



MOBILE NETWORKS
Solutions

Developing tomorrow's networks, today

DISCOVER YOUR MOBILE NETWORKS CATALOGUE

The Mobile offer developed by Telco networks includes different product categories such as:

- XG-optic FTTH/HTTA/PTTA/storage boxes
- XG-optic FTTH breakouts
- XG-optic 2FO outdoor patchcords
- RF Jumper cables
- XG-optic Power cables
- Cable clamps
- Antenna masts and Antenna supports
- Rainford outdoor cabinets
- Cable trays
- Optical patchpanels
- WDM solutions
- Transceivers



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The FTTA Digital Revolution



The third generation of mobile technology, 3G, offered speed rates of about 1.9Mbit/s. Based on the LTE standard, 4G offers speeds of up to 150Mbit/s. With theoretical speeds of 6 to 60 times higher and almost zero latency, the fifth generation 5G, opens up a very broad range of possibilities.

Well beyond the simple data and voice exchange, the challenge of today's mobile networks consists in opening up new possibilities in all sectors: industry, health, mobility, economics, Smart Cities, machine learning, Services. It is also a real bridge towards enabling access to new technologies for many communities that are poorly covered or not covered at all by wired networks.

It's in this context of digital revolution and driven by its expertise in outside plant optical infrastructures that Telenco has addressed the challenge of FTFA 4G/5G. Telenco networks designs, manufactures and markets reliable and high quality optical solutions for FTFA 4G/5G by applying eco-design principles and taking into account climatic conditions and harsh mechanical environments. By carefully considering the technical, economic and environmental aspects, Telenco offers genuine solutions for all 4G/5G cabling configurations, irrespective of the given network architecture.



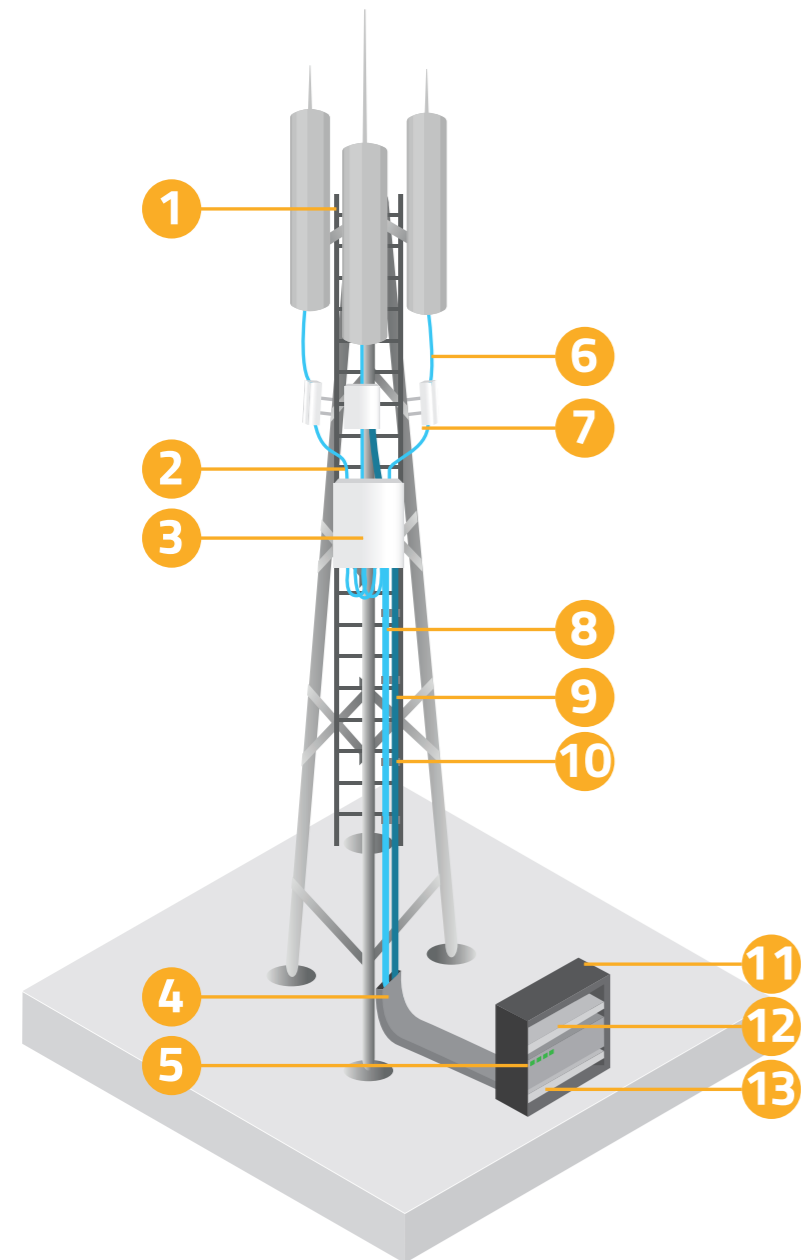
4G/5G cabling architecture

TOWER ARCHITECTURE
ROOFTOP ARCHITECTURE

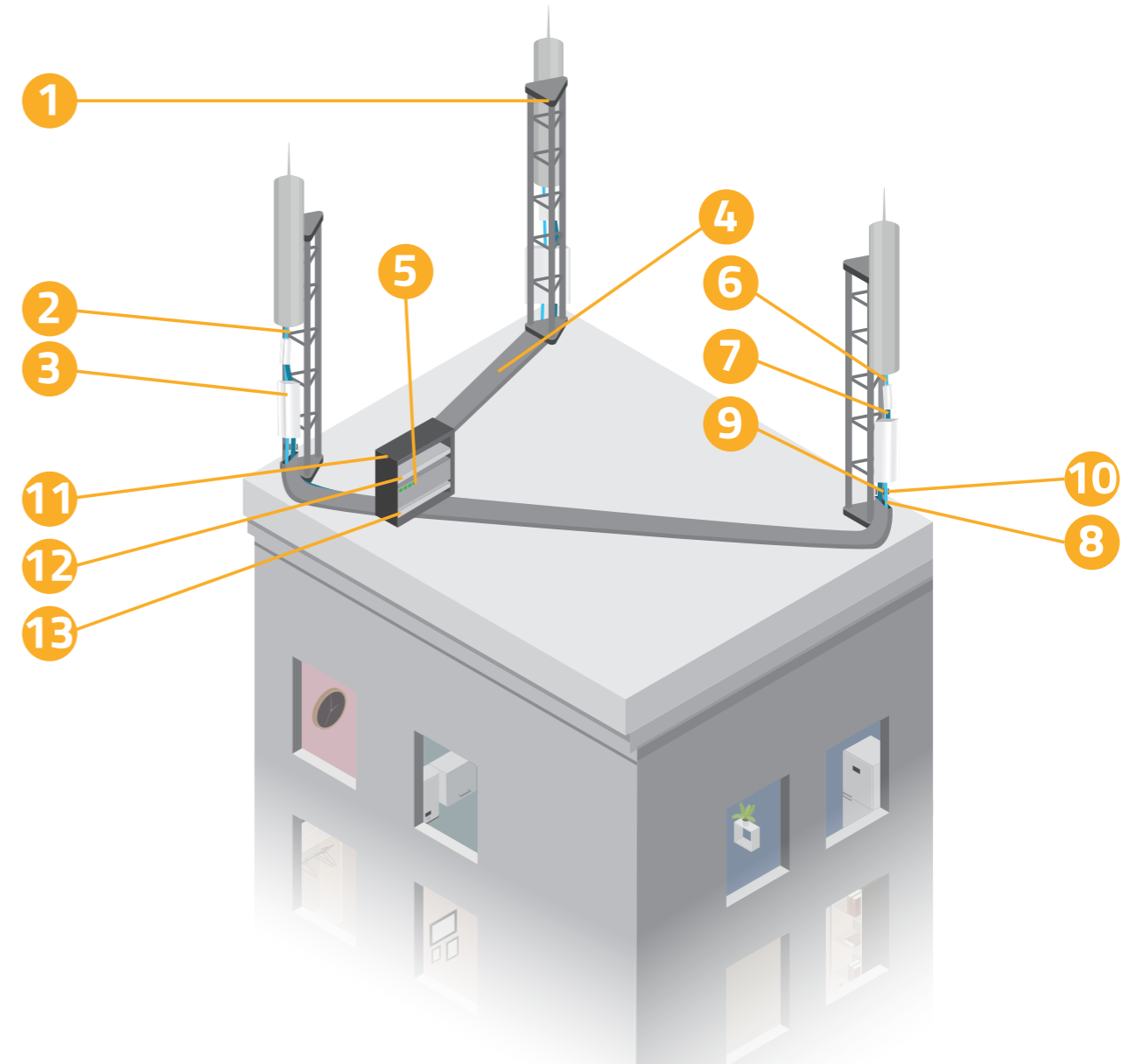
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TOWER ARCHITECTURE



ROOFTOP ARCHITECTURE



Legend

- | | | | |
|---|----------------------------------|----|--------------------|
| 1 | Antenna supports / Antenna masts | 8 | Breakout 12FO-24FO |
| 2 | 2FO outdoor patchcords | 9 | Power cables |
| 3 | FTTA/HTTA/PTTA boxes | 10 | Cable clamps |
| 4 | Cables trays | 11 | Outdoor cabinets |
| 5 | Transceivers | 12 | Optical patchpanel |
| 6 | RF jumper cables | 13 | WDM solutions |
| 7 | 5G Connectors | | |

Technical focus

Glossary

- **BTS** = Base Transceiver Stations
- **BBU** = Base Band Unit
- **RRU = RRH** = Remote Radio Unit = Remote Radio Head
- **FTTA** = Fiber to the Antenna
- **HTTA** = Hybrid to the Antenna (Hybrid = optical/power)
- **PTTA** = Power to the Antenna
- **Breakout = Trunk** = Pre-terminated or half-pre-terminated optical cable

Optical connectivity solutions for FTTA networks

Depending on the RRU/RRH model, the protection of the connectors installed on the FTTA outdoor pre-terminated breakouts may be different, although the basic connector remains the LC/UPC Duplex.



LC/UPC duplex connector without protection

There is no specific protection for the connectors, which are protected within the RRU/RRH itself.



LC/UPC duplex connector with NSN type protection

The NSN boot (Nokia Siemens Networks), also known as flexible boot, is a system enabling to reliably protect connectors against dust and water. Thanks to its simple structure, this boot is easy to implement while also compatible with a small footprint use



LC/UPC duplex connector with FullAXS type protection

The FullAxs is an IP67 waterproof system offering both a high mechanical protection and a complete dust protection. This boot locks onto a compatible base thanks to a rugged bayonet mount system.



