

## Optimum Series 2RU Patch Panel

19"/23" EQUIPMENT RACK COMPATIBILITY  
4 ADAPTER PLATES, UP TO 96 FIBERS

### Introduction

The RLH Optimum Series 2RU patch panel is one of a series of fully integrated fiber distribution units. The user friendly design makes the Optimum series the superior solution for fiber patching and/or splicing optical fiber in a 19/23" rack. It holds up to 4 fiber adapter plates (up to 96-fibers), 4 splice trays, and is ideal for installation in a wide variety of environments including equipment rooms, central offices, and outdoor enclosures.

Optimum Series patch panels are constructed from powder coated aluminum alloy, and feature a removable hinged door with quarter-turn cam-lock, removable slide out tray, and removable rear access self-sealing entry grommets. Optional strain relief kits featuring *Peel n' Seal* technology provide proper routing and securing of fiber optic entrance cables every time. Fiber assemblies or pigtails can be custom ordered and pre-terminated into the patch panel for a complete turn-key solution.

### Key Features

- Rugged design suited for any environment.
- Installer friendly built-in cable management & splice tray storage.
- Holds 4 adapter plates, up to 96 fiber capacity.
- (EIA) 19" or 23" rack front or mid/center mounting.
- Removable hinged door with latch.
- Self-sealing grommets provide superior dust and rodent protection.
- Convenient fiber identification system.
- Angled adapter plates for optimal fiber routing.
- Removable sliding tray, rear cover, and entry grommets allow for a variety of cable arrangements and maximum ease of fiber installation and maintenance.
- Flexible rear fiber entrance that adapts to every application.
- Additional options include our peel and seal fiber cable strain relief kits, splice trays, adapter plates, and fiber pigtails.
- **Made in the USA**



Optimum 2RU Patch Panel



Internal Rear View - Loaded

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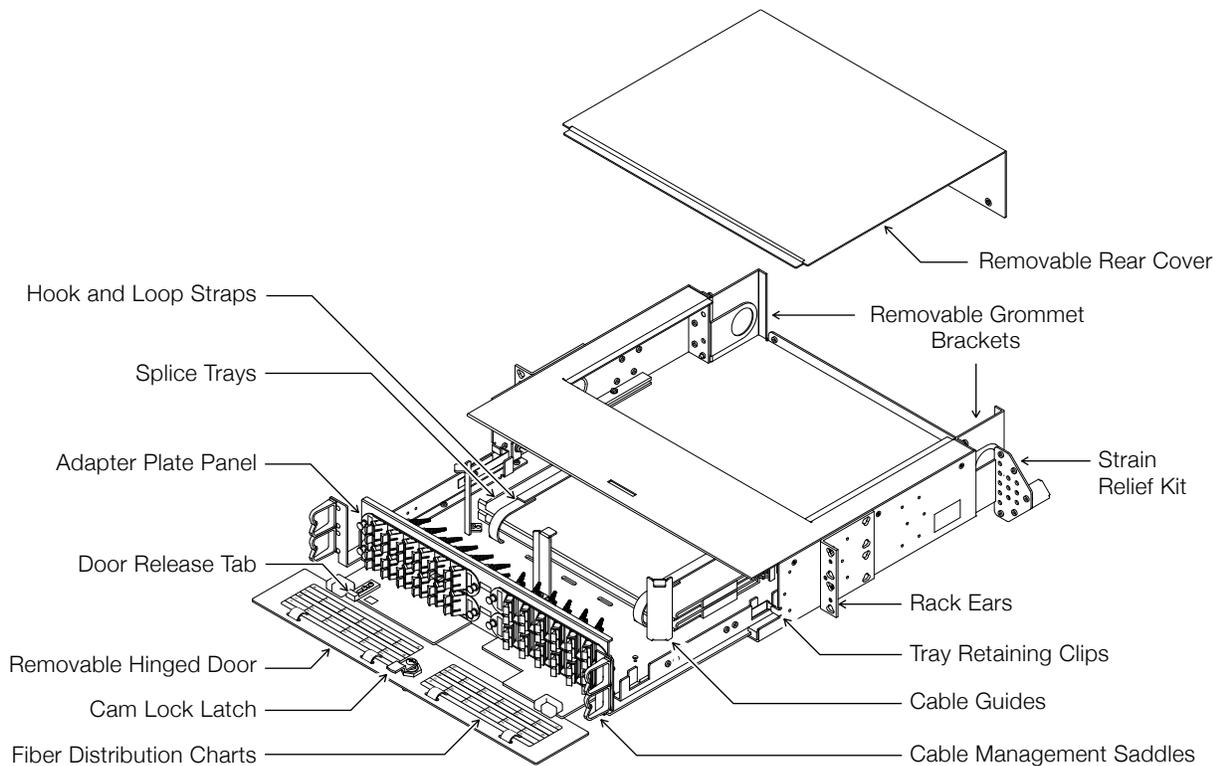
## Accessories

