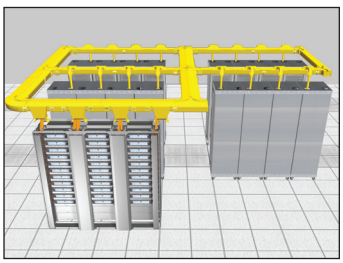
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# FiberRunner® 4x4 Routing System

PANDUIT®
SPECIFICATION SHEET

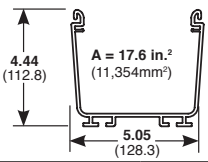
## specifications

The 4x4 routing system shall be a system of channel, fittings, and brackets designed to segregate, route, and protect fiber optic and high performance copper cabling. Channel and fittings shall be assembled using pre-assembled couplers. A selection of spillout options shall be available that easily attach using the vertical tee. Fittings maintain a minimum 2" bend radius to protect against signal loss due to excessive cable bends. Available system colors shall be yellow and black. A full complement of brackets shall be available for attaching system components to ladder rack, threaded rod, auxiliary framing, strut, equipment racks, cabinets, and raised floor pedestals.



## technical information

Dimensions are in inches
(Dimensions in parentheses are metric)




| | Cable | No. of Cables |
|---|---|---|
| ***Open channel 50% fill capacity: (4" pile up)*** | 1.6mm | 2,824 |
| | 2.0mm | 1,807 |
| | 3.0mm | 803 |
| Fiber Optic Ribbon Interconnect Category 6 | 5.20mm | 267 |
| | 6.35mm | 179 |
| Category 6A | 7.57mm | 126 |
| ***Material:*** | Rigid PVC (Channel), PC/ABS (Fittings) | |
| ***Flammability:*** | 94V-0 | |
| ***Approvals:*** | UL Listed to 2024 Optical Fiber Cable Routing Assemblies | |

## key features and benefits

| | |
|---|---|
| ***Fastest installations*** | No bolts need to be tightened and no tools are required when installing the QuikLock™ Coupler; QuikLock™ Couplers and Brackets take less than five seconds to make a mechanically secure connection |
| ***Easy to maintain*** | Hinged channel cover installs easily and fully encloses the channel for cable protection; split hinged channel cover creates radiused 3/4" (19mm) opening for easy access to add or remove cables; the 4x4 hinged and split hinged channel covers will stay open between 30° and 90° to allow cable access even in height restricted areas<br>Split fitting covers allow cable to be laid in without removing the fitting cover; the covers are also designed to prevent cables from coming out of the channel as cable is pulled through<br>Hinged channel cover and split fitting covers protect cabling and provide fast and easy access for future cabling moves, adds, and changes |
| ***System strength*** | Robust system of channel, covers, fittings and other non-metallic system components protect cable from physical damage; system includes full range of directional and spillout fittings |
| ***Versatility*** | Multiple spillout options include a spill-over fitting and the vertical tee which accepts a three-sided trumpet, transition to corrugated tubing and Panduit® FiberRunner® Systems |
| ***Cable protection*** | A minimum 2" bend radius maintained throughout all fittings prevents excessive bends in fiber optic cabling |

## applications

The FiberRunner® 4x4 Routing System is a system of channel, fittings, and brackets designed to segregate, route, and protect fiber optic and high performance copper cabling. It is suited for data center applications where cable is routed from distribution areas to equipment cabinets or racks. It is used in Telco Central Offices to route fiber optic jumper cables between fiber distribution frames and equipment bays. It can be deployed over the racks or in approved underfloor applications. Channel and fittings are assembled using timesaving Panduit® QuikLock™ Couplers.

A selection of spillout options is available that easily attach using the vertical tee. Fittings maintain a 2" bend radius to protect against signal loss due to excessive cable bends. Available system colors are yellow and black to differentiate various types of cabling. A full complement of QuikLock™ Brackets is available to attach system components to support structures found in all applications. The FiberRunner® 4x4 Routing System is part of the Panduit® complete fiber distribution system, which includes the FiberRunner® 24x4, 12x4, 6x4, and 2x2 Routing Systems, Wyr-Grid™ Overhead Cable Tray System, cable management, and racks.

