HI-DEX PRODUCT SET DATASHEET

GD102042v5

APPLICATION

HI-DEX is an ultra high-performance, pre-terminated and modular optical fibre cabling system based on MT ferrule connector technology.

This product set is designed for installation in the data centre and allows multiple, point-to-point fibre connections between distribution racks and equipment racks to be quickly and efficiently installed and maintained, supporting the Moves, Adds and Changes environment. It is also suitable for use in short length backbone connections.

This HI-DEX product set offers an upgrade path to multi-lane, higher speed transmissions and provides future-proofing for multi-Gigabit Fibre Channel, InfiniBand and Ethernet technologies.

FEATURES

- **High Density**

  High fibre density of up to 144 LC fibres per U
- **High Performance**

  Ultra high-performance connectors to achieve a low-loss optical budget
- **Modular Design**

  Plug and play cassettes allow flexibility in fibre type and patch presentation
- **Extensive Labelling**

  Labelling space for port, cassette and panel identification
- **Scalable System**

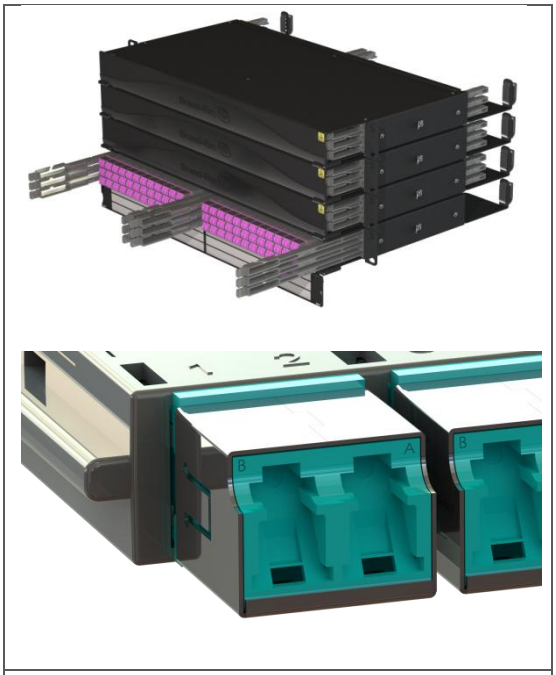
  Modular consolidation point and panel products to allow growth and evolution of the system
- **Fully Accessible Patch Field**

  Sliding cassettes provide unhindered access to patches in all port locations
- **Easy Installation**

  Front and rear loading of cassettes
- **Integrated Dust Protection**

  Shuttered LC adaptors with integrated dust and laser protection
- **Cable Management**

  Management features to allow patchcord segregation, bend management and cable routing
- **Patent Pending**



HI-DEX

SPECIFICATION AND PERFORMANCE

All HI-DEX components are designed and manufactured to conform to the requirements of the structured wiring, cabling and data centre standards including:

- ISO/IEC 11801:2002 amendments 1 & 2
- EN 50173-1
- TIA 568C series
- IEC 24764
- EN 50173-5
- TIA 942.

The use of low-loss connectors as standard allows multi-connector links to be configured whilst still meeting the optical budgets of high speed applications.

CABLE PERFORMANCE

Fibre Type and Cable Performance Grade	Wavelength (nm)	Maximum Attenuation (dB/km)	Typical Cable Attenuation (dB/km)
50/125 Multimode OM3 (Aqua)	850	3.5	2.6
	1300	1.5	0.6
50/125 Multimode OM4 (Heather-Violet)	850	3.5	2.6
	1300	1.5	0.6
Singlemode (Yellow)	1300	0.4	0.3
	1383	0.4	0.3
	1550	0.4	0.2

CONNECTOR PERFORMANCE

Connector Type		Insertion Loss (dB)		Return Loss (dB)	
		Typical	Maximum	Typical	Minimum
Multimode	MTP	0.10	0.35	-	20
	LC	0.10	0.20	-	20
Singlemode*	MTP	0.10	0.35	-	60
	LC	0.10	0.20	-	65

*Angle polish face

POLARITY

While the HI-DEX product range supports A, B, and C polarity schemes, it is recommended to implement a B polarity system as this will afford easier migration to higher speed, parallel transmissions and will simplify stock management for operators through an innovative cassette which can be flipped to provide both alpha and beta configurations with a single component.

