

FiberRunner® 4x4 Routing System

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

Attributes:	Cable In. (mm)	No. of Cables
Open channel 50% fill capacity: (4" pile up)	0.06 (1.6)	8,183
	0.07 (2.0)	5,237
	0.11 (3.0)	2,327
Fiber optic ribbon interconnect:	0.20 (5.2)	773
Category 6:	0.25 (6.4)	519
Category 6A:	0.29 (7.6)	336
Material:	Rigid PVC (Channel) PC/ABS (Fittings)	
Flammability:	94V-0	
Approvals:	UL Listed to 2024 Optical Fiber Cable Routing Assemblies	

KEY FEATURES AND BENEFITS

Speed of deployment:	Innovative QuikLock Couplers & Brackets make mechanically secure connections within (5) seconds. Featuring no loose hardware, QuikLock clips significantly reduce the amount of time needed to secure pathways together or against brackets, lowering installation costs
Reduced Cost of Ownership:	Reducing installation time, minimizing the risk of cable damage and easy maintenance lowers the lifecycle costs of the system. Scalable and tool-less assembly design means less downtime and fewer labor hours
Smooth Cable Carrying Surfaces:	Smooth transitions throughout every channel, fitting, and coupler connection guarantees best in class protection for fiber cabling infrastructure. Protects fiber investments with snag-free routing system
Multiple Spillout Options:	Spill-over junctions can be installed anywhere along the channel without cutting. Vertical tees don't require additional head height above the channel when installed. 3-sided trumpets provide proper bend radius for fiber cabling at cable exits
Proper Bend Radius:	Integrated 2" bend radius in all fittings provides the require protection for small diameter interconnect fiber and jumper cabling ensuring network performance

Channel and Cover	
4x4 channel (10'):	FR4X4**10
4x4 hinged cover (10'):	FRHC4**10
4x4 split hinged cover (10'):	FRSHC4**10
Cable retainer:	FRCR4LBL-X
Fittings, Split Covers, and Spillouts	
QuikLock™ coupler:	FRBC4X4L**
Horizontal right angle:	FRRA4X4L**
Right angle cover:	FRAASC4L**
Horizontal 45°:	FRH454X4L**
Horizontal 45° cover:	FRH45SC4L**
Horizontal tee:	FRT4X4L**
Horizontal tee cover:	FRTSC4L**
4-way cross:	FRFWC4X4L**
4-way cross split cover:	FRFWCSC4L**
End cap:	FREX4X4L**
Inside vertical 90°:	FRIVRA4X4L**
Inside vertical 45°:	FRIV454X4L**
Outside vertical 45°:	FROV454L**
Outside vertical 45° cover:	FROV45SC4L**
Outside vertical 90°:	FROVRA4X4L**
Outside vertical 90° cover:	FROVRASC4L**
6x4 to 4x4 FiberRunner® Reducer Fitting:	FRRF6FR4L**
6x4 to 4x4 FiberRunner® Reducer Fitting Cover:	FRRF6FR4SCL**
FiberRunner® 4" x 4" to 2" x 2" reducer:	FRRF4FD2L**
FiberRunner® FRSPJ4X4 to 4" x 4" Vertical Cable Manager Kit:	FRRF4FD4L**
Adapter to 4x4 FiberGuide*:	FRADC4X4BL
QuikLock™ Vertical Tee:	FRVT4X4L**
Three-sided vertical tee trumpet spillout:	FTR4X4L**
4" x 4" 2-port spill-out for vertical tee:	FIDT4X4LBL
4x4 hinged duct vertical cable manager kit:	FRHD4KT**
Low profile reducer 4x4 to 2x2 for vertical tee:	FRLPR42LBL
Spill-over with 2x2 exit:	FRSPJ2X2L**
Spill-over cover with 2x2 exit for 4x4 system:	FRSPJC24L**
2x2 three-sided trumpet:	FTR2X2L**
2" x 2" 1-port spillout for vertical tee:	FIDT2X2L**
2x2 hinged duct vertical cable manager kit:	FRHD2KT**
2x2 FiberRunner® bend radius control trumpet:	TRC2HDLBL
Spill-over with 4x4 exit:	FRSPJ4X4L**
Spill-over cover with 4x4 exit for 4x4 system:	FRSPJC44L**
4x4 three-sided trumpet:	FTR4X4L**
2-port spill-out to 1.5" I.D. corrugated tubing:	FRIDT4X4L**
1-port spillout to 1.5" I.D. corrugated tubing:	FR1.5IDEL**
4x4 up spout:	FRUPS4X4L**
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

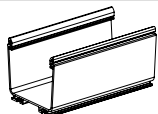
**Substitute: YL= Yellow, BL= Black

FiberRunner® 4x4 Routing System

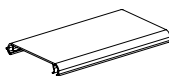
APPLICATIONS

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, Wire Basket Overhead Cable Tray Routing System, cable management, and racks.