SC/APC & SC/UPC connector

Not widely used, these connectors are mainly found at the BTS/BBU level.



5G specific connector – Clamp connector

The evolution of technologies, particularly 5G, has led to a significant development in protection, in order to optimize implementation time and the protection of optical links. Multiconnector clamp protection is one of these developments.



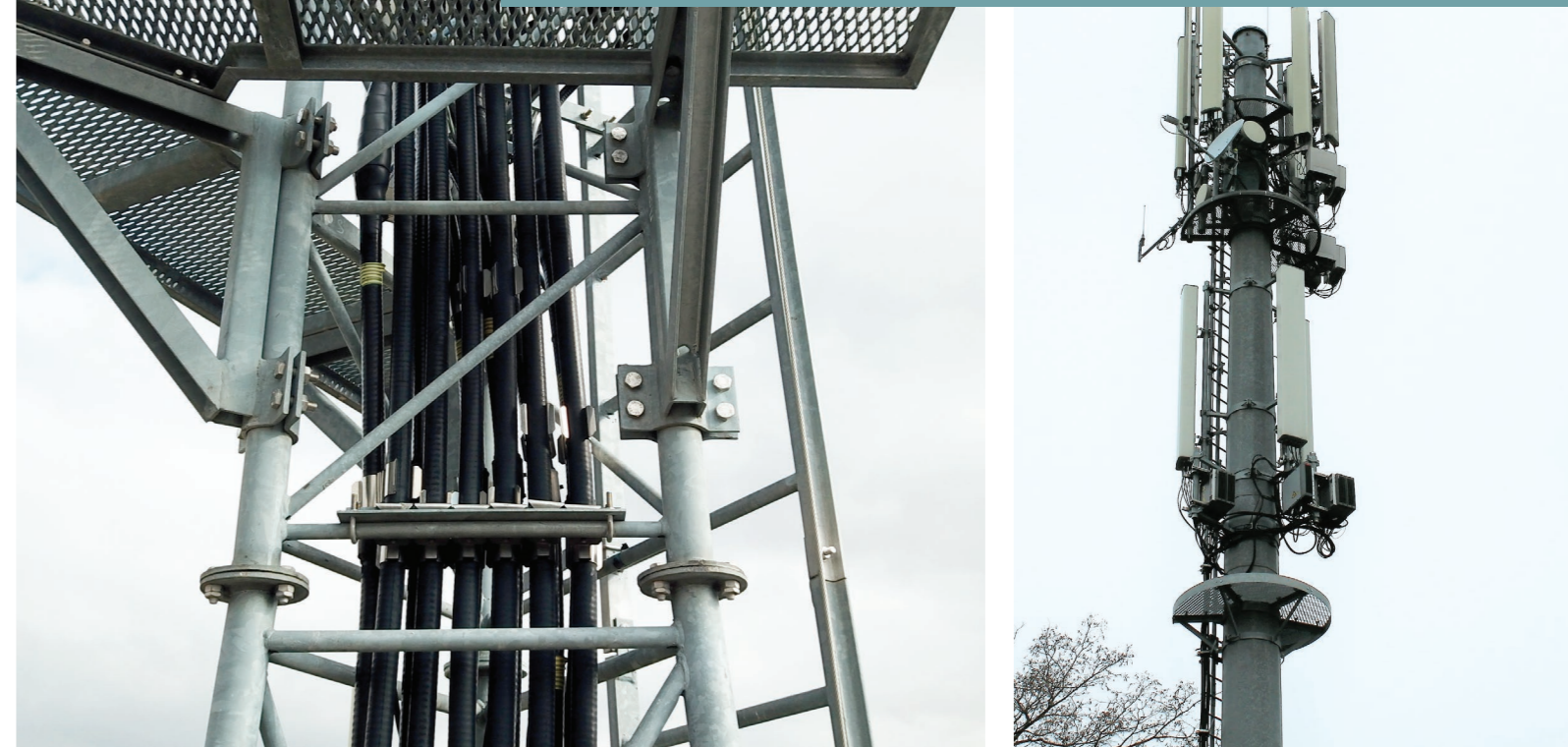
5G specific connector – Pushpull connector

The pushpull connector, like the clamp connector, enables secure deployment while reducing intervention time. This type of connector is used on the new O-RAN networks.

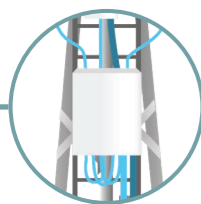


4G/5G Mobile Networks offer

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When it comes to FTTA 4G/5G optical cabling architectures, there are 2 main use cases: the deployment of new sites, and the upgrade of already equipped sites. Whatever the objective: increasing the coverage, integrating new networks operators, or simply upgrading to a higher technology generation, issues of space are inevitable.



XG-optic FTTA BOXES

Teleno's FTFA boxes, available in pre-terminated and pre-terminated/spliced versions, stand out as the first box solutions entirely designed and developed to simplify optical connection within indirect cabling infrastructures used in 4G and 5G network deployments. These FTFA boxes guarantee smooth, intuitive optical interconnection, whatever the installation configuration.

They are specially engineered and rigorously tested to ensure their resistance to harsh climatic conditions, including temperature variations, as well as to severe mechanical stress, such as winds of up to 250 km/h.

Product specifically designed for 4G/5G

The key benefits:

- + Captive parts
- + Fast and patented coupling system
- + High environmental resistance



Specifications:

Material	Plastic (PA)	
Colour	Grey RAL 7035	
Wind test (NF EN1991-1-4)	180 Km/h in all configurations 250 Km/h with pole band and 2-12 OMEGA bracket fixing (on single box or coupled by 2 and by 3)	
Waterproofing	IP55	
Impact resistance	IK 09	
Flammability	UL 94 HB	
UV resistance	UL 746 C	
Fiber bending radius	15mm (Supports G657A2 or G652D fibers and multimode fiber)	
Fiber management	Loosetube or Flexible tubes possible	
Temperature	-40°C to +65°C	
2 available versions	Pre-terminated	Pre-terminated/Spliced
Capacity	<ul style="list-style-type: none"> •1x 24FO Cable from Ø 7,5 to Ø 10 mm •12x 2FO patchcords LC/UPC : from Ø 4,5 to Ø 6,0 mm •12x LC/UPC duplex singlemode pre-installed adaptors 	<ul style="list-style-type: none"> •1x 24FO Cable : from Ø 7,5 to Ø 10 mm •12x 2FO LC/UPC Patchcords : from Ø 4,5 to Ø 6,0 mm •12x LC/UPC duplex singlemode pre-installed adaptors •24x LC/UPC 900µm G657A2 preinstalled pigtailed •2x12FO splice cassette : storage capacity of 2.4m x12 / splice cassette

Fixings:



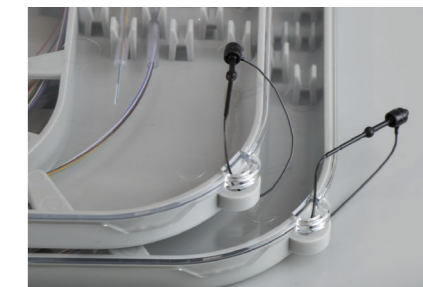
The key benefits: Captive parts



+ Open/Close with captive plastic screws



+ Captive enclosure cover



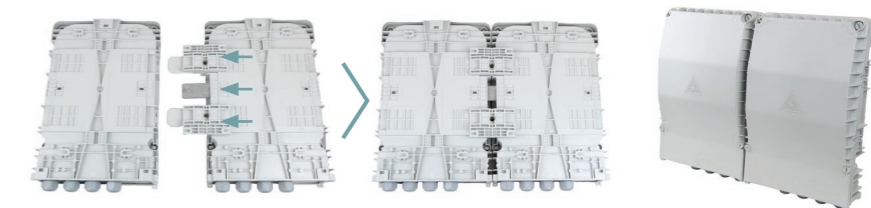
+ Captive splice cassette cover

The key benefits: Fast, patented coupling system

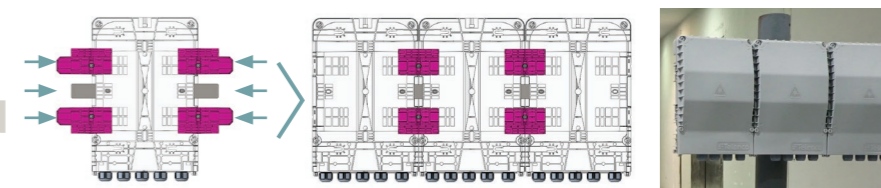
Coupling kit :

- 2 coupling elements and 1 galvanized steel reinforcement bar
- + Patented system
- + Fast, tool-free coupling system for 2 or 3 boxes

Coupling by 2 boxes



Coupling by 3 boxes



Ref	Designation
1002114	Coupling kit for FTFA box

The key benefits: High environmental resistance



- + Withstands 250km/h winds
 - On one single box or, boxes coupled by 2 or 3
 - 360°testing
 - To meet emerging challenges in the face of extreme climatic events



- + Resistance to temperature variations
 - -40°C to +65°C



- + Impact resistance
 - IK 09



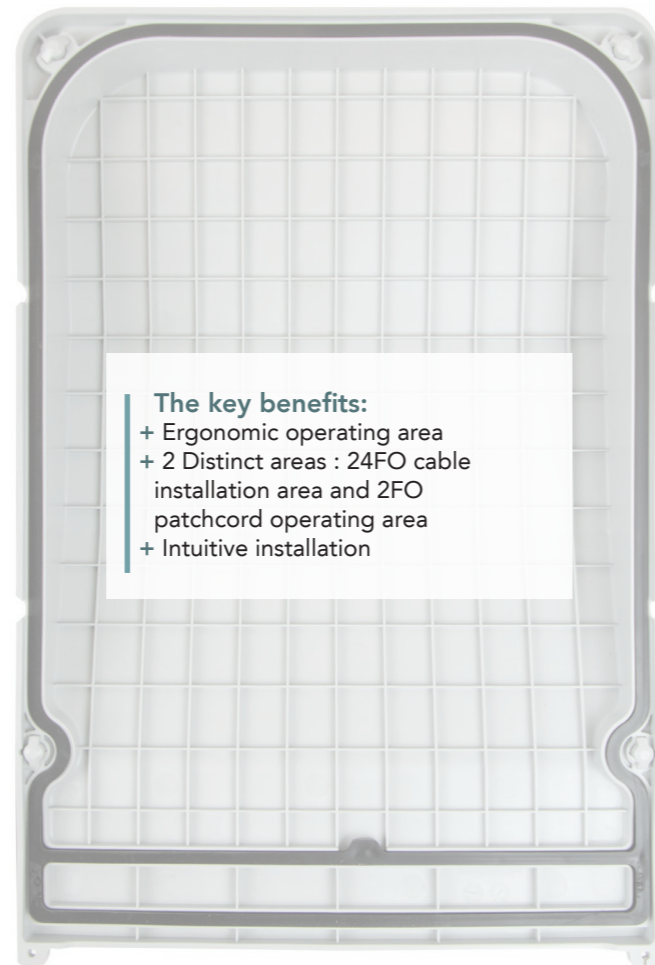
- + Waterproofing
 - IP55

Pre-terminated/spliced version

The Telenco's FTFA box pre-terminated/spliced version is the first solution 100% designed for splicing optical cables at 4G/5G sites.