PANEL ORDER INFO

Part Number	Item Description	Colour
HDXPNL2	19” 1U Panel	Black
HDXPNL8	19” 1U Panel	Grey
HDXM1U2	19" 1U Cable Manager	Black
HDXM1U8	19" 1U Cable Manager	Grey
HDXMNF2	1U Finger Management	Black
HDXMNF8	1U Finger Management	Grey

CASSETTE ORDER INFO

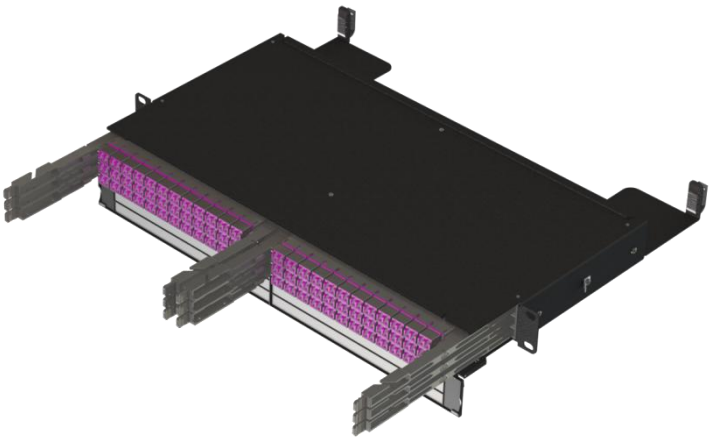
Part Number	Item Description	Colour
HDXBBTMLCOM424	2x12 MTP-LC OM4 α/β Cassette	Grey
HDXBBTMLCOM324	2x12 MTP-LC OM3 α/β Cassette	Grey
HDXBBTMAL10824	2x12 MTP-LC APC α/β Cassette	Grey
HDXBBTMLC10824	2x12 MTP-LC SM α/β Cassette	Grey
HDXACTMLCOM424	2x12 MTP-LC OM4 Cassette	Grey
HDXACTMLCOM324	2x12 MTP-LC OM3 Cassette	Grey
HDXACTMAL10824	2x12 MTP-LC APC Cassette	Grey
HDXACTMLC10824	2x12 MTP-LC SM Cassette	Grey
HDXOCAM144	Opposed Key MTP Open Cassette	Grey
HDXOCBM144	Aligned Key MTP Open Cassette	Grey
HDXOCLC10824	Singlemode LC Open Cassette	Grey
HDXOCLCOM324	OM3 LC Open Cassette	Grey
HDXOCLCOM424	OM4 LC Open Cassette	Grey
HDXOCBLK	Blank Open Cassette	Grey

ACCESSORY ORDER INFO

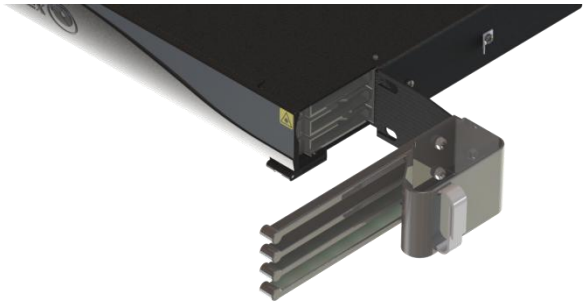
Part Number	Item Description	Colour
HDXZSR2	Side Rack Consolidation Point	Black
HDXZCT2	Cable Tray Consolidation Point	Black
HDXZHR2	HDX 3U Hanging Rack Frame	Black
HDXZUF2	HDX 3U Under Floor Frame	Black

