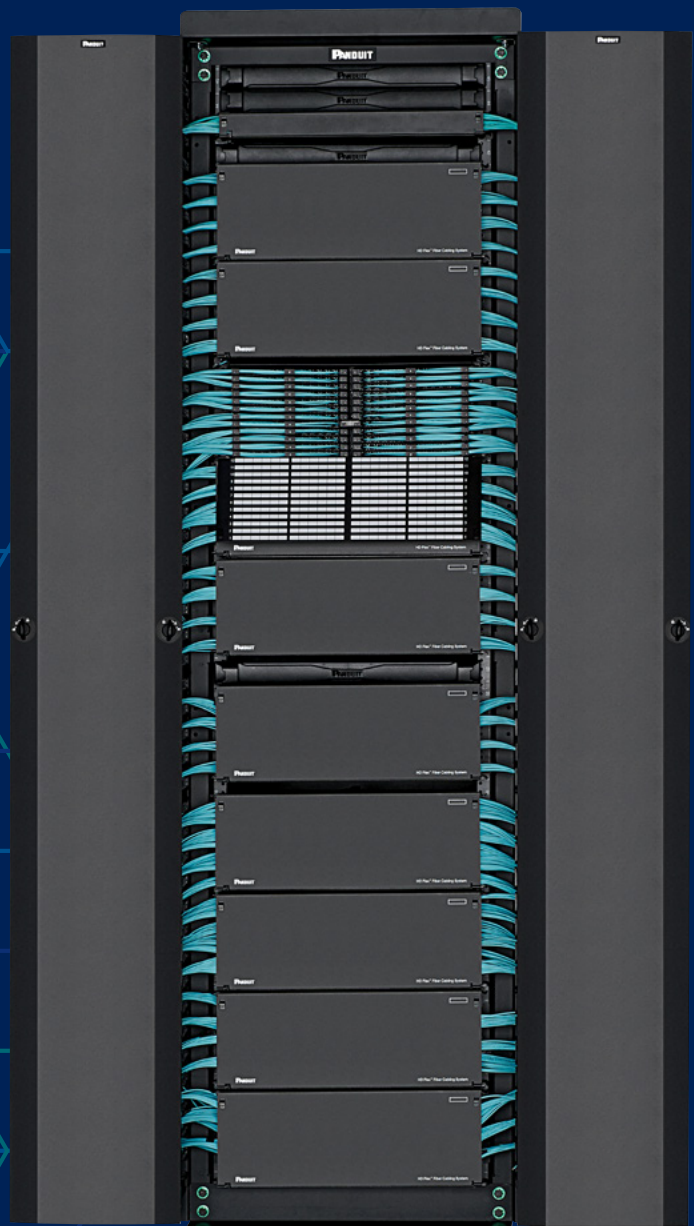


HD Flex™ Fiber Cabling System

PANDUIT®

Ordering Guide





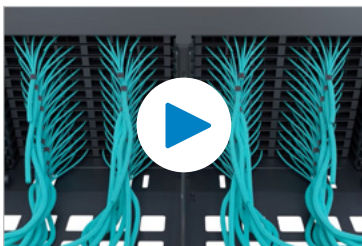
HD Flex Fiber Cabling System: Built for Next-Generation Density Demands

The HD Flex Fiber Cabling System is engineered to provide the highest levels of density and serviceability for high-performance data centers. The system is designed to enable organizations to easily scale up density and execute moves, adds, and changes quickly and safely, without disrupting adjacent circuits.

Technicians can take advantage of the unique benefits provided by the HD Flex Cabling System

- Innovative cable management that positions trunk cables away from the rear of the enclosure, providing enhanced access for moves, adds, and changes
- Split trays inside the enclosure support safe moves, adds, and changes
- Cassettes accessible from the front or back to streamline installation and migrations from 10G to 400G Ethernet and beyond
- Convertible enclosures and panels that accommodate 4-port, 6-port, and/or 12-port cassettes

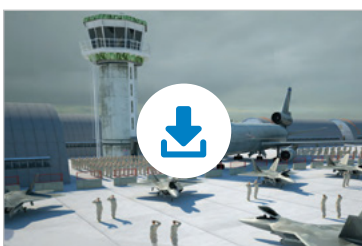
Watch
HD Flex Enclosure
Overview Video



HD Flex Enclosure

HD Flex enclosures increase density and fit various cabinet depths

Download
Beale Air Force
Case Study



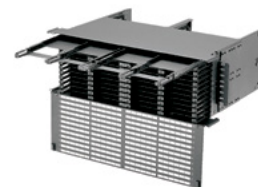
Delivering the Ultimate in Reach and Performance

The Panduit team's expertise enabled 400G performance at the Beale Air Force Base, supporting the ability to field capabilities at the speed of operational relevance.

