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MODULAR HYPERSCALE EXCHANGE (M-HSX) SOLUTIONS OVERVIEW

The need for a solution that adapts to every data center's demand for an optical distribution frame has never been greater. Based on the needs across many data centers and around world, Sumitomo Electric Lightwave has created the new M-HSX solution. The M-HSX provides a high density optical cabling solution that includes all the supreme flexibility that is needed in a single cabinet. With the number of supporting features, the M-HSX solution will marginally reduce the time and hassle it takes for any maintenance, installation or removal of cables while also providing an ease of usability, routing and scalability. Allowing for a number of application specific modules and providing other beneficial attachments, Sumitomo Electric Lightwave's M-HSX solution has capability to solve essential business needs and will go even further with our other supporting products.

FEATURES & BENEFITS

1. **A Frame** that will allow for a large cable capacity & opportunities for future growth
2. **Cable Entries Opening** from above & below with shingles based on your needs
3. **Removable Side Doors** allowing for additional access to handle cables
4. **Large Work Platform** to operate slicers & other equipment while being close to the current the module being worked on
5. **Fusion Splicing Tray & Connectivity Modules** that are easy to adjust and utilize
6. **Cable Management** options that will allow for clean routing and separations
7. **Floor Mount** to increase stability of the frame & all components inside

ITEM NUMBER	FRAME	M-HSX CAPACITY & DIMENSIONS
M-HSX Cabinet		H. 2,240 mm W. 840 mm D. 435 mm
432 Splice Tray Module, M-HSX		20,736 Fibers 48 Trays 12 Modules
288 Splice Tray Module, M-HSX		20,736 Fibers 72 Trays 12 Modules
Connectivity Module, M-HSX		2,592 LC Ports 108 Cassettes 6 Modules
Work Platform, M-HSX		W. 715 mm D: 311 mm



MODULAR HYPERSCALE EXCHANGE CABINET

Being the core part of the M-HSX solution, the M-HSX Cabinet has been designed to help increase workability that will allow data center managers to carefully craft logistical plans for cables needed now or in the future. This large capacity but compact frame will allow up to 20,736 fibers (12 by 1,728 fibers) cables or 2,592 LC ports (9 by 288 fiber cables) that will provide the needs of small or large data center demands.

FEATURES & BENEFITS

LARGE CAPACITY

- W x H x D: 33" x 87.625" x 17"
(840 mm x 2240 mm x 435 mm)
- Plenty of space to maneuver with.
- Fiber Capacity at 20,736.
- LC Port Capacity of 2,592.

OTHER FEATURES & BENEFITS

- Space that will increase the ability to scale
- Additional riser attachment available
- Electric ground busbar
- Lifting plate included to help move cabinet
- Floor mount to increase stability of frame

CABLE MANAGEMENT AREAS

- 14 total spots for attachments
- Attachment spots located on left & right side within cabinet
- Five cable management attachments available
- Ability to stagger attachments creating clearer routing

REMOVABLE SIDE DOORS

- Four removable side cabinet doors
- Each door lockable without a key from inside of the cabinet
- Additional access to help ease routing cables and populating the cabinet

KEYHOLE/TEARDROP MOUNTING

- Makes installation & adjustment of module cases simple
- Compatible with three module options
- Allows to mix & match modules

DYNAMIC FRONT DOORS

- Removable
- Lockable
- Includes area to hold 432 Splice Tray lid
- Work platform stored inside door

LARGE WORK PLATFORM

- 28.125" x 1.5" (715 mm x 311 mm)
- Easy to use & integrated flat surface work station for splicing & other data center tasks
- Multiple mounting positions to be closer to splice trays.
- Work surface covered in nonslip material