PANEL SET

The HI-DEX panel set is based around a 19” 1U panel which can accommodate up to six interchangeable cassettes. The cassettes are mounted on sliding runners which allow each cassette to be brought forward independently of the others, providing unrestricted access to every port. The subdivision of the cassettes also facilitates the routing of patchcords to both sides of the panel in order to simplify the management of the patchcords. The addition of a bridge piece ties each row together to provide single-sided routing where required. The front door protects the patches when not in use and provides generous labelling space on both the front and rear faces.



Innovative finger management provides bend radius control and sets a fixed patchcord length to prevent disruption to the fibre during the articulation of the sliding runners.



A matching 1U cable manager provides protected routing across the front of the rack.

ORDERING INFORMATION

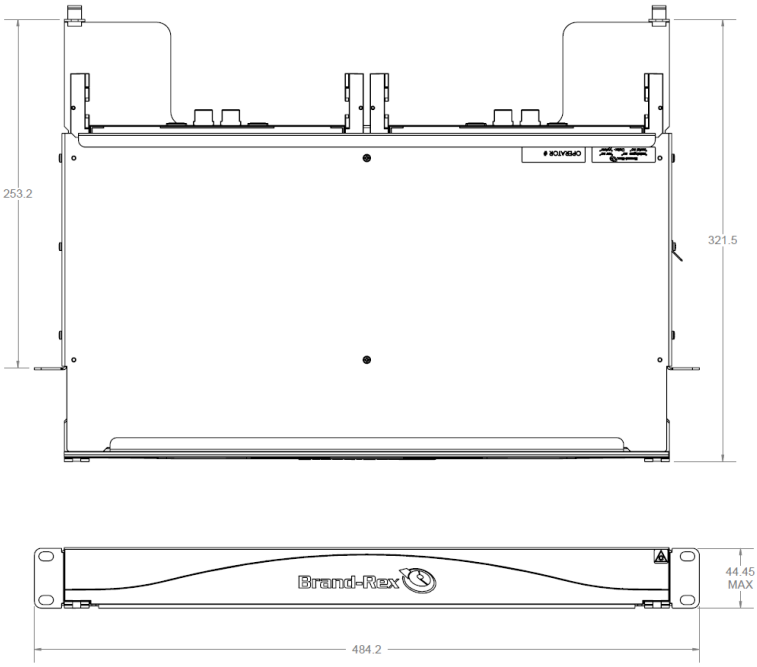
Product Set	Product type	Colour
HDX = HI-DEX	PNL = 1U Panel	2 = Black
	M1U = 1U Cable Manager	8 = Grey
	MNF = Management Fingers	