HD Flex Enclosures, Panels, Holder, and Bracket

HD Flex 4-Port Fiber Enclosures, Panels, and Zero RU Bracket

Part Number	Description	Cassette/FAP Openings
ENCLOSURES		
FLEX1U04	1 RU HD Flex 4-Port Enclosure	18
FLEX2U04	2 RU HD Flex 4-Port Enclosure	36
FLEX4U04	4 RU HD Flex 4-Port Enclosure	72
PANELS		
FLEX1UPN04	1 RU HD Flex 4-Port Panel	18
FLEX2UPN04	2 RU HD Flex 4-Port Panel	36
FLEX4UPN04	4 RU HD Flex 4-Port Panel	72
ZERO RU CASSETTE HOLDER AND BRACKET		
FLEX-0RUBR04	HD Flex 0 RU 4-Port Bracket and Cassette Holder	3
FLEX-0RUCH04	HD Flex 0 RU 4-Port Cassette Holder	–



FLEX4U04



FLEX1UPN04

HD Flex 6-Port Fiber Enclosures, Panels, and Zero RU Bracket

Part Number	Description	Cassette/FAP Openings
ENCLOSURES		
FLEX1U06**	1 RU HD Flex 6-Port Enclosure	12
FLEX2U06**	2 RU HD Flex 6-Port Enclosure	24
FLEX4U06**	4 RU HD Flex 6-Port Enclosure	48
PANELS		
FLEX1UPN06**	1 RU HD Flex 6-Port Panel	12
FLEX2UPN06**	2 RU HD Flex 6-Port Panel	24
FLEX4UPN06**	4 RU HD Flex 6-Port Panel	48
ZERO RU CASSETTE HOLDER AND BRACKET		
FLEX-0RUBR06**	HD Flex 0 RU 6-Port Bracket and Cassette Holder	2
FLEX-0RUCH06	HD Flex 0 RU 6-Port Cassette Holder	–



FLEX1U06



FLEX1UPN06



FLEX-0RUBR06

**Offered in white (add WH to part number for white)

HD Flex 12-Port Fiber Enclosures, Panels, and Zero RU Bracket

Part Number	Description	Cassette/FAP Openings
ENCLOSURES		
FLEX1U12	1 RU HD Flex 12-Port Enclosure	6
FLEX2U12	2 RU HD Flex 12-Port Enclosure	12
FLEX4U12	4 RU HD Flex 12-Port Enclosure	24
PANELS		
FLEX1UPN12	1 RU HD Flex 12-Port Panel	6
FLEX2UPN12	2 RU HD Flex 12-Port Panel	12
FLEX4UPN12	4 RU HD Flex 12-Port Panel	24
ZERO RU CASSETTE HOLDER AND BRACKET		
FLEX-0RUBR12	HD Flex 0 RU 12-Port Bracket and Cassette Holder	1
FLEX-0RUCH12	HD Flex 0 RU 12-Port Cassette Holder	–



FLEX1U12



FLEX1UPN12

HD Fusion Splicing Enclosure

Part Number	Description
FRMHSS-4RU	HD Fusion – fiber rack mount hyperscale splicing solution 4 RU that can splice up to 576 single fibers and 864 ribbon fibers
FST48	Fiber splice tray kit for up to 48 mechanical or fusion splices for use in Panduit FRMHSS-4RU
FST144R	Fiber splice tray kit for up to 144 ribbon fusion splices for use in Panduit FRMHSS-4RU



FRMHSS-4RU



HD Flex Fiber Optic Cassettes

HD Flex LC/MPO Cassettes (Base-12)