It enables simple, intuitive interconnection of optical links, and features a unique system for comfortable fiber splicing, whatever the conditions.

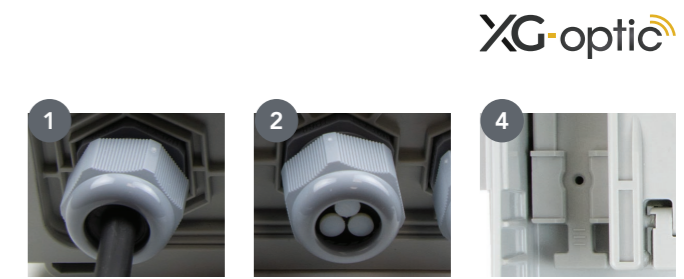
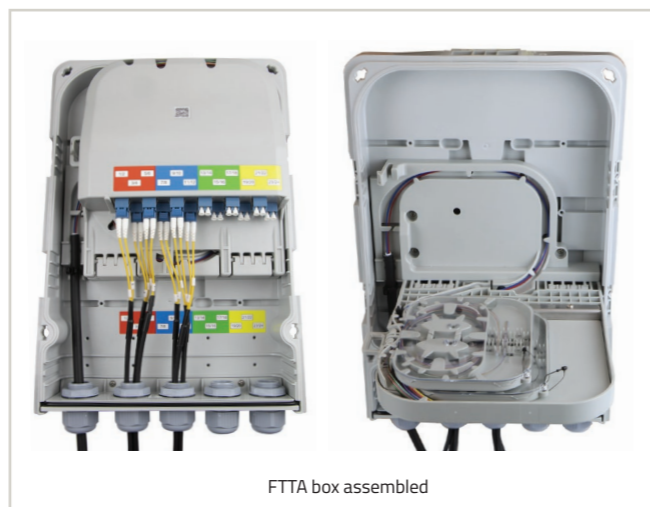
This box is designed and tested to withstand harsh climatic conditions, such as temperature changes and severe mechanical stress, such as 250 km/h winds.



Ref	Designation	Dimensions	Weight	Packing	Packing dimensions	Packing Weight
1002116	FTFA Box Pre-terminated/Spliced 24FO LC/UP	L 260 x W 380 x H 97	2.1 kg	1 unit	L 300 x W 400 x H 150	2.46 kg

Characteristics:
 + 1 input 24FO – 4 outputs 3x2FO

Capacity:
 + 1x 24FO Cable from Ø 7,5 to Ø 10 mm
 + 12x 2FO Patchcords LC/UPC : from Ø 4,5 to Ø 6,0 mm
 + 12x Adaptors LC/UPC duplex singlemode pre-installed
 + 24x Pigtails LC/UPC Ø900 µm G657A2 pre-installed
 + 2x 12FO splice cassette with a storage capacity of 2.4m x12 / cassette



- Splicing area (24FO Cable):**
 24FO cable splicing area protected by a cover (cover opens and closes by clipping) + storage area for 24 LC/UPC pigtails. The Ø900 µm pigtails are installed, stripped and coiled in the splice cassette, ready for connection.
- Operating area (2FO Patchcords) :**
 2FO Patchcords entry and connectorization area

- 1** Location for M25 cable gland for 24FO cable entry
- 2** 4 M25 triple cable glands for 2FO patchcords entry
- 3** 12 LC/UPC duplex adaptors
- 4** Fixing for the 24FO cable
- 5** QR code to access the box installation guide

Find the 2FO patchcords on page 24



Pre-terminated version

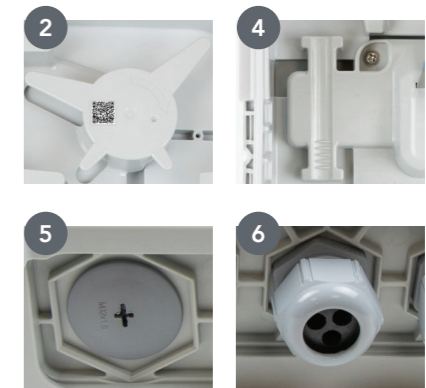
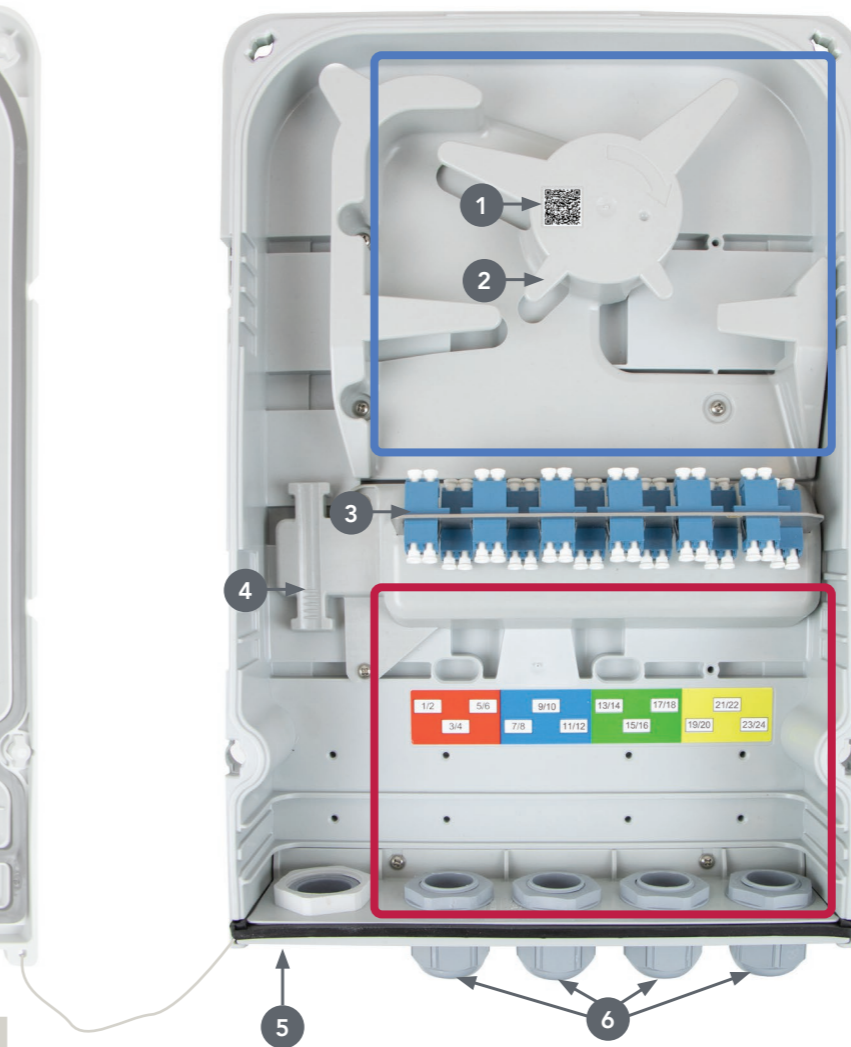
The Telenco's FTTA box pre-terminated version is the first solution 100% designed for optical junctions in 4G/5G indirect cabling structures. It enables simple, intuitive interconnection of optical links, whatever the conditions. This box is designed and tested to withstand harsh climatic conditions, such as temperature changes and severe mechanical stress, such as 250 km/h winds.



Ref	Designation	Dimensions	Weight	Packing	Packing dimensions	Packing Weight
1002115	FTTA Box Pre-terminated 24FO LC/UPC	L 260 x W 380 x H 97	2.1 kg	1 unit	L 300 x W 400 x H 150	2.46 kg

Characteristics:
 + 1 input 24FO – 4 outputs 3x2FO

Capacity:
 + 1x 24FO cable : from Ø 7,5 to Ø 10 mm
 + 12x 2FO LC/UPC Patchcords : from Ø 4,5 to Ø 6,0 mm
 + 12x Adaptors LC/UPC duplex singlemode pre-installed

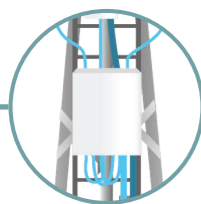


- Installation area:**
24FO breakout cable arrival and coiling area
- Operating area:**
2FO Patchcords entry and connection area

- 1 QR code to access the box installation guide
- 2 Coiling cylinder fins hold fibers in place without obstructing access to connectors
- 3 12 Adaptors LC/UPC duplex pre-installed and easily accessible for cleaning
- 4 Fixing system for the 24FO breakout fanout
- 5 1 slot for M32 cable gland, closed with a screwed cap
- 6 4 M25 triple cable glands for 2FO patchcords entry

Find the
 > Telenco breakout push-clip fanout solution page 21
 > Breakouts page 19
 > Patchcords page 24





XG-optic HTTA BOXES

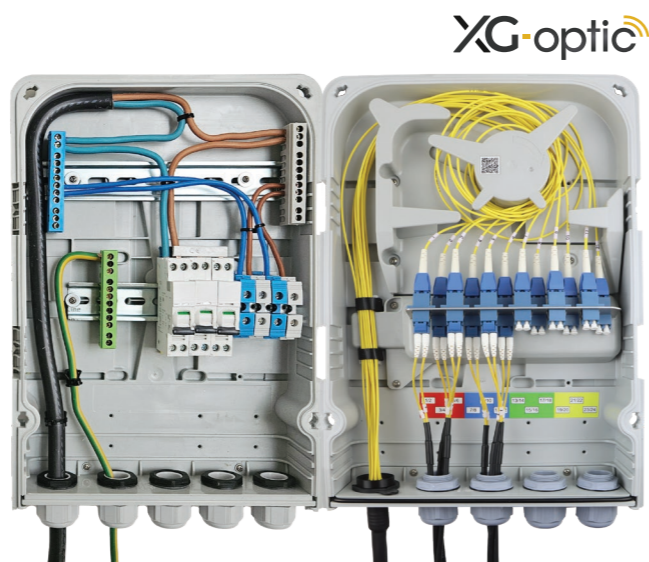
XG-optic HTTA Outdoor Hybrid box 24FO

The HTTA outdoor hybrid boxes 24FO have been specifically developed to enable the connection and distribution of optical and power links within the 4G/5G indirect cabling structure. They are associated with FTTH outdoor optical boxes 24FO and PTTA outdoor power boxes. HTTA outdoor hybrid boxes are placed as close as possible from the RRU/RRH. They enable the connection and management of the FTTH outdoor pre-terminated breakout 12 or 24FO and the FTTH outdoor pre-terminated breakout 2FO, as well as the management and distribution of power cables. For these latter ones, the HTTA outdoor hybrid boxes also present protection and switch features, as they include circuit breakers and earthing.