M-HSX STARTER SOLUTIONS

ITEM NUMBER	ITEMS		DIMENSIONS (W X D X H)
HDMEC-MX-STV001	Includes: 1, HDMEC-MX-STVHSX 4 FTHFC-10K-V-SPLICETRAY M-HSX Starter Components (See Below)		W. 33 in. (840 mm) D. 87.625 in. (2240 mm) H. 17 in. (435 mm)
HDMEC-MX-STH002	Includes: 1, HDMEC-MX-STHSX 6, HDFOC-X-ST24-01 M-HSX Starter Components (See Below)		
HDMEC-MX-FXC003	Includes: 1 HDMEC-MX-LGX (no cassettes included) M-HSX Starter Components (See Below)		

M-HSX STARTER COMPONENTS

All M-HSX Starter Solutions Come With The Following: (Please see ordering guide starting on page 8 for more attachment options)

ITEM NUMBER	ITEM NAME	QTY. PER UNIT	DESCRIPTION	
HDMEC-MX-CAB	M-HSX Cabinet	1	High Density Modular Fiber Optic Exchange Cabinet, M-HSX, Cabinet Only.	
HDC-CGS0001	12 Cable Gland Shingle 1.875" Holes, Raised Platform, M-HSX	1	High Density Cabinet Cable Gland Shingle, 12 Large Glands, Raised Platform, 2.75" (70 mm) Height. Compatible with FTHFC-GLAND-1.02.	
HDC-CBS0004	Brush Shingle, M-HSX	1	High Density Cabinet Cable Brush Shingle, Large Opening, Brush Dust Retention.	
HDC-BLS0005	Brush Shingle, M-HSX	2	High Density Cabinet Blank Shingle, Solid, Flush Platform.	
HDMEC-MX-CMSB	Lacing Bar, M-HSX	2	Cable & Fiber Management Lacing Bar for HDMEC-MX-CAB.	
HDMEC-MX-CMCR-L	Large Jumper Manager, M-HSX	1	Cable & Fiber Management Corral for HDMEC-MX-CAB, Large - 10.875" x 4.125" (276 mm x 105 mm) Sized.	
HDMEC-MX-WP	Work Platform, M-HSX	1	Work Platform for HDMEC-MX-CAB.	
FTHFC-ACK-1728-864	HyperScale Frames Gland and Accessory Starter Kit	QTY. PER UNIT		
		1	1.58" (40 mm) Ribbon Splice Protectors, 5 per pack.	
		1	0.625" x 75' (16 mm x 23860 mm) Ribbon Protection Sock.	
		1	0.5" x 30' (13 mm x 9144 mm) Hook & Loop Cable Tie.	
		1	0.75" x 30' (19 mm x 9144 mm) One-Piece Hook & Loop.	
		3	Strain Relief Gland for Cable Terminal, range of 0.787" to 1.020". Fits 2 inch diameter holes. Compatible with HDC-CGS0001, HDC-CGS0002, HDC-CGS0006.	

M-HSX FUSION SPLICING & CONNECTIVITY

432 SPLICE TRAY & MODULE

- Splice tray can accommodate up to 36 x 12ct. ribbon splices (432 fibers)
- Module can hold four 432 Splice Trays
- Fully populated can hold 48 trays totaling 20,736 fibers
- Durable metal frame for plenty of protection



288 SPLICE TRAY & MODULE

- Splice trays can accommodate up to 24 x 12ct. ribbon splices (288 fibers)
- Module Holds six 288 Splice Trays
- Fully populated can hold 72 trays totaling 20,736 fibers
- Transparent lid for tray allows full vision of spliced fibers









CONNECTIVITY MODULE & FOX CASSETTE

- Ability to hold LGX Cassettes, FOX Cassettes or Adapter Plates
- Module holds 18 Cassettes per Module
- Fully populated can hold Six Modules & 108 cassettes totaling 2,592 LC Ports
- Module contains built-in cable slack & routing for easy access during pre/post installation & populating
- Module can work from both left to right or right to left



