

HD<sup>3</sup>-ES

# FLEXIBLE. SIMPLE. ON DEMAND.

The multimedia all-rounder for compact data centres:  
HD<sup>3</sup>-ES.

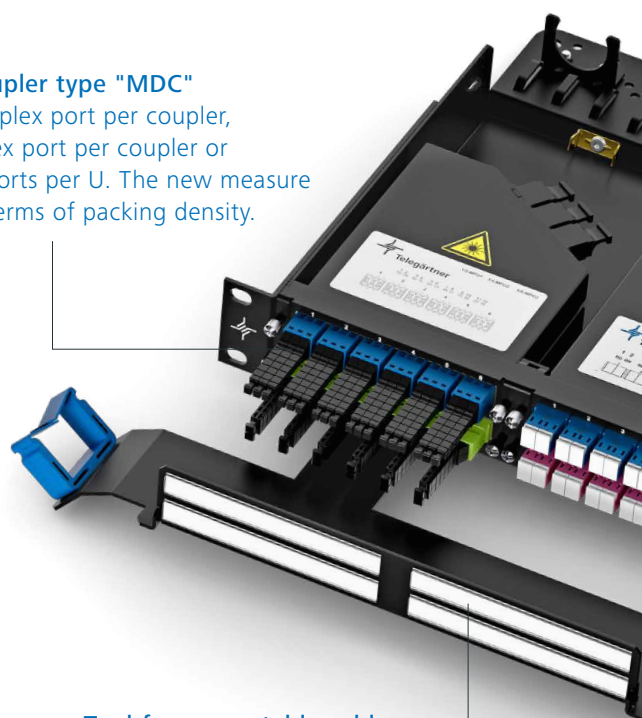
# SPACE OPTIMISATION. MADE EASY AND SAFE TO HANDLE.

Not only in telecommunication/equipment rooms and micro data centres, but also in large server rooms rack space is limited. Cost pressure and a lack of space, usually set narrow limits for a reliable passive IT infrastructure. The requirements are clear: **Scalability, flexibility** and **efficiency**.

The Telegärtner HD<sup>3</sup>-ES is the first choice for these requirements. It combines the unique features of the Telegärtner HD<sup>3</sup> philosophy – **High Density, High Durability, High Diversity** – with a clear focus on **simplicity, operational safety** and **customer benefits**.

"ES" stands for the **ESsential** oder stands for being focused on the **ESsential**. The fiber optic adaptors for example have integrated, automatic LCD-D shutters to protect personnel and equipment from laser light. The tool-free assembly simplifies the installation of the modules and the cable management. And the large cable management bar on the rear facilitates proper and safe cable routing. The perfect interaction of all components of the new HD<sup>3</sup>-ES series creates a robust, reliable and scalable platform for the economic fibre, twisted pair and coaxial expansion of your IT infrastructure. Today and tomorrow.

**The new coupler type "MDC"**  
as MDC-H duplex port per coupler,  
MDC-Q duplex port per coupler or  
144 duplex ports per U. The new measure  
of things in terms of packing density.



**Tool-free mountable cable  
management bar**  
with label holders, bendradius  
support on the sides  
and detachable cable guides

## Features and Benefits:

- Modules for individual mix-up of fibre, twisted pair and coaxial technology as the best base for your scalable and economic IT infrastructure
- 19" chassis of 0.5, 1 and 3U can be installed in recessed positions
- Simple and safe replacement of the modules with just a few simple steps
- Conductive surface of chassis and modules for improved bonding
- Row of bonding connections
- Multi-purpose rail for easy cable routing, strain relief and installation of mounting brackets
- Fibre modules for breakout/mini-breakout and for pre-terminated cables, with integrated splice cassette or FanOut modules with MPO/MTP® connectors
- Up to 48 RJ45 ports per Unit
- Up to 96 fibre ports (192 fibres) per Unit with LC Duplex
- Up to 144 duplex ports per Unit (288 fibres) with MDC
- Cable management on the front can be installed and removed without any tools
- Accessories for individual comfort and handling
- Customer specific modules on request

**Multipurpose rail**  
for easy cable routing, cable retention with velcro tape, cable glands and installation of mounting brackets