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| | |
|---|---|
| ***Channel and Cover*** | |
| ***4x4 channel (6'):*** | FR4X4**6 |
| ***4x4 hinged cover (6'):*** | FRHC4**6 |
| ***4x4 split hinged cover (6'):*** | FRSHC4**6 |
| ***Cable retainer:*** | FRCR4LBL-X |
| ***Fittings, Split Covers, and Spillouts*** | |
| ***QuikLock™ Coupler:*** | FRBC4X4L** |
| ***Horizontal right angle:*** | FRRA4X4L** |
| ***Right angle cover:*** | FRRASC4L** |
| ***Horizontal tee:*** | FRT4X4L** |
| ***Horizontal tee cover:*** | FRTSC4L** |
| ***Horizontal tee with 6"exits:*** | FRT4X4W6L** |
| ***Tee with 6" exits cover:*** | FRTSC4W6L** |
| ***Inside vertical 45°:*** | FRIV454X4L** |
| ***Outside vertical 45°:*** | FROV454X4L** |
| ***Outside vertical 45° cover:*** | FROV45SC4L** |
| ***Horizontal 45°:*** | FRH454X4L** |
| ***Horizontal 45° cover:*** | FRH45SC4L** |
| ***Inside vertical 90°:*** | FRIVRA4X4L** |
| ***Outside vertical 90°:*** | FROVRA4X4L** |
| ***Outside vertical 90° cover:*** | FROVRASC4L** |
| ***4-way cross:*** | FRFWC4X4L** |
| ***4-way cross cover:*** | FRFWCSC4L** |
| ***End cap:*** | FREC4X4L** |
| ***6x4 to 4x4 FiberRunner® Reducer Fitting:*** | FRRF6FR4L** |
| ***6x4 to 4x4 FiberRunner® Reducer Fitting Cover:*** | FRRF6FR4SCL** |
| ***4" FiberRunner® to 2" FiberDuct®:*** | FRRF4FD2L** |
| ***4"FiberRunner® to 4" FiberDuct®:*** | FRRF4FD4L** |
| ***Adapter to 4x4 FiberGuide*:*** | FRADC4X4BL |
| ***Adapter to CommScope 12x4 FiberGuide*:*** | FRADC12X4BL |
| ***QuikLock™ Vertical Tee:*** | FRVT12X4L** |
| ***Three-sided vertical tee trumpet spillout:*** | FTR4X4L** |
| ***Corrugated tubing spillout:*** | FRIDT6X4L** |
| ***Low profile reducer 4x4 to 2x2 for vertical tee:*** | FRLPR64LBL |
| ***Spill-over with 2x2 exit:*** | FRSPJ2X2L** |
| ***Spill-over cover with 2x2 exit for 12x4 system:*** | FRSPJC212L** |
| ***2x2 exit for 4x4 system:*** | FRSPJC24L** |
| ***2x2 three-sided trumpet:*** | FTR2X2L** |
| ***2x2 hinged duct vertical cable manager kit:*** | FRHD2KTL** |
| ***2x2 FiberRunner® Bend Radius Control Trumpet:*** | TRC2HDLBL |
| ***Spill-over with 4x4 exit:*** | FRSPJ4X4L** |
| ***Spill-over cover with 4x4 exit for 4x4 system:*** | FRSPJC412L** |
| ***4x4 three-sided trumpet:*** | FRTR4X4L** |
| ***4x4 hinged duct vertical cable manager kit:*** | FRHD4KTL** |
| ***1-port spillout to 1.5" I.D. corrugated tubing:*** | FR1.5IDEL** |
| ***2-port spillout to 1.5" I.D. corrugated tubing:*** | FRIDT4X4L** |
| ***4x4 up spout:*** | FRUPS4X4** |
| ***QuikLock™ Mounting Brackets*** | |
| ***QL existing 1/2" thr rod bracket:*** | FR6TRBE12 |
| ***QL existing 5/8" thr rod bracket:*** | FR6TRBE58 |
| ***QL new 1/2" thr rod bracket:*** | FR6TRBN12 |
| ***QL new 5/8" thr rod bracket:*** | FR6TRBN58 |
| ***QL underfloor bracket:*** | FR6USB |
| ***QL adjust ladder rack bracket:*** | FR6ALB |
| ***QL center support bracket 1/2":*** | FR6CS12 |
| ***QL center support bracket 5/8":*** | FR6CS58 |
| ***QL adjust C-bracket 1/2":*** | FR6ACB12 |
| ***QL adjust C-bracket 5/8":*** | FR6ACB58 |
| ***QL trapeze 3/8" bracket:*** | FR6TB38 |
| ***QL trapeze 1/2" bracket:*** | FR6TB12 |
| ***Two-piece ladder rack bracket 1/2" thr rod:*** | F2PCLB12 |
| ***Two-piece ladder rack bracket 5/8" thr rod:*** | F2PCLB58 |
| ***QL "L" wall mount bracket:*** | FR6LB |
| ***QL NetFrame™ Rack Mount Bracket:*** | FRRMBNF58 |
| ***QL adjustable cabinet mount bracket:*** | FR6ACAB |
| ***Two-piece framing clip 5/8" thr rod to 9/16" C-channel aux. framing bars:*** | FRFC58 |
| ***4 post rack bracket:*** | FR4PRB58 |