HTTA outdoor hybrid boxes are made to withstand harsh weather conditions, as well as significant temperature changes and high mechanical stress.

The key benefits:

- + Premium optical quality
- + Specific design for FTTH
- + Excellent mechanical performances
- + Easy installation and use
- + Compact design



Characteristics:

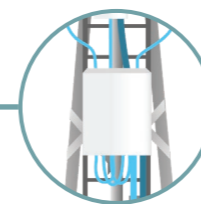
- + Input PE ISO25 or PE ISO32 (e.g. 3G16 - rigid cable type)
- + Input PE ISO25 for earthing
- + Outputs x3 PE ISO25 (e.g. 3G10 - rigid cable type; 3G6 - flexible cable type)
- + 1x 24FO cable : from Ø 7,5 to Ø 10 mm
- + 12x 2FO LC/UPC Patchcords : from Ø 4,5 to Ø 6,0 mm
- + 12x Adaptors LC/UPC duplex singlemode pre-installed

Ref	Designation
92854	HTTA Outdoor hybrid box 24 FO LC/UPC – 3 C32A

Specifications:

Dimensions	L 600 x W 400 x H 150
Weight	4,5 kg
Material	Plastic (PA)
UV	UV Resistant
Colour Grey	Grey RAL 7035
Capacity Fiber	Fiber : 12 adaptors LC Duplex 24FO
Capacity Power	Power : 3 C32A circuit-breakers
Inputs Fiber	PE ISO25
Outputs Fiber	4x PE ISO25 triple holes
Inputs Power	PE ISO25 or PE ISO32 (e.g. 3G16 - rigid cable type) + PE ISO25 for earthing"
Outputs Power	x3 PE ISO25 (e.g. 3G10 - rigid cable type; 3G6 - flexible cable type)
Waterproofing	IP55
Impact	IK09
Temperature	-40°C to +65°C
Installation	Pylon / Wall / Pole

Telenco is entitled to modify the specifications without prior notice.

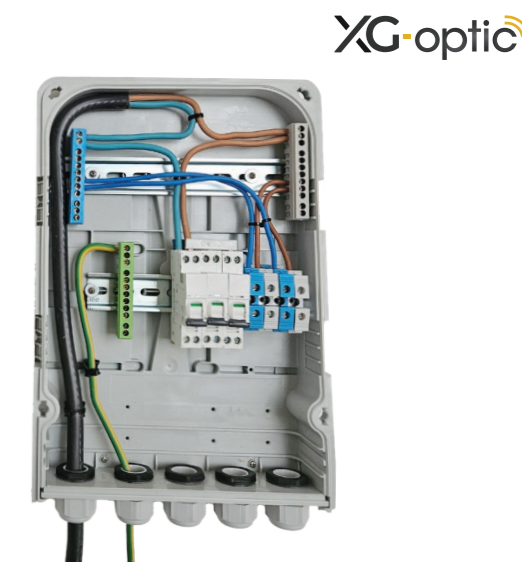


XG-optic PTTA BOXES

XG-optic PTTA Outdoor Power box

The PTTA outdoor power boxes have been developed to enable the connection of power cables within the 4G/5G cabling structure. They also have a protection and switch function, as they include circuit breakers, earthing and enable the management and distribution of power cables. The PTTA box can be used as a complement to a FTTH outdoor optical box 24FO or in case of 4G/5G direct cabling structure.

These boxes are designed to withstand harsh weather conditions and are able to resist to significant temperature variations and high mechanical stress.



The key benefits:

- + Specific design for FTTH
- + Excellent mechanical performances
- + Easy installation and use
- + Compact design

Characteristics:

- + Input PE ISO25 or PE ISO32 (e.g. 3G16 - rigid cable type)
- + Input PE ISO25 for earthing
- + Outputs x3 PE ISO25 (e.g. 3G10 - rigid cable type; 3G6 - flexible cable type)

Ref	Designation
92856	PTTA Outdoor power box 3 C32A

Specifications:

Dimensions	L 300 x W 400 x H 150
Weight	2,5 kg
Material	Plastic (PA)
UV	UV Resistant
Colour Grey	Grey RAL 7035
Capacity	Power : 3 C32A circuit-breakers
Inputs	"PE ISO25 or PE ISO32 (e.g. 3G16 - rigid cable type) + PE ISO25 for earthing"
Outputs	x3 PE ISO25 (e.g. 3G10 - rigid cable type; 3G6 - flexible cable type)
Waterproofing	IP55
Impact	IK09
Temperature	-40°C to +65°C
Installation	Pylon / Wall / Pole

XG-optic FTTH Storage box

The Telenco's FTTH Storage box is the first solution 100% designed to storage the cables in 4G/ 5G cabling and protect them to the rodents. It enables simple, intuitive storage fiber cables, and can be coupling with the Telenco's FTTH box or PTTA box. Whatever the conditions, this box is designed and tested to withstand harsh climatic conditions, such as temperature changes and severe mechanical stress, such as 250 km/h winds.





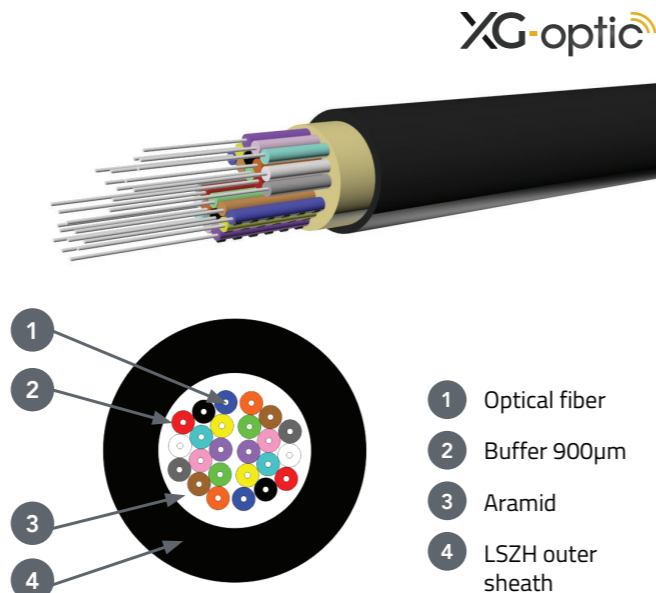
XG-optic FTTA BREAKOUTS

Standard cables

Telco FTFA 12-24FO standard breakout cables are high-performance 12 FO or 24 FO outdoor cables, specially designed to connect the BBU to optical boxes on 4G/5G sites. They can withstand harsh climatic conditions, temperature changes and high mechanical stress. They are available in 12FO and 24FO connectorized versions.

The key benefits:

- + High environmental and mechanical resistance
- + Simple construction
- + Compact design



Specifications:

Modules	Ø 0,85mm +/-0,05mm LSZH
Modules colours	FR colour code
Cable reinforcement	Aramid
Waterproofing	Waterblocking aramid
External sheath	12FO - Ø6,4mm +/-0,2mm 24FO - Ø8,0mm +/-0,2mm
Cable sheath material	RoHS / LSZH / UV resistant
Cable colour	Black

Telco is entitled to modify the specifications without prior notice.

Performances :

Flexion	IEC 60794-1-21 E11	20xØ
Impact	IEC 60794-1-21 E4	ΔIL≤0,1dB to 1550nm
Tensile strength	IEC 60794-1-21 E1	660 N
Torsion	IEC 60794-1-2-E7	+/-180°/m, L=120N, ≤0,1dB/km
Crush	IEC 60794-1-21 E3	1000 N/10cm
Temperature range		-40°C / +70°C

XG-optic Standard FTFA breakouts

The Telco 12-24FO standard FTFA breakouts are high-performance 12 FO or 24 FO outdoor cables, specially designed to connect the BTS/BBU to the optical boxes on 4G/5G sites. They can withstand harsh climatic conditions, temperature changes and high mechanical stress. With their simple, economic conception, they can be adapted to all pre-terminated deployments.

The key benefits:

- + High environmental and mechanical resistance
- + Premium optical performances
- + Easy, secure installation

Characteristics:

- + LC/UPC duplex uniboot connectors
- + Available with specific protection
- + Lengths available from 20 to 200 m

Specifications:

Connector type	LC/UPC duplex uniboot
Fanout	Standard
Insertion loss	IL≤0,25dB
Return Loss	RL>50dB
Mechanical tests	ΔIL≤0,2dB and RL>50dB
Environmental tests	ΔIL≤0,2dB and RL>50dB
Connectorization	On 2 sides
Cable length	20m to 200m
Fanout identification	Numbered clips
Fanout diameter	Ø2,0mm +/-0,2mm
Fanout colour	Yellow
Fanout lengths	Stepped Max 1,05m

Telco is entitled to modify the specifications without prior notice.