M-HSX FUSION SPLICING & CONNECTIVITY ORDER INFORMATION

ITEM NUMBER	PRODUCT NAME	DESCRIPTION	
HDMEC-MX-STVHSX	432 Splice Tray Module, M-HSX	432 Splice Tray Module for HDMEC-MX-CAB, Holds 4 of FTHFC-10K-V-SPLICETRAY.	
FTHFC-10K-V-SPLICETRAY	432 Splice Tray	432 Splice Tray for M-HSX, Holds up to 36 x 12ct Ribbon Splices. Compatible with HDMEC-MX-STVHSX.	
HDMEC-MX-STHSX	288 Splice Tray Module, M-HSX	288 Splice Tray Module for HDMEC-MX-CAB, Holds 6 of HDFOC-X-ST24-01.	
HDFOC-X-ST24-01	288 Splice Tray	288 Splice Tray for M-HSX, Holds up to 24 x 12ct Ribbon Splices. Compatible with HDMEC-MX-STHSX.	
HDMEC-MX-LGX	Connectivity Module, M-HSX	Connectivity Module for HDMEC-MX-CAB, Holds 18 of LGX Sized Adapter Plate or Cassette.	
(Please see ordering list page 9 for details)	PrecisionFlex® FOX Cassette	Fiber Optic eXchange Cassette, 3 Types of Front Connectors, 3 Types of Fiber Counts, 2 Types of Fiber Construction, & 4 Types of Fiber Type. Compatible with HDMEC-MX-LGX.	

M-HSX CABLE ENTRY & EXIT

Fibers within a data center are immensely delicate and needing protection from any point of entry. Sumitomo Electric Lightwave understands unwanted substances are a nuisance and can create issues. Through providing attachments that can dampen outside influences, frames will be cleaner than before.



BRUSH SHINGLE

- Four shingle positions on M-HSX Cabinet (Top/Bottom, Left/Right)
- Especially ideal for many small jumper cables due to the large opening
- Help mitigate unwanted dust

CABLE GLAND SHINGLES (GLANDS SOLD SEPARATELY)

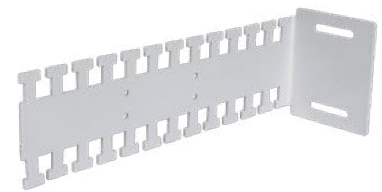
- Four shingle positions on M-HSX Cabinet (Top/Bottom, Left/Right)
- Total of 4 types & quantity of openings
- Can eliminated any unwelcomed dust or particles through each tight openings
- Glands will reduce movement & reduce even more unwanted particles

M-HSX CABLE MANAGEMENT

Cable management is one of the most important parts optimizing a data center's cable logistics. Through the simple installation and variety of Sumitomo Electric Lightwave's cable management attachments, any company can now easily maximize and better organize their fiber cables.

LACING BAR

- Very efficient with outside & inside plant cables up to 6912 fibers
- Works well with Air Blown Fiber Tube Cables
- Can be staggered to move out of the way of other cords
- Applicable with Breakout Kits for High Fiber Count Ribbon Cables



SPINDLE

- Ideal for applications that require socking of cable subunits
- Allows for some extra slack
- Can be staggered to move out of the way of other cords



JUMPER MANAGER

- Magnificent attachment that allows for managing jumpers
- Used for patching or cross connects
- Three sizes (Large, Medium, & Small)





PRODUCT ORDERING INFORMATION



ORDERING INSTRUCTIONS

1. Choose between the following options:
 - a. **M-HSX Starter Solution**, & choose further Modules, Trays, Cassettes, Cable Management & Other Consumables to fill your cabinet.
 - b. **Customize your own M-HSX Cabinet** from the Work Platform, Shingles, Modules, Trays, Cassettes, Cable Management & Other Consumables. (Two Blank Shingles Recommended)
2. Fill out a number under quantity on the left column.
3. Take a copy or photo of each page.
4. Send to your preferred distributor & they should provide a quote.

