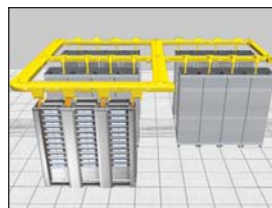


# FiberRunner® 4x4 Routing System

## PANDUIT® SPECIFICATION SHEET

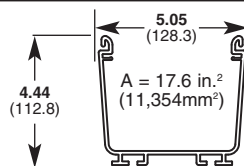
### specifications

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, orange, 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).



| Open channel<br>50% fill capacity:<br>(4" pile up) | Cable                                                                                                                                                                  | No. of Cables |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
|                                                    | 1.6mm                                                                                                                                                                  | 2824          |
|                                                    | 2.0mm                                                                                                                                                                  | 1807          |
|                                                    | 3.0mm                                                                                                                                                                  | 803           |
| Fiber Optic                                        |                                                                                                                                                                        |               |
| Ribbon Interconnect                                | 5.20mm                                                                                                                                                                 | 267           |
| Category 6                                         | 6.35mm                                                                                                                                                                 | 179           |
| Category 6A                                        | 7.57mm                                                                                                                                                                 | 126           |
| <b>Material:</b>                                   | Rigid PVC (Channel), ABS (Fittings)                                                                                                                                    |               |
| <b>Flammability:</b>                               | 94V-0                                                                                                                                                                  |               |
| <b>Approvals:</b>                                  | UL Listed to 2024A Optical Fiber Cable Routing Assemblies<br>Compliant with the applicable tests in Telcordia<br>GR-63-CORE Network Equipment Building Systems Level 3 |               |
| <b>CSI spec form:</b>                              | LP-CSISPEC-FR                                                                                                                                                          |               |

### key features and benefits

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fastest installations</b> | No bolts need to be tightened and no tools are required when installing the QuikLock™ Couplers; QuikLock™ Couplers and Brackets take less than five seconds to make a mechanically secure connection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Easy to maintain</b>      | 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><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><br>Hinged channel cover and split fitting covers protect cabling and provide fast and easy access for future cabling moves, adds, and changes |
| <b>System strength</b>       | 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Versatility</b>           | Multiple spill out options include spill-over fittings and the vertical tee which accepts a three sided trumpet, transition to corrugated tubing and Panduit® FiberRunner® and Fiber-Duct™ Systems                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Cable protection</b>      | 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 under floor 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, orange 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, the Fiber-Duct™ 4x4 and 2x2 Routing Systems, Wyr-Grid™ Overhead Cable Tray System, cable management, and racks.

#### Channel and Cover

|                              |           |
|------------------------------|-----------|
| 4x4 channel (6'):            | FR4X4**6  |
| 4x4 hinged cover (6'):       | FRHC4**6  |
| 4x4 split hinged cover (6'): | FRSHC4**6 |
| Cable retainer:              | FRCR4BL-X |