Breakout FTFA 24FO LC/UPC-LC/UPC Ø8,0mm G.657A2 Black

Ref	Length	Ref	Length
92810	20 m	92816	80 m
92811	30 m	92817	90 m
92812	40 m	92818	100 m
92813	50 m	92819	125 m
92814	60 m	92820	150 m
92815	70 m	92821	200 m

Logistic:

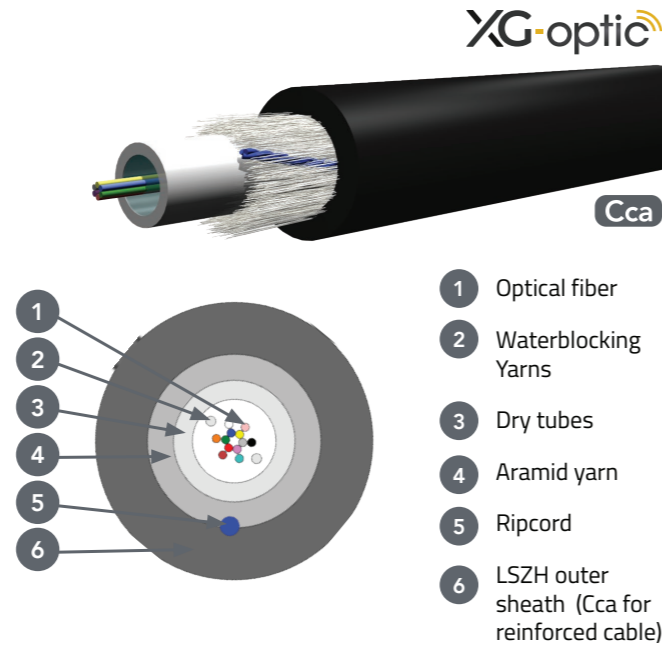
Test report	Delivered for each breakout
Marking/identification	Identification and traceability with a marking on the cable and packaging

Indoor/outdoor Cca reinforced cables

The Telenco Cca reinforced indoor/outdoor cable for FTTA breakout 24FO, is a high-performance, ultra-flexible 24 FO cable, specially designed to connect the BBU to optical boxes on 4G/5G sites. It can withstand extreme climatic conditions, temperature changes and high mechanical stress. This version of Cca-reinforced flexible cable is suitable for pre-terminated outdoor or indoor/outdoor use.

The key benefits:

- + High environmental and mechanical resistance
- + CPR Cca Certified
- + High flexibility



Specifications:

Structure	Dry tube 24FO
Module colours	/
Cable reinforcement	Aramid
Waterproofing	Waterblocking Yarns
Outer sheath	24FO - Ø8,2mm +/-0,5mm
Ripcords	Yes
Cable sheath material	RoHS / LSZH / UV resistant
CPR	Cca, s1a, d0,a1
Cable colour	Black

Telenco is entitled to modify the specifications without prior notice.

Performances:

Repeated bending	IEC 60794-1-21 E11	10xØ
Impact	IEC 60794-1-21 E4	$\Delta IL \leq 0,1dB$ to 1550nm
Tensile strength	IEC 60794-1-21 E1	2200 N
Torsion	IEC 60794-1-2-E7	$\pm 180^\circ/m$, L=120N, $\leq 0,1dB/km$
Crush	IEC 60794-1-21 E3	1500 N/10cm
Temperature range		-20°C / 70°C

XG-optic Reinforced FTTA breakout with Push-clip fanout

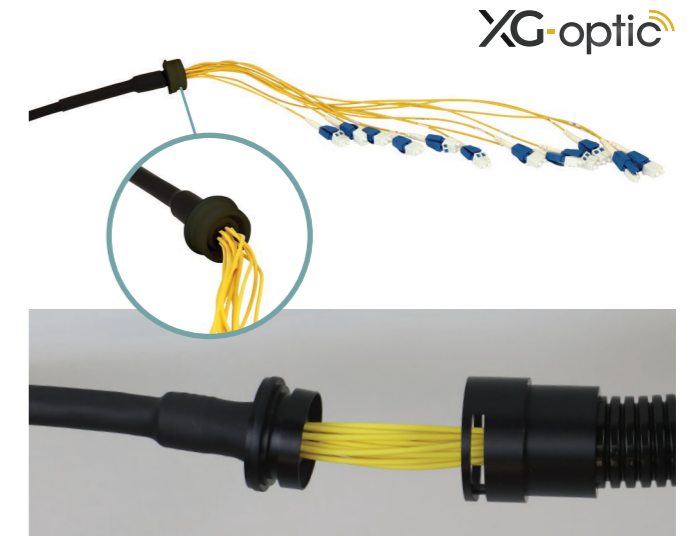
The Telenco Cca reinforced FTTA breakouts are high-performance 24 FO outdoor or indoor/outdoor pre-terminated cables, specially designed to connect the BTS to the optical boxes on 4G/5G sites. They can withstand harsh climatic conditions, temperature changes and withstand temperature changes and high mechanical stress. Equipped with Telenco's patented Push-clip solution, they enable rapid, secure installation, whatever the conditions.

The key benefits:

- + High environmental and mechanical resistance
- + CPR Cca Certified
- + Patented push-Clip fanout

Characteristics :

- + LC/UPC duplex uniboot connectors
- + Available with specific protection
- + Available from 20 to 200 m in lengths



Specifications:

Connector type	LC/UPC duplex uniboot
Fanout	Telenco Push-Clip
Insertion loss	IL $\leq 0,25dB$
Return Loss	RL $> 50dB$
Mechanical test	DIL $\leq 0,2dB$ and RL $> 50dB$
Environmental test	DIL $\leq 0,2dB$ and RL $> 50dB$
Connectorization	2 sides
Cable Length	20m to 200m
Fanout identification	Numbered clips
Fanout diameter	$\varnothing 2,0mm \pm 0,2mm$
Fanout colour	Yellow
Fanout Length	Stepped 1,05m Max

Telenco is entitled to modify the specifications without prior notice.

Logistic:

Test report	Delivered for each breakout
Marking/identification	Identification and traceability with a marking on the cable and packaging

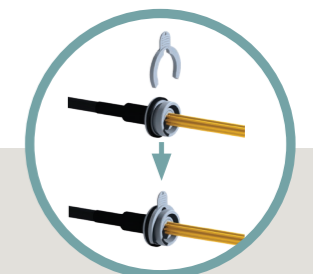
FTTA breakout reinforced Cca Push-clip 24FO LC/UPC-LC/UPC Ø8,2mm G.657A2 Black

Ref	Length	Ref	Length
92773	20 m	92779	80 m
92774	30 m	92780	90 m
92775	40 m	92781	100 m
92776	50 m	92782	120 m
92777	60 m	92783	150 m
92778	70 m	92784	200 m



Telenco fanout system Push-Clip

Fanout solution developed specifically by Telenco to simplify and make reliable the installation of the 24FO Breakout in the Telenco FTTA box.



The fanout is locked inside the box by a patented pin



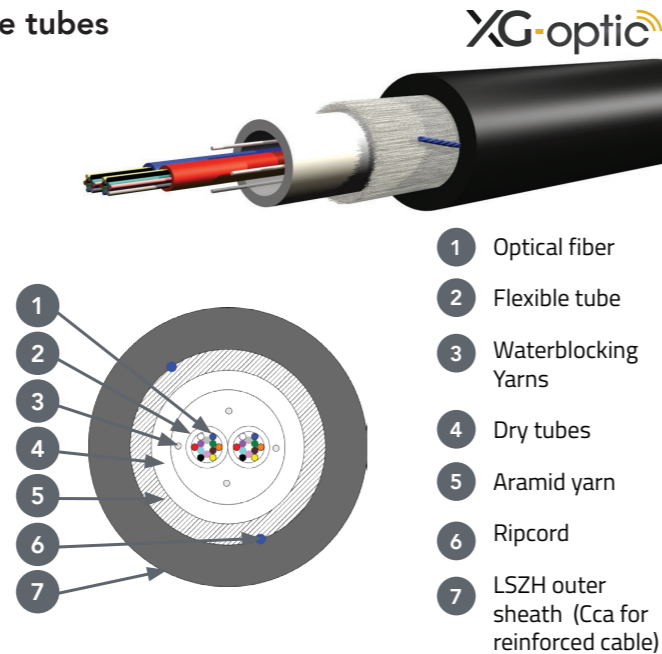
Outdoor extra-reinforced cables with flexible tubes

The Telenco FTTA breakout 24FO extra-reinforced cable is a high-performance 24 FO outdoor cable, specially designed to connect the BBU to the optical boxes on 4G/5G sites. It can withstand extreme climatic conditions, temperature changes and high mechanical stress.

This version of extra-reinforced flexible cable with flexible tubes enables pre-terminated and spliced use.

The key benefits:

- + High environmental and mechanical resistance
- + Product range adapted to each application
- + Small footprint
- + Splicing compatible



Specifications:

Structure	Dry tube + 2x Flexible tube 12FO
Module colours	Blue/Red (fiber: FR Colour code)
Cable reinforcement	Aramid yarn
Waterproofing	Waterblocking Yarns
Outer sheath	24FO - Ø9,8mm +/-0,3mm
Ripcords	Yes
Cable sheath material	RoHS / LSZH / UV resistant
CPR	Eca
Cable colour	Black

Telenco is entitled to modify the specifications without prior notice.

Performances:

Repeated bending	IEC 60794-1-21 E11	10xØ
Impact	IEC 60794-1-21 E4	$\Delta IL \leq 0,1dB$ to 1550nm
Tensile strength	IEC 60794-1-21 E1	2700 N
Torsion	IEC 60794-1-2-E7	$\pm 180^\circ/m$, L=120N, $\leq 0,1dB/km$
Crush	IEC 60794-1-21 E3	2000 N/10cm
Temperature range		-40°C / +80°C

XG-optic extra-reinforced FTTA Breakout with Push-clip fanout

The Telenco extra-reinforced FTTA breakouts 24FO are high-performance 24 FO outdoor pre-terminated cables, specially designed to connect BTS to optical boxes on 4G/5G sites. They can withstand harsh climatic conditions, temperature changes and high mechanical stress.

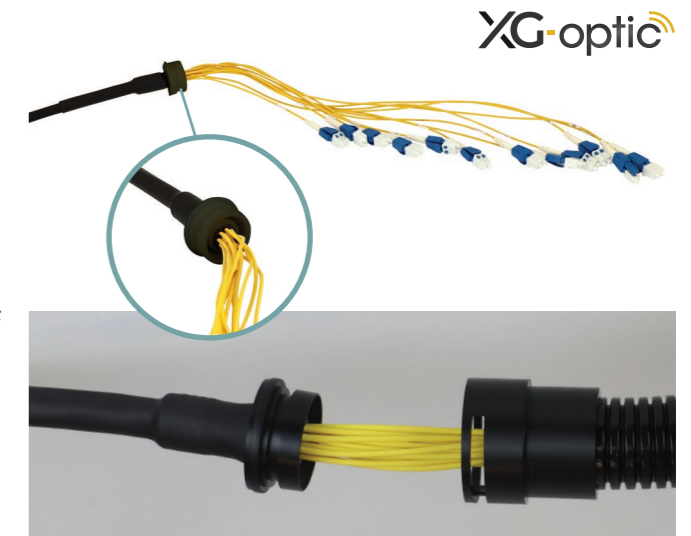
Equipped with Telenco's patented Push-clip solution, they enable rapid, safe installation, whatever the conditions. This version with extra-reinforced flexible tube cable allows easy splicing on one side of the breakout (half-terminated version).