M-HSX STARTER SOLUTIONS






QUANTITY	ITEM NUMBER	ITEM NAME	DESCRIPTION	
	HDMEC-MX-STV001	M-HSX Starter Solution 1	1, HDMEC-MX-CAB; 1, HDMEC-MX-STVHSX; 4, FTHFC-10K-V-SPLICETRAY; 1, HDC-CGS0001; 1, HDC-CBS0004; 2, HDC-BLS0005; 2, HDMEC-MX-CMSB; 1, HDMEC-MX-CMCR-L; 1, HDMEC-MX-WP; 1, FTHFC-ACK-1728-864 (See page 5 for further details)	
	HDMEC-MX-STH002	M-HSX Starter Solution 2	1, HDMEC-MX-CAB; 1, HDMEC-MX-STHSX; 6, HDFOC-X-ST24-01; 1, HDC-CGS0001; 1, HDC-CBS0004; 2, HDC-BLS0005; 2, HDMEC-MX-CMSB; 1, HDMEC-MX-CMCR-L; 1, HDMEC-MX-WP; 1, FTHFC-ACK-1728-864 (See page 5 for further details)	
	HDMEC-MX-FXC003	M-HSX Starter Solution 3	1, HDMEC-MX-CAB; 1, HDMEC-MX-LGX; 1, HDC-CGS0001; 1, HDC-CBS0004; 2, HDC-BLS0005; 2, HDMEC-MX-CMSB; 1, HDMEC-MX-CMCR-L; 1, HDMEC-MX-WP; 1, FTHFC-ACK-1728-864 (See page 5 for further details)	

M-HSX CABINET & WORK PLATFORM

QUANTITY	ITEM NUMBER	ITEM NAME	DESCRIPTION	
	HDMEC-MX-CAB	M-HSX Cabinet	High Density Modular Fiber Optic Exchange Cabinet, M-HSX, Cabinet Only.	
	HDMEC-MX-WP	Work Platform, M-HSX	Work Platform for HDMEC-MX-CAB.	

M-HSX MODULES, TRAYS & CASSETTES

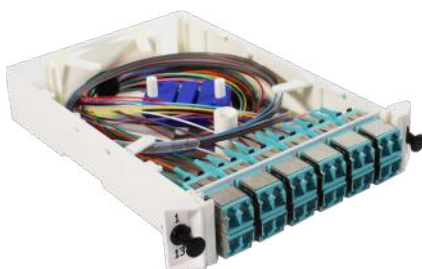
(Choose Up to 12 Splice Modules and/or 6 Connectivity Modules)

QUANTITY	ITEM NUMBER	ITEM NAME	DESCRIPTION	
	HDMEC-MX-STVHSX	32 Splice Tray Module, M-HSX	432 Splice Tray Module for HDMEC-MX-CAB, Holds 4 of FTHFC-10K-V-SPLICETRAY.	
	FTHFC-10K-V-SPLICETRAY	432 Splice Tray	432 Splice Tray for M-HSX, Holds up to 36 x 12ct Ribbon Splices. Compatible with HDMEC-MX-STVHSX.	
	HDMEC-MX-STHSX	288 Splice Tray Module, M-HSX	288 Splice Tray Module for HDMEC-MX-CAB, Holds 6 of HDFOC-X-ST24-01.	
	HDFOC-X-ST24-01	288 Splice Tray	288 Splice Tray for M-HSX, Holds up to 24 x 12ct Ribbon Splices. Compatible with HDMEC-MX-STHSX.	
	HDMEC-MX-LGX	Connectivity Module, M-HSX	Connectivity Module for HDMEC-MX-CAB, Holds 18 LGX Sized Adapter Plate or Cassette.	

