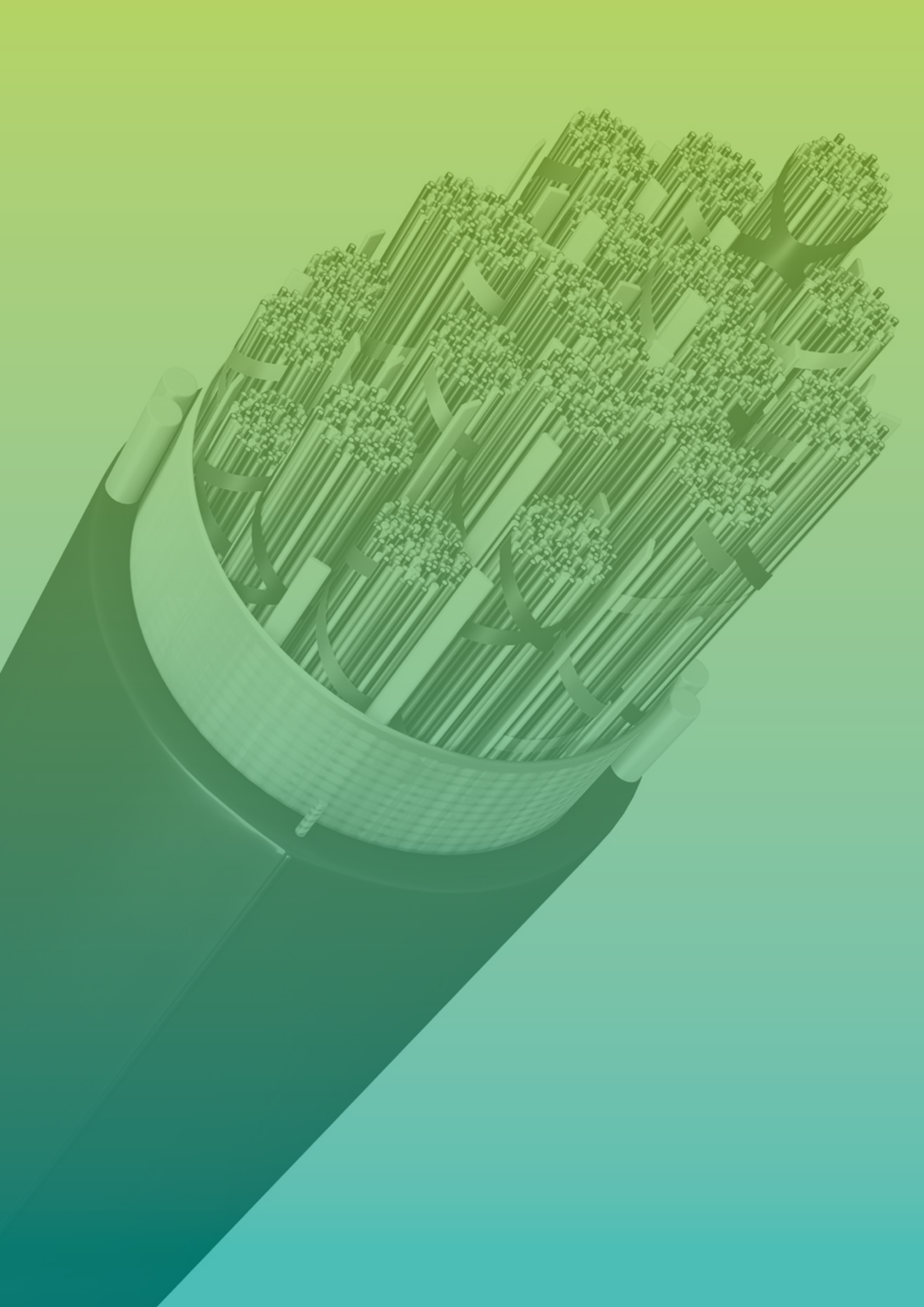
AFL HYPERSCALE®

Ultra-High Fiber Count Solution Guide



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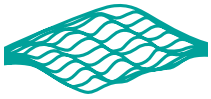
Ultra-High Fiber Count Solution

The extraordinary growth of cloud computing, the Internet of Things (IoT), and artificial intelligence has had a dramatic impact on data center scale, design, and connectivity.

In the last 20 years, global IP traffic has gone from 12 petabytes per month to a mammoth 156,000 petabytes (156 exabytes) and doesn't show signs of stopping, rising a predicted 396,000 petabytes per month by 2022, an increase of over 150%.

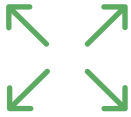
At AFL Hyperscale, we develop and deliver advanced, scalable network infrastructure solutions to facilitate the ultra-high fiber counts, bandwidth, and connectivity required today and in the future, for hyperscale and colocation data centers alike.

Our Ultra-High Fiber Count Solution is ideal for data center networks that require interconnection between and within data center buildings on a scale never seen before.



Fiber density

With the volume of fiber in data centers ever-increasing, the AFL Hyperscale Ultra-High Fiber Count Solution supports your growing fiber density with cables of up to 10,368 fibers and connectivity hardware that can house up to 13,864 fibers. Across the data hall, the Ultra-High Fiber Count Solution makes distribution from high fiber counts to lower fiber counts fast, efficient, and easy to install and maintain.



Space optimization

The sheer amount of data that needs to be stored and processed in a data center means space is at a premium. Existing cable ducts are full and demand for increased connectivity and bandwidth is showing no signs of slowing. The AFL Hyperscale Ultra-High Fiber Count Solution accommodates large volumes of fiber cable in a small footprint, improving space optimization and utilization in ducts and pathways.

Cable management

The growth of cloud computing services has led to the development of multi-data center designs that require rich interconnections between buildings and within buildings. Accommodating these new designs into existing networks has led to severe cable management issues and network degradation over time. The AFL Hyperscale Ultra-High Fiber Count Solution enables data centers to connect and interconnect with ultra-high fiber count cable, using SpiderWeb Ribbon® technology, and simplify cable management across and between data centers.

Speed

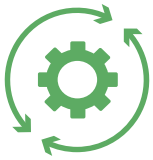
From manufacturing and delivery to installation and maintenance, data center networks have the need for speed. The AFL Hyperscale Ultra-High Fiber Count Solution offers short lead times, reduces installation times, and speeds up moves, adds, and changes. Using practical, high-density connectivity methods including splicing, patching, and/or blowing ensures a convenient and fast deployment.

Operational costs

Reducing operational expenses is likely top of a data center operator's to-do list. According to Microsoft and the Uptime Institute, costs related to the purchase and installation of data center equipment range between 82% and 85% of the initial capital investment. Incorporating ground-breaking SpiderWeb Ribbon technology as well as mass-fusion splice, pre-terminated, and plug-and-play solutions, the AFL Hyperscale Ultra-High Fiber Count Solution dramatically cuts time and cost associated with installation and maintenance.

High performance

As the demand for connectivity increases, the performance of connected devices and the networks that support them is more important than ever. The AFL Hyperscale Ultra-High Fiber Count Solution is high-density yet low-loss, supporting high fiber counts in data center environments whilst reducing insertion losses.



End-to-end solution

The AFL Hyperscale Ultra-High Fiber Count Solution is made up of high-density cabling and connectivity for every part of the data center, from the entrance facility all the way to the customer area.

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SpiderWeb Ribbon® Solutions

SpiderWeb Ribbon is made up of 12 single fibers, intermittently bonded to create a collapsible ribbon construction that can move flexibly in any direction.

SWR® allows for highly efficient ribbon termination for mass-fusion splicing with the ability to be broken out into single fibers for individual splicing and connectorization.

SWR technology significantly reduces cable diameter and weight and is used in ultra-high fiber count indoor and outdoor cable types, resulting in lower installation costs and major improvements in utilization of cable pathways and duct space.

SWR® Features and Benefits

High fiber packing density

Collapsible ribbon allows for up to 10,368 fibers

Single-fiber splicing still an option

Easily split into individual fibers for single-fiber splicing or connectorizing

Faster, easier installation

Easily identified individual bundles and optical fibers optimized for easy mass-fusion splicing, including Dry Core Technology with a longitudinally-applied water blocking tape that eliminates the need for messy hand tools

Improved storage and easier installation

Small-diameter and lighter-weight cable compared to conventional ribbon or single-fiber cables

Low-risk solution

Easy mid-span access functionality should the cable be damaged

Cost-effective cable solution

Smaller and lighter-weight cables mean easier installation practices and lower transportation costs

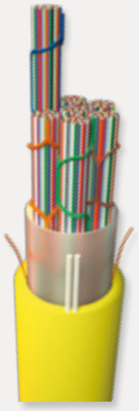
Fewer connection points

Up to twice the amount of cable can be wound on a drum, longer cable reduces the number of connection points, improving network latency

SpiderWeb Ribbon Solutions

Inside Plant Cabling (ISP) Overview

Our range of inside plant cables utilize SpiderWeb Ribbon® (SWR®) technology meaning that, across the data hall, operators can go from very high fiber count cables and break down to small fiber counts very easily. AFL Hyperscale have a range of ISP cables with a variety of jackets including LSZH, plenum, and CPR-rated so networks can be designed with a global mindset for a local deployment.



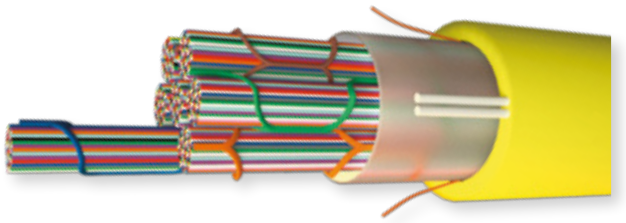
Flame-Retardant Wrapping Tube Cable (WTC) with SpiderWeb Ribbon (SWR)

Sub-Unitized Premise MicroCore 3.0 BASE-24 with SWR

Sub-Unitized Premise MicroCore 3.0 BASE-12 with SWR

Ruggedized MicroCore Cable with SWR

Flame-Retardant Wrapping Tube Cable (WTC) with SpiderWeb Ribbon® (SWR®)



Flame-Retardant (FR) Wrapping Tube Cable (WTC) with SpiderWeb Ribbon (SWR) is a high-density fiber optic ribbon cable intended for inside plant and indoor/outdoor network applications where riser-rated products are required.

The FR-WTC-SWR incorporates the leading-edge SpiderWeb Ribbon technology in a robust, flame-retardant cable package that can be used within buildings and, thanks to its core water-blocking feature, can also be routed outside provided the cable is housed within covered pathway spaces including duct-banks and cable trays.

The FR-WTC-SWR product set is available in LSZH, non-armored 250µm ACE fiber (288F), 250µm SR15E fiber (288F, 864F, and 1,728F), and 200µm SR15E fiber (864F and 1728F) constructions.

SWR technology eliminates many of the challenges that data center networks face today and will face in the future, and works to maximize fiber counts, minimize space utilized in ducts and raceways, and simplify high-fiber count installations.

Technical Specifications

Operating temperature
-20°C to +70°C

Storage temperature
-40°C to +70°C

Installation temperature
-10°C to +60°C

Mechanical Data-Non-Armored

Fiber Count	Binder Unit	Nominal Diameter	Weight	Short Term/Installation		Long Term/Installation	
		Inches (MM)	LBS/1,000 FT (KG/KM)	Max tensile load LBS (N)	Min bend radius inches (MM)	Max tensile load LBS (N)	Min bend radius inches (MM)
288	4 X 72F	0.49 (12.5)	108 (160)	297 (1320)	10 (250)	89 (396)	8 (188)
288	4 x 72f	0.49 (12.5)	108 (160)	297 (1320)	10 (250)	89 (396)	8 (188)
864	12 x 72f	0.71 (18.0)	208 (310)	297 (1320)	14 (250)	89 (396)	11 (270)
1728	12 x 144f	0.93 (23.5)	329 (490)	297 (1320)	19 (470)	89 (396)	14 (353)
864	12 x 72f	0.65 (16.5)	181 (270)	297 (1320)	13 (330)	89 (396)	10 (248)
1728	12 x 144f	0.87 (22.0)	276 (410)	297 (1320)	18 (440)	89 (396)	13 (330)

Optical Fiber

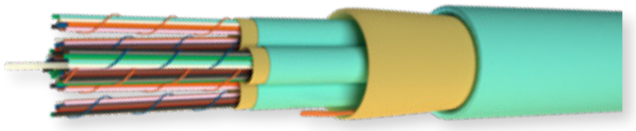
Fiber Count	Fiber Buffer	Optical Fiber Standard	MFD	Maximum Attenuation (Cabled) dB/km		
				1310 NM	1383 NM	1550 NM
288	250µm	9 (ITU-T G.652D/G.657.A1)	9.2 ± 0.4µm	0.4 dB/km	0.4 dB/km	0.3 dB/km
288, 864, 1728	250µm	4K (ITU-T G.652D/G.657.A1)	8.6 ± 0.4µm	0.4 dB/km	0.4 dB/km	0.3 dB/km
864, 1728	200µm	BE (ITU-T G.652.D AND G.657.A1)	8.6 ± 0.4µm	0.4 dB/km	0.4 dB/km	0.3 dB/km

Ordering Information

Contact us for ordering information.

View Product Datasheet

Sub-Unitized Premise MicroCore® 3.0 BASE-24 with SWR®



The third generation of AFL's Sub-Unitized Premise MicroCore Cable is another astounding evolution of high-performance premise cabling. Enabling even greater pathway density than our 2.0 version, the 3.0 BASE-24 revolutionizes cable deployment and allows the end user to realize savings in space, routing infrastructures, and fiber management with fiber counts up to 288 fibers available.

Combining the highest quality materials with rigorous testing to industry standards, this generation builds on the same quality of construction as the previous versions of our Sub-Unitized Premise MicroCore cables. Each stand-alone sub-cable is independently qualified and is suitable for individual routing paths within the rack/panel architecture.

This flexibility of design and deployment is not available in comparable high-density designs.

Designed for direct termination, and supportive of both single-fiber and multi-fiber architectures, this cable family is capable of serving as the backbone in any deployed system.

SWR technology eliminates many of the challenges that data center networks face today and will face in the future, and works to maximize fiber counts, minimize space utilized in ducts and raceways, and simplify high-fiber count installations.

Technical Specifications

Jacket Options

NFPA 262 (ONFP) / FT6
LSZH/ONFR-LS (IEC 60332, 60745, 61034) / CE CPR B2ca

Compliant to

EIA/TIA 568/GR-409-CORE
RoHS, Reach / SVHC

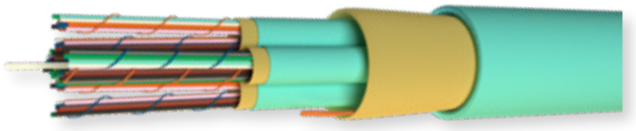
Type	Fiber Count	Nominal Diameter Inches (MM)	Weight LBS/1000 FT (KG/KM)	Tension LBS (N)		Bend Radius Inches (CM)	
				Install	Long-term	Install	Long-term
24-Fiber Sub-Units	48	0.40 (10.2)	60 (90)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
	72	0.40 (10.2)	60 (90)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
	98	0.40 (10.2)	60 (90)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
	144	0.50 (12.7)	107 (160)	150 (670)	45 (200)	7.5 (19.1)	5.0 (12.7)
	168	0.61 (15.5)	171 (255)	150 (670)	45 (200)	9.2 (23.5)	6.1 (15.5)
	192	0.61 (15.5)	171 (255)	150 (670)	45 (200)	9.2 (23.5)	6.1 (15.5)
	216	0.61 (15.5)	171 (255)	150 (670)	45 (200)	9.2 (23.5)	6.1 (15.5)
	288	0.72 (18.4)	218 (325)	150 (670)	45 (200)	11.0 (27.6)	7.2 (18.4)

Ordering Information

Contact us for ordering information.