Part Number	Fiber Type	Fiber Count	Cassette Size	Rear MPO Count	Front Duplex LC Count	Performance
6-PORT						
FHC9N-12-10**	OS2	12	6	1 x 12f	6	Standard
FHC9N-12-LA**					6 APC	
FHCZA-12-10**	OM4				6	Ultra
FHCZO-12-10**						Optimized
FHCZA-12-10**	OM4+					Ultra
FHCWA-12-10**	OM5					Optimized
FHCWO-12-10**						
12-PORT						
FHC9N-24-10**	OS2	24	12	2 x 12f	12	Standard
FHC9N-24-LA**					12 APC	
FHCZA-24-10**	OM4				12	Ultra
FHCZO-24-10**						Optimized
FHCZA-24-10**	OM4+					Ultra
FHCWA-24-10**	OM5					Optimized
FHCWO-24-10**						Standard
FHC9N-24F-10**	OS2			1 x 24f	12 APC	Optimized
FHC9N-24F-LA**					12	
FHCZO-24F-10**	OM4					
FHCZO-24F-10**	OM4+					
FHCWO-24F-10**	OM5					

**AS for Method A, AF for Modified Method A (pair flipped), BN for Method B, U for Universal



FHCZO-12-10AS



FHCZO-24-10AN



FHCZO-24F-10AS



HD Flex Base-8 Conversion Cassettes

Part Number	Fiber Type	Fiber Count	Cassette Size	Rear MPO Count	Front Duplex LC Count	Performance
-------------	------------	-------------	---------------	----------------	-----------------------	-------------

4-PORT

FHC39N-08H-10**	OS2	8	4	1 x 8f	4	Standard
FHC39N-08H-LA**					4 APC	
FHC39O-08H-10**					4	Optimized
FHC3ZA-08H-10**	Ultra					
FHC3ZO-08H-10**	Optimized					
FHC3SA-08H-10**	Ultra					
FHC3WA-08H-10**	OM5					Optimized
FHC3WO-08H-10**						



FHC3ZO-08H-10B

6-PORT

FHC39N-08-10**	OS2	8	6	1 x 8f	4	Standard
FHC39O-08-10**						Optimized
FHC3ZA-08-10**	OM4					Ultra
FHC3ZO-08-10**						Optimized
FHC3SA-08-10**	OM4+					Ultra
FHC3WA-08-10**	OM5					
FHC3WO-08-10**						



FHC39N-08-10AN

12-PORT

FHC39N-24H-10**	OS2	24	12	3 x 8f	12	Standard
FHC39O-24H-10**						Optimized
FHC3ZA-24H-10**	OM4					Ultra
FHC3ZO-24H-10**						Optimized
FHC3SA-24H-10**	OM4+					Ultra
FHC3WA-24H-10**	OM5					
FHC3WO-24H-10**						



FHC3ZO-24H-10A

**AS for Method A, AF for Modified Method A (pair flipped), BN for Method B, U for Universal

24 Fiber Breakout Cassettes (Base-12)

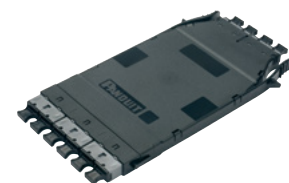
Part Number	Fiber Type	Fiber Count	Cassette Size	Rear MPO Count	Front Duplex LC Count	Performance
12-PORT						
FHC9N-20F-10**	OS2	20	12	1 x 20f	10	Standard
FHCZO-20F-10**	OM4					Optimized
FHC9N-24F-10**	OS2	24		1 x 24f	12	Standard
FHC9N-24F-LA**					12 APC	Optimized
FHCZO-24F-10**	OM4				12	
FHCZO-24F-10**	OM4+					
FHCWO-24F-10**	OM5					



FHCXO-24F-10AS

HD Flex Base-12 to Base 8 (Dark Fiber) Conversion Cassettes

Part Number	Fiber Type	Fiber Count	Cassette Size	Rear MPO Count	Front MPO Count	Performance
FH4ZU-24-NMNM*	OM4	24	6	2 x 12f	3 x 8f	Ultra
FH4WU-24-NMNM*	OM5					
FH49N-48-463MU	OS2	48		4 x 12f	6 x 8f	Standard
FH4ZO-48-463MU	OM4					Optimized
FH4ZU-48-NMNM*						Ultra
FH4WU-48-NMNM*	OM5					