The RLH Optimum Series patch panels may be ordered empty or pre-terminated with all the accessories needed for a professional installation. Adapter plates, Fiber Cable Strain Relief Kit, splice trays, fusion splice sleeves and fiber pigtails are all available separately or they may be ordered together to be preloaded. Inside packaged together is a set of cable ties and mounting hardware. The distribution unit can be ordered with jumpers pre-installed upon request. Contact your RLH representative for more information.



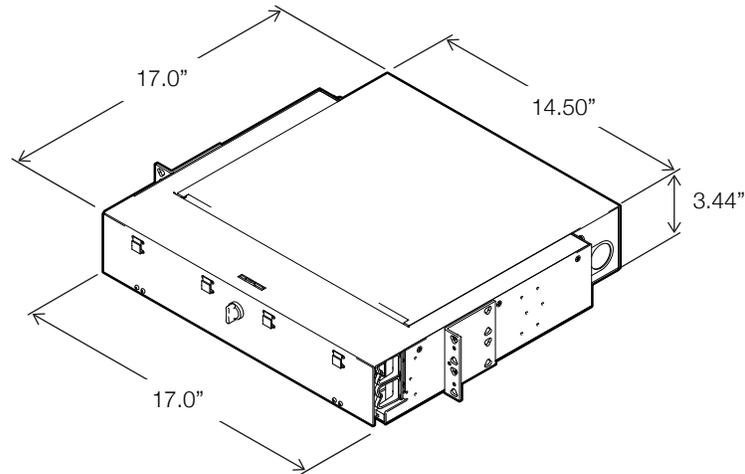
*Peel n' Seal Fiber Cable Strain Relief Kit*