View Product Datasheet

Sub-Unitized Premise MicroCore® 3.0 BASE-12 with SWR®



AFL's Sub-Unitized Premise MicroCore 3.0 BASE-12 cables represent the foundation for AFL's MicroCore portfolio with designs available up to 144 fibers for standard 250µm based fiber and AFL's revolutionary SpiderWeb Ribbon Technology.

Combining the highest quality materials with rigorous testing to industry standards, this generation builds on the same quality of construction as the previous versions of our Sub-Unitized Premise MicroCore cables. Each stand-alone sub-cable is independently qualified and is suitable for individual routing paths within the rack/panel architecture. This flexibility of design and deployment is not available in comparable high-density designs.

Designed for direct termination, and supportive of both single-fiber and multi-fiber architectures, this cable family is capable of serving as the backbone in any deployed system.

SWR technology eliminates many of the challenges that data center networks face today and will face in the future, and works to maximize fiber counts, minimize space utilized in ducts and raceways, and simplify high-fiber count installations.

Technical Specifications

Jacket Options

NFPA 262 (ONFP) / FT6
LSZH/ONFR-LS (IEC 60332, 60745, 61034) / CE CPR B2ca

Compliant to

EIA/TIA 568/GR-409-CORE
RoHS, Reach / SVHC

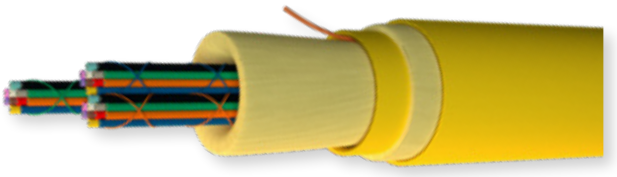
Type	Fiber Count	Nominal Diameter Inches (MM)	Weight LBS/1000 FT (KG/KM)	Tension LBS (N)		Bend Radius Inches (CM)	
				Install	Long-term	Install	Long-term
12-Fiber Sub-Units	24	0.40 (10.2)	60 (90)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
	36	0.40 (10.2)	60 (90)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
	48	0.40 (10.2)	60 (90)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
	60	0.40 (10.2)	60 (90)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
	72	0.44 (11.1)	77 (115)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
	96	0.52 (13.3	120 (175)	150 (670)	45 (200)	6.0 (15.3)	4.0 (10.2)
	144	0.59 (14.9)	125 (185)	150 (670)	45 (200)	7.5 (19.1)	5.0 (12.7)

Ordering Information

Contact us for ordering information.

View Product Datasheet

Ruggedized MicroCore® Cable with SWR®



AFL Ruggedized MicroCore with SWR is the next generation of maximizing fiber density in AFL's line of high-density data center cables. Ruggedized MicroCore is an industry-leading alternative to a traditional inside plant central loose tube ribbon cable with both standard 250µm based fiber and AFL revolutionary SpiderWeb Ribbon Technology designs available.

Ruggedized MicroCore with bare fiber eliminates concerns associated with edge fiber stresses due to preferential bend of encapsulated ribbons.

These cables consist of an LSZH (including ONFR-LS/FT4) flame-rated outer jacket with an installation tension rating of 150 lbs. qualified to meet and exceed the requirements of the latest Telcordia GR-409-CORE inside plant cabling requirements.

SWR technology eliminates many of the challenges that data center networks face today and will face in the future, and works to maximize fiber counts, minimize space utilized in ducts and raceways, and simplify high-fiber count installations.

Technical Specifications

Jacket Options

NFPA 262 (ONFP) / FT6
LSZH/ONFR-LS (IEC 60332, 60745, 61034) / CE CPR B2ca

Compliant to

EIA/TIA 568/GR-409-CORE
RoHS, Reach / SVHC

Fiber Count	Nominal Diameter Inches (MM)	Nominal Sub-Unit Inches (MM)	Weight LBS/1000 FT (KG/KM)	Tension LBS (N)		Bend Radius Inches (CM)	
				Install	Long-term	Install	Long-term
12	0.19 (4.8)	0.12 (3.0)	15 (22)	150 (660)	45 (200)	2.9 (7.2)	1.9 (4.8)
24	0.19 (4.8)	0.12 (3.0)	15 (22)	150 (660)	45 (200)	2.9 (7.2)	1.9 (4.8)
36	0.22 (5.6)	0.15 (3.8)	21 (31)	150 (660)	45 (200)	3.3 (8.4)	2.2 (5.6)
48	0.22 (5.6)	0.15 (3.8)	21 (31)	150 (660)	45 (200)	3.3 (8.4)	2.2 (5.6)
72	0.25 (6.4)	0.19 (4.8)	30 (45)	150 (660)	45 (200)	3.8 (9.6)	2.5 (6.4)

Ordering Information

Contact us for ordering information.

View Product Datasheet

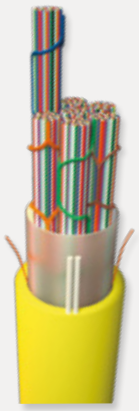
SpiderWeb Ribbon Solutions

Outside Plant Cabling (OSP) Overview

Advances in cable technology have led to an increase in fiber density and a decrease in cable diameter, weight, and installation time. Utilizing SpiderWeb Ribbon® (SWR®) technology in your outside plant cabling means your data center's fleets or availability zones can grow at a faster rate, whilst minimizing the impact on already congested duct space.

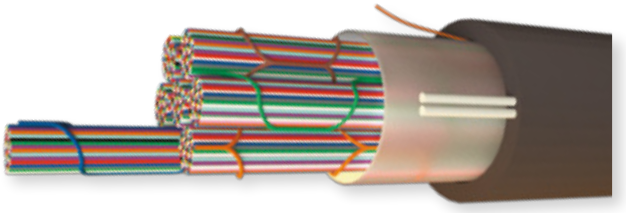
250µm Wrapping Tube Cable (WTC) with SpiderWeb Ribbon (SWR)

200µm Wrapping Tube Cable (WTC) with SpiderWeb Ribbon (SWR)



Flame-Retardant Wrapping Tube Cable (WTC) with SpiderWeb Ribbon (SWR)

250µm Wrapping Tube Cable (WTC) with SpiderWeb Ribbon® (SWR®)



Wrapping Tube Cable (WTC), with SpiderWeb Ribbon (SWR), is an ultra-high density outside plant cable designed specifically for fiber-to-the-home (FTTH) or access markets and is compliant with the latest issue of the outside plant cable standard, Telcordia GR-20.

Utilizing an ultra-high density ribbon technology called SpiderWeb Ribbon, WTC provides the smallest cable diameter and lowest weight high-fiber count ribbon cable in the industry. WTC with SWR cables are available in fiber counts from 144 to 3,456.

SWR is a bonded fiber ribbon design allowing for either a highly efficient ribbon splicing or an individual fiber breakout splicing process. This flexibility allows for a single cable design to cover a diverse set of applications from access networks to high-fiber count mass-fusion splicing. With the ability to roll and conform, SWR provides ultra-high-density packaging in the WTC.

SWR technology eliminates many of the challenges that data center networks face today and will face in the future, and works to maximize fiber counts, minimize space utilized in ducts and raceways, and simplify high-fiber count installations.

Technical Specifications

Mechanical Data-Non-Armored

Fiber Count	Binder Unit	Nominal Diameter	Weight	Short Term/Installation		Long Term/Installation	
		Inches (MM)	LBS/1,000 FT (KG/KM)	Max tensile load LBS (N)	Min bend radius inches (MM)	Max tensile load LBS (N)	Min bend radius inches (MM)
144	1 x 144f	0.41 (10.5)	57 (85)	607 (2700)	9 (229)	182 (810)	6 (158)
288	4 x 72f	0.47 (12.0)	71 (105)	607 (2700)	10 (254)	182 (810)	7 (180)
432	6 x 72f	0.53 (13.5)	91 (135)	607 (2700)	11 (270)	182 (810)	8 (203)
576	8 x 72f	0.59 (15.0)	111 (165)	607 (2700)	12 (300)	182 (810)	9 (225)
864	12 x 72f	0.69 (17.5)	145 (215)	607 (2700)	14 (350)	182 (810)	11 (279)
1152	8 x 144f	0.73 (18.5)	161 (240)	607 (2700)	15 (370)	182 (810)	11 (279)
1728	12 x 144f	0.91 (23.0)	242 (360)	607 (2700)	18 (460)	182 (810)	14 (345)
3456	24 x 144f	1.20 (30.5)	403 (600)	607 (2700)	24 (610)	182 (810)	18 (458)

Mechanical Data-OSP Armored

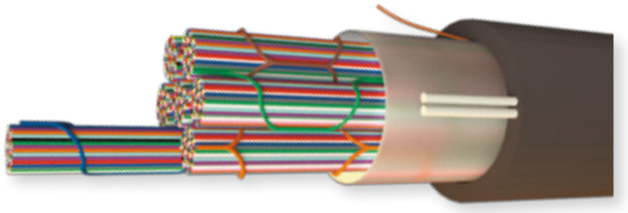
Fiber Count	Binder Unit	Nominal Diameter	Weight	Short Term/Installation		Long Term/Installation	
		Inches (MM)	LBS/1,000 FT (KG/KM)	Max tensile load LBS (N)	Min bend radius inches (MM)	Max tensile load LBS (N)	Min bend radius inches (MM)
144	1 x 144f	0.63 (16.0)	148 (220)	607 (2700)	13 (320)	182 (810)	10 (254)
288	4 x 72f	0.69 (17.5)	172 (255)	607 (2700)	14 (350)	182 (810)	11 (279)
432	6 x 72f	0.75 (19.0)	202 (300)	607 (2700)	15 (380)	182 (810)	11 (285)
576	8 x 72f	0.81 (20.5)	235 (350)	607 (2700)	16 (410)	182 (810)	12 (308)
864	12 x 72f	0.91 (23.0)	286 (425)	607 (2700)	18 (460)	182 (810)	14 (345)
1728	12 x 144f	1.14 (29.0)	410 (610)	607 (2700)	23 (580)	182 (810)	17 (435)

Ordering Information

Contact us for ordering information.

View Product Datasheet

200µm Wrapping Tube Cable (WTC) with SpiderWeb Ribbon® (SWR®)



Wrapping Tube Cable (WTC), with SpiderWeb Ribbon (SWR), is an ultra-high density outside plant cable designed specifically for fiber-to-the-home (FTTH) or access markets and is compliant with the latest issue of the outside plant cable standard, Telcordia GR-20.

Utilizing an ultra-high density ribbon technology called SpiderWeb Ribbon, WTC provides the smallest cable diameter and lowest weight high-fiber count ribbon cable in the industry. WTC with SWR cables are available in fiber counts from 144 to 3,456.

SWR is a bonded fiber ribbon design allowing for either a highly efficient ribbon splicing or an individual fiber breakout splicing process. This flexibility allows for a single cable design to cover a diverse set of applications from access networks to high-fiber count mass-fusion splicing. With the ability to roll and conform, SWR provides ultra-high-density packaging in the WTC.

SWR technology eliminates many of the challenges that data center networks face today and will face in the future, and works to maximize fiber counts, minimize space utilized in ducts and raceways, and simplify high-fiber count installations.

Technical Specifications

Operating temperature
-40°C to +70°C

Storage temperature
-40°C to +70°C

Installation temperature
-30°C to +60°C

Mechanical Data-Non-Armored

Fiber Count	Binder Unit	Nominal Diameter	Weight	Short Term/Installation		Long Term/Installation	
		Inches (MM)	LBS/1,000 FT (KG/KM)	Max tensile load LBS (N)	Min bend radius inches (MM)	Max tensile load LBS (N)	Min bend radius inches (MM)
1728	12 x 144f	0.85 (21.5)	202 (300)	607 (2700)	17 (432)	182 (810)	13 (330)
3456	24 x 144f	1.04 (26.5)	292 (435)	607 (2700)	21 (533)	182 (810)	16 (406)
6912	24 x 288f	1.38 (35.0)	514 (765)	607 (2700)	28 (711)	182 (810)	21 (533)

200µm Optical Fiber

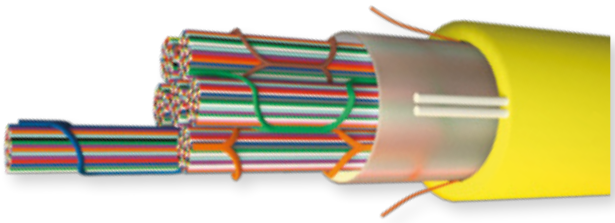
Fiber Count	Fiber Designator	MFD	Maximum Attenuation (Cabled) dB/km		
			1310 NM	1383 NM	1550 NM
1728	BE (ITU-T G.652.D and G.657.A1)	8.6 ± 0.4µm	≤0.40	≤0.40	≤0.30
3456	BE (ITU-T G.652.D and G.657.A1)	8.6 ± 0.4µm	≤0.40	≤0.40	≤0.30
6912	BE (ITU-T G.652.D and G.657.A1)	8.6 ± 0.4µm	≤0.40	≤0.40	≤0.30

Ordering Information

Contact us for ordering information.

View Product Datasheet

Flame-Retardant Wrapping Tube Cable (WTC) with SpiderWeb Ribbon® (SWR®)



Flame-Retardant (FR) Wrapping Tube Cable (WTC) with SpiderWeb Ribbon (SWR) is a high-density fiber optic ribbon cable intended for inside plant and indoor/outdoor network applications where riser-rated products are required.

The FR-WTC-SWR incorporates the leading-edge SpiderWeb Ribbon technology in a robust, flame-retardant cable package that can be used within buildings and, thanks to its core water-blocking feature, can also be routed outside provided the cable is housed within covered pathway spaces including duct-banks and cable trays.

The FR-WTC-SWR product set is available in LSZH, non-armored 250µm ACE fiber (288F), 250µm SR15E fiber (288F, 864F, and 1,728F), and 200µm SR15E fiber (864F and 1728F) constructions.

SWR technology eliminates many of the challenges that data center networks face today and will face in the future, and works to maximize fiber counts, minimize space utilized in ducts and raceways, and simplify high-fiber count installations.

Technical Specifications

Operating temperature
-20°C to +70°C

Storage temperature
-40°C to +70°C

Installation temperature
-10°C to +60°C

Mechanical Data-Non-Armored

Fiber Count	Binder Unit	Nominal Diameter	Weight	Short Term/Installation		Long Term/Installation	
		Inches (MM)	LBS/1,000 FT (KG/KM)	Max tensile load LBS (N)	Min bend radius inches (MM)	Max tensile load LBS (N)	Min bend radius inches (MM)
288	4 X 72F	0.49 (12.5)	108 (160)	297 (1320)	10 (250)	89 (396)	8 (188)
288	4 x 72f	0.49 (12.5)	108 (160)	297 (1320)	10 (250)	89 (396)	8 (188)
864	12 x 72f	0.71 (18.0)	208 (310)	297 (1320)	14 (250)	89 (396)	11 (270)
1728	12 x 144f	0.93 (23.5)	329 (490)	297 (1320)	19 (470)	89 (396)	14 (353)
864	12 x 72f	0.65 (16.5)	181 (270)	297 (1320)	13 (330)	89 (396)	10 (248)
1728	12 x 144f	0.87 (22.0)	276 (410)	297 (1320)	18 (440)	89 (396)	13 (330)

Optical Fiber

Fiber Count	Fiber Buffer	Optical Fiber Standard	MFD	Maximum Attenuation (Cabled) dB/km		
				1310 NM	1383 NM	1550 NM
288	250µm	9 (ITU-T G.652D/G.657.A1)	9.2 ± 0.4µm	0.4 dB/km	0.4 dB/km	0.3 dB/km
288, 864, 1728	250µm	4K (ITU-T G.652D/G.657.A1)	8.6 ± 0.4µm	0.4 dB/km	0.4 dB/km	0.3 dB/km
864, 1728	200µm	BE (ITU-T G.652.D AND G.657.A1)	8.6 ± 0.4µm	0.4 dB/km	0.4 dB/km	0.3 dB/km

Ordering Information

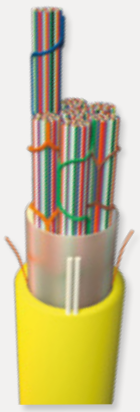
Contact us for ordering information.