FH4ZU-48-NMNM*

* = A for Method A, B for Method B

HD Flex Splice Cassettes (Base-12)

Part Number	Fiber Type	Fiber Count	Cassette Size	Rear MPO Count	Front Duplex LC Count	Performance		
FHSN-12	N/A	12	6	N/A	N/A	N/A		
FHS9N-12-10*	OS2				48	6	6	Standard
FHS9N-12-LA*								
FHSZA-12-10*	OM4	Ultra						
FHSZO-12-10*								
FHS9O-12-10*	OM4+	24						
FHSWA-12-10*	OM5				Optimized			
FHSWO-12-10*								
FHSN-24	N/A	24	12		N/A	N/A		
FHS9N-24-10*	OS2				12	12	Standard	
FHS9N-24-LA*								
FHSZA-24-10*	OM4				12	Ultra		
FHSSA-24-10*	OM5							



FHSZO12-10P

** P for 250um pigtails, R for ribbon pigtails

HD Flex TAP Cassettes (Base-12)

Part Number	Fiber Type	Live IN Ports	Live OUT Ports	TAP Ports	Split Ratio
FHCT-59UC	OS2	2 Duplex LC (Front)	2 Duplex LC (Front)	2 Duplex LC (Front)	50/50
FHCT-69AB		1 MPO (Rear)	6 Duplex LC (Front)	1 MPO (Rear)	60/40
FHCT-79UC		2 Duplex LC (Front)	2 Duplex LC (Front)	2 Duplex LC (Front)	70/30
FHCT-89AB		1 MPO (Rear)	6 Duplex LC (Front)	1 MPO (Rear)	80/20
FHCT-5ZUB	OM4				2 Duplex LC (Front)
FHCT-5ZUC		1 Duplex LC (Front)	1 Duplex LC (Front)		
FHCT-5ZUB (BiDi)		1 MPO (Rear)	6 Duplex LC (Front)	1 MPO (Rear)	60/40
FHCT-6ZUB					70/30
FHCT-7ZUB	2 Duplex LC (Front)	2 Duplex LC (Front)	2 Duplex LC (Front)		
FHCT-7ZUC	1 MPO (Front)	1 MPO (Front)	2 MPO (Front)		
FHCT-7ZUJ	1 MPO (Rear)	6 Duplex LC (Front)	1 MPO (Rear)	80/20	
FHCT-8ZUB				90/10	
FHCT-9ZUB					



FHCT-5ZUC 50/50

HD Flex Mesh Cassettes (Base-8)

Part Number	Fiber Type	Fiber Count	Cassette Size	Rear MPO Count	Front Duplex LC Count	Performance
FHM9N-32-M	OS2	32	6	4 x 8f	4 x 8f	Standard
FHMZO-32-M	OM4					Optimized



FHMZO-32-M

HD Flex Adapter Panel and Accessories

LC Fiber Adapter Panels

Part Number	Fiber count	Cassette Size	Adapter Color	Color designation
FHS9N-08-10N	8	4-port	Blue	SM LC/UPC
FHS9N-08-LAN			Green	SM LC/APC
FHSXN-08-10N			Aqua	MM LC/UPC
FHS9N-12-10N	12	6-port	Blue	SM LC/UPC
FHS9N-12-LAN			Green	SM LC/APC
FHSXN-12-10N			Aqua	MM LC/UPC
FHS9N-24-10N	24	12 port	Blue	SM LC/UPC
FHS9N-24-LAN	25	13 port	Green	SM LC/APC



FHSXN-12-10N

MPO Fiber Adapter Panels

Part Number	Fiber Type	Fiber Count	Cassette Size	Rear MPO Count	Front MPO Count	Performance	
FHMP-4-ABL	N/A	48	4	N/A	4 x 12f	N/A	
FHMP-4-BCG					4 x 16f		
FHMP-4M-ABL		64	6		6 x 12f		
FHMP-6-4ABL					6 x 16f		
FHMP-6-ABL		72	6		6 x 12f		
FHMP-6-BCG					6 x 16f		
FHMP-6M-ABL		96					