## Feature Identification



**Optimum 2RU Features**

## Dimensional Information

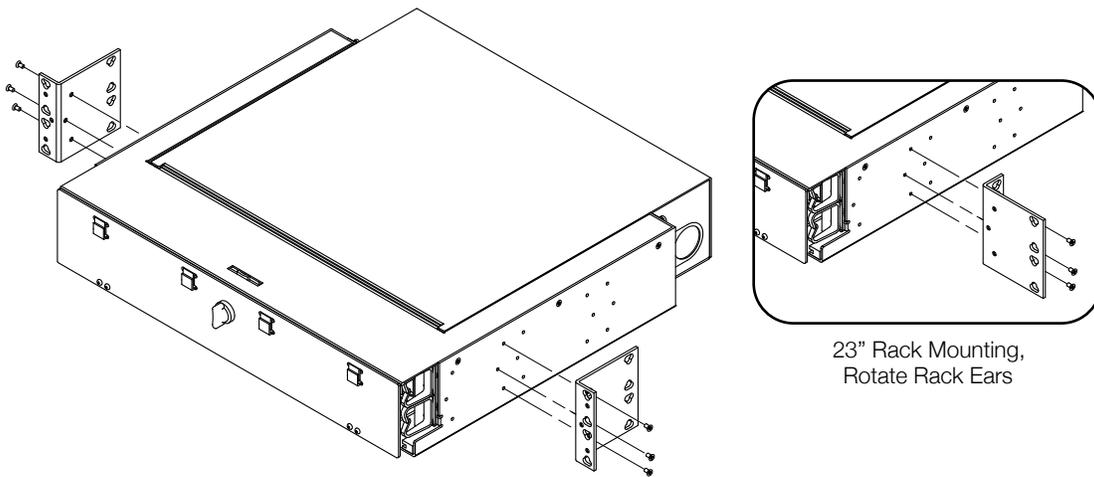


**Optimum 2RU Chassis Dimensions**

## Installation Instructions

### Rack Mounting

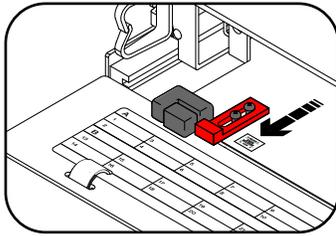
Choose a suitable 19"/23" equipment or telco rack location, with room for the fiber tray to extend out and allow for easy access to the interior. The rack ears are reversible for either 19" or 23" application. The rack ears may be attached to any of the 5 mounting locations on the sides of the housing to suit telco or equipment rack installations. Pre-position the unit in the rack to plan out fiber cable routings and check for any potential problems with the location, then fasten the unit to the equipment rack rails with the hardware provided.



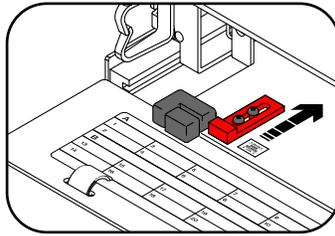
**Attaching Rack Mounting Ears**

## Door Release Tab

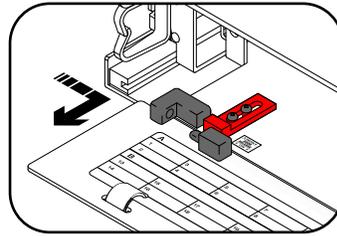
Removing the door for access to fiber is easy and convenient. The door release tab is located next to the left door hinge. When the tab is in the forward position the hinge is locked in place. Push the tab back to unlock the hinge and remove the door. Pull the door release tab into the locked position when replacing the door to prevent the door from being accidentally dropped and damaged.