View Product Datasheet

SpiderWeb Ribbon Solutions

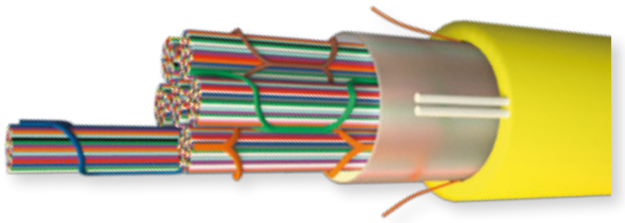
Inside Plant (ISP) / Outside Plant (OSP) Overview

Utilizing leading-edge SpiderWeb Ribbon® (SWR®) technology, this robust, end-to-end, flame-retardant cable is suitable for use both within and outside buildings thanks to its core water-blocking feature.



Flame-Retardant Wrapping Tube Cable (WTC) with SpiderWeb Ribbon (SWR)

Flame-Retardant Wrapping Tube Cable (WTC) with SpiderWeb Ribbon® (SWR®)



Flame-Retardant (FR) Wrapping Tube Cable (WTC) with SpiderWeb Ribbon (SWR) is a high-density fiber optic ribbon cable intended for inside plant and indoor/outdoor network applications where riser-rated products are required.

The FR-WTC-SWR incorporates the leading-edge SpiderWeb Ribbon technology in a robust, flame-retardant cable package that can be used within buildings and, thanks to its core water-blocking feature, can also be routed outside provided the cable is housed within covered pathway spaces including duct-banks and cable trays.

The FR-WTC-SWR product set is available in LSZH, non-armored 250µm ACE fiber (288F), 250µm SR15E fiber (288F, 864F, and 1,728F), and 200µm SR15E fiber (864F and 1728F) constructions.

SWR technology eliminates many of the challenges that data center networks face today and will face in the future, and works to maximize fiber counts, minimize space utilized in ducts and raceways, and simplify high-fiber count installations.

Technical Specifications

Operating temperature
-20°C to +70°C

Storage temperature
-40°C to +70°C

Installation temperature
-10°C to +60°C

Mechanical Data-Non-Armored

Fiber Count	Binder Unit	Nominal Diameter	Weight	Short Term/Installation		Long Term/Installation	
		Inches (MM)	LBS/1,000 FT (KG/KM)	Max tensile load LBS (N)	Min bend radius inches (MM)	Max tensile load LBS (N)	Min bend radius inches (MM)
288	4 X 72F	0.49 (12.5)	108 (160)	297 (1320)	10 (250)	89 (396)	8 (188)
288	4 x 72f	0.49 (12.5)	108 (160)	297 (1320)	10 (250)	89 (396)	8 (188)
864	12 x 72f	0.71 (18.0)	208 (310)	297 (1320)	14 (250)	89 (396)	11 (270)
1728	12 x 144f	0.93 (23.5)	329 (490)	297 (1320)	19 (470)	89 (396)	14 (353)
864	12 x 72f	0.65 (16.5)	181 (270)	297 (1320)	13 (330)	89 (396)	10 (248)
1728	12 x 144f	0.87 (22.0)	276 (410)	297 (1320)	18 (440)	89 (396)	13 (330)

Optical Fiber

Fiber Count	Fiber Buffer	Optical Fiber Standard	MFD	Maximum Attenuation (Cabled) dB/km		
				1310 NM	1383 NM	1550 NM
288	250µm	9 (ITU-T G.652D/G.657.A1)	9.2 ± 0.4µm	0.4 dB/km	0.4 dB/km	0.3 dB/km
288, 864, 1728	250µm	4K (ITU-T G.652D/G.657.A1)	8.6 ± 0.4µm	0.4 dB/km	0.4 dB/km	0.3 dB/km
864, 1728	200µm	BE (ITU-T G.652.D AND G.657.A1)	8.6 ± 0.4µm	0.4 dB/km	0.4 dB/km	0.3 dB/km

Ordering Information

Contact us for ordering information.

View Product Datasheet

2

External Network Interface (ENI)

Fiber counts in outside plant (OSP) cable for campus interconnection or service providers are rapidly increasing. The building entrance or External Network Interface (ENI) is essentially the data center's interface with the outside world. As such, the ENI requires higher density, more space efficiency, and more accessibility for effective fiber management and distribution of high fiber counts inside the data center.

AFL Hyperscale has designed and manufactured a range of entrance facility solutions for a fast and efficient installation that includes mass-splice frames, wall-mountable cabinets, and rack-mountable panels to support fiber counts above and beyond today's demand.

External Network Interface (ENI)

Wall-Mountable Overview

AFL Hyperscale's mass-fusion splice cabinets are designed to save space in the data center entrance facility. Rather than splicing on a fiber frame, the cabinets can be wall-mounted to transition OSP cables to ISP cables up to 6,912 fibers. The cabinets are lightweight and designed for easy installation by one person.

The splice cabinets feature leaf-style trays which allow 144 fiber mass-fusion splices per tray, as well as a raceway and manifold system that ensures fiber protection and network reliability.

6912f
Mass-Fusion
Splice Wall Cabinet

3456f
Mass-Fusion
Splice Wall Cabinet

288 Single-Fiber
864 Standard Ribbon
1152 SWR Fusion Splice
Wall Cabinet

6912f Mass-Fusion Splice Wall Cabinet

6912f Mass-Fusion Splice Wall Cabinet is designed for use in a building entrance facility, providing an enclosure to splice outside plant (OSP) cables to inside plant (ISP) cables with an ultra-high fiber count. This cabinet is lightweight, flexible, and designed for easy installation by one person providing a space-saving and cost-effective solution. Pass-through space provides cable routing for the installation of multiple cabinets.

The cabinet features 48 leaf-style trays which allow 144 fiber mass fusion splices per tray and a raceway and manifold system which ensures the 250µm fiber is protected at all times. There are various cable entry options at both top and bottom with modular tie-off points allowing up to 8 x Ø34mm at a time.

This Mass-Fusion Splice Wall Cabinet has the capacity to splice up to 6912f for SWR® and traditional ribbon cables. The cabinet can also be adapted to accommodate standard optical fiber by purchasing our standard fiber optic splice tray, allowing for 36 splices per tray and a maximum fiber count of 864f.

Technical Specifications

Dimensions
585mm (W) x 227mm (D) x 1212mm (H)

Material
Aluminum

Operating temperature
-40°C to +60°C

Maximum fiber count
6912f

Material coating
Powder

Materials compliant to
RoHS, Reach / SVHC

Cable entry
Top and bottom

Color
Gray

Ordering Information

Part Number	Description Characteristic
FXHCXXBXXX-04ZZ	AFL Hyperscale High Capacity Wall Box 6912F Mass Splice

View Product Datasheet

3456f Mass-Fusion Splice Wall Cabinet

3456f Mass-Fusion Splice Wall Cabinet is designed for use in a building entrance facility providing an enclosure to splice outside plant (OSP) cables to inside plant (ISP) cables with an ultra-high fiber count. This cabinet is lightweight, flexible, and designed for easy installation by one person, providing a space-saving and cost-effective solution. Pass-through space provides cable routing for the installation of multiple cabinets.

The cabinet features 24 leaf-style trays which allow 144 fiber mass fusion splices per tray and a raceway and manifold system which ensures the 250µm fiber is protected at all times. There are various cable entry options at both top and bottom with modular tie-off points allowing up to 8 x Ø34mm at a time.

This Mass-Fusion Splice Wall Cabinet has the capacity to splice up to 3456f for SWR® and traditional ribbon cables. The cabinet can also be adapted to accommodate standard optical allowing for 36 splices per tray and a total fiber count of 1,728f.

Technical Specifications

Dimensions
585mm (W) x 227mm (D) x 882mm (H)

Material
Aluminum

Operating temperature
-40°C to +60°C

Maximum fiber count
3456f

Material coating
Powder

Materials compliant to
RoHS, Reach / SVHC

Cable entry
Top and bottom

Color
Gray

Ordering Information

Part Number	Description Characteristic
FXHCXXBXXX-03ZZ	AFL Hyperscale High Capacity Wall Box 3456F Mass Splice

View Product Datasheet

288 Single-Fiber / 864 Standard Ribbon / 1152 SWR® Fusion Splice Wall Cabinet

This innovative mass-fusion splice wall cabinet is designed for applications in a building entrance facility providing an enclosure to splice outside plant (OSP) cables to inside plant (ISP) cables with a maximum fiber count of 1152f. This cabinet can be fitted into areas with limited physical space and it can be installed as a single unit or multiple units can be stacked. It can be both wall-mounted or in mounted in standard 19" racks.

Cable pass-through spaces inside and outside the cabinet provide cable routing for the installation of multiple cabinets on a wall or rack.

The splice cabinet features 12 leaf-style trays which allow 24 single fiber splices per tray and a raceway manifold system which ensures the fiber is protected at all times. The cabinet accommodates a variety of cables from inside plant cable (12 x 24f) to outside plant cable (1 x 288f / 2 x 144f). It can also be used for standard ribbon splicing with 12 x 72f splice trays providing a total fiber count of 864f. When used with SWR cable, splicing is possible with 12 x 96f splice trays providing a total fiber count of 1152f. Note: these splice trays (SPT17-12) are not included and will need to be ordered separately).

Technical Specifications

Dimensions
404mm (W) x 167mm (D) x 616mm (H)

Material
Aluminum

Operating temperature
-40°C to +60°C

Maximum fiber count
288 (single-fiber)
864 (standard ribbon)
1152 (SWR)

Material coating
Powder

Materials compliant to
RoHS, Reach / SVHC

Cable entry
Top and bottom

Color
Black

Ordering Information

Part Number	Description Characteristic
FXHCXXBXXX-02ZZ	AFL Hyperscale High Capacity Wall Box 288F Single Splice
SPT17-12	Splice Tray and Splice Holder for SWR and Standard Ribbon Cable up to 1152f

View Product Datasheet

External Network Interface (ENI)

Mass-Splice Frames
Overview

AFL Hyperscale's selection of mass-splice frames provides scalable and high-density splicing capability. Our cabinets are ideal for splicing OSP cables carrying up to 13,824f into indoor backbone 288f segments.

Designed for ease of installation and maintenance, there is plenty of room for slack storage both at incoming and outgoing cable ends. Integrated mounting points for cable transitions ensure appropriate management of breakout from cable to splicing area.

10,368f
Mass-Fusion
Splice Frame

10,368f Mass-Fusion Splice Frame

The The 10,368f Mass-Fusion Spice Frame is a high-capacity frame designed to accommodate up to 10,368 fibers utilizing ribbon cable. This fiber count is achieved using 72 mass splice cassettes providing 288 fibers per panel. Mass splice cassettes allowing 288 fibers per tray, each supplied with a fast mount mechanism for easy installation and maintenance.

Utilizing the latest SpiderWeb Ribbon® (SWR®) cable technology, the 288f splice trays accommodate to 24 mass splice protectors whilst ensuring sufficient slack storage for multiple re-splices.

Integrated mounting points for cable transitions ensure appropriate management of breakout from cable the splicing area.

Technical Specifications

Dimensions
600mm (W) x 300mm (D) x 2200mm (H)

Material
Cold Rolled Steel

Operating temperature
-40°C to +50°C

Maximum fiber count
10,368f

Material coating
Powder

Materials compliant to
RoHS, Reach / SVHC

Cable entry
Top and ottom

Color
Gray

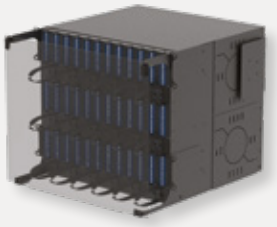
Ordering Information

Contact us for ordering information.

External Network Interface (ENI)

Rack-Mountable Panels Overview

The below rack-mountable panels accommodate pre-installed SpiderWeb Ribbon® (SWR®) LC pigtails and a host of unique features for a rapid installation where interconnection is required.



9RU

36 Adapter Plates
864 LC Ports
6 x 144f Splice Trays

6RU FVP

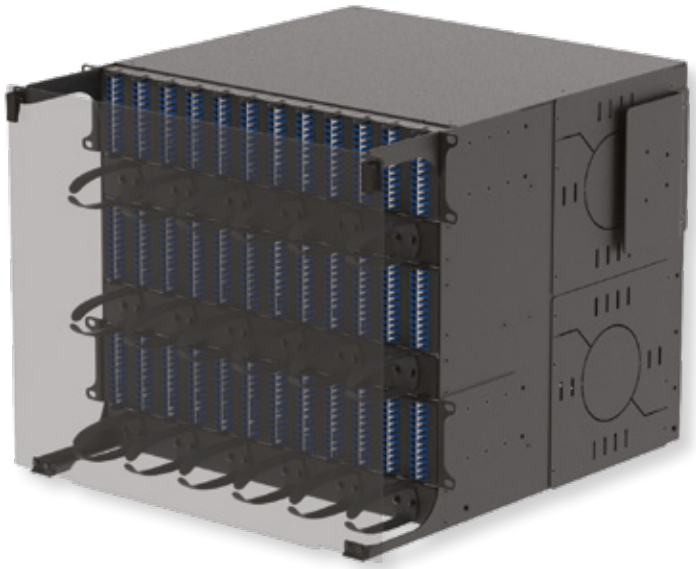
36 Cassettes
864 LC Ports
6 x 144f Splice Trays

2RU FVP

12 Cassettes
288 LC Ports
1 x 144f Splice Trays

U Series

9RU Splice and Patch Panel



The U-Series 9RU Splice and Patch Panel is a high-density, 19" profile rack-mountable fiber management solution that splices and patches in a 9RU cabinet space. Ribbon cabling splicing is possible via a rear positioned hinge down panel that is supplied with a latching feature for both open and closed positions. Shuttered LC adapter plates (for 432 LC duplex connectors or 864 LC simplex connectors) on the front of the panel improve space management and allow for smooth patching and easy LC/SC port access.

6 splice trays accommodate both SWR® ribbon cable as well as traditional ribbon cable with each splice tray having the capacity to splice up to 144 fibers. Integrated mounting points for cable transitions ensure appropriate management of breakout from cable to splicing area. A traditional leaf-style splice tray stack provides fully managed fiber routing from transition to the splice tray whilst minimizing the risk of bend losses.

Technical Specifications

Dimensions
524mm (W) x 521mm (D) x 400mm (H)

Material
CR4 Steel
Aluminum

Operating temperature
-20°C to +50°C

Maximum fiber count
864f (LC)
432f (SC)

Material coating
Powder

Materials compliant to
RoHS, Reach / SVHC

Cable entry
Left and right

Color
Black

Ordering Information

Part Number	Description Characteristic
F7HAAFBPAX-06AL	AFL Hyperscale U-Series 864F 9RU Splice+Patch Panel Low Loss LC SM G.657A1 Ribbon Pigtails
F7HAARBPDX-06AL	AFL Hyperscale U-Series 432F 9RU Splice+Patch Panel Low Loss SC SM G.657A1 Ribbon Pigtails
F7HAAFBPBX-06AL	AFL Hyperscale U-Series 864F 9RU Splice+Patch Panel Low Loss LC/APC SM G.657A1 Ribbon Pigtails

View Product Datasheet

Series

6RU Front-Access V-Panel (FVP)

The 6RU Front-Access V-Panel (FVP) facilitates ergonomic, modular, and simultaneous cold aisle front-access splicing and patching of up to 864 fibers utilizing SpiderWeb Ribbon® (SWR®) Technology.