FHMP-6-4ABL

Rail Kits for Enclosures

Part Number	Description
FLEX-RAIL04EN	HD Flex 4-Port Enclosure Rail Kit, 1 RU, 12 rails, 36 labels
FLEX-RAIL06EN	HD Flex 6-Port Enclosure Rail Kit, 1 RU, 6 rails, 12 labels

Rail Kits for Panels

Part Number	Description
FLEX-RAIL04PN	HD Flex 4-Port Panel Rail Kit, 1 RU, 12 rails
FLEX-RAIL06PN	HD Flex 6-Port Panel Rail Kit, 1 RU, 6 rails

HD Flex Adapter Cable Management and Accessories

Rear Cable Manager

Part Number	Description
FLEX-RCM1U**	1 RU HD Flex Rear Cable Manager
FLEX-RCM4U**	4 RU HD Flex Rear Cable Manager



FLEX-RCM1U

Front Cable Manager

Part Number	Description
FLEX-FCM1UA**	1 RU HD Flex Front Cable Manager
FLEX-FCM2UA**	2 RU HD Flex Front Cable Manager
FLEX-FCM4UA**	4 RU HD Flex Front Cable Manager



FLEX-FCM1UA

HD Flex Plate

Part Number	Description
FLEX-PLATE1U***	HD Flex Enclosure Trunk Slack Plate – 1 RU
FLEX-PLATE2U***	HD Flex Enclosure Trunk Slack Plate – 2 RU
FLEX-PLATE4U***	HD Flex Enclosure Trunk Slack Plate – 4 RU

+FLEX-PLATE is designed as a stand alone plate when a cover is not required. It is not compatible with the cover



FLEX-PLATE1U

HD Flex Rear Cover Kit for Enclosures

Part Number	Description
FLEX-PLATE1UR#	HD Flex Enclosure Trunk Slack Plate with rear cover – 1 RU
FLEX-PLATE2UR#	HD Flex Enclosure Trunk Slack Plate with rear cover – 2 RU
FLEX-PLATE4UR#	HD Flex Enclosure Trunk Slack Plate with rear cover – 4 RU

Note: For part in the color white, add a W at the end of the part number
 # Slack plate and cover as a bundle. Cover not sold separately
 Offered in white



FLEX-PLATE1UR

HD Flex Rear Cover Kit for Panels

Part Number	Description
FLEX-PLATE1UPR#	HD Flex Patch Panel Trunk Slack Plate with rear cover – 1 RU
FLEX-PLATE2UPR#	HD Flex Patch Panel Trunk Slack Plate with rear cover – 2 RU
FLEX-PLATE4UPR#	HD Flex Patch Panel Trunk Slack Plate with rear cover – 4 RU

Note: For part in the color white, add a W at the end of the part number
 # Slack plate and cover as a bundle. Cover not sold separately



FLEX-PLATE1UPRW

HD Flex Trunk Transition Clips

Part Number	Description
FLEX-CLIP12	HD Flex Trunk Transition Clip (quantity 2); 12 position
FLEX-CLIP18	HD Flex Trunk Transition Clip (quantity 2); 18 position



FLEX-CLIP12

Universal Cable Managers

Part Number	Description
FLEX-CM12S	HD Flex Universal Rear Cable Manager includes FLEX-CLIP12
FLEX-CM18S	HD Flex Universal Rear Cable Manager includes FLEX-CLIP18
FLEX-CM12C	HD Flex Universal Rear Cable Manager for PEV12 includes 2 FLEX-CLIP12
FLEX-CM18C	HD Flex Universal Rear Cable Manager for PEV12 includes 2 FLEX-CLIP18



FLEX-CM18S

Universal Cable Manager Mounting Brackets

Part Number	Description
FLEX-CM-1UB	HD Flex Universal Expandable Cable Management Bracket (front to back of cabinet or 4-Post rack)
FLEX-CM-1UBKIT	HD Flex Cable Management 1 RU Universal Bracket 19" Kit (2 FLEX-CM-1UB and horizontal strain relief bar)



FLEX-CM-1UB

HD Flex Conversion Bracket

Part Number	Description
FLEX-OPTI-1RU**	HD Flex Bracket Adapter for Opticom Enclosures 1 RU