**Locked Position**



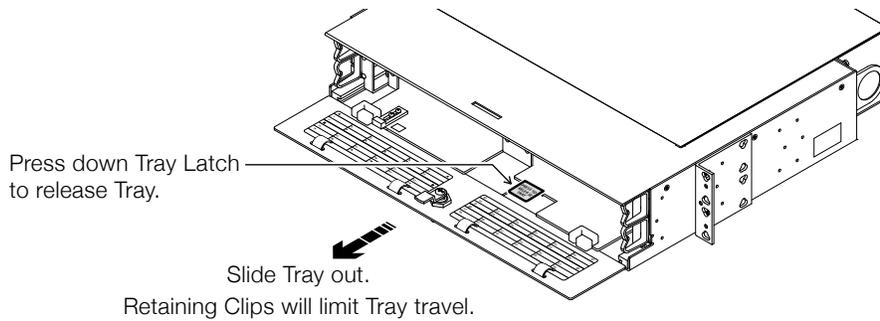
**Unlocked Position**



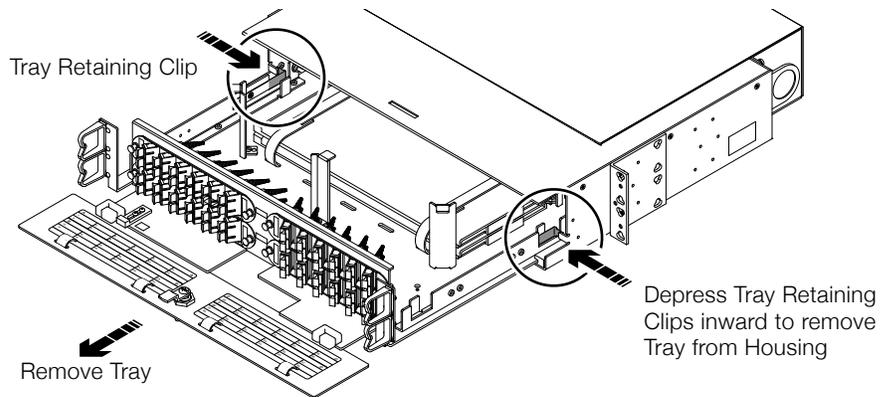
**Removed Door**

## Main Tray

The main tray can slide out the front of the housing for access to the front part of the housing. The main tray may also be completely removed for complete access to the interior.