The one-person 19" rack-mountable unit is easy to work with and both sturdy and lightweight. 3 slide-out modular drawers are dismounted from the panel and spliced in simultaneously providing a fast, efficient, and more comfortable cold aisle installation. Slack allows for simultaneous splicing to take place on a workbench at a safe working height.

A V-shaped design provides easy finger access and LC quad shuttered adapters help prevent the ingress of dust or debris whilst additionally providing laser eye safety.

Technical Specifications

Dimensions
513mm (W) x 565mm (D) x 255mm (H)

Material
CR4 Steel
Aluminum

Operating temperature
-20°C to +50°C

Maximum fiber count
864f (LC)

Material coating
Powder

Materials compliant to
RoHS, Reach / SVHC

Cable entry
Left, right, top, and bottom

Color
Black

Ordering Information

Part Number	Description Characteristic
F7HAAFBPAX-09AM	AFL Hyperscale U-Series 864F 6RU Splice+Patch FVP Panel Low Loss LC SM G.657A1 SWR Pigtails
A7UD24BPAX-14JF-M4	AFL Hyperscale U-Series 24F FVP Splice Cassette Low Loss LC SM G.657A1 Stub LSZH SWR MC 4M
FXSEXXBXXX-13ZZ	AFL Hyperscale U-Series FVP Breakout Box for 3456f cable
FXSEXXBXXX-14ZZ	AFL Hyperscale U-Series FVP Breakout Box for 6912f cable

View Product Datasheet

Series

2RU Front-Access V-Panel (FVP)

The U-Series 2RU Front-Access V-Panel (FVP) facilitates rapid, cold-aisle, front-access splicing and patching of up to 288 fibers utilizing SpiderWeb Ribbon® (SWR®) Technology to pre-loaded, high-performance SWR LC pigtails.

The one-person rack-mountable unit is easy to work with and both lightweight and sturdy. A slide-out modular drawer is dismounted from the panel so splicing can take place on a workbench at a safe working height. Its V-shaped design provides easy finger access and LC quad shuttered adapters help prevent the ingress of dust or debris whilst additionally providing laser eye safety.

Technical Specifications

Dimensions
482mm (W) x 559mm (D) x 88mm (H)

Material
CR4 Steel
Aluminum

Operating temperature
-20°C to +50°C

Maximum fiber count
288f

Material coating
Powder

Materials Compliant to
RoHS, Reach / SVHC

Cable entry
Left or right

Color
Black

Ordering Information

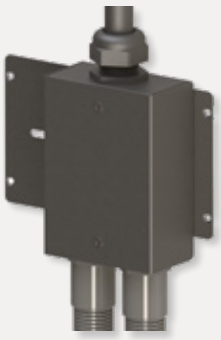
Part Number	Description Characteristic
F7HAADBPAX-10AM	U-Series High Capacity 2U Front Access V Patch Panel Black Premium LC G.657A1 288F (SWR Pigtails)
A7UD24BPAX-14JF-M4	U-Series FVP 24f Pigtail Cassette with Premium LCSM G.657A1 24F 4m Stub 3.0mm OD

View Product Datasheet

External Network Interface (ENI)

Breakout Boxes
Overview

AFL Hyperscale have a range of easy to install breakout boxes designed to land high-core-count SpiderWeb Ribbon (SWR) cables and distribute them to multiple splice and patch panels.



1728f

SWR Breakout Box
1728 fiber count

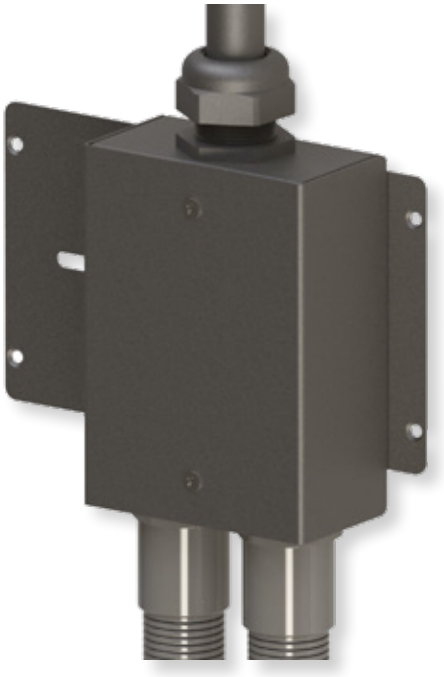
3456f

Breakout Box
3456 fiber count

6912f

Breakout Box
6912 fiber count

1728f SWR® Cable Breakout Box



This cable Breakout Box is an accessory kit designed to be used on two or more stackable HCF-005, our 6U Mass Fusion Splice and Patch Cabinets. It can be fitted onto the side of HCF-005 with a mounting plate included.

It allows the splitting of a high fiber count SWR cable of 1728f into 2x 864f cables. The 1728f cable can be fitted into a M32 Compression Gland secured with a nut and held by a Hose Clip inside the robust metal Breakout Box which protect the split fibers. The 2x 864f cables will exit the Breakout Box via the 2x Ø32mm Compress Gland secured with nuts. These 2x 864f cables will be protected by a Ø32mm Conduit all the way into the HCF-005 cabinets' splicing trays.

Technical Specifications

Dimensions
145mm (H) x 105mm (W) x 57.5mm (D)

Material
Cold roll steel (CR4)

Operating temperature
-40°C to +60°C

Maximum fiber count
1728f

Material coating
Powder coating

Compliant to
RoHS, Reach / SVHC

Cable entry
16-21mm

Color
Black

Ordering Information

Part Number	Description Characteristic
AFLHS-HCF-BB-1728	1728F High Fiber Count SWR Breakout Box

View Product Datasheet

U Series

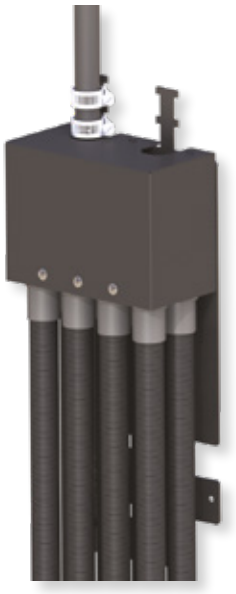
3456f & 6912f
Breakout Box

Breakout boxes designed to land 3456f / 6912f high-core-count SpiderWeb Ribbon® (SWR®) cables and distribute them to multiple splice and patch panels.

Their primary function is to ensure robust engagement with the cable and the safe transition to multiple panels, each of which will house 864 fibers.

3456f / 6912f breakout boxes are designed to be used with the 6RU Front-Access V-Panel (FVP).

3456f



6912f

Technical Specifications

Dimensions

3456f: 210mm (W) x 60.5mm (D) x 538.5mm (H)
6912f: 210mm (W) x 110.5mm (D) x 538.5mm (H)

Material

CR4 Steel

Operating temperature

-40°C to +60°C

Maximum fiber count

3456f and 6912f

Material coating

Powder

Materials compliant to

RoHS, Reach / SVHC

Cable entry

3456f up to Ø30mm,
6912f up to Ø34mm

Color

Black

Ordering Information

Part Number	Description Characteristic
FXSEXXBXXX-13ZZ	AFL Hyperscale U-Series FVP Breakout Box for 3456f cable
FXSEXXBXXX-14ZZ	AFL Hyperscale U-Series FVP Breakout Box for 6912f cable
F7HAAFBPAX-09AM	AFL Hyperscale U-Series 864F 6RU Splice+Patch FVP Panel Low Loss LC SM G.657A1 SWR Pigtails
A7UD24BPAX-14JF-M4	AFL Hyperscale U-Series 24F FVP Splice Cassette Low Loss LC SM G.657A1 Stub LSZH SWR MC 4M

View 3456f Datasheet

View 6912f Datasheet

3

Main Distribution Area (MDA)

The Main Distribution Area (MDA) is the central point of distribution for the data center's structured cabling system and is where horizontal cabling cross-connects to active equipment (switches, servers, and storage) or to the customer area.

The AFL Hyperscale Ultra-High Fiber Count Solution encompasses high-density solutions that reduce the footprint of the MDA, maximizing space utilization, simplifying moves, adds, and changes, and reducing the time required to bring customers online.

Main Distribution Area (MDA)

Open Optical Distribution Frame (OODF) Overview

The Open Optical Distribution Frame (OODF) is a unique, high-density distribution frame designed to accommodate up to 3,456 fibers. Thanks to its horizontal management troughs and ability to be bayed side-by-side or back-to-back, it facilitates the distribution of patch cords within a cluster of frames without the need for traditional overhead routing.

3456f

Open Optical Distribution Frame (OODF)

Open Optical Distribution Frame (OODF)

The Open Optical Distribution Frame (OODF) is a unique, high-density distribution frame designed to accommodate up to 3456 fibers. Thanks to its horizontal management troughs and ability to be bayed side-by-side or back-to-back, it facilitates the distribution of patch cords within a cluster of frames without the need for traditional overhead routing.

Integrated slack management allows standardized patch cord lengths to route between adjacent frames and each frame features a 19" profile which holds an array of modular panels to accommodate splicing, pre-terminated modules, MPO connectivity, and pass-through applications.

The OODF is the ideal building block for the future growth of high-density networks, where space optimization and fiber density are critical.

Technical Specifications

Dimensions
2200mm (H) 900mm (W) x 300mm (D)

Material
Cold rolled steel

Operating temperature
-40°C to +50°C

Maximum fiber count
Based on 2.0mm uniboot patch cord: 3456f

Material coating
Powder coating

Compliant to
RoHS, Reach / SVHC

Cable entry
Left and right

Color
Black

Ordering Information

Part Number	Description Characteristic
FXDAXXBXXX-03ZZ	AFL Hyperscale 19" Fixed Frame ODF 36RU LH With Integrated Management and Through
FXDAXXBXXX-04ZZ	AFL Hyperscale 19" Fixed Frame ODF 36RU RH With Integrated Management and Through

Main Distribution Area (MDA)

Housings and Panels Overview

6RU FVP

36 Cassettes
864 LC Ports
6 x 144f Splice Trays

7RU

576f (LC)
1728f (12-fiber MPO)
3456f (24-fiber MPO)

4RU

576F (LC)
3,456F (MPO)
12 Trays

2RU FVP

12 Cassettes
288 LC Ports
1 x 144f Splice Trays

U Series

6RU Front-Access V-Panel (FVP)

The 6RU Front-Access V-Panel (FVP) facilitates ergonomic, modular, and simultaneous cold aisle front-access splicing and patching of up to 864 fibers utilizing SpiderWeb Ribbon® (SWR®) Technology.

The one-person 19" rack-mountable unit is easy to work with and both sturdy and lightweight. 3 slide-out modular drawers are dismounted from the panel and spliced in simultaneously providing a fast, efficient, and more comfortable cold aisle installation. Slack allows for simultaneous splicing to take place on a workbench at a safe working height.

A V-shaped design provides easy finger access and LC quad shuttered adapters help prevent the ingress of dust or debris whilst additionally providing laser eye safety.

Technical Specifications

Dimensions
513mm (W) x 565mm (D) x 255mm (H)

Material
CR4 Steel
Aluminum

Operating temperature
-20°C to +50°C

Maximum fiber count
864f (LC)

Material coating
Powder

Materials compliant to
RoHS, Reach / SVHC

Cable entry
Left, right, top, and bottom

Color
Black

Ordering Information

Part Number	Description Characteristic
F7HAAFBPAX-09AM	AFL Hyperscale U-Series 864F 6RU Splice+Patch FVP Panel Low Loss LC SM G.657A1 SWR Pigtails
A7UD24BPAX-14JF-M4	AFL Hyperscale U-Series 24F FVP Splice Cassette Low Loss LC SM G.657A1 Stub LSZH SWR MC 4M
FXSEXXBXXX-13ZZ	AFL Hyperscale U-Series FVP Breakout Box for 3456f cable
FXSEXXBXXX-14ZZ	AFL Hyperscale U-Series FVP Breakout Box for 6912f cable

View Product Datasheet

Series

7RU
Housing

Features and Benefits

- 7RU housing can accommodate 24 H-Series cassettes and a total of 576 LC ports
- Available unloaded allowing you to add cassettes as your network grows
- Housing is robust but made out of lightweight aluminum alloy, enabling one-person installation
- Slim-depth housing is ideal for shallow rack environments
- Easy access makes adding, removing, or swapping cassettes simple and straightforward

Contact us to find out more about how to accommodate high-density MPO solutions

Technical Specifications

Dimensions
308mm (H) 438.6mm (W) x 260mm (D)

Material
Aluminum alloy

Color
Black

Maximum fiber count
576f (LC), 1728f (12-fiber MPO), 3456f (24-fiber MPO)

Material thickness
1.5mm

Operating temperature
-20°c + 50°c

Cable entry
Left and right

Material coating
Powder

Compliant to
RoHS, Reach, SVHC

Ordering Information

Part Number	Description Characteristic
FXHEXXBXXX-03ZZ	AFL Hyperscale H-Series 7RU Slim Depth for 24 Cassette

View Product Datasheet

ASCEND

4RU Fiber Housing

Features and Benefits

- High-density: 4RU / 576F (LC) 3456F (MPO) - 12 trays per housing
- Designed for 19" rack, optional 23" rack mount kit available
- Galvannealed steel construction
- Hinged front and rear doors and removable back cover
- BASE-8, BASE-12, and BASE-24 compatibility
- Interchangeable cassette options for multiple applications
- Cassettes install independently from front or rear of housing
- Trunk cable management area accommodates ASCEND® trunk cable assemblies equipped with integrated cable mounting clip
- Compatible with all ASCEND cassettes

Technical Specifications

Dimensions
176.5 x 444.5 x 500 mm
7.0 x 17.50 x 19.7 in.

Weight
15.5 kg
34.2 lb

Fiber Density
576F (LC)
3,456F (MPO)
12 Trays

Material
Metal Components: 16 GA Steel per ASTM A366
Plastic Components: UL 94 V-2 minimum

Cassette Capacity
72 x BASE-8 Cassettes (6 per tray)
48 x BASE-12 Cassettes (4 per tray)
24 x BASE-24 Cassettes (2 per tray)

Color
Blue

Ordering Information

Part Number	Description Characteristic
FXZZXXEXXX-03Z1	AFL Hyperscale ASCEND 4RU Housing BASE8 Cassette Trays Blue
FXZZXXEXXX-03Z2	AFL Hyperscale ASCEND 4RU Housing BASE12 Cassette Trays Blue

View Product Datasheet

Series

2RU Front-Access V-Panel (FVP)

The U-Series 2RU Front-Access V-Panel (FVP) facilitates rapid, cold-aisle, front-access splicing and patching of up to 288 fibers utilizing SpiderWeb Ribbon® (SWR®) Technology to pre-loaded, high-performance SWR LC pigtails.

The one-person rack-mountable unit is easy to work with and both lightweight and sturdy. A slide-out modular drawer is dismounted from the panel so splicing can take place on a workbench at a safe working height. Its V-shaped design provides easy finger access and LC quad shuttered adapters help prevent the ingress of dust or debris whilst additionally providing laser eye safety.

