shelf on either side and then continue to feed cable over top of rear apron. Loosely secure cable to rear of shelf as shown above, using a cable tie or hook-and-loop strip.

3. Temporarily store slack fibers in shelf.

4. Remove plug from appropriate size opening in shelf to accommodate cable gland on fiber cable. Select an opening on rear apron or either right or left side that will be most advantageous for cable entry.

5. Completely loosen gland nut from cable gland.

6. Feed fibers and subunit tubes through opening in shelf and temporarily coil fibers loosely inside shelf.

7. Rotate gland nut as required to allow it to pass through the opening and enter shelf.

   Note: It may be necessary to temporarily remove a plug from an adjacent opening to provide sufficient clearance for gland nut to be inserted through opening.

8. Insert threaded body of cable gland into opening and tighten gland nut onto threaded section to secure cable gland unit to shelf.

Step 4B – Route and Secure Fiber Cable (Sliding Version)
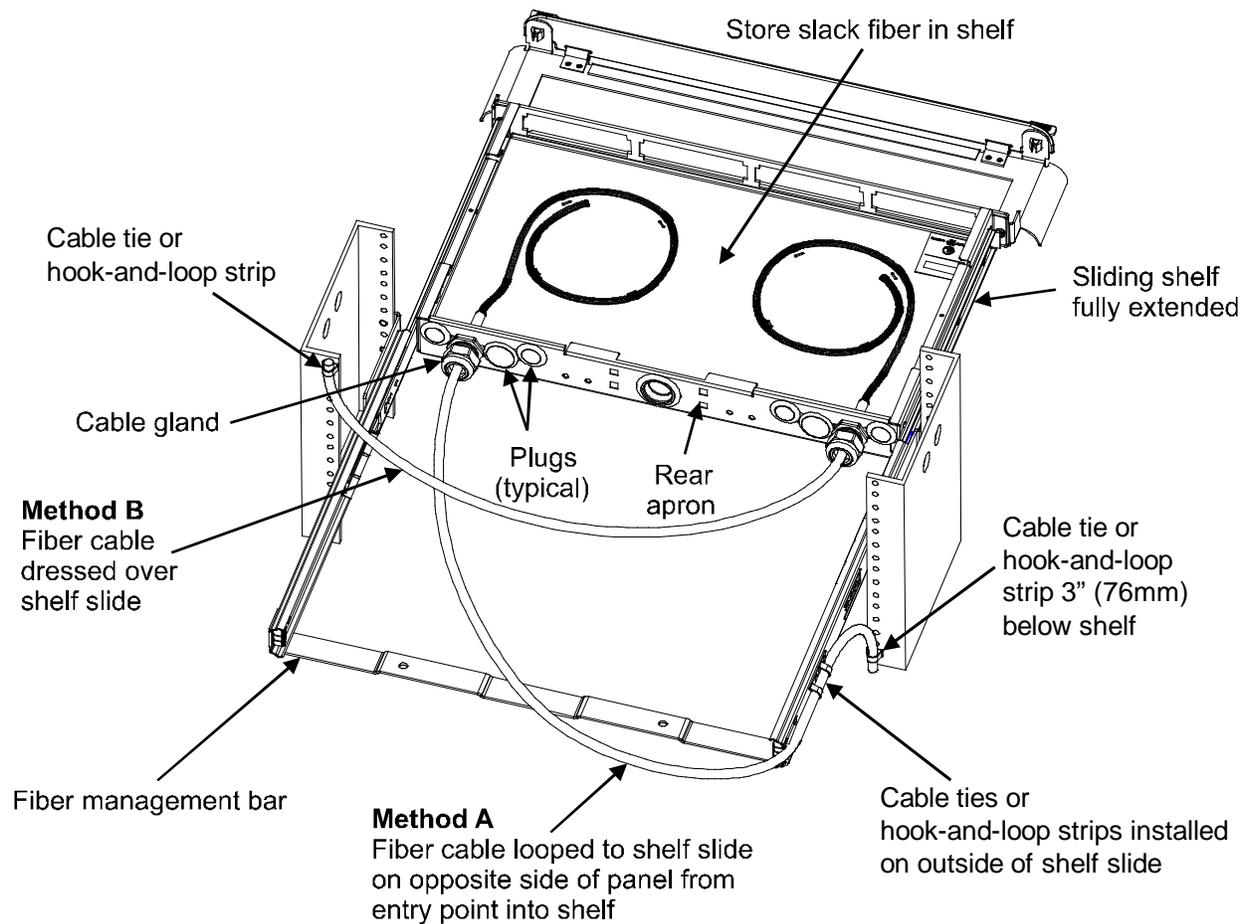
1. Fully extend sliding shelf to front of rack.