**Sliding Tray Out From Closed Position**



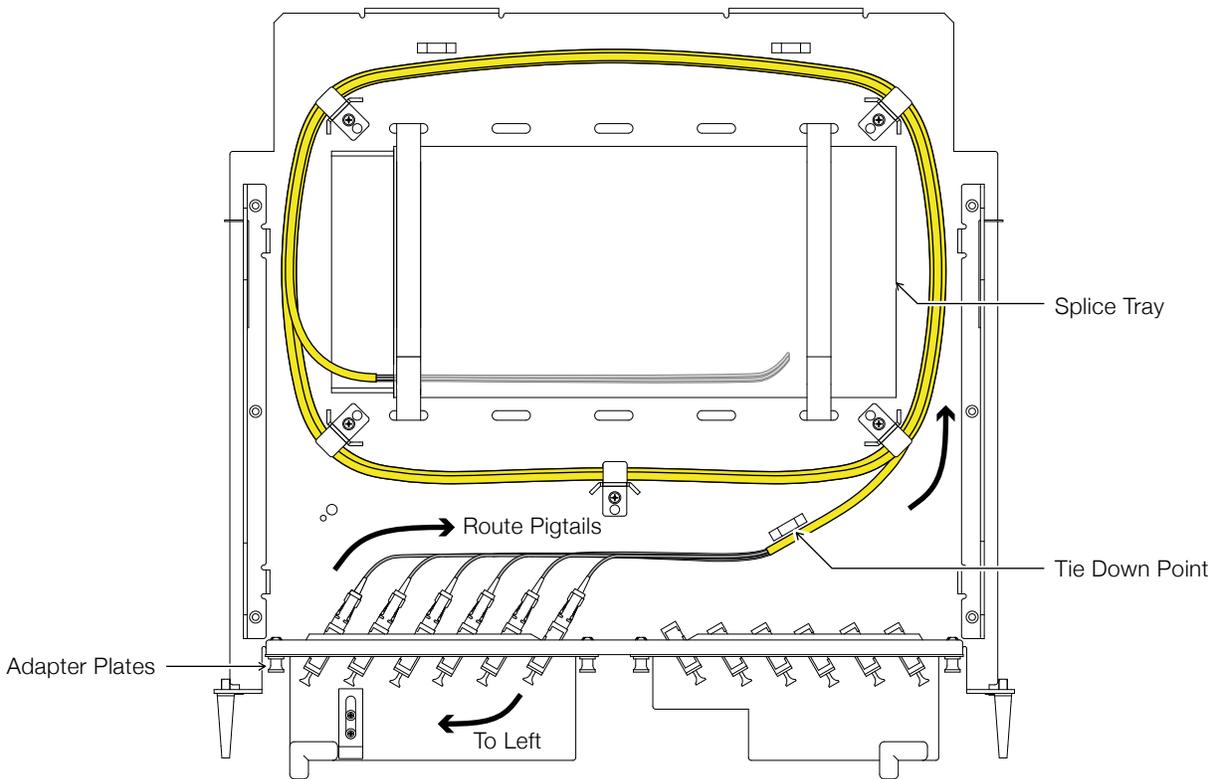
**Removing Tray From Housing**

## Adapter Plates

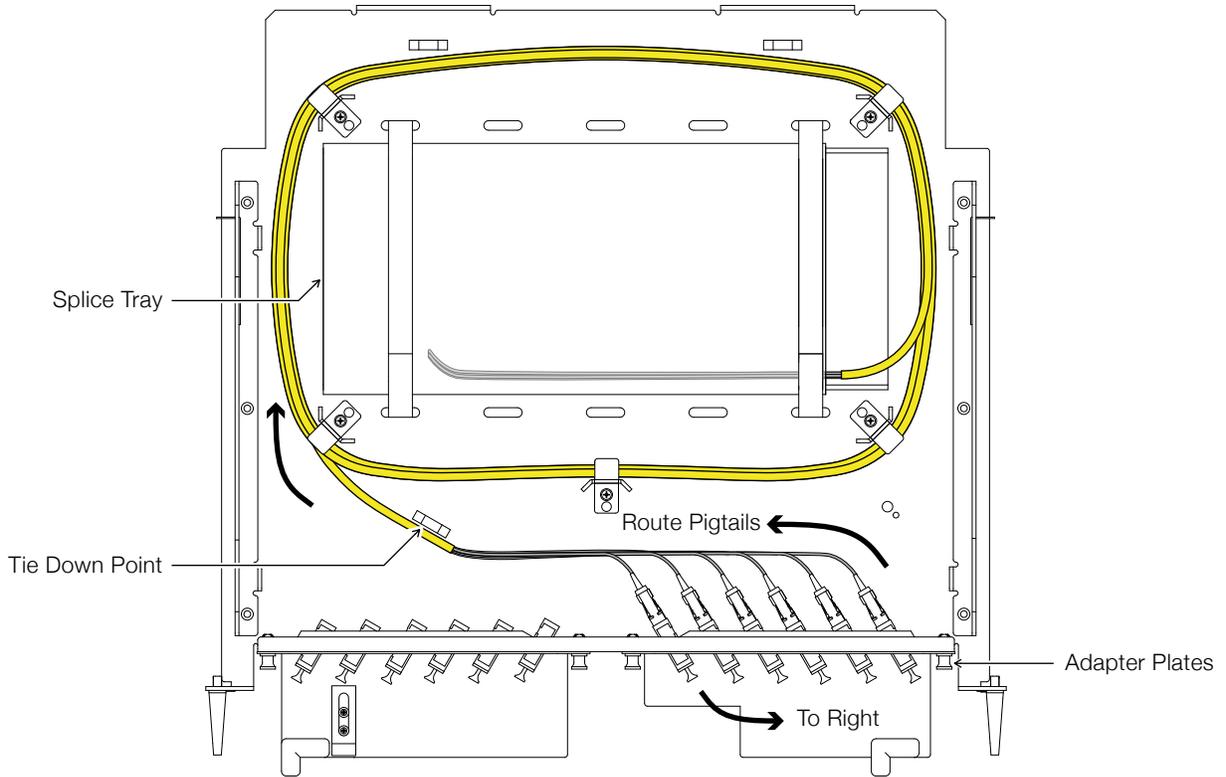
The Optimum 2RU patch panel accommodates four adapter plates. Angled adapter plates loaded on the left side are angled left, and adapter plates on the right side are angled right.

The Optimum Series adapter plates are easily installed and removed by pushing in or pulling out the two finger plunger latches on each side of the plate. In the **OUT** position, latches can be inserted or removed from the adapter plate panel. Pushing the latch into the **IN** position locks the adapter plate into the loaded position.

Route fiber pigtailed so that the fiber leads smoothly off of the fiber adapter plates, and continues in a loop around the splice trays, wrapping around the cable guides as shown. It is best to install one side (right or left) before the other to ensure simplified cable routing.