Technical Specifications

Dimensions
482mm (W) x 559mm (D) x 88mm (H)

Material
CR4 Steel
Aluminum

Operating temperature
-20°C to +50°C

Maximum fiber count
288f

Material coating
Powder

Materials Compliant to
RoHS, Reach / SVHC

Cable entry
Left or right

Color
Black

Ordering Information

Part Number	Description Characteristic
F7HAADBPAX-10AM	U-Series High Capacity 2U Front Access V Patch Panel Black Premium LC G.657A1 288F (SWR Pigtails)
A7UD24BPAX-14JF-M4	U-Series FVP 24f Pigtail Cassette with Premium LCSM G.657A1 24F 4m Stub 3.0mm OD

View Product Datasheet

Main Distribution Area (MDA)

Cassette
Overview

MPO Cassette BASE-24

Pre-Terminated Cassette

24f LC Ribbon/ Single Splice Cassette

Pass-Through Cassette

Patch Cassette
BASE-8 / BASE-12

Series

MPO Cassettes
BASE-12/BASE-24

With a compact footprint, U-Series MPO Cassettes provide scalability for high-density fiber optic infrastructure whilst enabling fast, plug-and-play installation.

With a range of rear loading MPO connector options, fiber types, and front-facing single form factor connections available, U-Series MPO cassettes can be quickly loaded into U-Series housings and quickly disconnected or reconfigured for Moves, Adds, and Changes.

Available in a range of polarities

- Available 12 or 24 fiber, OM3/OM4/single-mode
- 12 or 24 fiber MPO connectors
- Front presentation for 24 LC UPC or APC connections
- Front presentation for 12 SC UPC or APC connections

Technical Specifications

Dimensions
30mm (W) x 160mm (D) x 84.50mm (H)

Material
ABS
CR4 Steel

Storage temperature
-20°C to +60°C

Fiber count
12f (LC/SC)
24f (LC)
24f (MPO)

Color
Black

Materials compliant to
RoHS, Reach / SVHC

Fiber types
SM 9/125 G.657A1, MM 50/125 OM3/OM4

Operating temperature
-20°C to +60°C

Ordering Information

Part Number	Description Characteristic
A4UD12BPVA-05DA	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 12F (M12 Pol A/C)
A4UD12BPVA-05DB	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 12F (M12 Pol B1)
A4UD12BPVA-05DC	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 12F (M12 Pol B2)
A4UD12BPVA-05DD	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 12F (M12 Pol B Uni)
A7UD24BPVA-05DA	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC SM G.657A1 BK 24F (M12 Pol A/C)
A7UD24BPVB-05DA	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LCA SM G.657A1 BK 24F (M12 Pol A/C)
A4UD24BPVB-05DA	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LCA MM OM4 BK 24F (M12 Pol A/C)
A4UD24BPVA-05DB	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 24F (M12 Pol B1)
A4UD24BPVA-05DC	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 24F (M12 Pol B2)
A4UD24BPVA-05DD	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 24F (M12 Pol B Uni)
A7UD24BPVA-05DF	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC SM G.657A1 BK 24F (M24 Variant 1)
A7UD24BPVB-05DF	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LCA SM G.657A1 BK 24F (M24 Variant 1)
A4UD24BPVA-05DF	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 24F (M24 Variant 1)

View Product Datasheet

U Series

Pre-Terminated Cassette

U-Series Pre-Terminated Cassettes bring convenience and flexibility to your network. The convenience of a pre-terminated U-Series cassette means fewer links in your network, resulting in higher performance, faster speeds, and rapid installation.

Simply specify the fiber type, adapters required, cable construction and length, and then select your assembly for the opposite end. Out of the box, a fiber network has never been so convenient and fast to deploy.

U-Series Pre-Terminated Cassettes are the ideal solution for hosting pre-terminated cable assemblies, as well as improving installation speeds, and power budgets, and cost efficiency when compared with traditional modular MPO systems. Assemblies can be pre-installed inside the cassette and supplied to the installation site for instant deployment. Alternatively, pre-terminated cables can be fitted inside cassette post-installation in the field, if required. With many different configurations available, U-Series cassettes are compatible with 2RU, 1RU, and 0RU U-Series housings.

Technical Specifications

Dimensions
30mm (W) x 155mm (D) x 83mm (H)

Assembly tail options
2mm ruggedized
3mm
900µm*

Operating temperature
-20°C to +60°C

Fiber count
12f (LC/SC)
24f (LC)
24f (MPO)

Material
ABS
CR4 Steel

Storage temperature
-20°C to +60°C

Fiber types
SM 9/125 G.657A1,
MM 50/125 OM3/OM4

Color
Gray

Materials compliant to
RoHS, Reach / SVHC

*More sizes and connector options available. Contact your local sales office for more information.

Ordering Information

Contact us for part number details

View Product Datasheet

H Series

24f LC Ribbon/Single Splice Cassette

The H-Series 24f LC Ribbon Splice Cassette and H-Series 24f LC Single Splice Cassette offer a splicing platform for both loose fiber cable and SpiderWeb Ribbon® (SWR®) cable or traditional ribbon cable types.

Available in both tight buffer single strand pigtail and ribbon pigtail options (single fiber pigtail 900µm or ribbon 250µm), the cassettes provide internal fiber management, enabling the presentation of 24 fibers in an LC (UPC or APC) format.

The design of the cassettes allows them to be easily handled and for splice work to take place in a convenient position away from the destination rack position whilst providing effective segregation of inbound and outgoing fibers in a small footprint.

Mass-fusion splicing the H-Series 24f LC Ribbon Splice Cassette offers substantial reductions in installation times and cost whilst also maximizing the number of connections in high-density environments where space is at a premium.

Features and Benefits

- Pre-loaded pigtails reduce on-site installation time
- Cassette is wider than many other cassettes on the market, facilitating easier splicing/fiber routing
- Slim cassette with single row adapter design allows easy access
- Available in tight buffer single strand pigtail and ribbon pigtail options
- Available in single-mode and multimode fiber types
- Gland fit for 2.5-6mm diameter cable

Technical Specifications

Dimensions
17mm (H) x 216.5mm (W) x 174mm (D)

Material thickness
1.2mm

Operating temperature
-20°c + 50°c

Maximum fiber count
24f

Material coating
Powder

Compliant to
RoHS, Reach, SVHC

Material
Aluminum alloy

Color
Black

Ordering Information

Part Number	Description Characteristic
A7HG24BPAX-02AL	AFL Hyperscale H-Series 24F Splice Cassette Low Loss LC SM G.657A1 BK Ribbon Pigtails
A4HG24BPAX-02AL	AFL Hyperscale H-Series 24F Splice Cassette Low Loss LC MM OM4 BK Ribbon Pigtails
A4HG24BPAX-02AJ	AFL Hyperscale H-Series 24F Splice Cassette Low Loss LC MM OM4 BK TB Pigtails
A7HG24BPAX-02AJ	AFL Hyperscale H-Series 24F Splice Cassette Low Loss LC SM G.657A1 BK TB Pigtails

View Product Datasheet

H Series

Pass-Through Cassette

The H-Series Pass-Through Cassette features internal fiber management and a snap-fit system that allows the user to secure and store 24f LC pre-terminated cable across a range of fiber types, both single-mode and multimode.

The front of the cassette features a single entry point for inbound 24f LC pre-terminated cable as well as a single row of LC adapters for patching across different units. Its detachable design allows it to be easily handled and for splicing to take place away from the final rack position, easing installation.

Features and Benefits

- LC pass-through cable solution with no splicing work required
- Lower insertion losses vs. MPO-LC cassette
- Slim cassette with single row adapter design allows easy access
- Available in single-mode and multimode fiber types
- Best paired with AFL Hyperscale pre-terminated cable with 24 x 600µm breakout kit in 600µm 360mm tails

Technical Specifications

Dimensions
17mm (H) x 216.5mm (W) x 174mm (D)

Material thickness
1.2mm

Operating temperature
-20°c + 50°c

Maximum fiber count
24f

Material coating
Powder

Compliant to
RoHS, Reach, SVHC

Material
Aluminum alloy

Color
Black

Ordering Information

Part Number	Description Characteristic
ASHG24BXAX-03AD	AFL Hyperscale H-Series 24F Pass Through Cassette LC SM Adaptors Black
AMHG24BXAX-03AD	AFL Hyperscale H-Series 24F Pass Through Cassette LC MM Adaptors Black

View Product Datasheet

ASCEND

Patch Cassettes

ASCEND® Patch Cassettes are pre-loaded with MPO adapters or VFL-compatible shuttered LC adapters. Available in BASE-8 and BASE-12 configurations, patch cassettes install easily from the front or rear of any standard ASCEND housing. Each cassette independently mounts onto a sliding tray which allows access to individual connections while minimizing disruption to other fiber connections.

MPO patch cassettes are most frequently used when mating MPO trunk cables to extender trunks or to trunk harnesses, and when connecting MPO trunk cables to MPO jumpers using QSFP (Quad Small Form-Factor Pluggable) transceivers. LC patch cassettes are used to connect one duplex LC cable assembly to another. This is a convenient, plug-and-play solution when you need to introduce a small number of fibers to the network at various times.

Features and Benefits

- Plug-and-play
- BASE-8 and BASE-12 tray configurations only
- Install independently from front or rear of housing
- Compatible with all ASCEND housings
- Standard Duplex MPO or VFL-compatible shuttered Quad LC adapter

Ordering Information

Part Number	Description Characteristic
A7ZZ08BXAX-02AD	AFL Hyperscale ASCEND 8F Patch Cassette LC SM G.657A1 Adaptors
A7ZZ08BPBX-02AD	AFL Hyperscale ASCEND 8F Patch Cassette Low Loss LCA SM G.657A1 Adaptors
A3ZZ08BPAX-02AD	AFL Hyperscale ASCEND 8F Patch Cassette Low Loss LC MM OM3 Adaptors
A4ZZ08BPAX-02AD	AFL Hyperscale ASCEND 8F Patch Cassette Low Loss LC MM OM4 Adaptors
APZZ48BXUX-02Z4	AFL Hyperscale ASCEND 48F Patch Cassette MPO F Key Up Key Down BASE8 Adapters
A7ZZ12BXAX-02AD	AFL Hyperscale ASCEND 12F Patch Cassette LC SM G.657A1 Adaptors
A7ZZ12BPBX-02AD	AFL Hyperscale ASCEND 12F Patch Cassette Low Loss LCA SM G.657A1 Adaptors
A3ZZ12BPAX-02AD	AFL Hyperscale ASCEND 12F Patch Cassette Low Loss LC MM OM3 Adaptors
A4ZZ12BPAX-02AD	AFL Hyperscale ASCEND 12F Patch Cassette Low Loss LC MM OM4 Adaptors
APZZ72BXUX-02Z5	AFL Hyperscale ASCEND 72F Patch Cassette MPO F Key Up Key Down BASE12 Adapters

View Product Datasheet

4

Intermediate Distribution Frame (IDF)

An Intermediate Distribution Frame (IDF) is a distribution frame in a data center that interconnects and manages the cabling between the MDA and the Local Distribution Point (LDP). A multi-story data center may use an IDF as a cable distributor to each floor.

Intermediate Distribution Frame (IDF) Overview

The Intermediate Distribution Frame (IDF) offers a solution for the mass splicing and routing of high-density cables for presentation and distribution to multiple customer areas within a data center. The frame, in combination with the snap-fit breakout box, facilitates the landing of high-core-count SpiderWeb Ribbon® Wrapping Tube Cable (WTC) into a 24f (single or ribbon) cassette that can be presented to splice pass-through or pre-terminated splice cassettes.

Intermediate Distribution Frame (IDF)

Intermediate Distribution Frame (IDF)

The AFL Hyperscale Intermediate Distribution Frame (IDF) offers a solution for the mass splicing and routing of high-density cables for presentation and distribution to multiple customer areas within a data center. The frame, in combination with the snap-fit breakout box, facilitates the landing of high-core-count Wrapping Tube Cable (WTC) (up to 1728 fibers) into 24-fiber segments that can be presented to splice pass-through or pre-terminated splice cassettes.

The IDF features a scalable design, capable of presenting and distributing a large number of fibers that can be locked and stored in shallow-depth environments.

Technical Specifications

Dimensions
2200mm (H) 900mm (W) x 300mm (D)

Material
Cold rolled steel

Operating temperature
-40°C to +50°C

Maximum fiber count
5760f

Material coating
Powder coating

Compliant to
RoHS, Reach / SVHC

Cable entry
Left and right

Color
Black

Ordering Information

Part Number	Description Characteristic
FXDAXXBXXX-05ZZ	19” Fixed Frame ODF Intermediate Distribution Frame 900mm LH/RH Black

Intermediate Distribution Frame (IDF)

Housings and Panels Overview

2RU

12 Cassettes
288 LC Ports
144 SC Ports

6RU FVP

36 Cassettes
864 LC Ports
6 x 144f Splice Trays

7RU

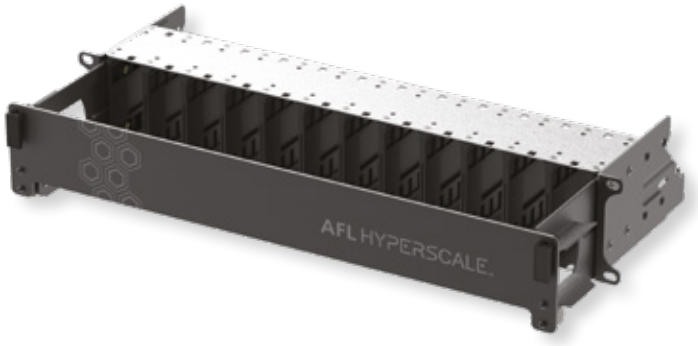
576f (LC)
1728f (12-fiber MPO)
3456f (24-fiber MPO)

4RU

576F (LC)
3,456F (MPO)
12 Trays

U Series

2RU Housing



The U-Series 2RU Housing can house up to 12 U-Series cassettes with the capacity to scale up to 288 LC ports and 2304 fibers using an MPO interface.

Compact to facilitate installation in shallow-depth racks, it allows for front and rear cassette installation and is compatible with U-Series MPO, pre-terminated, and splice cassettes.

Technical Specifications

Dimensions
484mm (W) x 139mm (D) x 88mm (H)

Material
CR4 Steel
Aluminum
ABS

Operating temperature
-20°C to +50°C

Maximum fiber count
144f (LC/SC)
288f (LC)
3456f (MPO)

Material coating
Powder

Materials compliant to
RoHS, Reach / SVHC

Cable entry
Left and right

Color
Black

Ordering Information

Part Number	Description Characteristic
FXUCXXBXXX-02BG	AFL Hyperscale U-Series 2RU Housing 12 Cassettes Front Door ONLY Black
FXUCXXBXXX-03ZZ	AFL Hyperscale U-Series 2RU Housing Rear Mgt Black

View Product Datasheet

Series

6RU Front-Access V-Panel (FVP)

The 6RU Front-Access V-Panel (FVP) facilitates ergonomic, modular, and simultaneous cold aisle front-access splicing and patching of up to 864 fibers utilizing SpiderWeb Ribbon® (SWR®) Technology.

The one-person 19" rack-mountable unit is easy to work with and both sturdy and lightweight. 3 slide-out modular drawers are dismounted from the panel and spliced in simultaneously providing a fast, efficient, and more comfortable cold aisle installation. Slack allows for simultaneous splicing to take place on a workbench at a safe working height.

A V-shaped design provides easy finger access and LC quad shuttered adapters help prevent the ingress of dust or debris whilst additionally providing laser eye safety.