**Offered in White (add WH to part number for White)



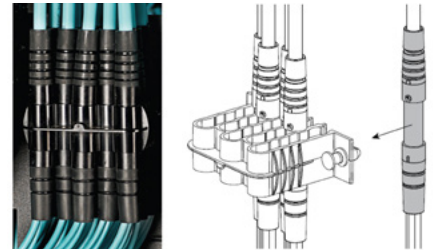
FLEX-OPTI-1RU

HD Flex Trunks, Harnesses, Interconnects and Patch Cords

Need to configure a custom fiber optic cable assembly or patch cord? Configure what you need with the Panduit CPQ product configurator at configure.panduit.com.

HD Flex Trunk Transitions

HD Flex trunk transitions, included at no cost on all HD Flex trunks, provide a simple, convenient way to keep your cables clean and organized. Include them in your trunk configurations (7th character in configurator on next page), and order clips separately or as part of the Universal Cable Manager brackets.



PanMPO™ Fiber Connector

Simplify fiber deployment in your DC! The PanMPO Fiber Connector is a unique, patented design that specifically addresses today's needs for fast and efficient Ethernet and Fiber Channel migration to help maximize return on cabling infrastructure investment and minimize downtime. Reduce the installed cost of high-speed data center fiber links and secure your position as a next-generation data center prepared to face future demands.

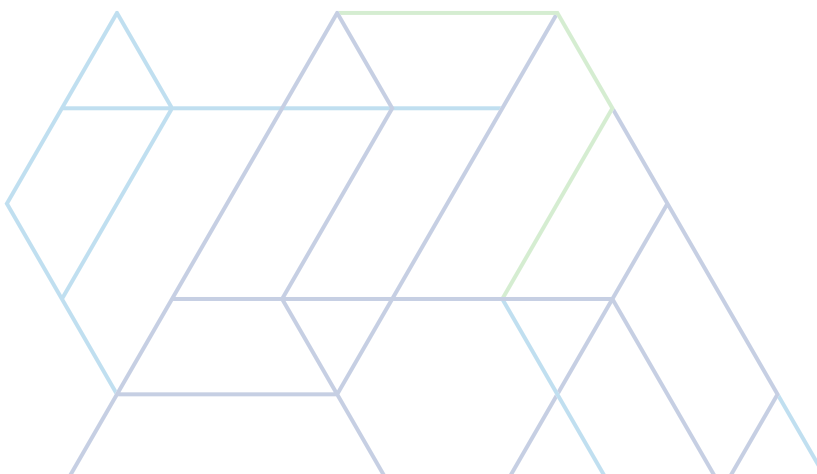


- Easily change gender and polarity on-site: alignment pins and tool are permanently housed and protected inside the connector, allowing for a tool-less change preventing downtime from mistakes.
- Faster connector cleaning: retract the pins for interference-free cleaning of the MPO surface.
- Reduced test variability: in-field changing of PanMPO gender and polarity on test leads can cover multiple link certification test scenarios, eliminating cable-to-cable variability.
- Simpler installation and removal with an innovative push-pull boot.
- Easy migration from serial duplex (SR/SR-BD) to parallel (SR4.x) while maintaining compliance with cabling standards (TIA and ISO/IEC)

▶ Watch the PanMPO connector video



For more information on the PanMPO Fiber Connector, visit panduit.com/panmpo



HD Flex Trunk Assemblies



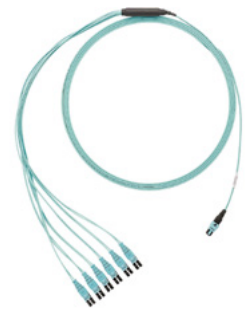
PART NUMBER CONFIGURATOR

Example: FXUYP7575XNF030 = OM3 24-Fiber indoor trunk, plenum, PanMPO Female to PanMPO Female, 39" breakouts with HD Flex transitions, Method A polarity, optimized IL, no pulling eye, 30 feet

Character	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Example	F	X	U	Y	P	7	5	7	5	X	N	F	0	3	0