Example Part No: HDXPNL2 HI-DEX 1U Panel in Black

PHYSICAL CHARACTERISTICS

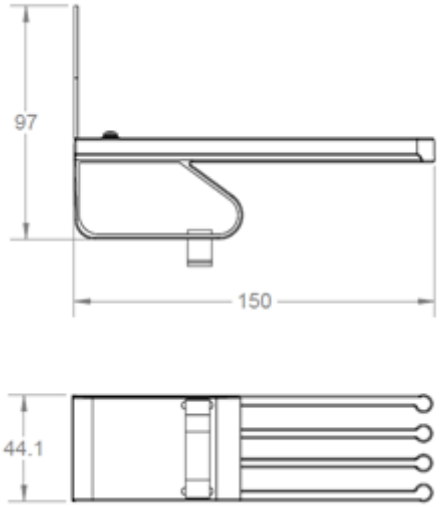
1U PANEL

HDXPNL2
HDXPNL8



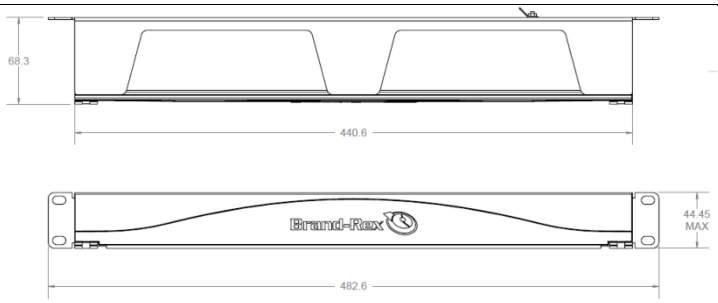
FINGER MANAGEMENT

HDXMNF2
HDXMNF8



1U CABLE MANAGER

HDXM1U2
HDXM1U8



CLOSED CASSETTES

HI-DEX closed cassettes provide 24 fibre MTP-to-LC patches per cassette, giving a maximum density of 144 LC fibres in 1U. HI-DEX closed cassettes have two 12-fibre MTP adaptors on the rear and 12 LC duplex adaptors on the front. The LC adaptors feature an integrated shutter which provides both dust and laser protection. The HI-DEX cassette features printed port identification in addition to a supplementary patch labelling area.

Innovative B-polarity cassettes provide alpha and beta configurations within a single unit which is flipped to transition between alpha and beta configurations.

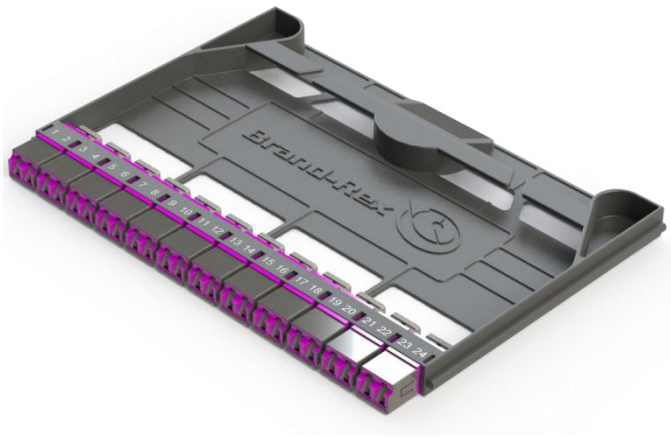
ORDERING INFORMATION

Product Set	Polarity	MTP Adaptor Type	LC Adaptor Type	Fibre Type	Fibre Count
HDX = HI-DEX	AC = A and C Polarity BB = B Polarity	TM = MTP Adaptor With Pins	LC = UPC LC AL = APC LC	108 = Singlemode OM3 = Multimode OM4 = Multimode	24 = 24 Fibres

Example Part No: HDXBBTMLCOM424 HI-DEX 24-Fibre B-Polarity OM4 MTP (With Pins) to LC Cassette

OPEN CASSETTES

HI-DEX open cassettes provide 24 fibre LC presentation or 144 fibre MTP presentation in a single cassette, giving a maximum density of 144 LC fibres or 864 MTP fibres in 1U. Available in singlemode and both OM3 and OM4multimode, HI-DEX open cassettes can be configured with opposed or aligned MTP adaptors or UPC or APC LC adaptors. HI-DEX open cassettes provide an added element of cable management.



MTP-MTP ORDERING INFORMATION

Product Set	Product Type	Adaptor Type	Fibre Count
HDX = HI-DEX	OC = Open Cassette	AM = Key-Up to Key-Down MTP BM = Key-Up to Key-Up MTP	144 = 144 Fibres

Example Part No: HDXOCAM144 **HI-DEX 144-Fibre Key-Up To Key-Down Open Cassette**

LC-LC ORDERING INFORMATION

Product Set	Product Type	Adaptor Type	Fibre Type	Fibre Count
HDX = HI-DEX	OC = Open Cassette	LC = UPC LC AL = APC LC	108 = Singlemode OM3 = Multimode OM4 = Multimode	12 = 12 Fibres 24 = 24 Fibres