Technical Specifications

Dimensions
513mm (W) x 565mm (D) x 255mm (H)

Material
CR4 Steel
Aluminum

Operating temperature
-20°C to +50°C

Maximum fiber count
864f (LC)

Material coating
Powder

Materials compliant to
RoHS, Reach / SVHC

Cable entry
Left, right, top, and bottom

Color
Black

Ordering Information

Part Number	Description Characteristic
F7HAAFBPAX-09AM	AFL Hyperscale U-Series 864F 6RU Splice+Patch FVP Panel Low Loss LC SM G.657A1 SWR Pigtails
A7UD24BPAX-14JF-M4	AFL Hyperscale U-Series 24F FVP Splice Cassette Low Loss LC SM G.657A1 Stub LSZH SWR MC 4M
FXSEXXBXXX-13ZZ	AFL Hyperscale U-Series FVP Breakout Box for 3456f cable
FXSEXXBXXX-14ZZ	AFL Hyperscale U-Series FVP Breakout Box for 6912f cable

View Product Datasheet

H Series

7RU Housing

Features and Benefits

- 7RU housing can accommodate 24 H-Series cassettes and a total of 576 LC ports
- Available unloaded allowing you to add cassettes as your network grows
- Housing is robust but made out of lightweight aluminum alloy, enabling one-person installation
- Slim-depth housing is ideal for shallow rack environments
- Easy access makes adding, removing, or swapping cassettes simple and straightforward

Contact us to find out more about how to accommodate high-density MPO solutions

Technical Specifications

Dimensions
308mm (H) 438.6mm (W) x 260mm (D)

Material
Aluminum alloy

Color
Black

Maximum fiber count
576f (LC), 1728f (12-fiber MPO), 3456f (24-fiber MPO)

Material thickness
1.5mm

Operating temperature
-20°c + 50°c

Cable entry
Left and right

Material coating
Powder

Compliant to
RoHS, Reach, SVHC

Ordering Information

Part Number	Description Characteristic
FXHEXXBXXX-03ZZ	AFL Hyperscale H-Series 7RU Slim Depth for 24 Cassette

View Product Datasheet

ASCEND

4RU Fiber Housing

Features and Benefits

- High-density: 4RU / 576F (LC) 3456F (MPO) - 12 trays per housing
- Designed for 19" rack, optional 23" rack mount kit available
- Galvannealed steel construction
- Hinged front and rear doors and removable back cover
- BASE-8, BASE-12, and BASE-24 compatibility
- Interchangeable cassette options for multiple applications
- Cassettes install independently from front or rear of housing
- Trunk cable management area accommodates ASCEND® trunk cable assemblies equipped with integrated cable mounting clip
- Compatible with all ASCEND cassettes

Technical Specifications

Dimensions

176.5 x 444.5 x 500 mm
7.0 x 17.50 x 19.7 in.

Weight

15.5 kg
34.2 lb

Fiber Density

576F (LC)
3,456F (MPO)
12 Trays

Material

Metal Components: 16 GA Steel per ASTM A366
Plastic Components: UL 94 V-2 minimum

Cassette Capacity

72 x BASE-8 Cassettes (6 per tray)
48 x BASE-12 Cassettes (4 per tray)
24 x BASE-24 Cassettes (2 per tray)

Color

Blue

Ordering Information

Part Number	Description Characteristic
FXZZXXEXXX-03Z1	AFL Hyperscale ASCEND 4RU Housing BASE8 Cassette Trays Blue
FXZZXXEXXX-03Z2	AFL Hyperscale ASCEND 4RU Housing BASE12 Cassette Trays Blue

View Product Datasheet

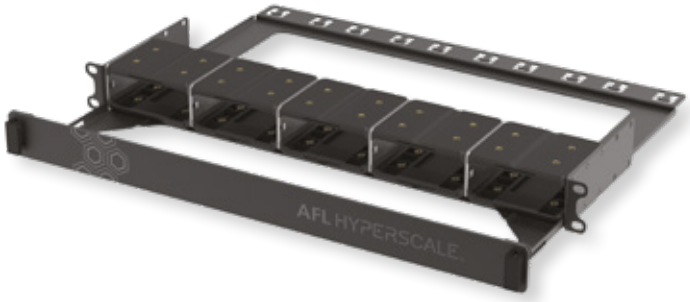
5

Horizontal Cabling

The MDA connections out to the LDP and equipment cabinets are referred to as horizontal cabling. When designing these links, consideration must be given to the flexibility required for the infrastructure over its lifetime.

Series

1RU Housing



The U-Series 1RU Housing can house up to 5 U-Series cassettes with the capacity to scale up to 120 LC ports and 960 fibers using an MPO interface.

Compact to facilitate installation in shallow-depth racks, it allows for front and rear cassette installation and is compatible with U-Series MPO, pre-terminated, and splice cassettes.

Technical Specifications

Dimensions
479mm (W) x 226mm (D) x 44.4mm (H)

Material
CR4 Steel
Aluminum
ABS

Operating temperature
-20°C to +50°C

Maximum fiber count
60f (LC/SC)
120f (LC)
960f (MPO)

Material coating
Powder

Materials compliant to
RoHS, Reach / SVHC

Cable entry
Left and right

Color
Black

Ordering Information

Part Number	Description Characteristic
FXUCXXBXXX-01BH	AFL Hyperscale U-Series 1RU Housing 5 Cassettes Front Door+Rear Mgt Black
FXUCXXBXXX-01BK	AFL Hyperscale U-Series 1RU Housing 5 Cassettes Rear Mgt+No door Black

View Product Datasheet

Series

MPO Cassettes
BASE-12/BASE-24

With a compact footprint, U-Series MPO Cassettes provide scalability for high-density fiber optic infrastructure whilst enabling fast, plug-and-play installation.

With a range of rear loading MPO connector options, fiber types, and front-facing single form factor connections available, U-Series MPO cassettes can be quickly loaded into U-Series housings and quickly disconnected or reconfigured for Moves, Adds, and Changes.

Available in a range of polarities

- Available 12 or 24 fiber, OM3/OM4/single-mode
- 12 or 24 fiber MPO connectors
- Front presentation for 24 LC UPC or APC connections
- Front presentation for 12 SC UPC or APC connections

Technical Specifications

Dimensions
30mm (W) x 160mm (D) x 84.50mm (H)

Material
ABS
CR4 Steel

Storage temperature
-20°C to +60°C

Fiber count
12f (LC/SC)
24f (LC)
24f (MPO)

Color
Black

Materials compliant to
RoHS, Reach / SVHC

Fiber types
SM 9/125 G.657A1, MM 50/125 OM3/OM4

Operating temperature
-20°C to +60°C

Ordering Information

Part Number	Description Characteristic
A4UD12BPVA-05DA	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 12F (M12 Pol A/C)
A4UD12BPVA-05DB	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 12F (M12 Pol B1)
A4UD12BPVA-05DC	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 12F (M12 Pol B2)
A4UD12BPVA-05DD	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 12F (M12 Pol B Uni)
A7UD24BPVA-05DA	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC SM G.657A1 BK 24F (M12 Pol A/C)
A7UD24BPVB-05DA	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LCA SM G.657A1 BK 24F (M12 Pol A/C)
A4UD24BPVB-05DA	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LCA MM OM4 BK 24F (M12 Pol A/C)
A4UD24BPVA-05DB	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 24F (M12 Pol B1)
A4UD24BPVA-05DC	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 24F (M12 Pol B2)
A4UD24BPVA-05DD	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 24F (M12 Pol B Uni)
A7UD24BPVA-05DF	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC SM G.657A1 BK 24F (M24 Variant 1)
A7UD24BPVB-05DF	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LCA SM G.657A1 BK 24F (M24 Variant 1)
A4UD24BPVA-05DF	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 24F (M24 Variant 1)

View Product Datasheet

Series

Pre-Terminated Cassette

U-Series Pre-Terminated Cassettes bring convenience and flexibility to your network. The convenience of a pre-terminated U-Series cassette means fewer links in your network, resulting in higher performance, faster speeds, and rapid installation.

Simply specify the fiber type, adapters required, cable construction and length, and then select your assembly for the opposite end. Out of the box, a fiber network has never been so convenient and fast to deploy.

U-Series Pre-Terminated Cassettes are the ideal solution for hosting pre-terminated cable assemblies, as well as improving installation speeds, and power budgets, and cost efficiency when compared with traditional modular MPO systems. Assemblies can be pre-installed inside the cassette and supplied to the installation site for instant deployment. Alternatively, pre-terminated cables can be fitted inside cassette post-installation in the field, if required. With many different configurations available, U-Series cassettes are compatible with 2RU, 1RU, and 0RU U-Series housings.

Technical Specifications

Dimensions
30mm (W) x 155mm (D) x 83mm (H)

Assembly tail options
2mm ruggedized
3mm
900µm*

Operating temperature
-20°C to +60°C

Fiber count
12f (LC/SC)
24f (LC)
24f (MPO)

Material
ABS
CR4 Steel

Storage temperature
-20°C to +60°C

Fiber types
SM 9/125 G.657A1,
MM 50/125 OM3/OM4

Color
Gray

Materials compliant to
RoHS, Reach / SVHC

*More sizes and connector options available. Contact your local sales office for more information.

Ordering Information

Contact us for part number details

View Product Datasheet

Series

MPO Loose Tube Trunk

- Available in OS1/2 G.657A1, OM1, OM2, OM3, OM4
- Up to 144 fiber core count
- Available with Multifiber MPO and discrete connectors
- 900 µm or 2 mm ruggedised tails
- Internal/External Application
- Factory terminated and tested
- Steel tape armored version available
- Hybrid MPO and Discrete Connector Interface AFL Hyperscale® LT can be used as high density multifiber MPO ruggedised trunk or ruggedised MPO to LC or SC fanouts.
- Tails Selection 2mm ruggedised tails can be used for a direct front panel or equipment connections whereas 900µm tails can be used for installation inside fiber management.
- Rapid Deployment Factory terminated cabling saves installation and reconfiguration time eliminating field deployment variables.
- Optimised Performance Low loss Premium MPO, discrete Premium connectors and OM4 fiber assures low insertion losses and power penalties in tight power budget high speed network environment.

Technical Specifications

Element	Characteristics
Fiber	OS1/OS2 G.657A1, OM1, OM2, OM3, OM4
Tail Dimensions	3 mm Tails
MPO Terminations	MPO 12-Fiber Ferrule Boot Color: Black Body Sleeve: MM (Beige), MM Premium (Aqua, Erika Violet for EV Cable), SM (Green), SM Premium (Yellow)
Cable Diameter	Single LT (Up to 24 Cores) OD MAX: 5.8-6.7 ± 0.3 mm, Multi LT (Up to 48 Cores) OD MAX: 13.7 ± 0.3 mm

Element	Characteristics
Crush Resistance	Single LT 1000 N/100 mm Multi LT 3000 N/100 mm
Cable Strength Member	Single LT - E-Glass Multi LT - FRP/E-Glass
Storage Temperature	-5 ~ +40°C
Installation Temperature	-20 ~ +60°C
Operating Temperature	-20 ~ +60°C
Pulling Element	RPS Reusable Sock

Connector Performance

Connector Mating	IL Average	IL Max	Return Loss
MPO Premium (MM)	0.10 dB	0.35 dB	NA
MPO Premium (SM)	0.10 dB	0.35 dB	>60 dB

Ordering Information

Code
M

Fiber Type	
1	OM1
2	OM2
3	OM3
4	OM4
9	G.652D
7	G.657A1

Fiber Count	
BQB	12F SLT
BQF	24F SLT
CBJ	48F MLT (5 element)
CGM	72F MLT (6 element)
CLP	96F MLT (8 element)
CQT	144F MLT (12 element)

Jacket Material	
L	LSZH
R	OFNR
P	OFNP
Y	PE

Code
8P

End A	
U	MPO F
V	MPO M

End B	
U	MPO F
V	MPO M
A	LC
B	LCA
C	LC Uniboot
D	SC
E	SCA
H	FC
J	FCA
K	ST
L	E2
M	E2A

Polarity	
-A	Polarity A
-B	Polarity B
-C	Polarity C
-L	Fanout 1 to A (Crossed)
-M	Fanout 1 to B (default)

Polarity	
027-	MPO Staggered Tails
035-	MPO to Simplex Staggered
047-	MPO to Uniboot Staggered Tails
088-	MPO to LC Reversible Uniboot Staggered Tails

Unit	
M	Meters
F	Feet

Length	
1	1
2	2
3	3
4	4
5	5
10	10
XX	Specify

View Product Datasheet

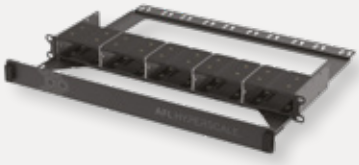
6

Local Distribution Point (LDP)

The AFL Hyperscale Ultra-High Fiber Count Solution helps you maximize density and future-proof your network infrastructure against growing bandwidth requirements in the network equipment area or customer cage.

Local Distribution Point (LDP)

Housing and Panels
Overview



1RU

5 Cassettes
120 LC Ports
60 SC Ports

0RU

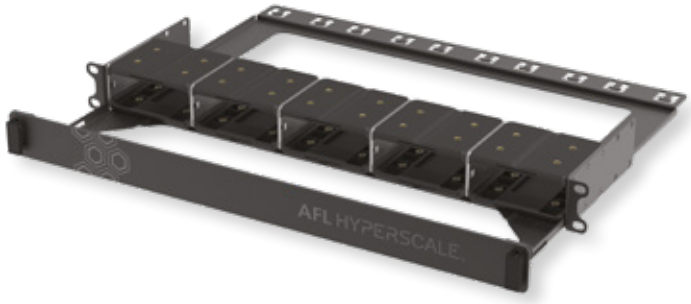
1 Cassette
24 LC Ports
12 SC Ports

2RU

288F (LC)
1,728F (MPO)
6 Trays

Series

1RU Housing



The U-Series 1RU Housing can house up to 5 U-Series cassettes with the capacity to scale up to 120 LC ports and 960 fibers using an MPO interface.

Compact to facilitate installation in shallow-depth racks, it allows for front and rear cassette installation and is compatible with U-Series MPO, pre-terminated, and splice cassettes.

Technical Specifications

Dimensions
479mm (W) x 226mm (D) x 44.4mm (H)

Material
CR4 Steel
Aluminum
ABS

Operating temperature
-20°C to +50°C

Maximum fiber count
60f (LC/SC)
120f (LC)
960f (MPO)

Material coating
Powder

Materials compliant to
RoHS, Reach / SVHC

Cable entry
Left and right

Color
Black

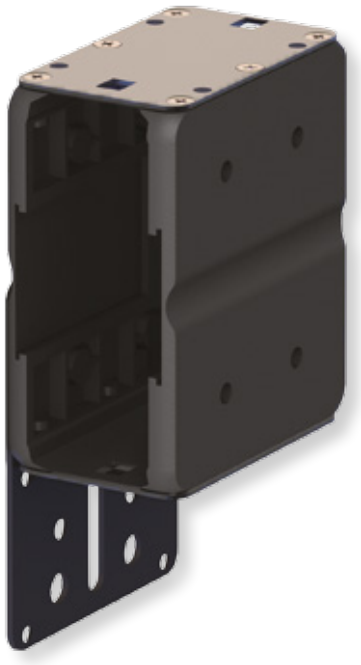
Ordering Information

Part Number	Description Characteristic
FXUCXXBXXX-01BH	AFL Hyperscale U-Series 1RU Housing 5 Cassettes Front Door+Rear Mgt Black
FXUCXXBXXX-01BK	AFL Hyperscale U-Series 1RU Housing 5 Cassettes Rear Mgt+No door Black

View Product Datasheet

Series

0RU
Housing



The U-Series 0RU Housing is designed to enable outside-rack, U space installation of U-Series cassettes. The shipped kit contains an assembled housing to accommodate one U-Series cassette, a mounting plate, and a set of installation screws. The mounting plate can be installed in a variety of positions. U-Series 0RU housings can be easily stacked, accommodating multiple cassettes outside rack housing structures.