**Conductive surface**  
for improved bonding and pre-assembled connections for blade receptacles

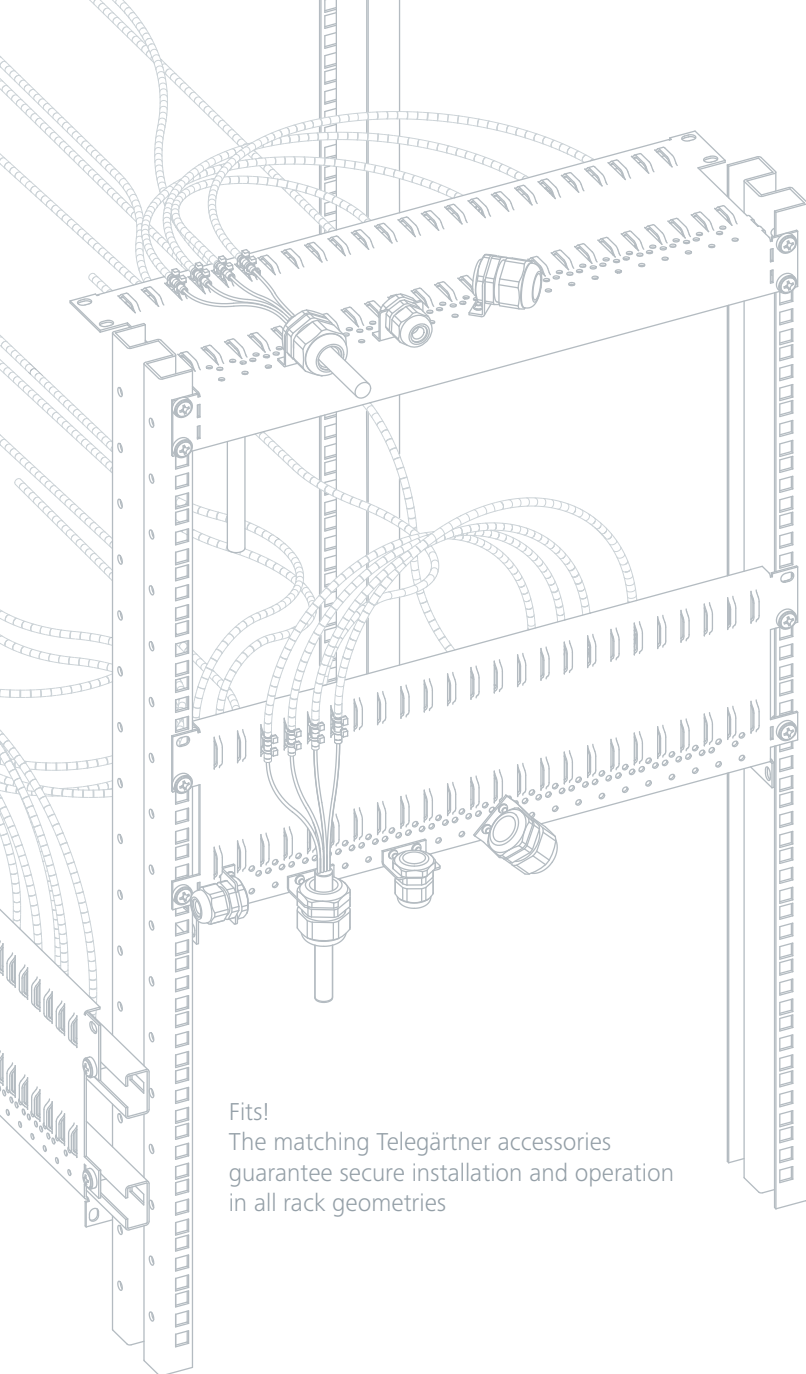
Depth module carrier 245 mm

**LC Duplex adaptors with integrated, automatic shutters**  
for improved laser-safety and dust protection

110 mm

**Wide range of fibre, RJ45 and coaxial modules**

- Patch, splice and FanOut modules in all common fibre categories and polishing grades
- Available with MDC couplers for particularly high connection density and LC duplex couplers for medium connection density
- Patching on the front, connecting pre-terminated links on the rear
- Easy assembling of Telegärtner Cat.6<sub>A</sub> and Cat.8.1 RJ45 modules



Fits!  
The matching Telegärtner accessories guarantee secure installation and operation in all rack geometries

Operators of small and medium-sized data centres benefit from the improved usability of the HD³-ES by Telegärtner. Short installation time, individual configuration, extensions exactly as needed and easy changes of the tool-free mountable modules offer the user a practical solution at a very attractive price.