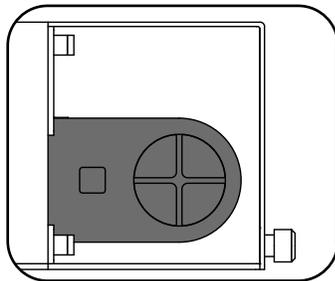
**Main Tray Top View Showing Left Side Fiber Pigtail Routing**



**Main Tray Top View Showing Right Side Fiber Pigtail Routing**

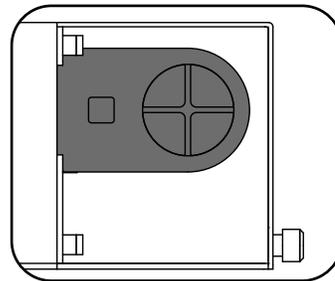
### Removable Grommet Brackets

The removable self-sealing grommet brackets provide protection to interior components while allowing access perform do maintenance or remove the incoming fiber cables without damaging the fiber. The bracket may be adjusted to accommodate rear fiber cable routing if necessary. To adjust the grommet bracket, unscrew the self-captive screws from the housing and switch with the bracket on the other side.



**Bottom Position (Standard)**

Best for incoming cable from above or the side.

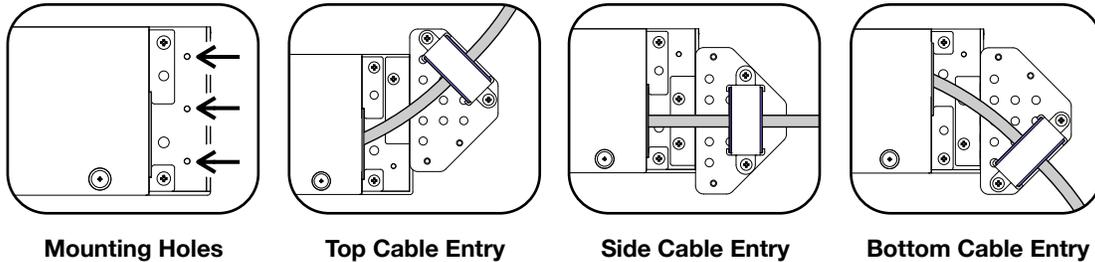


**Top Position**

Best for incoming cable from below.

### Peel n' Seal Strain Relief Kit

The *Peel n' Seal* strain relief kit is a universal clamping system for splicing applications. The bracket can be placed on either side of the patch panel as well as adjusted vertically in two different positions depending on where the cable is coming from into the patch panel. To fit the incoming cable in the clamp, peel the rubber sections away to the size of the cable being retained. Place the cable through the middle of the two pieces and screw down to the bracket. If the Peel n' Seal clamp is not used, lacing holes are provided on the bracket for securing cable.