2. Fiber cables may enter shelf from either right side, left side or rear apron. Carefully loop fiber cable to rear of shelf on either side and then continue to feed cable over top of rear apron. Loosely secure cable to rear of shelf as shown above, using a cable tie or hook-and-loop strip.

3. Temporarily store slack fibers in shelf.

4. Remove plug from appropriate size opening in shelf to accommodate cable gland on fiber cable. Select an opening on rear apron that will be most advantageous for cable entry.

5. Completely loosen gland nut from cable gland.

6. Feed fibers and subunit tubes through opening in shelf and temporarily coil fibers loosely inside shelf.

7. Rotate gland nut as required to allow it to pass through the opening and enter shelf.

   Note: It may be necessary to temporarily remove a plug from an adjacent opening to provide sufficient clearance for gland nut to be inserted through opening.

8. Insert threaded body of cable gland into opening and tighten gland nut onto threaded section to secure cable gland unit to shelf.

Method A

1. Working back from where the fiber cable enters the shelf (at a cable gland), carefully loop cable over rear fiber management bar and then to outside of shelf slide on opposite side of panel from cable entry point as shown. Maintain the cable in as small of a radius as possible while not exceeding the minimum bend radius for the cable. Secure fiber cable to shelf slide in at least two places using cable ties or hook-and-loop strips threaded through slots and punches provided in rails. **Do not secure cables to fiber management bar.**

2. From shelf slide, route cable to equipment rack and loosely secure cable to rack upright approximately 3 inches (76mm) above or below shelf, using a cable tie or hook-and-loop strip.
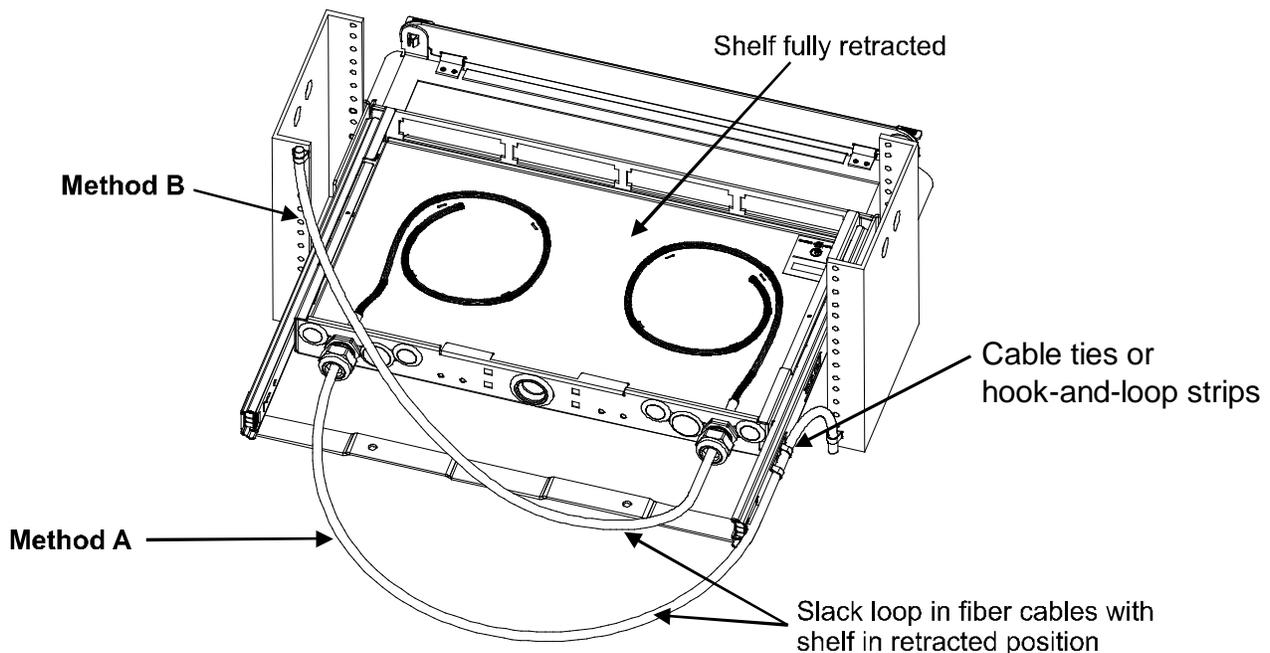
    Note: Do not exceed minimum bend radius for fiber cable.