U-Series 0RU housings allow front and rear cassette installation, feature a 2-point locking position, and are compatible with U-Series MPO, pre-terminated, and splice cassettes.

Technical Specifications

Dimensions
43mm (W) x 76mm (D) x 88mm (H)

Material
ABS
CR4 Steel

Operating temperature
-20°C to +60°C

Maximum fiber count
12f (SC)
24f (LC)
144F (MPO)

Material coating
Powder

Materials compliant to
RoHS, Reach / SVHC

Cable entry
Left and right

Color
Black / Gray

Ordering Information

Part Number	Description Characteristic
FXUAXXCXXX-01ZZ	AFL Hyperscale U-Series Cassette Mount Grey 7015
FXUAXXDXXX-01ZZ	AFL Hyperscale U-Series Cassette Mount Grey 7035
FXUAXXBXXX-01ZZ	AFL Hyperscale U-Series Cassette Mount Black

View Product Datasheet

ASCEND

2RU Fiber Housing

Features and Benefits

- High-density: 2RU / 288F (LC) 1728F (MPO) - 6 trays per housing
- Designed for 19" rack, optional 23" rack mount kit available
- Galvannealed steel construction
- Hinged front and rear doors and removable back cover
- BASE-8, BASE-12, and BASE-24 compatibility
- Interchangeable cassette options for multiple applications
- Cassettes install independently from front or rear of housing
- Trunk cable management area accommodates ASCEND® trunk cable assemblies equipped with integrated cable mounting clip
- Compatible with all ASCEND cassettes

Technical Specifications

Dimensions

87.6 x 444.5 x 500 mm
3.5 x 17.50 x 19.7 in.

Weight

10 kg
22 lb

Fiber Density

288F (LC)
1,728F (MPO)
6 Trays

Material

Metal Components: 16 GA Steel per ASTM A366
Plastic Components: UL 94 V-2 minimum

Cassette Capacity

36 x BASE-8 Cassettes (6 per tray)
24 x BASE-12 Cassettes (4 per tray)
12 x BASE-24 Cassettes (2 per tray)

Color

Blue

Ordering Information

Part Number	Description Characteristic
FXZZXXEXXX-02Z1	AFL Hyperscale ASCEND 2RU Housing BASE8 Cassette Trays Blue
FXZZXXEXXX-02Z2	AFL Hyperscale ASCEND 2RU Housing BASE12 Cassette Trays Blue

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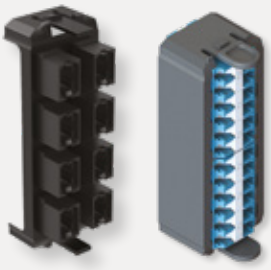
Local Distribution Point (LDP)

Cassette
Overview

MPO Cassette BASE-24

Pre-Terminated Cassette

Splice Cassette



MPO/Patch Adapter Plates

Fanout Cassette
8 / 12 / 24F

Series

MPO Cassettes
BASE-12/BASE-24

With a compact footprint, U-Series MPO Cassettes provide scalability for high-density fiber optic infrastructure whilst enabling fast, plug-and-play installation.

With a range of rear loading MPO connector options, fiber types, and front-facing single form factor connections available, U-Series MPO cassettes can be quickly loaded into U-Series housings and quickly disconnected or reconfigured for Moves, Adds, and Changes.

Available in a range of polarities

- Available 12 or 24 fiber, OM3/OM4/single-mode
- 12 or 24 fiber MPO connectors
- Front presentation for 24 LC UPC or APC connections
- Front presentation for 12 SC UPC or APC connections

Technical Specifications

Dimensions
30mm (W) x 160mm (D) x 84.50mm (H)

Material
ABS
CR4 Steel

Storage temperature
-20°C to +60°C

Fiber count
12f (LC/SC)
24f (LC)
24f (MPO)

Color
Black

Materials compliant to
RoHS, Reach / SVHC

Fiber types
SM 9/125 G.657A1, MM 50/125 OM3/OM4

Operating temperature
-20°C to +60°C

Ordering Information

Part Number	Description Characteristic
A4UD12BPVA-05DA	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 12F (M12 Pol A/C)
A4UD12BPVA-05DB	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 12F (M12 Pol B1)
A4UD12BPVA-05DC	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 12F (M12 Pol B2)
A4UD12BPVA-05DD	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 12F (M12 Pol B Uni)
A7UD24BPVA-05DA	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC SM G.657A1 BK 24F (M12 Pol A/C)
A7UD24BPVB-05DA	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LCA SM G.657A1 BK 24F (M12 Pol A/C)
A4UD24BPVB-05DA	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LCA MM OM4 BK 24F (M12 Pol A/C)
A4UD24BPVA-05DB	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 24F (M12 Pol B1)
A4UD24BPVA-05DC	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 24F (M12 Pol B2)
A4UD24BPVA-05DD	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 24F (M12 Pol B Uni)
A7UD24BPVA-05DF	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC SM G.657A1 BK 24F (M24 Variant 1)
A7UD24BPVB-05DF	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LCA SM G.657A1 BK 24F (M24 Variant 1)
A4UD24BPVA-05DF	AFL Hyperscale U-Series MPO Cassette (Short) Black Premium MPO M - LC MM OM4 BK 24F (M24 Variant 1)

View Product Datasheet

U Series

Pre-Terminated Cassette

U-Series Pre-Terminated Cassettes bring convenience and flexibility to your network. The convenience of a pre-terminated U-Series cassette means fewer links in your network, resulting in higher performance, faster speeds, and rapid installation.

Simply specify the fiber type, adapters required, cable construction and length, and then select your assembly for the opposite end. Out of the box, a fiber network has never been so convenient and fast to deploy.

U-Series Pre-Terminated Cassettes are the ideal solution for hosting pre-terminated cable assemblies, as well as improving installation speeds, and power budgets, and cost efficiency when compared with traditional modular MPO systems. Assemblies can be pre-installed inside the cassette and supplied to the installation site for instant deployment. Alternatively, pre-terminated cables can be fitted inside cassette post-installation in the field, if required. With many different configurations available, U-Series cassettes are compatible with 2RU, 1RU, and 0RU U-Series housings.

Technical Specifications

Dimensions
30mm (W) x 155mm (D) x 83mm (H)

Assembly tail options
2mm ruggedized
3mm
900µm*

Operating temperature
-20°C to +60°C

Fiber count
12f (LC/SC)
24f (LC)
24f (MPO)

Material
ABS
CR4 Steel

Storage temperature
-20°C to +60°C

Fiber types
SM 9/125 G.657A1,
MM 50/125 OM3/OM4

Color
Gray

Materials compliant to
RoHS, Reach / SVHC

*More sizes and connector options available. Contact your local sales office for more information.

Ordering Information

Contact us for part number details

View Product Datasheet

Series

Splice Cassette

The AFL Hyperscale U-Series Splice Cassette brings installer or site engineer convenience to the field.

With up to 24 splice positions, all cassettes are pre-loaded with easy-strip pigtails.

- Available with 24 LC or 12 SC pigtails pre-loaded
- Single splicing
- Up to 12.5mm cable diameter entry
- Ultra Polished Connector (UPC) and Angle Polished Connector (APC) pigtails (SM only) and adapters available

Technical Specifications

Dimensions
45mm (W) x 280mm (D) x 135mm (H)

Material
ABS
CR4 Steel

Storage temperature
-20°C to +60°C

Fiber count
12f (SC)
24f (LC)

Color
Black

Materials compliant to
RoHS, Reach / SVHC

Fiber types
SM 9/125 G.657A1, MM 50/125 OM3/ OM4

Operating temperature
-20°C to +60°C

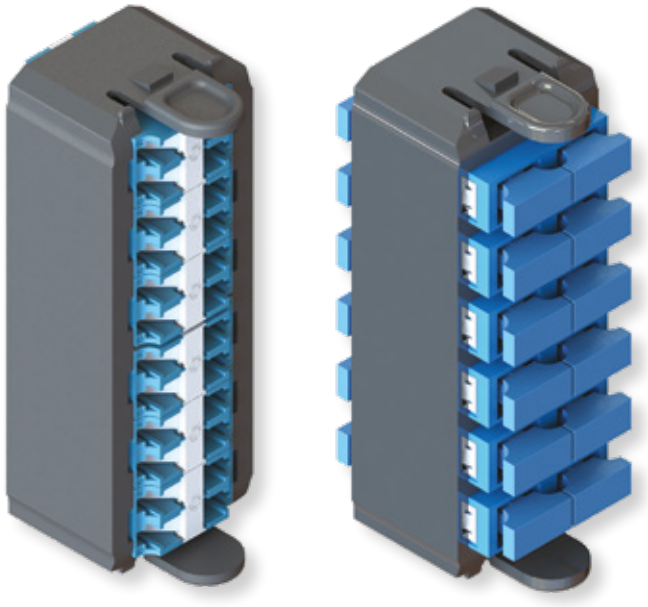
Ordering Information

Part Number	Description Characteristic
A7UD12BPDX-01AK	AFL Hyperscale U-Series 12F L Splice Cassette Low Loss SC SM G.657A1 BK EZ Pigtails
A7UD12BPEX-01AK	AFL Hyperscale U-Series 12F L Splice Cassette Low Loss SCA SM G.657A1 BK EZ Pigtails
A4UD12BPDX-01AK	AFL Hyperscale U-Series 12F L Splice Cassette Low Loss SC MM OM4 BK EZ Pigtails
A7UD12BPAX-01AK	AFL Hyperscale U-Series 12F L Splice Cassette Low Loss LC SM G.657A1 BK EZ Pigtails
A7UD12BPBX-01AK	AFL Hyperscale U-Series 12F L Splice Cassette Low Loss LCA SM G.657A1 BK EZ Pigtails
A4UD12BPAX-01AK	AFL Hyperscale U-Series 12F L Splice Cassette Low Loss LC MM OM4 BK EZ Pigtails
A7UD24BPAX-01AK	AFL Hyperscale U-Series 24F L Splice Cassette Low Loss LC SM G.657A1 BK EZ Pigtails
A7UD24BPBX-01AK	AFL Hyperscale U-Series 24F L Splice Cassette Low Loss LCA SM G.657A1 BK EZ Pigtails
A4UD24BPAX-01AK	AFL Hyperscale U-Series 24F L Splice Cassette Low Loss LC MM OM4 BK EZ Pigtails

View Product Datasheet

Series

Patch
Adapter Plate



U-Series Patch Adapter Plates are compatible with shallow-depth U-Series housings, allowing for easy rear and front access to LC/SC adapters.

12 Patch Adapter Plates can be accommodated in a 2RU U-Series housing, providing 288 x LC and 144 x SC ports in a 2RU rack space.

Technical Specifications

Dimensions
30mm (W) x 35mm (D) x 87mm (H)

Material
ABS

Storage temperature
-20°C to +60°C

Fiber count
24f (LC)
12f (SC)

Color
Black

Materials compliant to
IEC 61754-20-2012
IEC 61754-4-2013
RoHS, Reach / SVHC

Fiber types
SM 9/125 G.657A1, MM 50/125 OM3/ OM4

Operating temperature
-20°C to +60°C

Ordering Information

Part Number	Description Characteristic
FSUB12BXDX-04AD	AFL Hyperscale U-Series Patch Plate 12F 6 Port (SC DX) SC SM Adaptors Black
FSUB12BXEX-04AD	AFL Hyperscale U-Series Patch Plate 12F 6 Port (SC DX) SC/APC SM Adaptors Black
FQUB12BXDX-04AD	AFL Hyperscale U-Series Patch Plate 12F 6 Port (SC DX) SC MM AQ Adaptors Black
FSUB24BXAX-02AD	AFL Hyperscale U-Series Patch Plate 24F 6 Port (LC Quad) LC SM Adaptors Black
FSUB24BXBX-02AD	AFL Hyperscale U-Series Patch Plate 24F 6 Port (LC Quad) LC/APC SM Adaptors Black
FQUB24BXAX-02AD	AFL Hyperscale U-Series Patch Plate 24F 6 Port (LC Quad) LC MM AQ Adaptors Black
FXUEXXBXXX-01ZZ	AFL Hyperscale U-Series Blank Plate Black

View Product Datasheet

ASCEND

Fanout Cassettes

ASCEND® Fanout Cassettes are pre-terminated, plug-and-play breakout cassettes designed to transition a trunk cable into individual connector ports. Available in single-mode and multimode fiber types, fanout cassettes feature low-loss MPO connectors and VFL-compatible shuttered LC adapters. All cassettes are offered in BASE-8, BASE-12, and BASE-24 configurations. Fanout cassettes are compatible with all standard ASCEND housings and can be independently installed from the front or rear onto a sliding tray system. This allows access to individual connections while minimizing disruption to other fiber connections.

Features and Benefits

- Plug-and-play, universal polarity F
- BASE-8, BASE-12, or BASE-24 configurations
- SM, MM (OM3), MM (OM4), and MM (OM5)
- VFL-compatible shuttered Quad LC adapters
- Low-loss MPO connectors
- Compatible with all ASCEND housings
- Install independently from front or rear of housing

Ordering Information

Part Number	Description Characteristic
A7ZZ08BPVA-01Z1	AFL Hyperscale ASCEND 8F MPO Cassette Low Loss MPO M - LC SM G.657A1 BASE8 Pol F
A7ZZ08BPVB-01Z1	AFL Hyperscale ASCEND 8F MPO Cassette Low Loss MPO M - LCA SM G.657A1 BASE8 Pol F
A3ZZ08BPVA-01Z1	AFL Hyperscale ASCEND 8F MPO Cassette Low Loss MPO M - LC MM OM3 BASE8 Pol F
A4ZZ08BPVA-01Z1	AFL Hyperscale ASCEND 8F MPO Cassette Low Loss MPO M - LC MM OM4 BASE8 Pol F
A7ZZ12BPVA-01Z2	AFL Hyperscale ASCEND 12F MPO Cassette Low Loss MPO M - LC SM G.657A1 BASE12 Pol F
A7ZZ12BPVB-01Z2	AFL Hyperscale ASCEND 12F MPO Cassette Low Loss MPO M - LCA SM G.657A1 BASE12 Pol F
A3ZZ12BPVA-01Z2	AFL Hyperscale ASCEND 12F MPO Cassette Low Loss MPO M - LC MM OM3 BASE12 Pol F
A4ZZ12BPVA-01Z2	AFL Hyperscale ASCEND 12F MPO Cassette Low Loss MPO M - LC MM OM4 BASE12 Pol F
A7ZZ12BPVA-01Z3	AFL Hyperscale ASCEND 12F MPO Cassette Low Loss MPO M - LC SM G.657A1 BASE24 Pol F
A7ZZ12BPVB-01Z3	AFL Hyperscale ASCEND 12F MPO Cassette Low Loss MPO M - LCA SM G.657A1 BASE24 Pol F
A3ZZ12BPVA-01Z3	AFL Hyperscale ASCEND 12F MPO Cassette Low Loss MPO M - LC MM OM3 BASE24 Pol F
A4ZZ12BPVA-01Z3	AFL Hyperscale ASCEND 12F MPO Cassette Low Loss MPO M - LC MM OM4 BASE24 Pol F
A7ZZ24BPVA-01Z2	AFL Hyperscale ASCEND 24F MPO Cassette Low Loss MPO M - LC SM G.657A1 BASE12 Pol F
A7ZZ24BPVB-01Z2	AFL Hyperscale ASCEND 24F MPO Cassette Low Loss MPO M - LCA SM G.657A1 BASE12 Pol F
A3ZZ24BPVA-01Z2	AFL Hyperscale ASCEND 24F MPO Cassette Low Loss MPO M - LC MM OM3 BASE12 Pol F
A4ZZ24BPVA-01Z2	AFL Hyperscale ASCEND 24F MPO Cassette Low Loss MPO M - LC MM OM4 BASE12 Pol F
A7ZZ24BPVA-01Z1	AFL Hyperscale ASCEND 24F MPO Cassette Low Loss MPO M - LC SM G.657A1 BASE8 Pol F
A7ZZ24BPVB-01Z1	AFL Hyperscale ASCEND 24F MPO Cassette Low Loss MPO M - LCA SM G.657A1 BASE8 Pol F
A3ZZ24BPVA-01Z1	AFL Hyperscale ASCEND 24F MPO Cassette Low Loss MPO M - LC MM OM3 BASE8 Pol F
A4ZZ24BPVA-01Z1	AFL Hyperscale ASCEND 24F MPO Cassette Low Loss MPO M - LC MM OM4 BASE8 Pol F