PRECISIONFLEX® FOX CASSETTE

(See Further Information at Sumitomo Electric Lightwave's Website)







QUANTITY
FT - **FSP** - - -



1 – Front Connector Type LC – LC Connector SC – SC Connector ST – ST Connector	2 – Fiber Count 06 – 6 Fiber 12 – 12 Fiber 24 – 24 Fiber	3 – Fiber Construction RBN – Ribbon TBF – Tight Buffer
4 – Fiber Type OM1 – OM1 Fiber (62.5 μm) OM4 – OM4 Fiber (50 μm) OS2 – Single Mode Fiber (9 μm)	5 – Special APFC – APC (Angle Polished Connector) MP12 – 12 Fiber MPO MP24 – 24 Fiber MPO	






M-HSX SHINGLE ATTACHMENTS

(Choose Up to 4 Shingles Per Cabinet)





QUANTITY	ITEM NUMBER	ITEM NAME	DESCRIPTION	
	HDC-BLS0005	Blank Shingle, M-HSX	High Density Cabinet Blank Shingle, Solid, Flush Platform.	
	HDC-CBS0004	Brush Shingle, M-HSX	High Density Cabinet Cable Brush Shingle, Large Opening, Brush Dust Retention.	
	HDC-CGS0002	9 Cable Gland Shingle 1.875" Holes, M-HSX	High Density Cabinet Gland Shingle, 9 Gland Holes 1.875" (48 mm) for HDMEC-MX-CAB. Compatible with FTHFC-GLAND-KIT-1.02.	
	HDC-CGS0006	12 Cable Gland Shingle 1.875" Holes, M-HSX	High Density Cabinet Gland Shingle, 12 Gland Holes 1.875" (48 mm) for HDMEC-MX-CAB. Compatible with FTHFC-GLAND-KIT-1.02.	
	HDC-CGS0001	12 Cable Gland Shingle 1.875" Holes, Raised Platform, M-HSX	High Density Cabinet Gland Shingle, 12 Gland Holes 1.875" (48 mm), 2.75" (70 mm) Raised Platform for HDMEC-MX-CAB. Compatible with FTHFC-GLAND-KIT-1.02.	
	FTHFC-GLAND-KIT-1.02	Strain Relief Gland, 0.787 to 1.020 inch	Strain Relief Gland for Cable Terminal, range of 0.787" to 1.020" (20 mm to 26 mm). Fits 21.875" (48 mm) diameter holes. Compatible with HDC-CGS0001, HDC-CGS0002, HDC-CGS0006.	
	HDC-CGS0003	18 Cable Gland Shingle 1" Holes, M-HSX	High Density Cabinet Gland Shingle, 18 Gland Holes 1" (24 mm) for HDMEC-MX-CAB. Compatible with FTHFC-GLAND-KIT-0.709.	
	FTHFC-GLAND-KIT-0.709	Strain Relief Gland, 0.354 to 0.709 inch	Strain Relief Gland for Cable Terminal, range of 0.354" to 0.709" (9 mm to 18 mm). Fits 1" (25 mm) diameter holes. Compatible with HDC-CGS0003.	

M-HSX CABLE MANAGEMENT ATTACHMENTS








(Choose Up to 14 Cable Management Attachments Per Cabinet)

QUANTITY	ITEM NUMBER	ITEM NAME	DESCRIPTION	
	HDMEC-MX-CMSP	Spindle, M-HSX	Cable & Fiber Management Spindle for HDMEC-MX-CAB.	
	HDMEC-MX-CMSB	Lacing Bar, M-HSX	Cable & Fiber Management Lacing Bar for HDMEC-MX-CAB.	
	HDMEC-MX-CMCR-L	Large Jumper Manager, M-HSX	Cable & Fiber Management Corral for HDMEC-MX-CAB, Large - 10.875" x 4.125" (276 mm x 105 mm) Sized.	
	HDMEC-MX-CMCR-M	Medium Jumper Manager, M-HSX	Cable or Fiber Management Corral for HDMEC-MX-CAB, Medium - 8.75" x 2.75" (222 mm x 70 mm) Sized.	
	HDMEC-MX-CMCR-S	Small Jumper Manager, M-HSX	Cable or Fiber Management Corral for HDMEC-MX-CAB, Small - 4.25" x 2.75" (108 mm x 70 mm) Sized.	