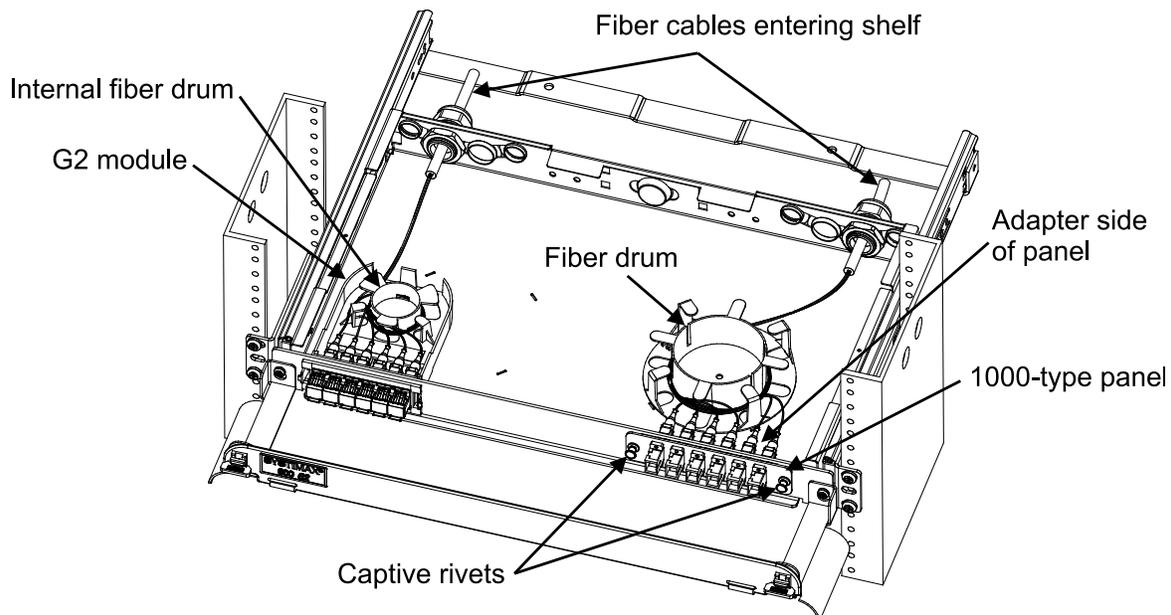3. Verify that shelf retracts and extends fully before proceeding.

Method B

Note: This method reduces the slack loop length at the rear of the shelf but it requires an open space of at least 1U above a 1U shelf to work. 2U shelves do not have this restriction.