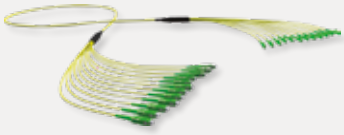
View Product Datasheet

Local Distribution Point (LDP)

Assemblies
Overview

MPO to LC Assembly BASE-8

MPO Trunk BASE-8



MicroCable Assemblies

MPO 3mm MicroCable Patch Assembly

MPO to LC
Assembly BASE-8

- New miniature breakout module saves space within the patching management area whilst providing a robust and safe transition between cable and tails
- Female MPO connectors for direct connection into QSFP+ transceiver
- 4 x 2 mm tails (Uniboot DX version available) improve rack patching management
- OM3, OM4, G.657A1, and G.657A2 fiber versions
- 3 mm OD Patch / 4.5 mm OD Trunk MicroCable versions
- LSZH, OFNP, and OFNR cable jacket types

Technical Specifications

Element	Characteristics
Fiber	OM3, OM4, OS1/OS2 G.657A1, G.657A2
Connectors	MPO 12 Fiber Ferrule Body Sleeve Color: MM (Beige), MM Premium (Aqua, EricaViolet for EV Cable), SM (Green), SM Premium(Yellow) Boot Color: Black LC(DX), LC(DX) Uniboot Housing Color: Beige (MM Standard), AQUA(MM Low Loss Premium), Blue (SM), Green (SM/APC)

Element	Characteristics
Cable	**MicroCable- 8 cores MAX OD:** Max OD 8 cores Trunk Double Jacket 4.5 ± 0.3 mm / Max OD 8 cores Patch **Single Jacket 2.95 ± 0.1 mm Jacket Material:** LSZH, OFNP, OFNR Jacket Color: Aqua (OM3, OM4), Erica Violet (OM4), Yellow (OS1/OS2, G.657A1)
Storage Temperature	-20 ~ +60°C
Installation Temperature	-5 ~ +50°C
Operating Temperature	-20 ~ +60°C

Connector Performance

Connector Mating	IL Average	IL Max	Return Loss
MPO Premium (MM)	0.10 dB	0.35 dB	NA
MPO Premium (SM)	0.10 dB	0.35 dB	>60 dB
LC, SC (MM)	0.15 dB**	0.30 dB**	NA
LC, SC Premium (MM)	0.08 dB**	0.15 dB**	NA
LC, SC (SM)	0.18 dB**	0.30 dB**	>55/65 dB*
LC, SC Low Loss Premium (SM)	0.12 dB**	0.15 dB**	>55/65 dB*

Ordering Information

Code
M

Fiber Type	
3	OM3
4	OM4
7	G.657A1
8	G.657A2

Cable Type	
DR8	Microcable 8/16F Single Jacket 3mm
DT8	8 Microcable 8/16F Double Jacket 4.5mm

Jacket Material	
L	LSZH
E	CPR Eca
C	CPR Cca*
B	CPR B2ca*
R	OFNR
Q	OFNR UL Listed*
P	OFNP
A	OFNP UL Listed*

Color	
9	Yellow
C	Aqua
D	Erika Violet

Code
P

End A	
U	MPO F
V	MPO M

End B	
A	LC
C	LC Uniboot

Code	
-K010-	QSFP Staggered Simplex
-K013-	QSFP Staggered Duplex
-K014-	QSFP Fanout Duplex
-K017-	QSFP Staggered Uniboot
-K018-	QSFP Fanout Uniboot

Unit	
M	Meters
F	Feet

Length	
1	1
2	2
3	3
4	4
5	5
10	10
XX	Specify

View Product Datasheet

MPO Trunk
BASE-8

- OS1/2 G.657A1, OM3, OM4
- 8x Fiber MicroCable 4.5 mm OD Trunk & 3 mm OD patch cord options
- LSZH, OFNP, or OFNR cable jacket options
- Standard jacket colors: OM3 and OM4 Aqua (OM4 Available EricaViolet), and G.657A1 Yellow
- Loose Tube, Loose Tube Armored, and Universal MicroCable types available
- Female/un-pinned and Male/pinned MPO connectors
- Polarity B
- Factory terminated and tested
- MPO interface – QSFP+ 40Gbase-SR transceivers using MPO interface

Technical Specifications

Element	Characteristics
Fiber	OS1/2 G.657A1, OM3, OM4
Cable Type	MicroCable Max OD Trunks 8 cores 4.5 ± 0.3 mm Max OD patch cord 8 cores 2.9 ± 0.1 mm Jacket material: LSZH, OFNP, OFNR Jacket color: Aqua (OM3, OM4), Erica Violet (OM4)

Element	Characteristics
Connectors	MPO 12xFiber Ferrule Boot color: Black Body sleeve color: MM (Beige), MM Premium (Aqua, EricaViolet for EV Cable) Male/ Pinned or Female/ Un-Pinned
Storage Temperature	-20 ~ +60°C
Installation Temperature	-5 ~ +50°C
Operating Temperature	-20 ~ +60°C

Termination Performance

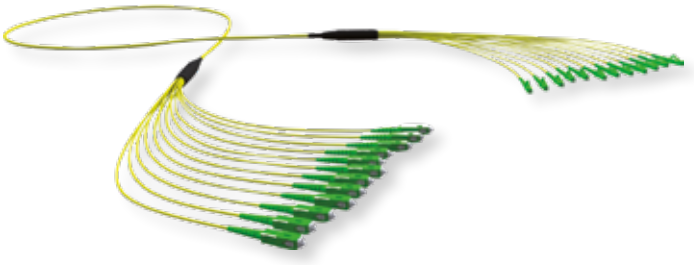
Connector Mating	IL Average	IL Max	Return Loss
MPO Premium (MM)	0.10 dB	0.35 dB	NA
MPO Premium (SM)	0.10 dB	0.35 dB	>60 dB

Ordering Information

Code	Fiber Type		Cable Type		Jacket Material		Color		Code	End A		End B		Code	Unit		Length	
M	3	OM3	DQ8	Single Jacket 3mm	L	LSZH	9	Yellow	P	U	MPO F	U	MPO F	-B002-	M	Meters	1	1
	4	OM4	DS8	Double Jacket 4.5mm	E	CPR Eca	C	Aqua		V	MPO M	V	MPO M		F	Feet	2	2
	7	G.657A1			C	CPR Cca*	D	Erika Violet									3	3
					B	CPR B2ca*											4	4
					R	OFNR											5	5
					Q	OFNR UL Listed*											10	10
					P	OFNP											XX	Specify
					A	OFNP UL Listed*												

View Product Datasheet

MicroCable Assemblies



AFL Hyperscale MicroCable assemblies are compact and flexible for fast installation and a high-performance network.

Flexible tail configurations are available, including 2mm patch cord style tails, ruggedized to secure the optical fiber in unprotected environments such as outside of a patch panel, and 900µm tails for more efficient fiber management inside cassettes, wall boxes, or patch panels.

- Compact, flexible, lightweight MicroCable
- Available in OM3, OM4, and G.657A1 types
- 12 and 24 cores standard (high core counts available on request)
- 900µm or 2mm tails
- CPR, LSZH, OFNP, OFNR cable jacket
- Factory-terminated and tested
- Secure breakout module

Technical Specifications

Element	Characteristics
Fiber	G.657A1, OM3, OM4
Tail Dimensions	900µm Simplex Tails Staggered 2mm Simplex Tails Fanout (Standard) 2mm Simplex Tails Staggered with Pulling Element (Optional)
Terminations	LC, SC, ST, FC, E2000
Cable Constructions	Double Jacket 12-24 Core MicroCable
Cable Diameter	24 Core Max OD 4.5 ± 0.3mm
Crush Resistance	1000N/100mm

Element	Characteristics
Cable Tensile Strength	(Short) 400N
Cable Strength Member	Aramid
Storage Temperature	-20°C ~ +60°C
Installation Temperature	-5°C ~ +50°C
Operating Temperature	-20°C ~ +60°C
Tail Protection	Bubble Wrap (Standard), Reusable Sock/ Protection Tube (optional)
Packaging	Length ≤ 100mtr: HD Bag Length ≥ 100mtr: Drum

Connector Performance

Optical Performance	MM Premium	SM Premium	Conformance
IL Max/Master (Acceptance)	0.15 dB	0.15 dB	IEC 61300-3-4
Ave/Master	0.08 dB	0.12 dB	IEC 61300-3-4
Ave/Random	0.10 dB	0.12 dB	IEC 61300-3-34
RL (Min Acceptance)	NA	55/65	IEC 61300-3-6

Ordering Information

Code	Fiber Type		Fiber Count		Jacket Material		Color		Grade		End A		End B		Tails		Unit		Length	
T	3	OM3	DSB	12f Double Jacket MC	L	LSZH	C	Aqua	E	Enhanced	A	LC	A	LC	-0001-	2mm Tail Stagger	M	Meters	1	1
	4	OM4	DSF	24f Double Jacket MC	C	CPR Cca	9	Yellow	P	Premium	B	LCA	B	LCA	-0002-	2mm Tail Fanout	F	Feet	2	2
	7	G.657A1	EAJ	48f Microcable	B	CPR B2Ca					D	SC	D	SC	-0005-	900µm Simplex Stagger			3	3
			EBM	72f Microcable	R	OFNR					E	SCA	E	SCA					4	4
			-	96f Microcable	P	OFNP							X	Open					5	5
			-	144f Microcable															10	10
																			XX	Specify

View Product Datasheet

MPO 3mm MicroCable Patch Assembly

MPO 3mm MicroCable assemblies are flexible, compact, 12-fiber assemblies, ideal for rapid deployment where space and density are critical. Plug-and-play, premium MPO connectors assure low insertion loss in tight power budget, high-speed networks.

- MPO interface provides superior optical and mechanical properties
- Compact dimensions maximize available data center space
- Save installation and reconfiguration time
- Next-generation, network-proof, emerging high-speed protocols utilize MPO interface
- G.657A1, G.657A2 OM3, OM4
- CPR, LSZH, OFNP, OFNR cable jacket options
- Female and male MPO connectors
- Polarity A (standard), B, or C
- Factory-terminated and tested
- Optional pulling element available

Technical Specifications

Element	Characteristics
Fiber	G.657A1, OM4
Tail Dimensions	2mm (LC,SC) 3 mm (MPO)
Connector Selection	MPO
Cable Construction	MicroCable Single Jacket
Jacket Color	Yellow (G.657A1), Aqua (OM4)
Cable Diameter	Up to 12 Cores OD Max: 3.0mm
Crush Resistance	(Short) 600N/100mm

Element	Characteristics
Design Pulling Strength	(Short) 300N
Cable Strength Member	Aramid
Storage Temperature	-25 ~ +60°C
Installation Temperature	-5 ~ +50°C
Operating Temperature	-10 ~ +60°C
EuroCass of Cable	CCa s1a d1 a2
Tail Protection	Soft Protection

Termination Performance

Connector Mating	IL Average	IL Max	Return Loss
MPO Premium (MM)	0.10 dB	0.35 dB	NA
MPO Premium (SM)	0.10 dB	0.35 dB	>60 dB

Ordering Information

Code
M

Fiber Type	
4	OM4
7	G.657A1

Code
DQBC

Color	
9	Yellow
C	Aqua

End A	
U	MPO F
V	MPO M

End B	
U	MPO F
V	MPO M

Polarity	
-A028-	Polarity A
-B028-	Polarity B
-C028-	Polarity C

Unit	
M	Meters
F	Feet

Length	
1	1
2	2
3	3
4	4
5	5
10	10
XX	Specify

View Product Datasheet

Accessories
(Test, Inspection & Cleaning)

FOCIS
Flex

- Liquid lens camera technology
- Auto-focus, auto-centering, PASS/FAIL analysis, and save
- A wide range of cross-compatible adapter tips
- Bluetooth pairing to smart device apps and integration with aeRos®

Part Number	Description
FOCIS-FLX-P4XUA	FOCIS Flex Kit with 4 user-selected UPC & APC adapter tips (ferrule and bulkhead)

FlexScan®
FS200 OTDR

- High-resolution, dual-wavelength single-mode testing
- Easy-to-understand LinkMap® results with PASS/FAIL
- FleXpress™ mode completes OTDR test in <5 seconds
- 12f MPO testing with optional Multi-Fiber Switch
- Bluetooth, WiFi, and USB enabled
- TRM® Reporting Software

Part Number	Description
FS200-100-BAS-P1-W1	FlexScan® FS200 1310/1550nm OTDR with OPM/OLS/VFI

SMLP5-5
SM/MM Loss Test Kit

- Measure insertion loss at 850/1300 & 1310/1550nm
- Tone generation and detection at 2 kHz
- Set reference storage
- Automatic wavelength detection (Wave ID)
- USB port for transfer of stored results
- TRM Reporting Software
- 5-year product warranty

Part Number	Description
SMLP5-5-SC	SM & MM Test Kit with Data Storage and Reporting (SC Adapter)
SMLP5-5-LC	SM & MM Test Kit with Data Storage and Reporting (LC Adapter)

One-Click® Cleaners
LC/MU/SC/ST/FC/MPO

- One-Click Cleaner D-LC, Duplex LC
- One-Click Cleaner MU/LC
- One-Click Cleaner SC/ST/FC
- One-Click Cleaner MPO

Part Number	Description
8500-05-0008MZ	One-Click® Cleaner D-LC, Duplex LC (2 x 500+ cleans)
8500-05-0002MZ	One-Click® Cleaner MU/LC (500 cleans)
8500-05-0001MZ	One-Click® Cleaner SC/ST/FC (500 cleans)
8500-05-0030MZ	One-Click® Cleaner MPO (500 cleans)

AFL HYPERSCALE®

Data Center Cabling and Connectivity Experts

AFL Hyperscale is the first cabling and connectivity solution provider focused on the ever-evolving needs of data centers.

Hyperscale, colocation, and enterprise data centers are united in their pursuit to connect the unconnected, yet their infrastructure, performance, and operational challenges are totally unique.

We work collaboratively with our customers to create connectivity solutions tailored to their current needs and to the requirements of future networks. We then use our responsive, global operational capabilities and distribution network for fast delivery.

This approach has transformed how many data centers grow worldwide and is built on 70 years' combined experience in the design and manufacture of high-performance optical fiber networks, a global presence, and the backing and innovation sharing of our parent and grandparent companies, AFL and Fujikura, the pioneer in optical technology. AFL Hyperscale is your dependable partner to build a more connected world.

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