**This is the all-rounder HD³-ES.**

Huge amounts data traffic and high port densities in confined rack space require **reliable**, **scalable** and **flexible** IT infrastructure solutions.

The Telegärtner fibre patch, splice and FanOut modules spare your link budgets, the RJ45 modules of series STX, AMJ-S, -SL and Cat.8.1 provide high performance and the headroom needed in real-life installations. All components are relentlessly **reliable**, so you can entrust them your critical business applications with confidence.

The distribution panel system HD³-ES by Telegärtner grows with your demands on your data network. Thanks to its modular and **scalable** design, you just buy what you need, when you need it. Module by module.

Continuously increasing data rates due to new applications necessarily lead to changes in data transmission technology and require **flexible** IT infrastructures that can easily and economically be adapted to the changing demands. With the extensive portfolio of various copper and fibre modules you can adjust your HD³-ES exactly to your changing needs.

### High Density becomes Ultra High Density

The new MDC connector and coupling system doubles the connection density compared to LC duplex in no time at all.

Existing space is utilised even more efficiently - without any conversion work.

# HD<sup>3</sup>-ES Modules

## HD<sup>3</sup>-ES Modular Subracks

for equipping with modules in half (0.5U) and full (1U) height. The modules can be inserted from the front and fixed in place without tools. Different modules can be combined within a subrack according to application requirements. Comprehensive accessories for front and rear cable routing can be found on page 9 of this brochure.



Order No.	Description	Remarks
100021876	HD <sup>3</sup> -ES panel 0.5U	With 4 slots of 0.5U for mounting of up to 4 half height modules
100021875	HD <sup>3</sup> -ES panel 1U	With 4 slots of 1U for mounting of up to 4 modules of full height, 8 modules of half height or a combination thereof
100025720	HD <sup>3</sup> -ES panel 3U	With 12 slots of 1U for mounting of up to 12 modules of full height, 24 modules of half height or a combination thereof

## HD<sup>3</sup>-ES FO Splice Modules for medium packing densities

for connecting loose tube cables, with integrated splice cassette incl. splice holder for crimp and micro-shrink splice protectors. Supplied with colour-coded and inserted pigtails. Modules can be suitably combined in the HD<sup>3</sup>-ES subrack.



Order No.	Description	Remarks
100022375	HD <sup>3</sup> -ES module splice, 0.5U 6x LC/PC Duplex OS2	Couplers blue, integrated laser protection
100022376	HD <sup>3</sup> -ES module splice, 0.5U 6x LC/APC Duplex OS2	Couplers green, integrated laser protection
100022377	HD <sup>3</sup> -ES module splice, 0.5U 6x LC Duplex OM3	Couplers aqua, integrated laser protection
100022378	HD <sup>3</sup> -ES module splice, 0.5U 6x LC Duplex OM4	Couplers violet, integrated laser protection
100022379	HD <sup>3</sup> -ES module splice, 0.5U 6x LC Duplex OM5	Couplers limegreen, integrated laser protection
100041760	HD <sup>3</sup> -ES module splice, 1U 12x LC/PC Duplex OS2	Couplers blue, integrated laser protection
100121205	HD <sup>3</sup> -ES module splice, 1U 12x LC/APC Duplex OS2	Couplers green, integrated laser protection
100041410	HD <sup>3</sup> -ES module splice, 1U 12x LC Duplex OM3	Couplers aqua, integrated laser protection
100041411	HD <sup>3</sup> -ES module splice, 1U 12x LC Duplex, OM4	Couplers violet, integrated laser protection
100128146	HD <sup>3</sup> -ES module splice, 1U 12x LC Duplex OM5	Couplers limegreen, integrated laser protection
100044132	HD <sup>3</sup> -ES module splice, 1U 12x E2000/APC Compact OS2	Couplers green



## HD<sup>3</sup>-ES Modules

### HD<sup>3</sup>-ES FO Patch Modules for **medium** packing densities

for the use of ready-to-connect fibre optic lines. Please visit our TICNET configurator on our website. Modules can be suitably combined in the HD<sup>3</sup>-ES subrack.