1. Working back from where the fiber cable enters the shelf (at a cable gland), carefully loop cable over rear fiber management bar and then across shelf slide on opposite side of chassis from cable entry point as shown. Maintain the cable in as small of a radius as possible while not exceeding the minimum bend radius for the cable. **Do not secure cables to fiber management bar or drawer slide.**

2. Route cable to equipment rack and loosely secure cable to rack upright approximately 3 inches (76mm) above or below shelf, using a cable tie or hook-and-loop strip.

3. Verify that shelf retracts and extends fully before proceeding.

4. Figure below shows typical fiber loop when shelf is retracted.

Shelf fully retracted

Method B

Cable ties or hook-and-loop strips

Method A

Slack loop in fiber cables with shelf in retracted position

Step 5A – Route Cable/Fibers Inside Shelf – Field Termination Only

G2 Module Application:

1. Remove clear plastic cover from G2 module and insert module into opening provided in faceplate, oriented so that the rear passes through the opening first. Push until module snaps into place.

   Note: On a 2U shelf, start on the bottom row first

2. After connectorization, route buffered fibers from cable toward front of tray.

3. Terminate connector end of pigtails into module adapter openings in standard sequence.

4. Spool excess fiber slack length around drum integrated into module.

5. Replace cover on G2 Module.

6. Repeat items 1-5 for all remaining locations.

   Note: Any excess fiber that cannot be spooled on drums should be restrained to floor of shelf with hook-and-loop strips or blue painters tape.
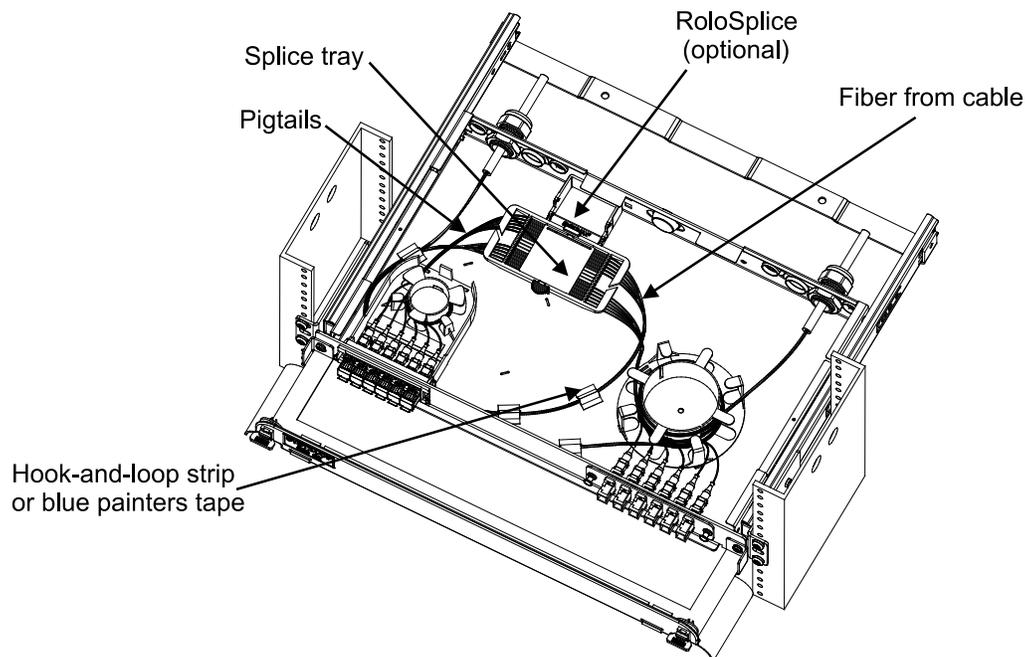
1000-Type Panel Application:

1. Insert module into opening provided in faceplate, oriented so that the adapters pass through the opening first. Push in on two captive rivets until they lock into place.

   Note: On a 2U shelf, start on the bottom row first

2. After connectorization, route buffered fibers from cable toward front of tray.

3. Terminate connector end of pigtails into module adapter openings in standard sequence.

4. Spool excess fiber slack length around drum

5. Repeat items 1-4 for all remaining locations

   Note: Any excess fiber that cannot be spooled on drums should be restrained to floor of shelf with hook-and-loop strips or blue painters tape.

