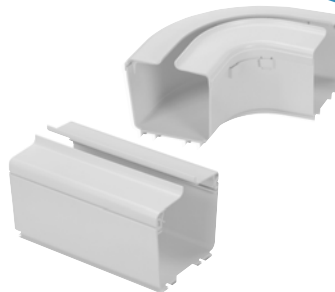


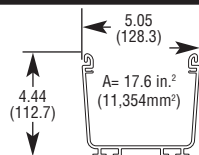
# FIBERRUNNER® 4x4 Routing System

## 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, 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 and raised floor pedestals.



## technical information



Dimensions are in inches (Dimensions in parentheses are metric)

Open channel 50% fill capacity: (2" pile up)	Cable	No. of Cables
	1.6mm	1428
	2.0mm	908
	3.0mm	407
	CAT6 5.2mm	135
	CAT5e 5.5mm	120
<b>Material:</b>	Rigid PVC (channel), ABS (fittings)	
<b>Flammability:</b>	94V-0	
<b>Approvals:</b>	UL Listed, compliant with the applicable tests in Telcordia 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 <i>QUIKLOCK™</i> Couplers; <i>QUIKLOCK™</i> 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 degrees to allow cable access even in height restricted areas. 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. 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 <i>PANDUIT® FIBERRUNNER®</i> and <i>FIBER-DUCT</i> 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 minimum 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 *FIBERRUNNER®* 12x4, 6x4 and 2x2 Routing Systems, the *FIBER-DUCT™* 4x4 and 2x2 Routing Systems and *OPTICOM™ HD* Cable Management products.

### Channel & Cover

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

### Fittings & Split Covers

<i>QUIKLOCK®</i> coupler:	FRBC4X4**
Horizontal right angle:	FRR4A4X**
Right angle cover:	FRRASC4**
Horizontal 45°:	FRH454X4**
Horizontal 45° cover:	FRH45SC4**
Horizontal tee:	FRT4X4**
Horizontal tee cover:	FRTSC4**
Four way cross:	FRFWC4X4**
Four way cross cover:	FRFWCSC4**
4x4 three sided trumpet:	FRTR4X4**
End cap:	FRFC4X4**
<i>QUIKLOCK®</i> vertical tee:	FRVT4X4**
2-port spillout to 1.5" I.D.	
corrugated tubing:	FIDT4X4BL
3-sided vertical tee trumpet spillout:	FTR4X4**
Low profile reducer 4x4 to 2x2 for vertical tee:	FRLPR42BL
Spill-over fitting with 2x2 exit:	FRSP**
Spill-over fitting cover with 2x2 exit for 4x4 system:	FRSP4C**
Spill-over fitting with 4x4 exit for 4x4 system:	FRSP4**
2x2 three sided trumpet:	FRSP44C**
Inside vertical 45°:	FRIV454X4**
Outside vertical 45°:	FROV454X4**
Outside vertical 45° cover:	FROV45SC4**
Outside vertical 90°:	FROVRA4X4**
Outside vertical 90° cover:	FROVRASC4**
4x4 up spout fitting:	FRUPS4X4**
6x4 to 4x4 <i>FIBERRUNNER®</i> reducer fitting:	FRRF6FR4**
6x4 to 4x4 <i>FIBERRUNNER®</i> reducer fitting cover:	FRRF6FR4SC**
4" FR to 2" FD:	FRRF4FD2**
4" FR to 4" FD:	FRRF4FD4**
Adapter to ADC 4x4 <i>FiberGuide™</i> :	FRADC4X4BL