Order No.	Description	Remarks
100022364	HD <sup>3</sup> -ES module patch, 0.5U 6x LC/PC Duplex OS2	Couplers blue, integrated laser protection
100022365	HD <sup>3</sup> -ES module patch, 0.5U 6x LC/APC Duplex OS2	Couplers green, integrated laser protection
100022366	HD <sup>3</sup> -ES module patch, 0.5U 6x LC Duplex OM3	Couplers aqua, integrated laser protection
100022367	HD <sup>3</sup> -ES module patch, 0.5U 6x LC Duplex OM4	Couplers violet, integrated laser protection
100022368	HD <sup>3</sup> -ES module patch, 0.5U 6x LC Duplex OM5	Couplers limegreen, integrated laser protection
100022369	HD <sup>3</sup> -ES module patch, 1U 12x LC/PC Duplex OS2	Couplers blue, integrated laser protection
100022370	HD <sup>3</sup> -ES module patch, 1U 12x LC/APC Duplex OS2	Couplers green, integrated laser protection
100022371	HD <sup>3</sup> -ES module patch, 1U 12x LC Duplex OM3	Couplers aqua, integrated laser protection
100022372	HD <sup>3</sup> -ES module patch, 1U 12x LC Duplex OM4	Couplers violet, integrated laser protection
100022373	HD <sup>3</sup> -ES module patch, 1U 12x LC Duplex OM5	Couplers limegreen, integrated laser protection
100044127	HD <sup>3</sup> -ES module patch, 1U 12x E2000/APC E2k OS2	Couplers green
100044131	HD <sup>3</sup> -ES module patch, 1U 12x E2000/APC Compact E2k/C OS2	Couplers green
100022374	HD <sup>3</sup> -ES module patch, 0.5U 6x MPO	Couplers black

### HD<sup>3</sup>-ES FO Patch Modules for **maximum** packing densities

for the use of ready-to-connect fibre optic lines. Please visit our TICNET configurator on our website. Modules can be suitably combined in the HD<sup>3</sup>-ES subrack.

Order No.	Description	Remarks
100125998	HD <sup>3</sup> -ES module patch, 0.5U 6x MDC/PC Quad OS2	Couplers blue
100125994	HD <sup>3</sup> -ES module patch, 0.5U 6x MDCAPC Quad OS2	Couplers green
100125996	HD <sup>3</sup> -ES module patch, 0.5U 6x MDC Quad OM4	Couplers violet
100125999	HD <sup>3</sup> -ES module patch, 1U 12x MDC/PC Quad OS2	Couplers blue
100125995	HD <sup>3</sup> -ES module patch, 1U 12x MDC/APC Quad OS2	Couplers green
100125997	HD <sup>3</sup> -ES module patch, 1U 12x MDC Quad OM4	Couplers violet

### HD<sup>3</sup>-ES FO FanOut Modules for **medium** packing densities

with MPO/MTP® adaptors at the back.

Modules come with installed FanOut Kit MPO/MTP®LC. Modules can be suitably combined in the HD<sup>3</sup>-ES subrack.



Order No.	Description	Remarks
100022380	HD <sup>3</sup> -ES module FanOut, 0.5U 6x LC/PC Duplex OS2, MPO12	Couplers blue, integrated laser protection
100022381	HD <sup>3</sup> -ES module FanOut, 0.5U 6x LC/APC Duplex OS2, MPO12	Couplers green, integrated laser protection
100022382	HD <sup>3</sup> -ES module FanOut, 0.5U 6x LC Duplex OM3, MPO12	Couplers aqua, integrated laser protection
100022383	HD <sup>3</sup> -ES module FanOut, 0.5U 6x LC Duplex OM4, MPO12	Couplers violet, integrated laser protection
100022384	HD <sup>3</sup> -ES module FanOut, 0.5U 6x LC Duplex OM5, MPO12	Couplers limegreen, integrated laser protection
100022385	HD <sup>3</sup> -ES module FanOut, 1U 12x LC/PC Duplex OS2, 2x MPO12	Couplers blue, integrated laser protection
100022386	HD <sup>3</sup> -ES module FanOut, 1U 12x LC/APC Duplex OS2, 2x MPO12	Couplers grün, integrated laser protection
100022387	HD <sup>3</sup> -ES module FanOut, 1U 12x LC Duplex OM3, 2x MPO12	Couplers aqua, integrated laser protection
100022388	HD <sup>3</sup> -ES module FanOut, 1U 12x LC Duplex OM4, 2x MPO12	Couplers violet, integrated laser protection
100022389	HD <sup>3</sup> -ES module FanOut, 1U 12x LC Duplex OM5, 2x MPO12	Couplers limegreen, integrated laser protection
100044133	HD <sup>3</sup> -ES module FanOut, 1U 12x E2000/APC OS2, MPO12	Couplers green, integrated laser protection
100044134	HD <sup>3</sup> -ES module FanOut, 1U 12x E200/APC Compact OS2, 2x MPO12	Couplers green, integrated laser protection