#### Fittings, Split Covers, and Spillouts

|                                                  |              |
|--------------------------------------------------|--------------|
| QuikLock™ Coupler:                               | FRBC4X4**    |
| Horizontal right angle:                          | FRRA4X4**    |
| Right angle cover:                               | FRRASC4**    |
| Horizontal 45°:                                  | FRH454X4**   |
| Horizontal 45° cover:                            | FRH45SC4**   |
| Horizontal tee:                                  | FRT4X4**     |
| Horizontal tee cover:                            | FRTSC4**     |
| 4-way cross:                                     | FRFWC4X4**   |
| 4-way cross cover:                               | FRFWCSC4**   |
| End cap:                                         | FREC4X4**    |
| Inside vertical 90°:                             | FRIVRA4X4**  |
| Inside vertical 45°:                             | FRIV454X4**  |
| Outside vertical 45°:                            | FROV454X4**  |
| Outside vertical 45° cover:                      | FROV45SC4**  |
| Outside vertical 90°:                            | FROVRA4X4**  |
| Outside vertical 90° cover:                      | FROVRASC4**  |
| 6x4 to 4x4 FiberRunner® Reducer Fitting:         | FRRF6FR4**   |
| 6x4 to 4x4 FiberRunner® Reducer Fitting Cover:   | FRRF6FR4SC** |
| 4" FR to 2" FD:                                  | FRRF4FD2**   |
| 4" FR to 4" FD:                                  | FRRF4FD4**   |
| Adapter to ADC                                   |              |
| 4x4 FiberGuide™:                                 | FRADC4X4BL   |
| QuikLock™ Vertical Tee:                          | FRVT4X4**    |
| 3-sided vertical tee trumpet spillout:           | FTR4X4**     |
| 2-port spillout to 1.5" I.D. corrugated tubing:  | FIDT4X4BL    |
| 4x4 hinged duct vertical cable manager kit:      | FRHD4KT**    |
| 4x4 hinged duct bend radius control trumpet:     | TRC4HDBL     |
| Low profile reducer 4x4 to 2x2 for vertical tee: | FRLPR42BL    |
| Spill-over with 2x2 exit:                        | FRSPJ2X2**   |
| 2x2 3-sided trumpet:                             | FRSPJC24**   |
| 1-port spillout to 1.5" I.D. corrugated tubing:  | FIDT2X2**    |
| 2x2 hinged duct vertical cable manager kit:      | FRHD2KT**    |
| 2x2 FiberRunner® Bend Radius Control Trumpet:    | TRC2HDBL     |
| Spill-over with 4x4 exit:                        | FRSPJ4X4**   |
| Spill-over cover with 4x4 exit for 4x4 system:   | FRSPJC44**   |
| 4x4 3-sided trumpet:                             | FRTR4X4**    |
| 2-port spillout to 1.5" I.D. corrugated tubing:  | FRIDT4X4**   |
| 1-port spillout to 1.5" I.D. corrugated tubing:  | FR1.5IDE**   |
| 4x4 up spout:                                    | FRUPS4X4**   |

#### QuikLock™ Mounting Brackets

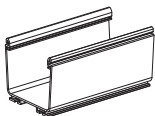
|                                                                           |           |
|---------------------------------------------------------------------------|-----------|
| QL existing 1/2" thr rod brkt:                                            | FR6TRBE12 |
| QL existing 5/8" thr rod brkt:                                            | FR6TRBE58 |
| QL new 1/2" thr rod brkt:                                                 | FR6TRBN12 |
| QL new 5/8" thr rod brkt:                                                 | FR6TRBN58 |
| QL under floor brkt:                                                      | FR6USB    |
| QL adjust ladder rack brkt:                                               | FR6ALB    |
| QL center support brkt 1/2":                                              | FR6CS12   |
| QL center support brkt 5/8":                                              | FR6CS58   |
| QL adjust C-brkt 1/2":                                                    | FR6ACB12  |
| QL adjust C-brkt 5/8":                                                    | FR6ACB58  |
| QL trapeze 3/8" brkt:                                                     | FR6TB38   |
| QL trapeze 1/2" brkt:                                                     | FR6TB12   |
| Two-piece ladder rack brkt 1/2" thr rod:                                  | F2PCLB12  |
| Two-piece ladder rack brkt 5/8" thr rod:                                  | F2PCLB58  |
| Ladder rack brkt:                                                         | FR6LRB    |
| QL "L" wall mount brkt:                                                   | FR6LB     |
| QL NetFrame™ Rack Mount Brkt:                                             | FRRMBNF58 |
| QL adjust cabinet mount brkt:                                             | FR6ACAB   |
| Two-piece framing clip 5/8" thr rod to 9/16" C-channel aux. framing bars: | FRAFC58   |
| 4 post rack brkt:                                                         | FR4PRB58  |

\*ADC's 4x4 FiberGuide Management System is a product of ADC Telecommunications, Inc.