Example Part No: HDXOCLCOM424 **HI-DEX 24-Fibre OM4 LC Cassette**

BLANK ORDERING INFORMATION

Product Set	Product Type	Adaptor Type	Fibre Count
HDX = HI-DEX	OC = Open Cassette	BLK = Blanking Plugs	N/A

Example Part No: HDXOCBLK **HI-DEX Blanking Cassette**

ZERO U ACCESSORIES

The HI-DEX product range includes additional accessory panels which extend the use of HI-DEX beyond traditional U-based racks.

The Zero-U Side-Rack Consolidation point allows a single HI-DEX cassette to be mounted alongside active equipment to provide patching without the need to sacrifice an entire U of rack space.

The Cable Tray Consolidation Point can be mounted underneath or above most basket-type cable tray to provide inline patching for up to three HI-DEX cassettes.

The 3U Hanging Rack provides 3U of 19" rack space which can be suspended from racking or cable trays and will accommodate any standard sized 19" panel up to 3U in height in addition to the HI-DEX 1U panel. Panels are mounted horizontally within the 3U Hanging Rack.

The 3U Under-Floor Rack provides 3U of 19" rack space which can be mounted under floors and will accommodate any standard sized 19" panel up to 3U in height in addition to the HI-DEX 1U panel. Panels are mounted vertically within the 3U Under-Floor Rack.

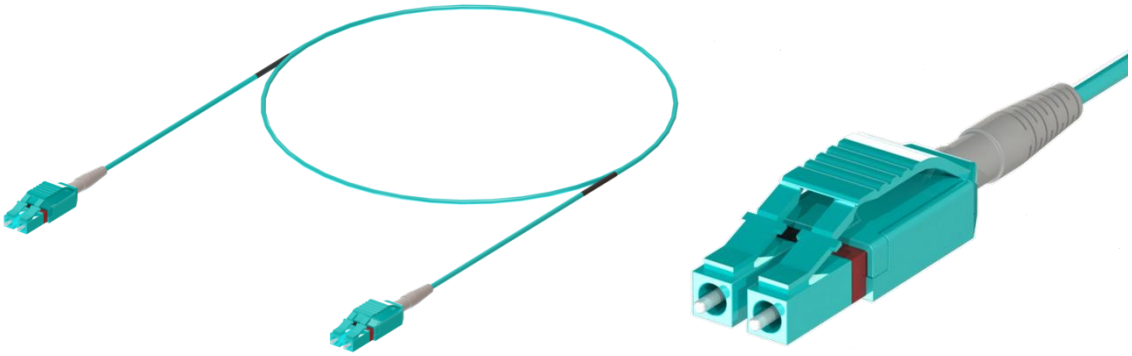
ORDERING INFORMATION

Product Set	Product Type	Colour
HDX = HI-DEX	ZSR = Side-Rack Consolidation Point	2 = Black
	ZCT = Cable Tray Consolidation Point	8 = Grey
	ZHR = 3U Hanging Rack	
	ZUF = 3U Under-Floor Rack	

Example Part No: HDXZSR2 **HI-DEX Side-Rack Mounted Zero-U Frame in Black**

UNIBOOT PATCHCORDS

The 2.0mm uniboot patchcord is suited for high density applications where the reduced cable diameter improves cable management by reducing the total volume of cable without reducing fibre count. The polarity of the uniboot patchcord can be switched at the point of installation



ORDERING INFORMATION

Product Type	Connector 1	Fibre Type	Length	Connector 2	No. Fibres	Sheath Colour	Cable Type
BOP = Bend	LC = LC PC	108 = Singlemode	zzz = Length in m	LC = LC PC	2 = Duplex	0 = Yellow	7 = 2.0mm/900µm
Insensitive	UL = LC UPC	OM3 = Multimode		UL = LC UPC		5 = Aqua	24
Patchcord	AL = LC APC	OM4 = Multimode		AL = LC APC		7 = Heather Violet	48