### HD<sup>3</sup>-ES FO FanOut Modules for **maximum** packing densities

with MPO/MTP® adaptors at the back.

Modules come with installed FanOut Kit MPO/MTP®LC. Any combination of modules with 0.5U and 1U can be installed in the 1- and 3U subrack.



Order No.	Description	Remarks
100125989	HD <sup>3</sup> -ES module FanOut, 0.5U 6x MDC/PC Hex OS2, 3x MPO12	Couplers blue
100125977	HD <sup>3</sup> -ES module FanOut, 0.5U 6x MDC/APC Hex OS2, 3x MPO12	Couplers green
100125983	HD <sup>3</sup> -ES module FanOut, 0.5U 6x MDC Hex OM4, 3x MPO12	Couplers violet
100125992	HD <sup>3</sup> -ES module FanOut, 1U 6x MDC/PC Hex OS2, 6x MPO12	Couplers blue
100125980	HD <sup>3</sup> -ES module FanOut, 1U 12x MDC/APC Hex OS2, 6x MPO12	Couplers green
100125986	HD <sup>3</sup> -ES module FanOut, 1U, 6x MDC Hex OM4, 6x MPO12	Couplers violet

## HD<sup>3</sup>-ES Modules

Order No.	Description	Remarks
100125988	HD <sup>3</sup> -ES module FanOut, 0.5U 6x MDC/PC Quad OS2, 2x MPO12	Couplers blue
100125990	HD <sup>3</sup> -ES module FanOut, 0.5U 6x MDC/PC Quad OS2, 3x MPO8	Couplers blue
100125976	HD <sup>3</sup> -ES module FanOut, 0.5U 6x MDC/APC Quad OS2, 2x MPO12	Couplers green
100125978	HD <sup>3</sup> -ES module FanOut, 0.5U 6x MDC/APC Quad OS2, 3x MPO8	Couplers green
100125982	HD <sup>3</sup> -ES module FanOut, 0.5U 6x MDC Quad OM4, 2x MPO12	Couplers violet
100125984	HD <sup>3</sup> -ES module FanOut, 0.5U 6x MDC Quad OM4, 3x MPO8	Couplers violet
100125991	HD <sup>3</sup> -ES module FanOut, 1U 6x MDC/PC Quad OS2, 4x MPO12	Couplers blue
100125993	HD <sup>3</sup> -ES module FanOut, 1U 6x MDC/PC Quad OS2, 6x MPO8	Couplers blue
100125979	HD <sup>3</sup> -ES module FanOut, 1U 12x MDC/APC Quad OS2, 4x MPO12	Couplers green
100125981	HD <sup>3</sup> -ES module FanOut, 1U 12x MDC/APC Quad OS2, 6x MPO8	Couplers green
100125985	HD <sup>3</sup> -ES module FanOut, 1U 12x MDC Quad OM4, 4x MPO12	Couplers violet
100125987	HD <sup>3</sup> -ES module FanOut, 1U 12x MDC Quad OM4, 6x MPO8	Couplers violet



### HD<sup>3</sup>-ES Modules for RJ45 and Coupler

accept STX or AMJS / AMJ Cat.8.1 / AMJSL RJ45 jacks for twisted pair cables. AMJS, AMJSL and AMJ Cat.8.1 jacks can be mixed in the same HD3-ES module in 1U. Modules with 0.5U and 1U can be mixed in 1- and 3U subrack. Please order RJ45 jacks separate.