Step 5B – Route Cable/Fibers Inside Shelf – Termination and Splicing

Splice tray
Pigtails
RoloSplice (optional)
Fiber from cable
Hook-and-loop strip or blue painters tape

G2 Module Application:

1. Remove clear plastic cover from G2 module and insert module into opening provided in faceplate, oriented so that the rear passes through the opening first. Push until module snaps into place.

    Note: On a 2U shelf, start on the bottom row first

2. If module came equipped with pigtails already installed, spool out length sufficient for splicing operations. If pigtails were provided separately, terminate connector end of pigtails into module adapter openings in standard sequence and leave slack length free.

3. Splice pigtails to appropriate fibers from cable per best standard practice.

4. Secure splices into splice tray and route fibers from cable and pigtails from module neatly inside shelf. Contain pigtail slack on spool integrated into module. Fibers from cable should be looped onto shelf floor and restrained.

5. Replace cover on G2 Module.

6. Repeat items 1-5 for all remaining locations.

    Note: Any excess fiber that cannot be spooled on drums should be restrained to floor of shelf with hook-and-loop strips or blue painters tape.

1000-Type Panel Application:

1. Insert module into opening provided in faceplate, oriented so that the adapters pass through the opening first. Push in on two captive rivets until they lock into place.

    Note: On a 2U shelf, start on the bottom row first.

2. Terminate connector end of pigtails into panel adapter openings in standard sequence and leave slack length free.

3. Splice pigtails to appropriate fibers from cable per best standard practice.

4. Secure splices into splice tray and route fibers from cable and pigtails from adapters neatly inside shelf. Loop pigtail and fiber slack on drum.

5. Repeat items 1-4 for all remaining locations.

   Note: Any excess fiber that cannot be spooled on drums should be restrained to floor of shelf with hook-and-loop strips or blue painters tape.

Figures below show 1U and 2U shelves fully populated and featuring the optional RoloSplice multiple splice tray organizer.
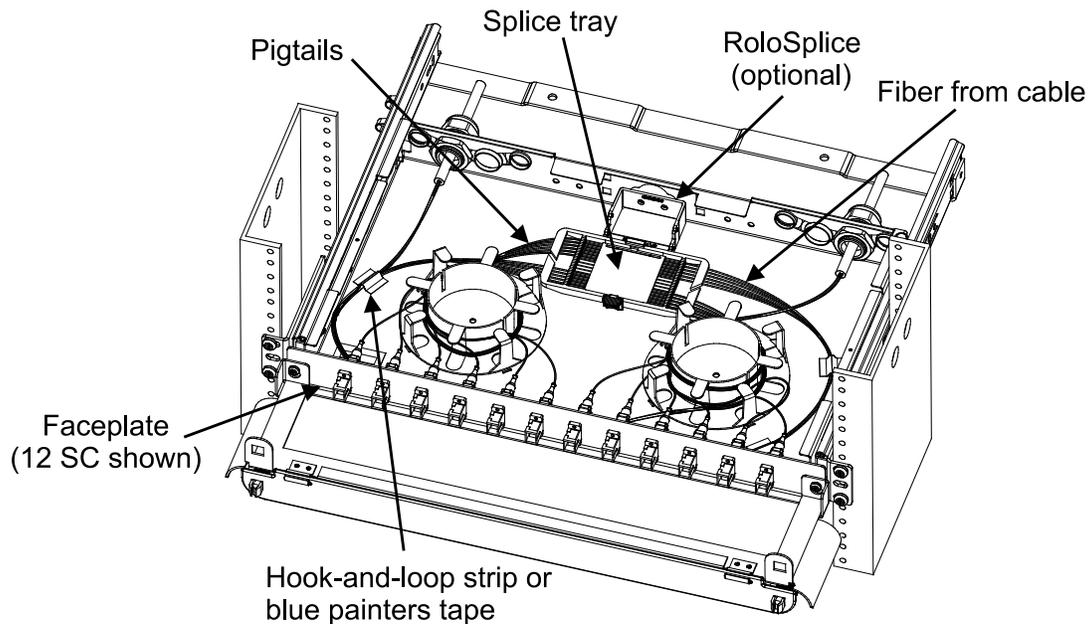