Example Part No: BOPLCOM4010LC277 **Bend-insensitive uniboot LC/PC-to-LC/PC duplex patch-cord, 2.0mm diameter, 1m long with OM4 fibre, heather-violet in colour**

MTP-LC UNIBOOT BREAKOUTS

Hybrid breakout units are made up of 12 fibres LSOH jacketed cables terminated at one end with Low Loss MTP connectors, through a bifurcation unit, to LC duplex low loss uniboot connectors terminated to 2mm OD simplex cables. The assemblies are available in OM3, enhanced OM4 or single-mode performance grades.

ORDERING INFORMATION

Group	Pins	Connector 1	Performance	No. of Fibres	Overall Length
H = HI-DEX	T = without pins	LC = LC polished connector	OM3 = Multimode	12	zzz = Length in m
	TM = with pins		OM4 = Multimode		
			108 = Singlemode		

Example Part No: HTMLCOM312020 **Breakout assembly, low loss MTP with pins to 12 LC low loss uniboot connectors, OM3 performance, 12 way, 2.0m overall length**

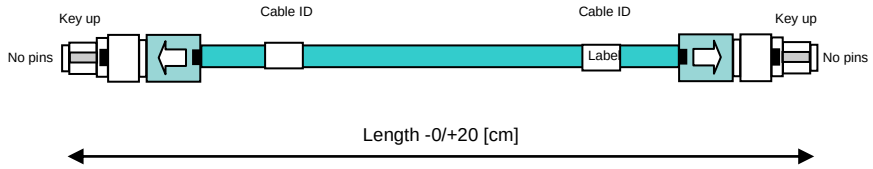
CABLE ASSEMBLY

Cable assemblies are made up of 12 fibre LSOH jacketed cables terminated at both ends in MTP Low Loss connectors which can be loomed together to offer increased fibre counts of 24 and 48 fibres. The assemblies can be used as backbone or horizontal cable interconnections between distribution racks and are available in a range of performance levels to suit the needs of the network.

Cable assemblies are supplied in standard lengths of 1, 3, 5, 10, 20, 30, 50 and 100m. Custom lengths are also available on request. The assemblies are delivered as coils in lengths up to 50m long and on reels in lengths over 50m.
Singlemode cables are yellow; multimode are either aqua (OM3) or heather-violet (OM4).

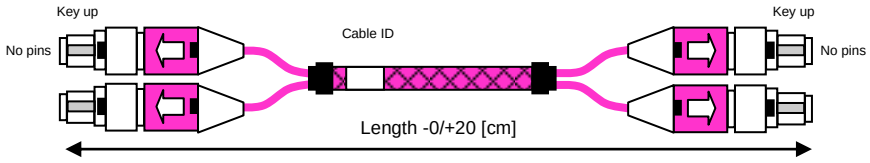
12-Fibre Cable Assembly

Type 'B' Multi-mode OM3 fibre



24-Fibre Loomed Cable Assembly

Type 'B' Multimode OM4 fibre



ORDERING INFORMATION

Product Set	Connector 1	Cable Type	Polarity	Connector 2	Performance	Fibre Count	Length (m)
S = Superset	T = without pins	C = Compact Cable	A	T = without pins	OM3 = Multimode	12	ZZZ Z
	TM = with pins	(3mmØ)	B	TM = with pins	OM4 = Multimode	24	
			c		108 = Singlemode	48	

Example Part No: STCBTOM4120100 **12-fibre, B polarity, female MTP-to-female MTP, OM4 fibre, 10m long cable assembly**

*"Brand-Rex is **dedicated** to **designing**, **developing** and **manufacturing***
*sustainable **high performance** structured cabling and speciality **cabling solutions**"*