The key benefits:

- + High environmental and mechanical resistance
- + Premium optical performances
- + Patented push-Clip fanout

Characteristics :

- + LC/UPC duplex uniboot connectors
- + Available with specific protection
- + Available from 20 to 200 m in lengths



Specifications:

Connector type	LC/UPC duplex uniboot
Fanout	Telenco Push-Clip
Insertion loss	$IL \leq 0,25dB$
Return Loss	$RL > 50dB$
Mechanical test	$\Delta IL \leq 0,2dB$ and $RL > 50dB$
Environmental test	$\Delta IL \leq 0,2dB$ and $RL > 50dB$
Connectorization	1 or 2 sides
Cable Length	20m to 200m
Fanout identification	Numbered clips
Fanout diameter	$\varnothing 2,0mm \pm 0,2mm$
Fanout colour	Yellow
Fanout Length	Stepped 1,05m Max

Telenco is entitled to modify the specifications without prior notice.

Logistic:

Test report	Delivered for each breakout
Marking/identification	Identification and traceability with a marking on the cable and packaging

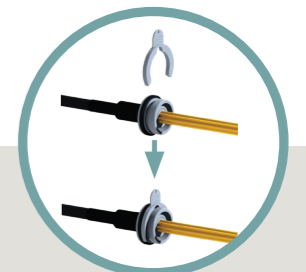
FTTA breakout extra-reinforced Push-clip 2x12FO LC/UPC-LC/UPC Ø9,8mm G.657A2 Black

Ref	Length	Ref	Length
92761	20 m	92767	80 m
92762	30 m	92768	90 m
92763	40 m	92769	100 m
92764	50 m	92770	120 m
92765	60 m	92771	150 m
92766	70 m	92772	200 m



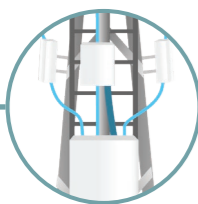
Telenco fanout system Push-Clip

Fanout solution developed specifically by Telenco to simplify and make reliable the installation of the 24FO Breakout in the Telenco FTTA box.



The fanout is locked inside the box by a patented pin





XG-optic FTTA 2FO PATCHCORDS

Cable for FTTA 2FO patchcords

The Telenco FTTA cables for 2FO patchcords are high-performance outdoor cables, specially designed to connect the BTS/ BBU to the RRU/RRH in the 4G/5G direct cabling structure, or the junction box (FTTA or HTTA) to the RRU in the 4G/5G indirect cabling structure.

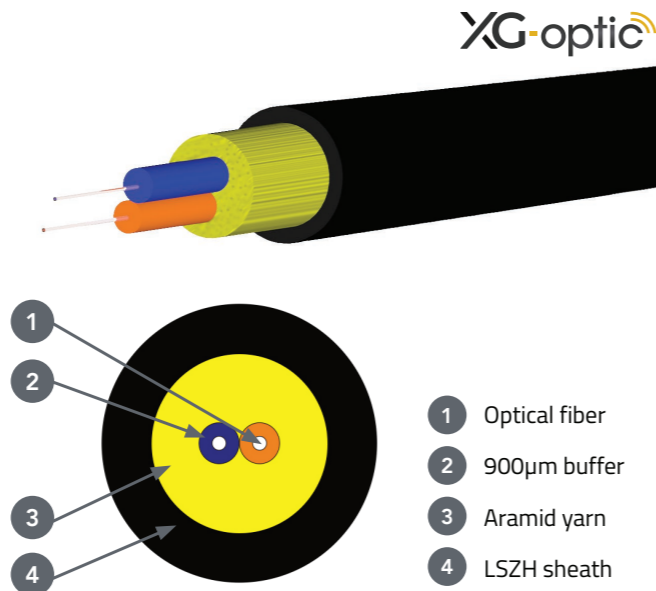
They can withstand harsh climatic conditions, temperature changes and high mechanical stress. They are available in 2FO pre-terminated versions, with different types of connectors and protection.

The key benefits:

- + High environmental and mechanical resistance
- + Simple design
- + High flexibility

Specifications:

Module	Ø 0,9 mm
Module sheath material	PVC
Module colour	Blue / Red
Cable reinforcement	Aramid
Waterproofing	Waterblocking Yarns
Outer sheath	Ø 5 mm +/- 0,2 mm
Outer sheath material	RoHS / LSZH / UV resistant
Cable Weight	22 kg / km
Outer sheath colour	Black



- 1 Optical fiber
- 2 900µm buffer
- 3 Aramid yarn
- 4 LSZH sheath

Performances:

Tensile strength	Installation	450 N
Torsion	NF EN 60794-1-2 E7	+/-180°/m, L=120N, ≤0,1dB/km
Crush	Court terme	1000 N/100mm
	Utilisation	-40°C / +75°C
Temperature range	Transport and storage	-40°C / +85°C

XG-optic FTTA 2 FO Patchcord

The FTTA 2 FO patchcords are specially designed to connect the BTS/ BBU to the RRU/RRH in the 4G/5G direct cabling structure, or the junction box (FTTA or HTTA) to the RRU in the 4G/5G indirect cabling structure. Thanks to its know-how and expertise in aerial cable deployment, Telenco has developed a solution that withstands harsh environments while maintaining a lightweight yet highly resistant cable structure. FTTA 2 FO patchcords have a Ø 5 mm diameter, guaranteeing flexibility and ease of installation.

Available in various symmetrical versions:

- Connector LC/UPC duplex - LC/UPC duplex
- Connector LC/UPC duplex with NSN protection- LC/UPC duplex with NSN protection
- Connectique LC/UPC duplex with FullAxs protection - LC/UPC duplex with FullAxs protection

Or asymmetrical versions:

- Connector LC/UPC duplex - SC/APC duplex
- Connector LC/UPC duplex - SC/UPC duplex
- Connector LC/UPC duplex - LC/UPC duplex With NSN protection
- Connector LC/UPC duplex - LC/UPC duplex with FullAxs protection

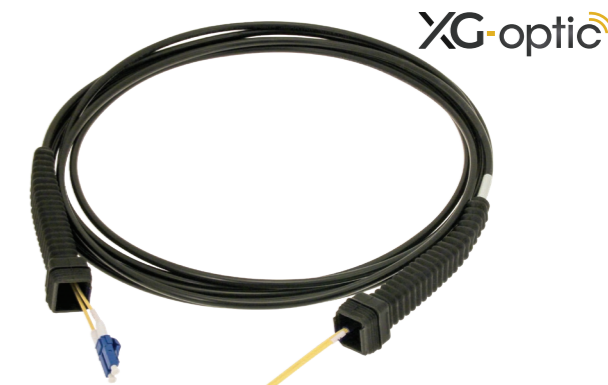
Specifications:

Test wavelengths (nm)	1310 and 1550 nm
Connector type	Monomode : LC/UPC duplex (blue)
	Multimode : LC/UPC duplex (beige)
Insertion loss	IL ≤ 0,25 dB (SM)
Return loss	RL > 50 dB (SM UPC)
Mechanical test	Δ IL ≤ 0,2 dB and RL ≥ 50 dB (SM UPC)
	Δ IL ≤ 0,2 dB and RL ≥ 50 dB (SM UPC)
Environmental test	Δ IL ≤ 0,2 dB and RL ≥ 50 dB (SM UPC)
Cable lengths	1 m to 300 m
Identification	Numbered clips on each ends
Fanout	Ø 3 mm +/- 0,2 mm
Fanout colour	Yellow
Fanout lengths	To be defined
Connector	LC
Available protection	NSN - FullAXS

Logistic:

Test report	Delivered for each breakout
Marking/identification	Identification and traceability with a marking on the cable and packaging
Packaging	L ≤ 250m > Individual PE bag
	L > 250m > Individual cable drum

Telenco se réserve le droit de modifier les spécifications sans préavis



The key benefits:

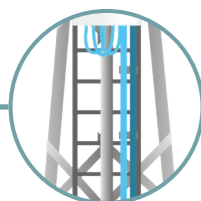
- + Premium optical quality
- + Excellent mechanical performance
- + Simple installation
- + Flexible, lightweight cable

FTTA 2FO Patchcord LCD/UPC-LCD/UPC Ø5.0mm G.657A2 Black

Ref	Length	Ref	Length
92741	1 m	92751	40 m
92742	2 m	92752	45 m
92743	3 m	92753	50 m
92744	5 m	92754	60 m
92745	10 m	92755	70 m
92746	15 m	92756	90 m
92747	20 m	92757	100 m
92748	25 m	92758	120 m
92749	30 m	92759	150 m
92750	35 m		

FTTA 2FO Patchcord NSN LCD/UPC-NSN LCD/UPC Ø5.0mm G.657A2 Black

Ref	Length	Ref	Length
92723	1 m	92733	40 m
92724	2 m	92735	45 m
92726	3 m	92734	50 m
92725	5 m	92736	60 m
92727	10 m	92737	70 m
92728	15 m	92738	90 m
92729	20 m	92739	100 m
92730	25 m	92740	120 m
92731	30 m	92760	150 m
92732	35 m		



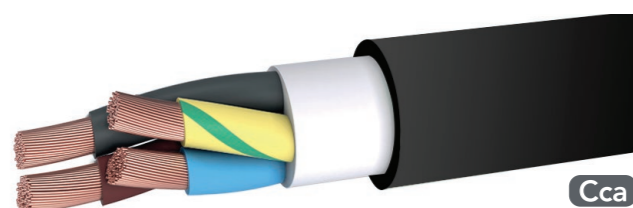
XG-optic POWER CABLES

XG-optic power cables Cca

We offer a wide range of power cables for RRUs and 4G/5G antennas. We manufacture both armored and non-armored high-performance cables in Europe. Our power cable solutions comply with current standards and CPR certifications, enabling them to be used in all types of environment.