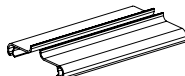
CHANNEL AND COVER



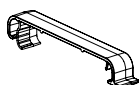
FR4X4**10



FRHC4**10

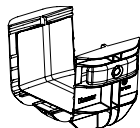


FRSHC4**10

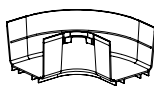


FRCR4LBL-X

FITTINGS, SPLIT COVERS, AND SPILLOUTS



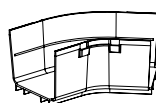
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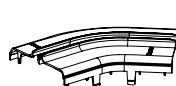
FRR4X4L**



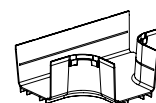
FRRASC4L**



FRH454X4L**



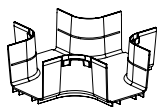
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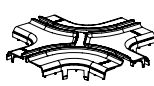
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FRTSC4L**



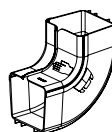
FRFWC4X4L**



FRFWCSC4L**



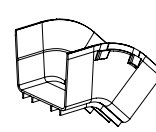
FREC4X4L**



FRIVRA4X4L**



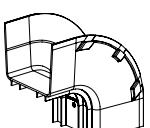
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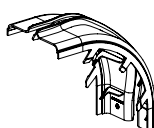
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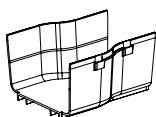
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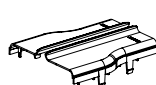
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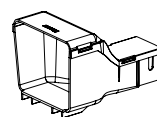
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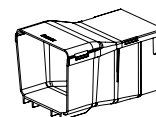
FRRF6FR4L**



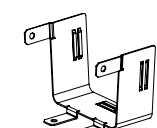
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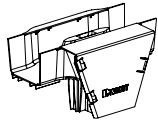
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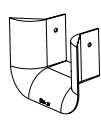
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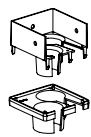
FRADC4X4BL



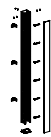
FRVT4X4L**



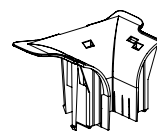
FTR4X4L**



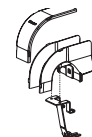
FIDT4X4LBL



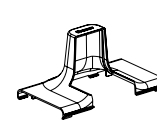
FRHD4KT**



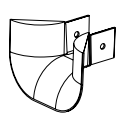
FRLPR42LBL



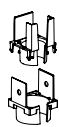
FRSPJ2X2L**



FRSPJC24L**



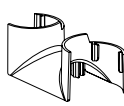
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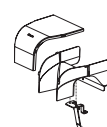
FIDT2X2L**



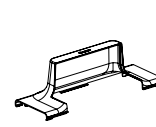
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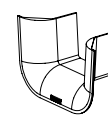
TRC2HDLBL



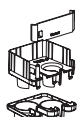
FRSPJ4X4L**



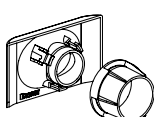
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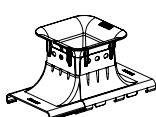
FRTR4X4L**



FRIDT4X4L**



FR1.5IDEL**

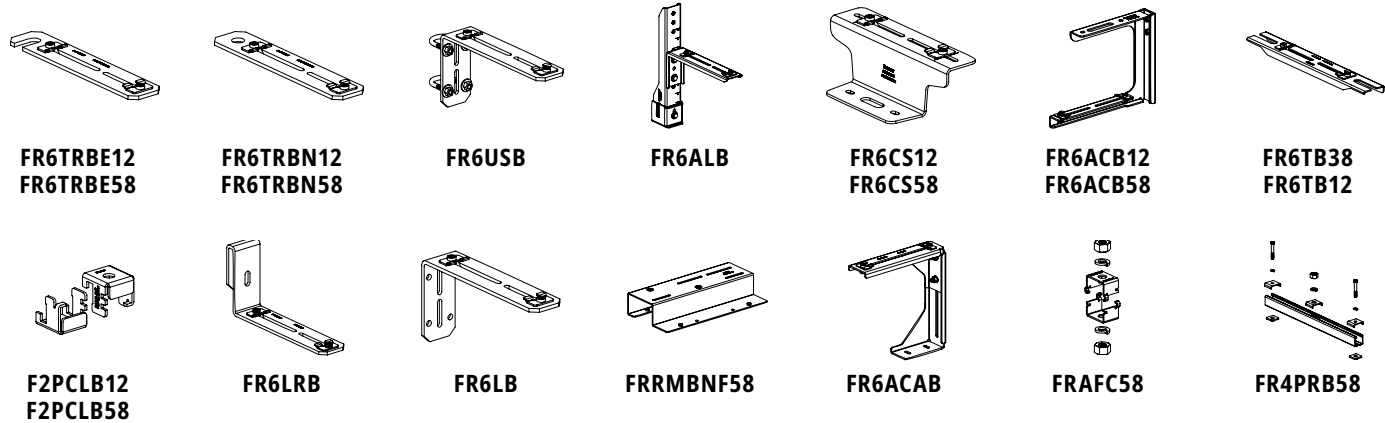


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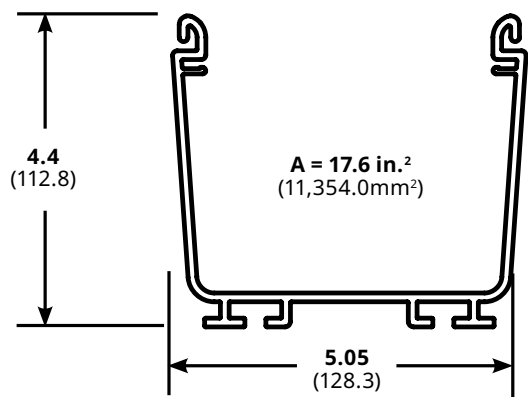
**Substitute: YL= Yellow, BL= Black

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QUIKLOCK™ MOUNTING BRACKETS



ENGINEERING DRAWINGS



Dimensions are in inches. [Dimensions in brackets are metric].