A completed 1U shelf with RoloSplice
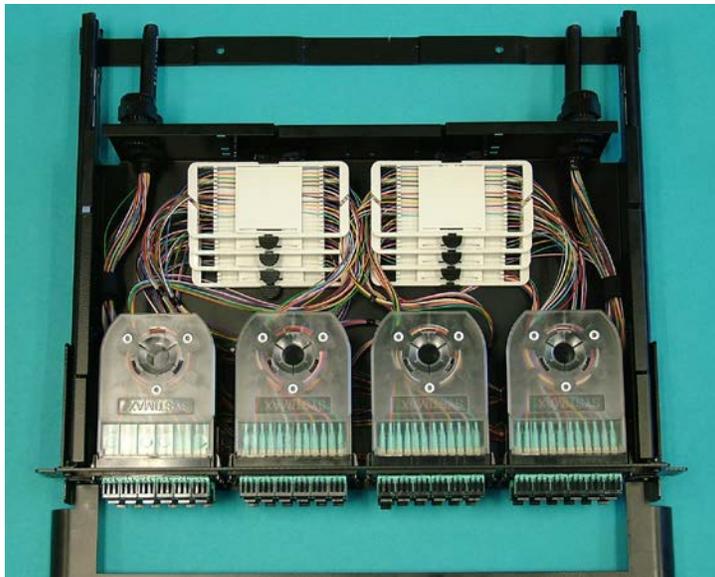
A completed 2U Shelf with RoloSplice

Step 5C – Route Fiber/Cable Inside Unpopulated Shelf Using Faceplates

After installing fiber drums per Step 1 and faceplate per Step 2, install adapters into cutouts provided in faceplate.

For Field Termination:

1. After connectorization, route buffered fiber from cable toward faceplate.

2. Spool slack fiber around drum nearest targeted adapter, leaving sufficient length to mate connector to adapter.

3. Terminate connector into adapter in standard sequence.

4. Repeat items 1-3 for all remaining locations, transitioning slack to adjacent fiber drum as adapters are filled toward that drum.

5. Bundle and/or restrain groups of fibers as required with hook-and-loop strips or blue painters tape.

For Termination and Splicing:

1. Insert module into opening provided in faceplate, oriented so that the adapters pass through the opening first. Push in on two captive rivets until they lock into place.

2. Terminate connector into adapter in standard sequence and leave slack length free.

3. Splice pigtails to appropriate fibers from cable per best standard practice.

4. Secure splice into splice tray and route fiber from cable and pigtails from adapter neatly inside shelf. Loop pigtail and fiber slack on drum.

5. Repeat items 1-4 for all remaining locations, transitioning slack to adjacent fiber drum as adapters are filled toward that drum.

    Note: Any excess fiber that cannot be spooled on drums should be restrained to floor of shelf with hook-and-loop strips or blue painters tape.