Order No.	Description	Remarks
100021643	HD <sup>3</sup> -ES module 0.5U for 6x RJ45 STX	Module accepts up to 6 RJ45 jacks type STX
100021644	HD <sup>3</sup> -ES module 1U for 6x RJ45 AMJ	Module accepts up to 6 RJ45 jacks type AMJ-S/-SL/-Cat.8.1
100021645	HD <sup>3</sup> -ES module 1U for 8x RJ45 AMJ	Module accepts up to 8 RJ45 jacks type AMJ-S/-SL/-Cat.8.1





### HD<sup>3</sup>-ES Modules for Coax

for connecting pre-assembled coaxial cables with SMA and BNC connectors. Modules can be suitably combined in the HD<sup>3</sup>-ES subrack.

	Order No.	Description	Remarks
	100120920	HD <sup>3</sup> -ES module Coax 0.5U (FO-M HD3ES .5U pcm 6 SMA)	Module with 6 SMA couplers, gold-plated
	100120925	HD <sup>3</sup> -ES module Coax 1U (FO-M HD3ES 1U pcm 6 BNC)	Module with 6 BNC couplers

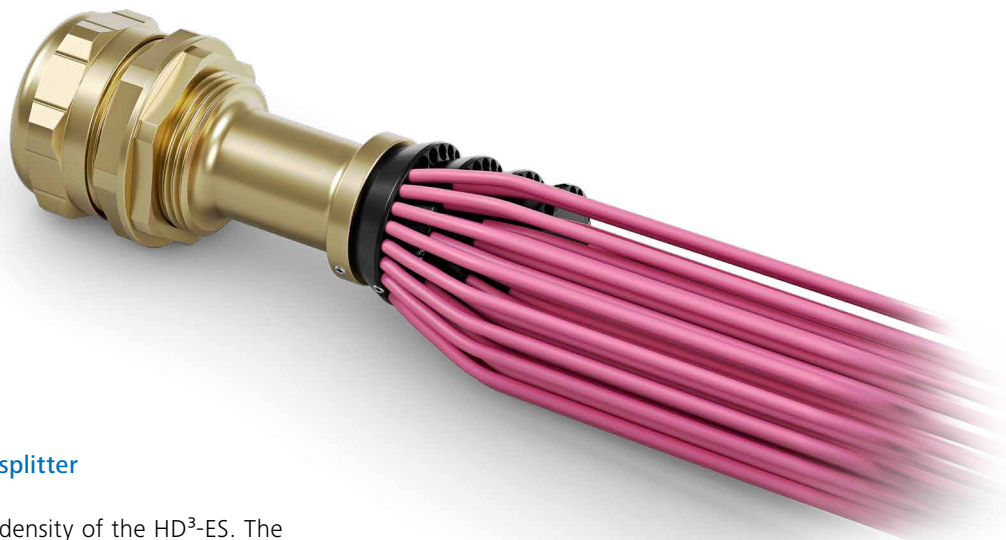
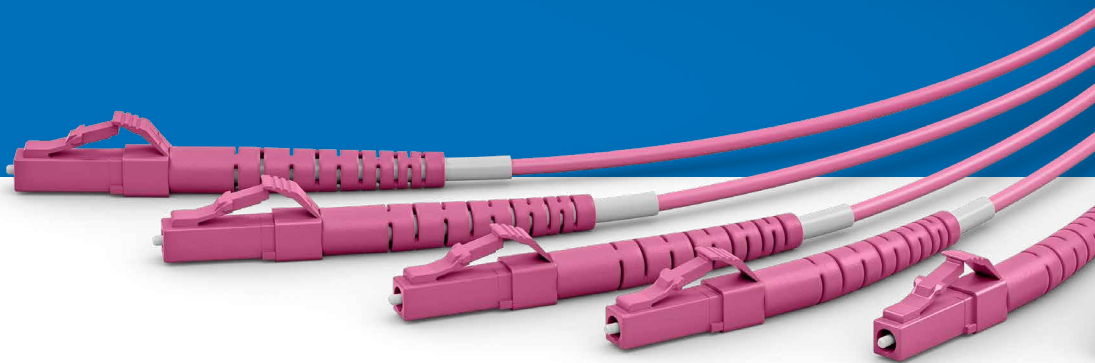
### Accessories

to customise the patch panels and for even more convenient installation and patching.