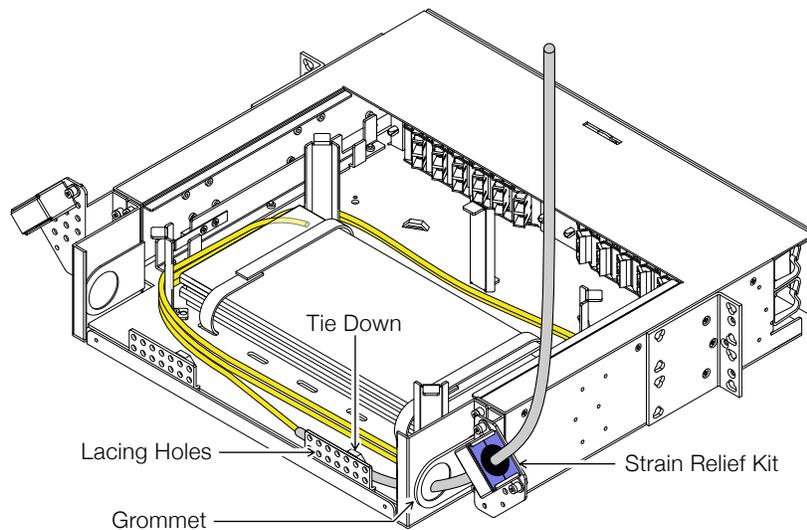


### Rear Cable Entry

After preparing the rear cable entrance pull the cable through grommet and secure it to a tie down loop or lace holes, on the back of the tray. Always secure cable lightly to avoid fiber damage. Make sure to leave room for the service loop out the back once the tray is closed. Wrap excess fiber loosely around the fiber spools avoiding sharp bends.

Splice trays are stacked and held together with retaining hook and loop straps. Use heat shrink splice protectors as required on each fiber splice before inserting into the splice trays. Snap the top back into place on the tray and secure the splice tray with the hook and loop straps when finished.

Use hook and loop fasteners to organize fiber as required so that no strands are pinched between the tray and housing when the unit is closed. Once the fiber is secured, replace the rear cover and tighten the thumb screws.



**Installed Rear Top Cable Entry**

# Ordering Information

## Custom Optimum 2RU Patch Panel - Loaded

PRO-2B-1- XXX - XX - X

Plate Number	
<b>A</b>	2 Adapter Plates
<b>B</b>	4 Adapter Plates

Adapter Plates			
<b>00</b>	Blank Plate		
<b>01</b>	ST Simplex 12	SM	OS1/2
<b>06</b>	ST Simplex 12	MM	OM1/2
<b>31</b>	SC Simplex 12	SM	OS1/2
<b>32</b>	SC Duplex 12	SM	OS1/2
<b>34</b>	SC Simplex 12	MM	OM1/2
<b>35</b>	SC Duplex 12	MM	OM1/2
<b>37</b>	SC Simplex 12 APC	SM	OS1/2
<b>38</b>	SC Duplex 12 APC	SM	OS1/2
<b>40</b>	SC Simplex 12 10G	MM	OM3/4
<b>41</b>	SC Duplex 12 10G	MM	OM3/4
<b>53</b>	LC Duplex 24	SM	OS1/2
<b>58</b>	LC Duplex 24	MM	OM1/2
<b>63</b>	LC Duplex 24 APC	SM	OS1/2
<b>66</b>	LC Duplex 24 10G	MM	OM3/4

Cable Strain Relief	
<b>0</b>	No Strain Relief
<b>1</b>	1 Strain Relief Clamp
<b>2</b>	2 Strain Relief Clamps

Splice Trays - 24 Fiber Capacity	
<b>0</b>	None
<b>1</b>	1 Splice Tray
<b>2</b>	2 Splice Trays
<b>4</b>	4 Splice Trays

Pigtails	
<b>N</b>	No Pigtails
<b>A</b>	Single-mode (8-9/125) OS1
<b>V</b>	Multimode (62.5/125) OM1
<b>E</b>	Multimode (50/125) OM2
<b>L</b>	Multimode (50/125) OM3
<b>S</b>	Multimode (50/125) OM4

- ▶ Example: **PRO-2B-1-B35-N2-1**  
RLH Optimum 2RU with 4 SC Duplex 12, Multimode OM1/2 adapter plates, no pigtails, 2 splice trays, and 1 strain relief clamp.