Step 5D – Alternate Use as Splice Shelf (With Optional Stackable Splice Trays)
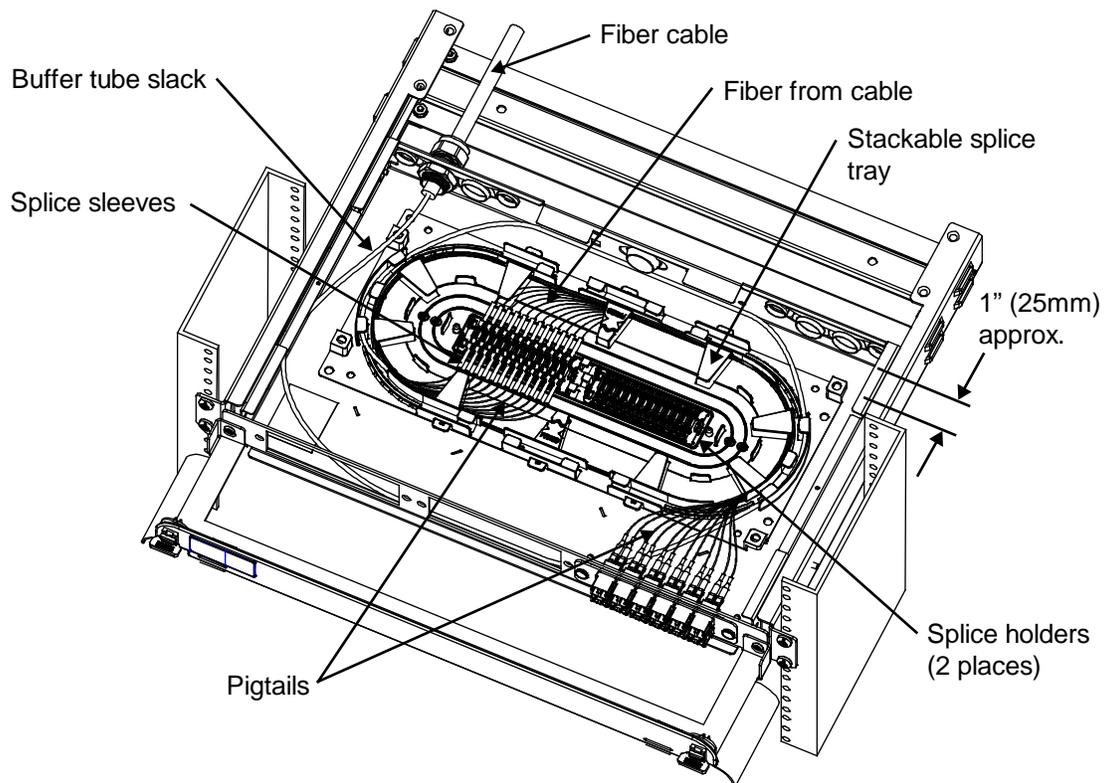

Note: Stackable splice tray kit (MID 760148502) is ordered separately from shelf. Refer to instructions enclosed with that kit for all details not covered here.

1. Using a lint-free wipe and isopropyl alcohol, clean area where splice tray is to be located.

2. Peel off paper backing from splice tray. Center over shelf floor approximately 1" (25mm) from rear wall and press down firmly. If permanent adhesion to the floor is not desirable, installer provided hook-and-loop or mechanical fasteners (such as **Micro Plastics**® p/n 011032ABTS050 stud and 0401032HFN nut) may be used.

3. Route buffer tube(s) to tray, as shown above. Buffer tube slack shall be spooled inside perimeter of chassis and restrained to tray with cable ties at tie-down points provided, as necessary.

4. Each splice tray will accommodate up to 48 fusion splices. If more splice capacity is required, additional trays may be stacked and attached together. In a 1U shelf, three trays may be used for a total of 144 possible splices and in a 2U shelf, 6 trays may be used for a total capacity of 288 possible splices.