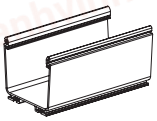
*CommScope's 4x4 FiberGuide Management System is a product of CommScope

**Substitute: YL= Yellow, BL= Black

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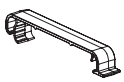
# FiberRunner® 4x4 Routing System

## channel and cover

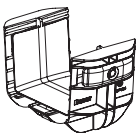

FR4X4**6

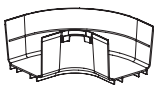

FRHC4**6


FRSHC4**6

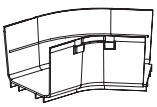

FRCR4LBL-X

## fittings, split covers, and spillouts

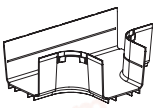

FRBC4X4L**


FRRA4X4L**

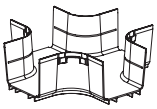

FRRASC4L**


FRH454X4L**


FRH45SC4L**

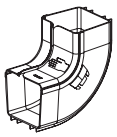

FRT4X4L**

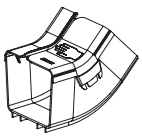

FRTSC4L**

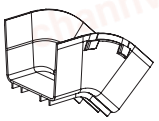

FRFWC4X4L**


FRFWCSC4L**

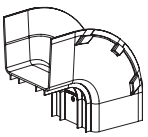

FREC4X4L**

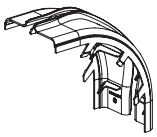

FRIVRA4X4L**

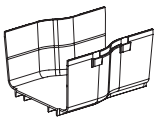

FRIV454X4L**

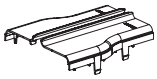

FROV454X4L**

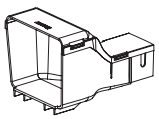

FROV45SCL**

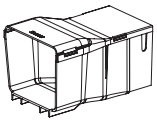

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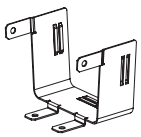

FROVRASC4L**

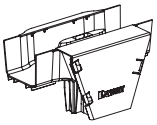

FRRF6FR4L**

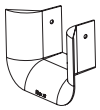

FRRF6FR4SCL**

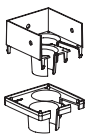

FRRF4FD2L**


FRRF4FD4L**


FRADC4X4BL

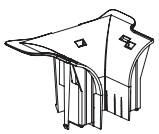

FRVT4X4L**

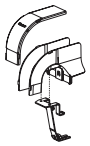

FTR4X4L**


FIDT4X4LBL

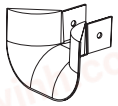

FRHD4KT**

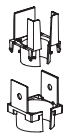

TRC4HDLBL


FRLPR42LBL

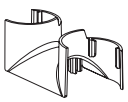

FRSPJ2X2L**

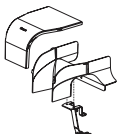

FRSPJC24L**


FTR2X2L**

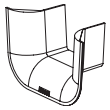

FIDT2X2L**


FRHD2KT**


TRC2HDLBL


FRSPJ4X4L**


FRSPJC44L**


FRTR4X4L**


FRIDT4X4L**


FR1.5IDEL**


FRUPS4X4L**

## QuikLock™ Mounting Brackets


FR6TRBE12
FR6TRBE58


FR6TRBN12
FR6TRBN58


FR6USB


FR6ALB


FR6CS12
FR6CS58


FR6ACB12
FR6ACB58


FR6TB38
FR6TB12


F2PCLB12
F2PCLB58


FR6LRB


FR6LB


FRRMBNF58


FR6ACAB


FRAFC58


FR4PRB58

**Substitute: YL = Yellow, BL = Black

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