## Optimum 2RU Patch Panel - Unloaded

Description	Dimensions	Part Number
Optimum 2RU Patch Panel - Unloaded	3.44"H x 17"W x 17"D	<b>PRO-2B-1</b>

## Splice Trays

Description	Fiber Capacity	Dimensions	Plate Number
Fiber Splice Tray	24	11.75"H x 5.15"W x 0.35"D	<b>RLH-FST-03</b>

## Peel n' Seal Strain Relief Kit

Description	Quantity Per Kit	Plate Number
Peel n' Seal Strain Relief Kit	1	<b>PRO-SRK-2</b>

## Adapter Plates

Adapter Style	Mode	Style	Fiber Count	Supported Fiber Types	Adapter Color	Plate Style	Part Number
<b>Blank Plate</b>	N/A	N/A	N/A	N/A	N/A	Flat	<b>APO-BLANK</b>
<b>ST</b>	SM	Simplex	12	OS1/OS2	Metal	Angled	<b>APO-ST12-LSSM</b>
	MM	Simplex	12	OM1/OM2	Metal	Angled	<b>APO-ST12-LSMM</b>
<b>SC</b>	SM	Simplex	12	OS1/OS2	Blue	Angled	<b>APO-SC12-LSSM</b>
		Duplex	12	OS1/OS2	Blue	Angled	<b>APO-SC6-LDSM</b>
	MM	Simplex	12	OM1/OM2	Beige	Angled	<b>APO-SC12-LSMM</b>
		Duplex	12	OM1/OM2	Beige	Angled	<b>APO-SC6-LDMM</b>
<b>SC APC</b>	SM	Simplex	12	OS1/OS2	Green	Angled	<b>APO-SC12-LSSA</b>
		Duplex	12	OS1/OS2	Green	Angled	<b>APO-SC6-LDSA</b>
<b>SC 10G</b>	MM	Simplex	12	OM3/OM4	Aqua	Angled	<b>APO-SC12-LSMX</b>
		Duplex	12	OM3/OM4	Aqua	Angled	<b>APO-SC6-LDMX</b>
<b>LC</b>	SM	Duplex	24	OS1/OS2	Blue	Flat	<b>APO-LC12-LDSM</b>
	MM	Duplex	24	OM1/OM2	Beige	Flat	<b>APO-LC12-LDMM</b>
<b>LC APC</b>	SM	Duplex	24	OS1/OS2	Green	Flat	<b>APO-LC12-LDSA</b>
<b>LC 10G</b>	MM	Duplex	24	OM3/OM4	Aqua	Flat	<b>APO-LC12-LDMX</b>

## Specifications

<b>Adapter Plates</b>	Holds 4 plates	Simplex	48 Fibers	
		Duplex	48 to 96 Fibers	
<b>Connectors</b>	ST - ST	Simplex	SC - SC	Simplex, Duplex
	SC APC - SC APC	Simplex, Duplex	SC 10G - SC 10G	Simplex, Duplex
	LC - LC	Duplex	LC APC - LC APC	Duplex
	LC 10G - LC 10G	Duplex		
<b>Mounting Style</b>	Standard EIA 19"/23" equipment rack or telco rack			
<b>Environmental</b>	Indoor type sliding tray design			
<b>Construction</b>	Powder coated aluminum			
	Removable hinged door with cam locking latch			
	Plastic tray guides with built-in closing detent			
	Includes cable guides, fiber management saddles, self sealing cable grommets, hook and loop straps from splice trays, 19"/23" rack adapter ears and rack mounting hardware.			
<b>Dimensions</b>	H 3.4in. x W 17in. x D 17in. (86mm x 432mm x 432mm) Without rack ears			
	2RU Rack Height - <b>Note:</b> 1RU = 1.75 inches			

## Contact Information

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<b>Corporate Headquarters:</b>	RLH Industries, Inc. 936 N. Main Street Orange, CA 92867 USA
<b>Phone:</b>	(714) 532-1672 Toll Free 1-800-877-1672 Toll Free 1-866-DO-FIBER
<b>Fax:</b>	(714) 532-1885
<b>Email:</b>	info@fiberopticlink.com
<b>Web site:</b>	www.fiberopticlink.com

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RLH Industries, Inc.  
936 N. Main Street, Orange, CA 92867 USA  
T: (714) 532-1672  
F: (714) 532-1885

Please contact your RLH sales representative for pricing and delivery information.

Specifications subject to change without notice.