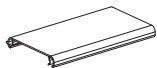
\*\*Substitute: YL = Yellow, OR = Orange, BL = Black

# FiberRunner® 4x4 Routing System

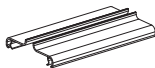
## Channel and Cover



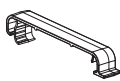
FR4X4\*\*6



FRHC4\*\*6

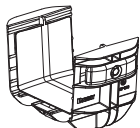


FRSHC4\*\*6

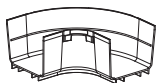


FRCR4BL-X

## Fittings, Split Covers, and Spillouts



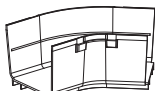
FRBC4X4\*\*



FRAA4X4\*\*



FRRASC4\*\*



FRH454X4\*\*



FRH45SC4\*\*



FRT4X4\*\*



FRTSC4\*\*



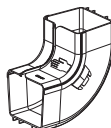
FRFWC4X4\*\*



FRFWCSC4\*\*



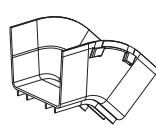
FREC4X4\*\*



FRIVRA4X4\*\*



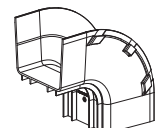
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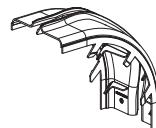
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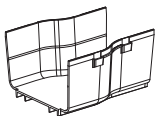
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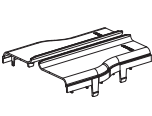
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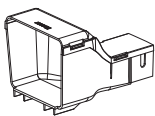
FROVRASC4\*\*



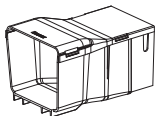
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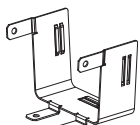
FRRF6FR4SC\*\*



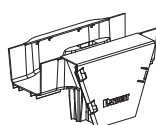
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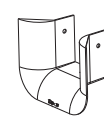
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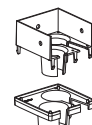
FRADC4X4BL



FRVT4X4\*\*



FTR4X4\*\*



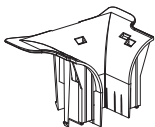
FIDT4X4BL\*\*



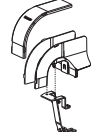
FRHD4KT\*\*



TRC4HDBL



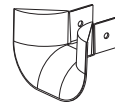
FRLPR42BL



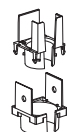
FRSPJ2X2\*\*



FRSPJC24\*\*



FTR2X2\*\*



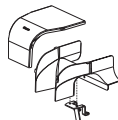
FIDT2X2\*\*



FRHD2KT\*\*



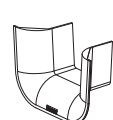
TRC2HDBL



FRSPJ4X4\*\*



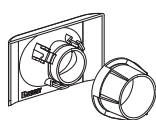
FRSPJC44\*\*



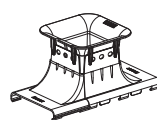
FRTR4X4\*\*



FRIDT4X4\*\*

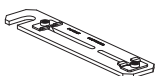


FR1.5IDE\*\*

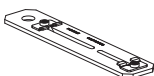


FRUPS4X4\*\*

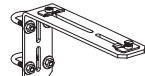
## QuikLock™ Mounting Brackets



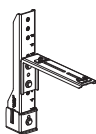
FR6TRBE12  
FR6TRBE58



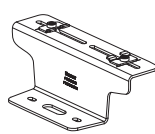
FR6TRBN12  
FR6TRBN58



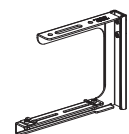
FR6USB



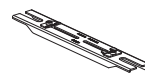
FR6ALB



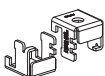
FR6CS12  
FR6CS58



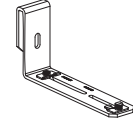
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FR6ACB58



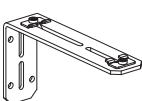
FR6TB38  
FR6TB12



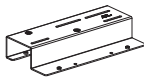
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F2PCLB58



FR6LRB



FR6LB



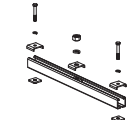
FRRMBNF58



FR6ACAB



FRAFC58



FR4PRB58

\*\*Substitute: YL = Yellow, OR = Orange, BL = Black

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cs-cdn@panduit.com  
Phone: 800.777.3300

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