Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China
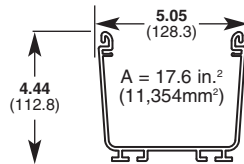
FiberRunner® 4x4 Routing System

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, cabinets and raised floor pedestals.
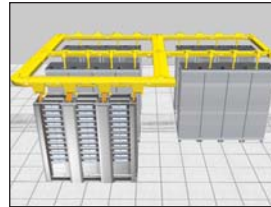
technical information

Dimensions are in inches (Dimensions in parentheses are metric).

5.05 (128.3)

4.44 (112.8)

A = 17.6 in.^{2} (11,354mm^2)

Open channel 50% fill capacity: (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

Material:	Rigid PVC (Channel), ABS (Fittings)
Flammability:	94V-0
Approvals:	UL Listed to 2024A Optical Fiber Cable Routing Assemblies Compliant with the applicable tests in Telcordia GR-63-CORE Network Equipment Building Systems Level 3
CSI spec form:	LP-CSISPEC-FR

key features and benefits

Fastest installations	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
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
	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
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 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
Cable protection	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**
Spill-over cover with 2x2 exit for 4x4 system:	FRSPJC24**
2x2 3-sided trumpet:	FTR2X2**
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
QL 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.
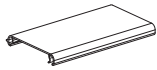**Substitute: YL = Yellow, OR = Orange, BL = Black

FiberRunner® 4x4 Routing System

Channel and Cover
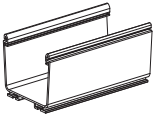
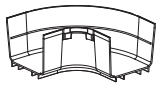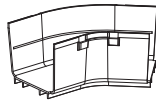| FR4X4**6	FRHC4**6	FRSHC4**6	FRCR4BL-X
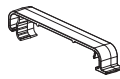
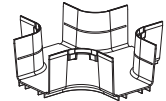## Fittings, Split Covers, and Spillouts
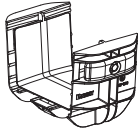
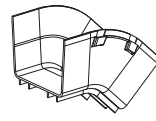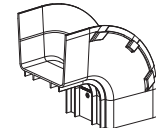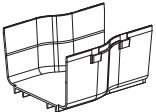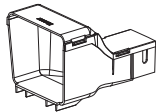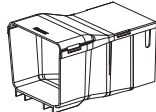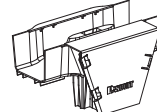| FRBC4X4**	FRRA4X4**	FRRASC4**	FRH454X4**	FRH45SC4**	FRT4X4**	FRTSC4**	FRFWC4X4**
FRFWCSC4**	FREC4X4**	FRIVRA4X4**	FRIV454X4**	FROV454X4**	FROV45SC4**	FROVRA4X4**	FROVRASC4**
FRRF6FR4**	FRRF6FR4SC**	FRRF4FD2**	FRRF4FD4**	FRADC4X4BL	FRVT4X4**	FTR4X4**	FIDT4X4BL**
FRHD4KT**	TRC4HDBL	FRLPR42BL	FRSPJ2X2**	FRSPJC24**	FTR2X2**	FIDT2X2**	FRHD2KT**
TRC2HDBL	FRSPJ4X4**	FRSPJC44**	FRTR4X4**	FRIDT4X4**	FR1.5IDE**	FRUPS4X4**	
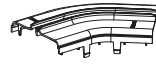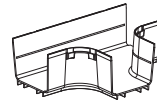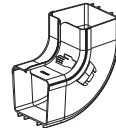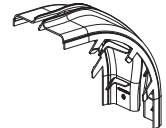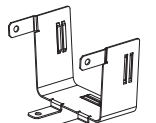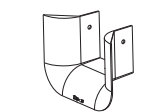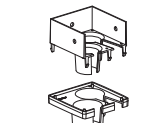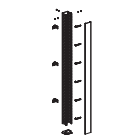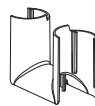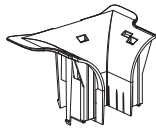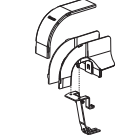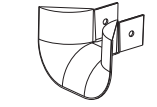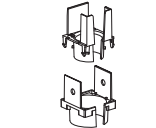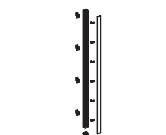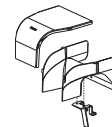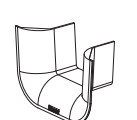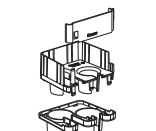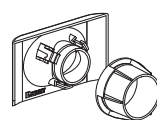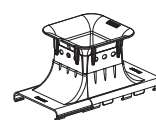
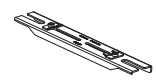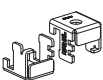## QuikLock™ Mounting Brackets
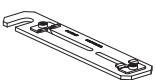
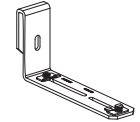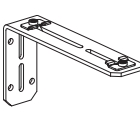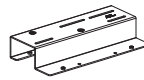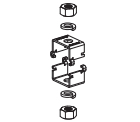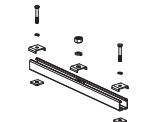| FR6TRBE12 FR6TRBE58	FR6TRBN12 FR6TRBN58	FR6USB	FR6ALB	FR6CS12 FR6CS58	FR6ACB12 FR6ACB58	FR6TB38 FR6TB12
F2PCLB12 F2PCLB58	FR6LRB	FR6LB	FRRMBNF58	FR6ACAB	FRAFC58	FR4PRB58
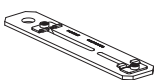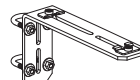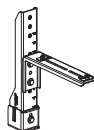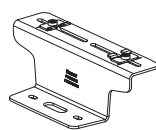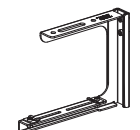
**Substitute: YL = Yellow, OR = Orange, BL = Black

WORLDWIDE SUBSIDIARIES AND SALES OFFICES

For a copy of Panduit product syarranties, log on to www.panduit.com/warranty

For more information

Visit us at www.panduit.com

Contact Customer Service by email: cs@panduit.com
or by phone: 800.777.3300 and reference FRSP03

WW-FRSP03
9/2010

PANDUIT®