- The key benefits:**
- + European manufacturing
 - + Large range of cables
 - + CPR Cca

XG-optic unshield power cable Cca



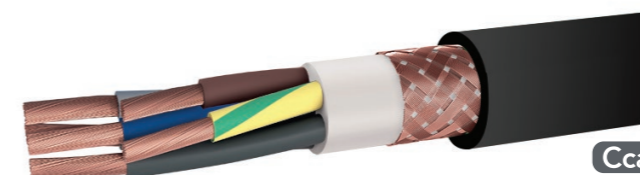
Ref	Designation
92785	Power cable unshield FTTA Cca 2x6mm ² /T.500m
92786	Power cable unshield FTTA Cca 2x10mm ² /T.500m
92787	Power cable unshield FTTA Cca 2x16mm ² /T.500m

Technical characteristics :

Copper	Flexible copper Class 5 EN 60228		
	2x6mm ²	2x10mm ²	2x16mm ²
Maximum wire diameter	0,31mm	0,41mm	0,41mm
Insulation thickness	0,7mm	0,7mm	0,7mm
Sheath thickness	1,8mm	1,8mm	1,8mm
Outer diameter	12,9mm	15,0mm	16,8mm
Max electrical resistance (at 20°C)	3,3 Ω/Km	1,91 Ω/Km	1,21 Ω/Km
Sheath	Black – UV-resistant		
Operating temperature	-40°C / +90°C		
Bending radius	UNEL 35324: 4 x Ø UNEL 35324: 6 x Ø		
Nominal voltage U ₀ /U	0,6/1KV		
Max voltage U _m	1,5KV		
Maximum temperature in case of short-circuit:	250°C for 5 seconds		
Weight	300 Kg/Km	440 Kg/Km	590 Kg/Km
CPR	Cca-s1b,d1,a1		
Norm	CEI 20-13 CEI 20-13 V.2 CEI EN 50575 CEI UNEL 35324		

Telenco is entitled to modify the specifications without prior notice

XG-optic shield power cable Cca



Ref	Designation
92788	Power cable shield FTTA Cca 2x6mm ² /T.500m
92789	Power cable shield FTTA Cca 2x10mm ² /T.500m
92790	Power cable shield FTTA Cca 2x16mm ² /T.500m
92791	Power cable shield FTTA Cca 2x25mm ² /T.500m

Technical characteristics :

Copper	Flexible copper Class 5 EN 60228			
	2x6mm ²	2x10mm ²	2x16mm ²	2x25mm ²
Maximum wire diameter	0,31mm	0,41mm	0,41mm	0,41mm
Insulation thickness	0,7mm	0,7mm	0,7mm	0,9mm
Sheath thickness	1,8mm	1,8mm	1,8mm	1,8mm
Outer diameter	14,4mm	16,8mm	18,6mm	21,8mm
Max electrical resistance (at 20°C)	3,3 Ω/Km	1,91 Ω/Km	1,21 Ω/Km	0,78 Ω/Km
Shielding	Copper braided shield			
Sheath	Black – UV-resistant			
Operating temperature	-40°C / +90°C			
Bending radius	UNEL 35324: 6 x Ø			
Nominal voltage U ₀ /U	0,6/1KV			
Max voltage U _m	1,5KV			
Maximum temperature in case of short-circuit:	250°C for 5 seconds			
Weight	380 Kg/Km	560 Kg/Km	730 Kg/Km	1030 Kg/Km
CPR	Cca-s1b,d1,a1			
Norm	CEI 20-13 CEI 20-13 V.2 CEI EN 50575 CEI UNEL 35324			

Telenco is entitled to modify the specifications without prior notice

XG-optic pre-terminated power cables



Telenco has added to its power cable range, dedicated connectors for 5G installations. This flexibility enables us to meet both standard and specific needs, and to support our customers in the technological evolution of mobile networks.



- The key benefits:**
- + European manufacturing
 - + Large range of cables
 - + CPR Cca

- Technical characteristics:**
- UNSHIELD:**
- + 1 to 4 conductors
 - + 6mm²/ 10mm²/16mm²
 - + Pushpull connector 43A & 60A
- SHIELD:**
- + 1 to 4 conductors
 - + 6mm²/10mm² /16mm²/25mm²
 - + Pushpull connector 43A & 60A

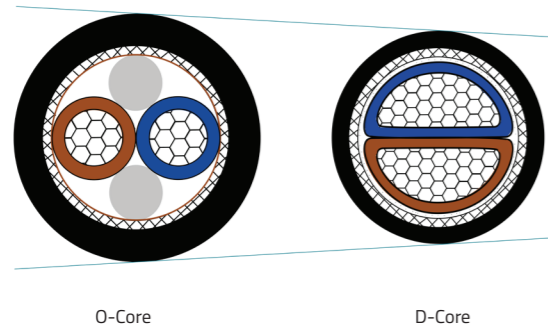
XG-optic D-Core power cable



Ultra-flexible and compact, XG-optic PTTA D-Core cables have been specifically developed for outdoor mobile installations. Designed for DC installation in mobile radio networks, 4G and 5G mobile radio networks. Its unique design gives it unique advantages: reduced weight, smaller diameter, improved strippability, lower installation costs, less clutter on mobile sites and an improved environmental footprint.

The key benefits:

- + European manufacturing
- + Ultra-flexibles
- + Better EMC protection
- + Easier to strip
- + Up to 23% lighter
- + Up to 13% smaller diameter
- + 20% greener



Diameter :
-13%
on 2x10mm²

Weight :
-23%
on 2x10mm²

x10
easy to strip

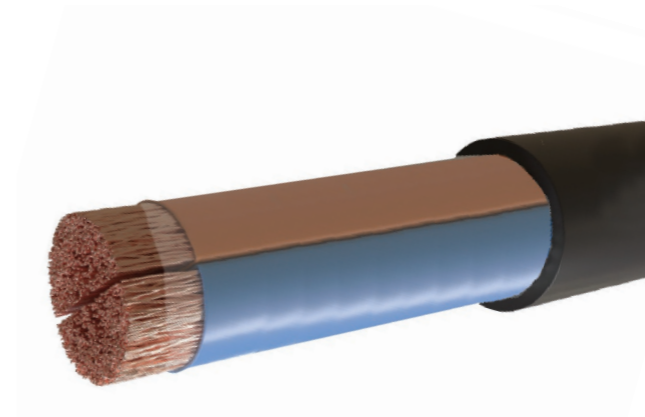
20%
Greener

Technical characteristics :

Conductor cross-section	2x 4mm ²	2x 6mm ²	2x 10mm ²	2x 16mm ²	2x 25mm ²	2x 35mm ²
Cable diameter (Unshield & Shield)	11.0	12.0	13.0	14.5	17.0	19.0
Nominal voltage U ₀ /U	0,6/1KV					
Min. Static bend	4x Ø					
Min. Installation bend	8x Ø					
Conductormaterial	Barecopperclass5					
Outersheath	LSZH (HFFR)					
Isolation	XLPE - IEC 60502-1					
Shield structure	Aluminium-Polyester tape + tinned copper braid					
Mini. insulation resistance	10MOhm.km					
Breakdown voltage V _{cc} , 5min.	3500V					
UV resistance	UL 1581 section 1200					
Water resistance	NF C 15-100 : IPX6 (AD6)					
Flame resistance	IEC 60332-1 / EN50575					
REACH & ROHS	(UE) 1907/2006/CE / Directive 2011/65					
Temperature range	-40°C / +90°C					

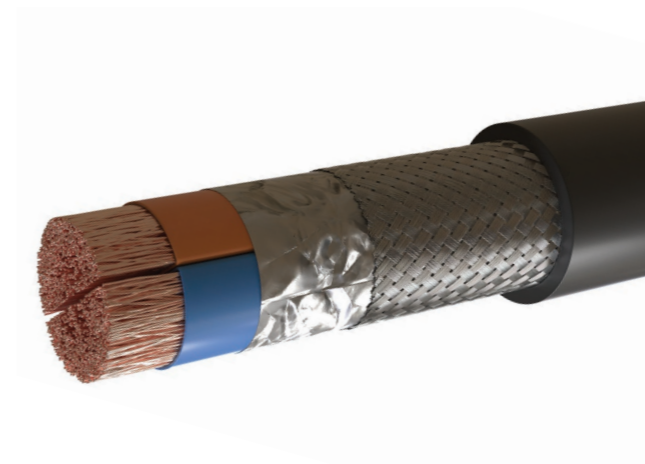
Telenco is entitled to modify the specifications without prior notice

XG-optic unshield D-CORE power cable



Ref	Designation
1002907	Power cable FTTA D-core unshield 2x4mm ² XG-optic /T.500m
1002908	Power cable FTTA D-core unshield 2x6mm ² XG-optic /T.500m
1002909	Power cable FTTA D-core unshield 2x10mm ² XG-optic /T.500m
1002910	Power cable FTTA D-core unshield 2x16mm ² XG-optic /T.500m
1002911	Power cable FTTA D-core unshield 2x25mm ² XG-optic /T.500m
1002912	Power cable FTTA D-core unshield 2x35mm ² XG-optic /T.500m

XG-optic shield D-CORE power cable



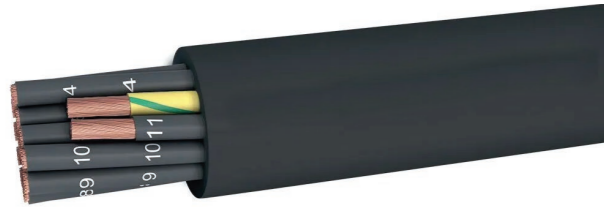
Ref	Designation
1002913	Power cable FTTA D-core shield 2x4mm ² XG-optic /T.500m
1002914	Power cable FTTA D-core shield 2x6mm ² XG-optic /T.500m
1002915	Power cable FTTA D-core shield 2x10mm ² XG-optic /T.500m
1002916	Power cable FTTA D-core shield 2x16mm ² XG-optic /T.500m
1002917	Power cable FTTA D-core shield 2x25mm ² XG-optic /T.500m
1002918	Power cable FTTA D-core shield 2x35mm ² XG-optic /T.500m

Power cables HO7RN-F



Telenco offer a wide range of power cables for RRUs and 4G/5G antennas. We manufacture both armored and non-armored high-performance cables in Europe. Our power cable solutions comply with current standards, enabling them to be used in all types of environment.