1 - Fiber	F = Fiber	8 - Connector Type (End 'B')	7 = Multimode PanMPO Female 8 = Multimode PanMPO Male
2 - Fiber Type	9 = OS2 9/125µm Z = OM4 50/125µm S = OM4+ Signature Core 50/125µm W = OM5 50/125µm	9 - Connector Variant (End 'B')	5 = 39" Breakout with transition
3 - Fiber Count	T = 12-Fiber U = 24-Fiber	10 - Construction/ Performance	B = Standard IL / Polarity A (SM) K = Ultra IL / Polarity A (MM) L = Ultra IL / Polarity B (MM)
4 - Cable Type	Y = Indoor small diameter trunk cable S = Indoor Trunk Cable	11 - Other	N = No pulling eye (15 - 100 ft. 5 - 30m) A = Pulling eye end A (>100 ft. >30m)
5 - Jacket Type	L = Low Smoke Zero Halogen (LSZH) P = Plenum (OFNP)	12 - Length, Unit	F = Feet M = Meters
6 - Connector Type (End 'A')	5 = SM MPO Female 7 = MM PanMPO Female 8 = MM PanMPO Male	13 - Cable Assembly Length	015 - 100 ft., 1 ft. increments 100 - 300 ft, 5 ft increments 005 - 100m, 1m increments
7 - Connector Variant (End 'A')	5 = 39" Breakout with HD Flex transition		





HD Flex Harness Assemblies

PART NUMBER CONFIGURATOR

Example: FZTRP8NQSONF003 = Fiber OM4, 12-Fiber, round, plenum rated, PanMPO™ male to Push/Pull duplex LC harness with 61 cm equal breakout, standard IL, no pulling eye, 3 feet

Character	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Example	F	Z	T	R	P	8	N	Q	S	O	N	F	0	0	3

1 - Fiber	F = Fiber	8 - Connector Type End "B"	U = LC Uniboot Q = Push/Pull Duplex LC
2 - Fiber Type	9 = OS2 Z = OM4 S = OM4+ Signature Core W = OM5	9 - Connector Variant	S = 24 in. (61 cm)
3 - Fiber Count	T = 12-Fiber 8 = 8-Fiber	10 - Construction/Performance	S = Standard IL / Standard Fanout (SM) Q = Standard IL / 4-1 Conversion (SM) N = Ultra Low IL / Standard Fanout (MM) U = Ultra Low IL / 4-1 Conversion (MM)
4 - Cable Type	R = Round	11 - Other	N = No variant
5 - Jacket Type	L = Low Smoke Zero Halogen (LSZH) P = Plenum (OFNP)	12 - Length, Unit	F = Feet M = Meters
6 - Connector Type (End 'A')	5 = SM MPO Female 7 = MM PanMPO Female 8 = MM PanMPO Male	13 - Length	Feet: 003 to 030 Meters: 001 to 010, 15, 25, 35, 45 (keep the "14")
7 - Connector Variant	N = No variant	14	
		15	

Opti-Core LC Uniboot Pull-Boot Duplex Patch Cords



PART NUMBER CONFIGURATOR

Example: FZ2RLU1U1ONM005 = Fiber, OM4, 2-Fiber, 2mm Round, LSZH, LC Uniboot to LC Uniboot, Optimized IL, 5 Meters

Character	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Example	F	Z	2	R	L	U	1	U	1	0	N	M	0	0	0

1 - Fiber	F = Fiber	8 - Connector Variant	U = LC Duplex Uniboot
2 - Fiber Type	9 = OS2 Z = OM4 S = OM4+ Signature Core W = OM5	9 - Connector Variant	1 = UPC 2 = APC Singlmode
3 - Fiber Count	2 = 2-Fiber	10 - Construction/Performance	O = Optimized IL (A-B) N = Ultra IL (A-B)
4 - Cable Type	R = Round 2.0mm	11 - Connector Variant	N = No variant
5 - Jacket Type	L = LSZH (Low Smoke Zero Halogen) P = OFNP (Plenum)	12 - Length, Unit	M = Meters
6 - Connector Type	U = LC Duplex Uniboot	13 - Length	001 - 050
7 - Connector Variant	1 = UPC 2 = APC Singlmode	14	
		15	

We have the knowledge
and experience to help you
make the most of your
infrastructure investment.

panduit.com/hdflex



Let's connect
panduit.com/contact-us

PANDUIT®
infrastructure for a connected world