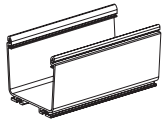
### *QUIKLOCK®* Mounting Brackets

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
2 pc. ladder rack brkt 1/2" thr rod:	F2PCLB12
2 pc. ladder rack brkt 5/8" thr rod:	F2PCLB58
1/2" thr rod ladder rack brkt:	FLB12X15
5/8" thr rod ladder rack brkt:	FLB58X15
QL ladder rack brkt:	FR6LRB
QL "L" wall mount brkt:	FR6LB
QL EIA rack mount brkt:	FR6RMBEIA
EIA/TIA threaded rod mounting brkt:	FEIAB58
QL <i>NETFRAME™</i> rack mount brkt:	FRRMBNF58
QL adjust cabinet mount brkt:	FR6ACAB
Strut mtl frmgr brkt 1/2" thr rod:	FTRB12
Strut mtl frmgr brkt 5/8" thr rod:	FTRB58

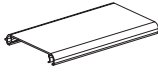
\* ADC's 12x4 *FiberGuide* Management System is a registered trademark of ADC Telecommunications, Inc.  
\*\* Substitute: YL = Yellow OR = Orange BL = Black

# FIBERRUNNER® 4x4 Routing System

## Channel & Cover



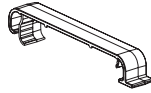
FR4X4\*\*



FRHC4\*\*6

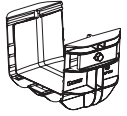


FRSHC4\*\*6

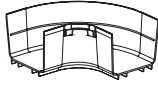


FRCR4BL-X

## Fittings and Split Covers



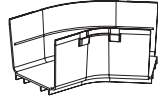
FRBC4X4\*\*



FRRA4X4\*\*



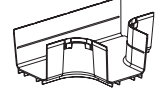
FRRASC4\*\*



FRH454X4\*\*



FRH45SC4\*\*



FRT4X4\*\*



FRTSC4\*\*



FRFWC4X4\*\*



FRFWCSC4\*\*



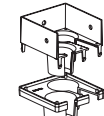
FRTR4X4\*\*



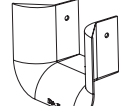
FREC4X4\*\*



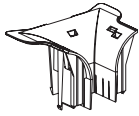
FRVT4X4\*\*



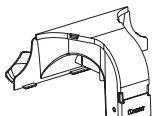
FIDT4X4BL



FTR4X4\*\*



FRLPR42BL



FRSP\*\*



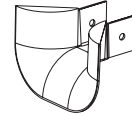
FRSP4C\*\*



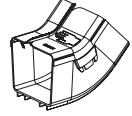
FRSP4\*\*



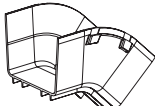
FRSP44C\*\*



FTR2X2\*\*



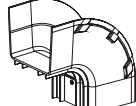
FRIV454X4\*\*



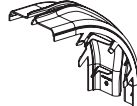
FROV454X4\*\*



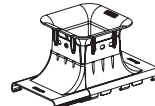
FROV45SC4\*\*



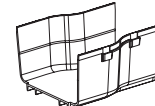
FROVRA4X4\*\*



FROVRASC4\*\*



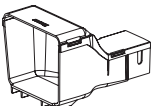
FRUPS4X4\*\*



FRRF6FR4\*\*



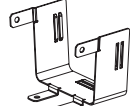
FRRF6FR4SC\*\*



FRRF4FD2\*\*

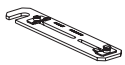


FRRF4FD4\*\*

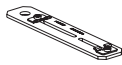


FRADC4X4BL

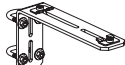
## QuikLock™ Mounting Brackets



FR6TRBE12  
FR6TRBE58



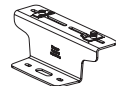
FR6TRBN12  
FR6TRBN58



FR6USB



FR6ALB



FR6CS12  
FR6CS58



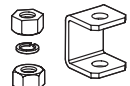
FR6ACB12  
FR6ACB58



FR6TB38  
FR6TB12



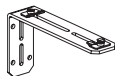
F2PCLB12  
F2PCLB58



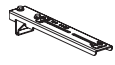
FLB12X15  
FLB58X15



FR6LRB



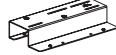
FR6LB



FR6RMBEIA



FEIAB58



FRRMBNF58



FR6ACAB



FTRB12  
FTRB58

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

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