	Order No.	Description	Remarks
	100021629	HD <sup>3</sup> -ES cable management and front label holder, 0.5U	Tool-free assembly due to latching mechanism
	100021630	HD <sup>3</sup> -ES cable management and front label holder, 1U	Tool-free assembly due to latching mechanism
	100021631	HD <sup>3</sup> -ES cable management and front label holder, 2x1U	Tool-free assembly due to latching mechanism
	100021632	HD <sup>3</sup> -ES cable management and front label holder, 3U	Tool-free assembly due to latching mechanism
	100022666	HD <sup>3</sup> -ES Rear side mounting bracket M20	Anti-twist screw mounting
	100022667	HD <sup>3</sup> -ES Rear side mounting bracket M25	Anti-twist screw mounting
	100021877	HD <sup>3</sup> -ES top-side cover for HD3-ES panel 1U	Tool-free assembly due to latching mechanism
	100021646	HD3-ES panel 0.5U - blank	For front mounting
	100021647	HD3-ES panel 1U - blank	For front mounting
	100031054	HD3-ES bonding set	For galvanic coupling of the RJ45 and coaxial patch-patch modules to the patch panel
	100043729	HD <sup>3</sup> -ES cable management, universal for different mounting positions	For horizontal or vertical screw mounting at various rack positions For fixing cables with cable ties, or M20/25 mounts



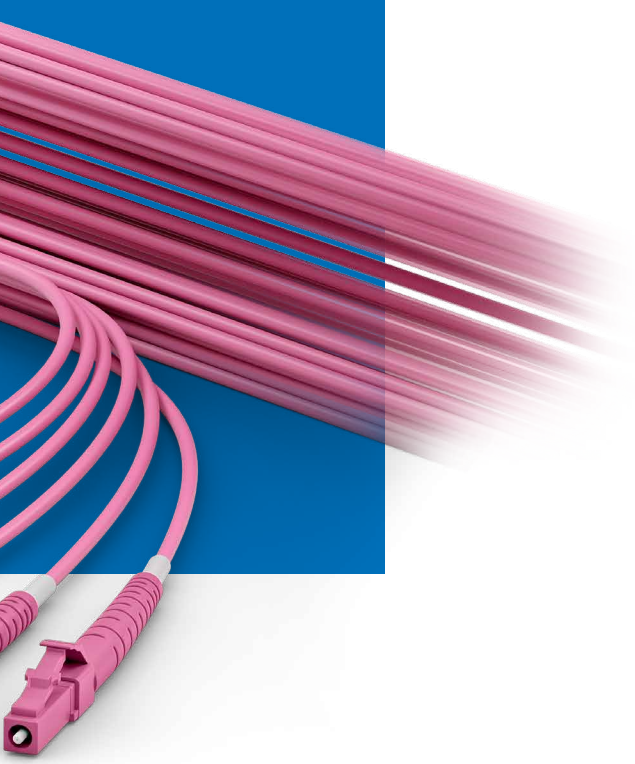
# FAST INSTALLATION WITHOUT SPLICING.



## The modular and high-fiber ODS/M25 splitter

Harmonises perfectly with the high port density of the HD<sup>3</sup>-ES. The customer can select the whip lengths to suit their application, either as a single fibre or as a duplex fibre bundle. The splitter is mounted securely on one of the freely selectable mounting points, either on the subrack itself or on the universal cable management system.

# UNIBOOT PATCH CORDS.



## Uniboot patch cords

The built-in pull and locking tab allows effortless patching of LC duplex and MDC duplex cables, even with extremely high packing densities.

Even with 96 ports/U of the HD<sup>3</sup>-ES distribution system, you can work quickly and safely. Changing the polarity of the LC duplex connector is also easy and requires no special knowledge or special tools.

Available in all common fibre and polish classes and in lengths from 0.5 m to 10 m, nothing stands in the way of your application, even in the tightest of installation spaces.



## The youngest VSFF connector in the Telegärtner portfolio

The USconec® MDC is available in senior and junior versions. Even the MDC-Q version provides twice the packing density of the LC duplex. Matching Telegärtner patch cables for front-side cable routing and Telegärtner trunk cables for rear-side cable routing.