Fiber Management When Using Stackable Splice Trays

1. Trim all pigtail lengths to 39 inches (1m) or less.

2. Terminate a fiber pigtail into panel, color keying as required. Repeat for all remaining locations.

3. Perform fusion splicing operations per best practices and snap splice sleeves into holders provided inside of tray.

4. Wind and dress fibers from buffer tube(s) into tray.

5. Wind and dress pigtails into tray.

6. After tray is fully populated, snap on clear plastic top cover.

7. Repeat items 1-6 for any/all additional trays.

Step 6 – Apply Jumper Designation Labels

Label on
module cover

Label on
bezel

Label on trough

Faceplate label
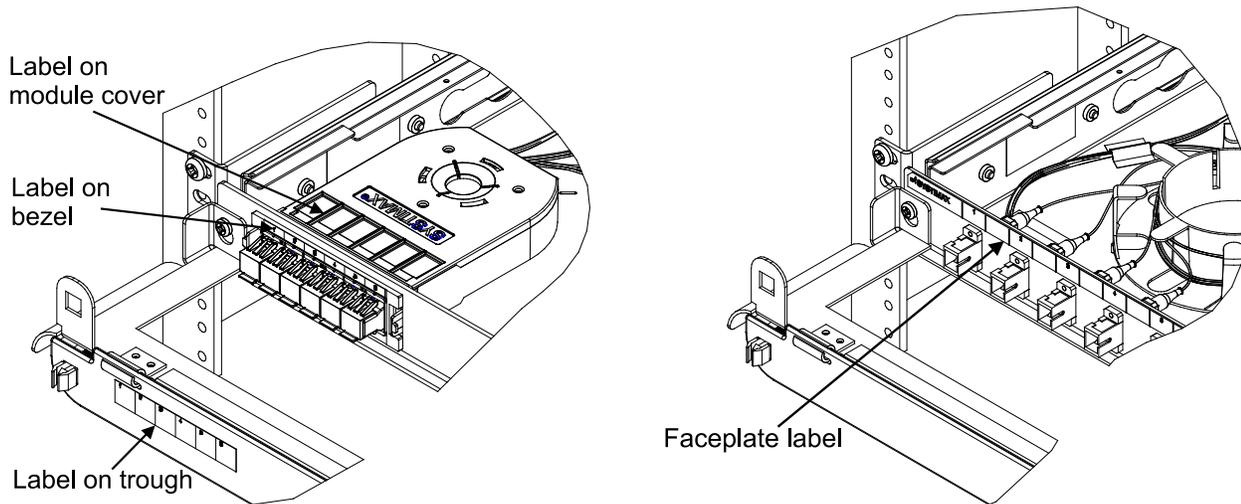
Trough Door/Bezel Application　　　　　　**Unpopulated Shelf Application**

1. On the modular shelf, jumper designation labels may be applied to the module cover, the bezel, and/or the inside of the trough doors.

2. On the unpopulated shelf, apply jumper designation labels to the top edge of the faceplates.

Step 7 – Install Cover

Finger hole
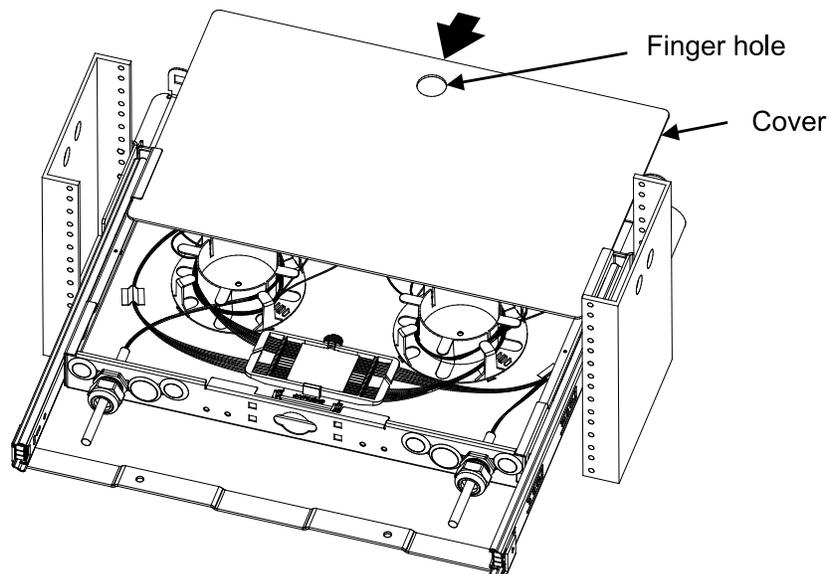
Cover

1. Remove protective film from cover before installing.

2. From front of shelf, position cover between upper and lower sets of tabs on each side of the shelf and slide it into place.

3. If optional security cover is used, install with hardware provided.