BREAKOUT KITS - CENTRAL TUBE APPLICATION CABLE TYPE

QUANTITY	ITEM NUMBER	FIBER CABLE TYPE	STANDARD PACK QTY.	BREAKOUT KIT TYPE	FIBER PER TUBE (FB/T)	TOTAL TUBING LENGTH	COMPONENTS INCLUDED	
	FOR-288-CT-SET	288f	5	10 Holes	48 fb/t	61 m	<ul style="list-style-type: none"> • 2 Breakout Kits • Tubing • 10 Zip Ties • 25 Small Double Sided Pieces of Tape 	
	FOR-576-864-CT-SET	576f; 864f	2	18 Holes	48 fb/t	122 m	<ul style="list-style-type: none"> • 2 Breakout Kits • Tubing • 12 Short Spiral Bundle Wraps 	
	FOR-1152-CT-SET	1152f	2	24 Holes	48 fb/t	122 m	<ul style="list-style-type: none"> • 2 Breakout Kits • Tubing • 12 Short Spiral Bundle Wraps • 1 Roll of PVC Tape 	
	FOR-1728-CT-SET	1728f	2	36 Holes	48 fb/t	183 m	<ul style="list-style-type: none"> • 2 Breakout Kits • Tubing • 12 Short Spiral Bundle Wraps • 1 Roll of PVC Tape 	

BREAKOUT KITS - SLOTTED CORE APPLICATION CABLE TYPE

QUANTITY	ITEM NUMBER	FIBER CABLE TYPE	STANDARD PACK QTY.	BREAKOUT KIT TYPE	FIBER PER TUBE (FB/T)	TOTAL TUBING LENGTH	COMPONENTS INCLUDED	
	FOR-1152-F-SET	1152f	2	16 Holes	48 fb/t	122 m	<ul style="list-style-type: none"> • 2 Breakout Kits • Tubing • 12 Short Spiral Bundles 	
	FOR-1152-12T-F-SET	1152f	2	8 Holes	144 fb/t	80 m	<ul style="list-style-type: none"> • 2 Breakout Kits • Tubing 	
	FOR-1728-F-SET	1728f	2	36 Holes	48 fb/t	183 m	<ul style="list-style-type: none"> • 2 Breakout Kits • Tubing • 12 Short Spiral Bundle Wraps 	
	FOR-1728-12T-F-SET	1728f	2	12 Holes	144 fb/t	80 m	<ul style="list-style-type: none"> • 2 Breakout Kits • Tubing 	
	FOR-3456-F-SET	3456f	2	72 Holes	48 fb/t	244 m	<ul style="list-style-type: none"> • 2 Breakout Kits • Tubing 	
	FOR-3456-250-F-SET	3456f	2	72 Holes	48 fb/t	244 m	<ul style="list-style-type: none"> • 2 Breakout Kits • Tubing 	
	FOR-3456-12T-F-SET	3456f	2	24 Holes	144 fb/t	160 m	<ul style="list-style-type: none"> • 2 Breakout Kits • Tubing 	

ACCESSORIES & CONSUMABLES

QUANTITY	ITEM NUMBER	ITEM NAME	DESCRIPTION	
	HDMEC-MX-RISER	M-HSX Platform Riser	Riser Platform for HDMEC-MX-CAB with Feet for Bottom Access.	
	FPS-6-5P	Ribbon Splice Protector	1.58" (40 mm) Ribbon Splice Protectors, 5 per Pack.	
	FTHFC-SOCK-5/8-75FT	Ribbon Protection Sock	Ribbon Protection Sock, 0.625" x 75' (16 mm x 22860 mm) Spool.	
	FTHFC-HL-TIE-30FT	Hook & Loop Cable Tie	Hook & Loop Cable Tie, 0.5" x 30' (13 mm x 9144 mm).	
	FTHFC-HL-3/4IN-30FT	One-Piece Hook & Loop	One-Piece Hook & Loop, 0.75" x 30' (19 mm x 9144 mm).	

For further ordering assistance, please contact Inside Sales at **800-358-7378** or visit our website at: SumitomoElectricLightwave.com



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