Explore our  
Uniboot patch cords

# BENEFITS.

	Installer	End customer
<b>Flexible</b>	<ul style="list-style-type: none"><li>• <b>Various options for cable support</b> at the front &amp; behind the wall significantly eases the installation</li></ul>	<ul style="list-style-type: none"><li>• <b>Space-saving and variable in design</b> so that you are optimally prepared for future changes</li></ul>
<b>Simple</b>	<ul style="list-style-type: none"><li>• <b>Tool-free</b> mounting of modules and accessories</li><li>• <b>Simple</b> equipotential bonding</li></ul>	<ul style="list-style-type: none"><li>• Highest operational safety thanks to tamper-proof laser protection</li></ul>
<b>Expandable</b>	<ul style="list-style-type: none"><li>• Extendable FO fibre density up to 288/U, or 32/48 /U for RJ45, or up to 48/U SMA/BNA or any combination</li></ul>	

# FOCUS.

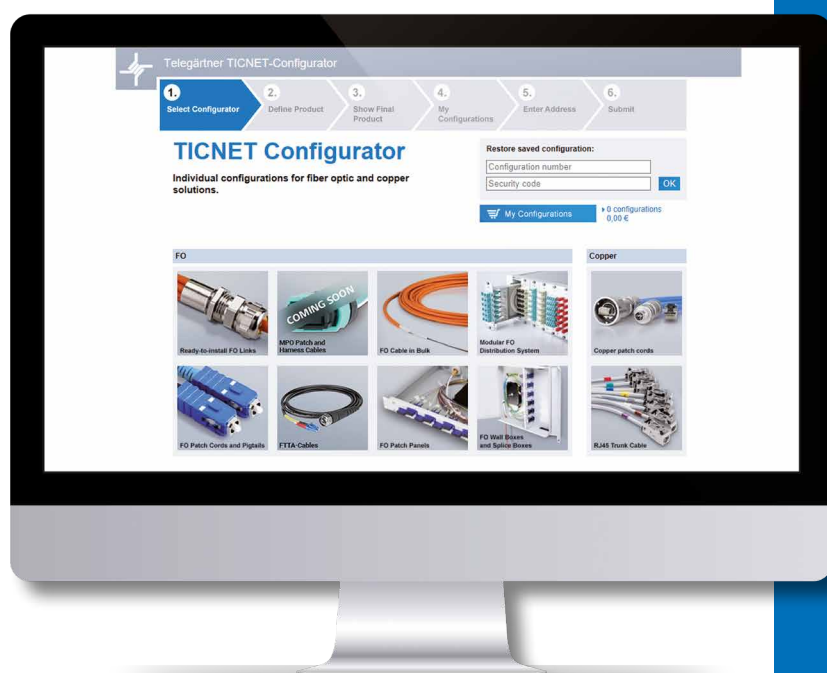
The HD<sup>3</sup>-ES is the ideal solution for cost-conscious operators of small and medium-sized data centres who, for cost or space reasons, want to scale their fibre optic, RJ45 and coax connections step by step (module by module).

- Small and medium-sized enterprises/data centres
- Hotel operators with their own server rooms and expansion requirements
- Operators of data centres

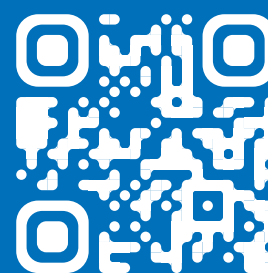


The fast way to the online catalogue  
DataVoice Office from Telegärtner.

# EASY, QUICK, RELIABLE: THE TICNET CONFIGURATOR.



Whether you need copper or optical fibre products, cables or patch panels, solutions for office buildings, data centres, industrial facilities or home networks: the TICNET configurator service is available around the clock to inquire customised products. Of course, it is also possible to save your configurations.



[www.telegartner.com/en/ticnet-configurator](http://www.telegartner.com/en/ticnet-configurator)

The TICNET configurator is a convenient and quick way of ordering pre-assembled cabling components from the factory. Just follow six simple steps to order the product you need:

- 1 Select type of product
- 2 Define product
- 3 Check final product
- 4 Add product to shopping basket
- 5 Enter address details
- 6 Send inquiry

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