- The key benefits:**
- + European manufacturing
 - + Large range of cables



Ref	Designation
1002903	Power cable HO7RN-F 2x4mm ² /T.500m
1002904	Power cable HO7RN-F 2x6mm ² /T.500m
1002905	Power cable HO7RN-F 2x10mm ² /T.500m
1002906	Power cable HO7RN-F 2x16mm ² /T.500m

-
- 1 Flexible copper class 5 EN 60228
 - 2 Rubber type EI4
 - 3 Rubber type EM2

Technical characteristics :

Copper	Flexible copper Class 5 EN 60228			
	2x4mm ²	2x6mm ²	2x10mm ²	2x16mm ²
Maximum wire diameter	0.31mm	0.31mm	0.41mm	0.41mm
Insulation thickness	1.0mm	1.0mm	1.2mm	1.2mm
Sheath thickness	1.8mm	2.0mm	3.1mm	3.3mm
Outer diameter	12.0mm	13.5mm	18.1mm	20.2mm
Max electrical resistance (at 20°C)	4.95 W/Km	3.3 W/Km	1.91 W/Km	1.21 W/Km
Sheath	Black – UV-resistant			
Operating temperature	-40°C / +80°C			
Bending radius	4 x Ø 6 x Ø			
Rated voltage U ₀ /U	450/750V (0.6/1KV) According to HD516: Guide to use of low voltage Harmonized cables the use up 1000 V a.c. is permitted for fixed protected installation (in conduit or appliances) and also for motor connection of hoisting motors and the like.			
Max voltage U _m	1.5KV			
Maximum temperature in case of short-circuit	200°C for 5 seconds			
Weight	225 Kg/Km	295 Kg/Km	540 Kg/Km	725 Kg/Km
Norm	EN 50525-2-21			

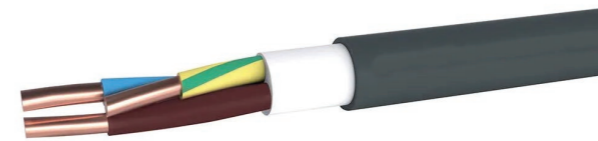
Telenco is entitled to modify the specifications without prior notice

Power cables U-1000 R2V



Telenco offer a wide range of power cables for RRUs and 4G/5G antennas. We manufacture both armored and non-armored high-performance cables in Europe. Our power cable solutions comply with current standards, enabling them to be used in all types of environment.

- The key benefits:**
- + European manufacturing
 - + Large range of cables



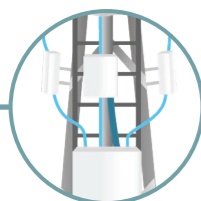
Ref	Designation
1002920	Power cable U-1000 R2V 2x10mm ² /T.500m
1002921	Power cable U-1000 R2V 2x16mm ² /T.500m
1002922	Power cable U-1000 R2V 2x25mm ² /T.500m
1002923	Power cable U-1000 R2V 2x35mm ² /T.500m
1002924	Power cable U-1000 R2V 2x50mm ² /T.500m
1002925	Power cable U-1000 R2V 3x1.5mm ² /T.500m
1002926	Power cable U-1000 R2V 3x2.5mm ² /T.500m

-
- 1 Rigid copper class 1 EN 60228
 - 2 Rigid stranded copper class 2 EN 60228
 - 3 Cross-linked Polyethylene (XLPE)
 - 4 PVC

Technical characteristics :

Copper	Rigid stranded copper class 2 EN 60228					Rigid copper class 1 EN 60228	
	2x10mm ²	2x16mm ²	2x25mm ²	2x35mm ²	2x50mm ²	3x1.5mm ²	3x2.5mm ²
Insulation thickness	0.7mm	0.7mm	0.9mm	0.9mm	1.0mm	0.7mm	0.7mm
Sheath thickness	1.8mm						
Outer diameter	14.7mm	16.6mm	19.8mm	21.6mm	24.8mm	9.9mm	10.6mm
Max electrical resistance (at 20°C)	1.83 W/Km	1.15 W/Km	0.727 W/Km	0.524 W/Km	0.387 W/Km	12.1 W/Km	7.41 W/Km
Sheath	Black – UV-resistant						
Operating temperature	-15°C / +90°C						
Bending radius	6 x Ø						
Rated voltage U ₀ /U	0.6/1KV						
Max voltage U _m	1.2KV						
Maximum temperature in case of short-circuit:	200°C for 5 seconds						
Weight	450 Kg/Km	620 Kg/K	915 Kg/K	1175 Kg/K	1580 Kg/K	155 Kg/K	195 Kg/K
CPR	Eca						
Norm	ENNF C 32-321 IEC 60502 EU 305/2011 (CPR) EN 50575 + EN 50575/A1						

Telenco is entitled to modify the specifications without prior notice



RF JUMPERS

Telco offers a wide range of high-performance RF jumpers.

By drawing on our mutual expertise, know-how and experience, Telco is able to deliver reliable products with short lead times.

This offer is completed by a full range of coaxial connectors for 3G and 4G mobile site deployments.

The key benefits:

- + High-performance jumpers made in Europe
- + Large product range
- + Short lead times

Technical Characteristics :

- + 50 Ohm
- + De 1/4" au 1.5/8"
- + Right/Angled – Male/Female
- + Cellflex or Superflex
- + Connectors IP68



Connector 7/16 male Superflex



Connector 7/8 female Low loss



Connector 1/2 female Superflex



Transition 4.3/10 male - 7/16 female

Bretelle 4.3/10 - 7/16 angular

Connector A	Connector B	Length	Ref
4.3/10	7/16 angular	1 m	40065
		1,5 m	40066
		2 m	40067
		2,5 m	40427
		3 m	40068
		4 m	40069
		5 m	40070
		6 m	40071
		7 m	40072
		8 m	40428
9 m	40429		
10 m	40426		

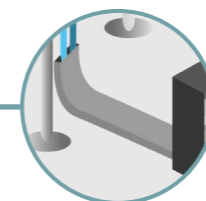
Bretelle 4.3/10 - 4.3/10 angular

Connector A	Connector B	Length	Ref
4.3/10	4.3/10 angular	1 m	40084
		1,5 m	40085
		2 m	40086
		2,5 m	40432
		3 m	40087
		4 m	40088
		5 m	40089
		6 m	40090
		7 m	40091
		8 m	40433
9 m	40434		
10 m	40431		

Bretelle 4.3/10 - 4.3/10

Connector A	Connector B	Length	Ref
4.3/10	4.3/10	1 m	40073
		1,5 m	40074
		2 m	40075
		2,5 m	40430
		3 m	40410
		4 m	40077
		5 m	40411
		6 m	40079
		7 m	40080
		8 m	40081
9 m	40082		
10 m	40083		

Other dimensions available on request



CABLES TRAYS

The expertise of Telco in the development and manufacturing of metallic and stainless steel elements enables us to provide solutions adapted to the constraints of mobile deployments on towers or rooftops. Our UK-based plant draws on its 40 years of experience to develop and manufacture reliable cable tray solutions, meeting all usage constraints and harsh environmental conditions.

The key benefits:

- + Developed and manufactured in Europe
- + Configurable
- + High environmental resistance

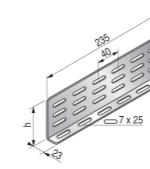


Hot-dipped galvanized perforated tray



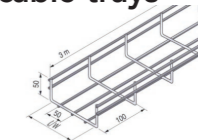
Ref	Dimensions
17631	48 x 50 mm
17632	48 x 75 mm
17633	48 x 100 mm
17635	48 x 147 mm
17636	48 x 195 mm
17637	48 x 316 mm
17638	48 x 507 mm
17639	48 x 604 mm
17641	48 x 100 mm
17643	48 x 147 mm
17644	48 x 195 mm
17645	48 x 316 mm
17646	48 x 507 mm
17647	48 x 604 mm

Angle connector



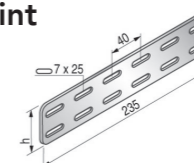
Ref	Dimensions
17660	48LG240
17661	72 LG240
17662	96 LG240

Hot-dipped galvanized wire mesh cable trays



Ref	Dimensions
17666	54 x 50 mm
17667	54 x 100 mm
17668	54 x 150 mm
17669	54 x 200 mm
17670	54 x 300 mm
17671	54 x 400 mm
17672	54 x 500 mm

Flat joint



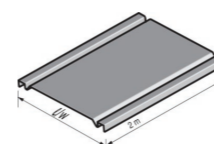
Ref	Dimensions
17657	51 LG240
17658	72 LG240
17659	96 LG240

Wire-ribbed cover



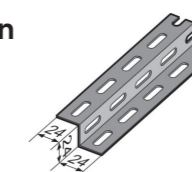
Ref	Dimensions
17673	50 mm
17674	100 mm
17675	150 mm
17676	200 mm
17677	300 mm
17678	400 mm
17679	500 mm

Slab cover



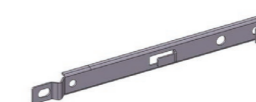
Ref	Dimensions
17648	50 mm
17649	75 mm
17650	100 mm
17652	147 mm
17653	195 mm
17654	316 mm
17655	507 mm
17656	604 mm

Z Iron



Ref	Dimensions
17663	24 x 24 x 24
17664	24 x 48 x 24
17665	48 x 48 x 48

Wire quick joint



Ref	Designation
19650	Wire quick coupling bar

Clips for covers



Ref	Designation
20110	Clip for cover CDC wire /Qty 10
20111	Clip for cover CDC tile /Qty 10



CABLES CLAMPS

Clips

EMC clips are quick-to-fit fastening systems for coaxial, power and fiber cables. They are made from high-quality stainless steel. They will retain their characteristics over time, combining firm hold and elasticity.



Double EMC 5 - 7 mm



EMC 7/8"



EMC Clip for fixing on angle profile

Ref	Capacity
40185	5 - 7 mm
40186	8 - 12 mm (1/4")
40187	1/2"
40188	7/8"
40189	1.1/4" ou 1.5/8"

Fixing clip

Ref	Capacity
40184	Fixing clip

EMC Clip stainless steel fixing, adjustable

Ref	Capacity
40190	5 - 7 mm
40191	8 - 12 mm (1/4")
40192	1/2"
40193	7/8"
40194	1.1/4" ou 1.5/8"

EMC Clip for fixing stainless steel fixing, non adjustable

Ref	Capacity
40195	5 - 7 mm
40196	8 - 12 mm (1/4")
40197	1/2"
40198	7/8"
40199	1.1/4" ou 1.5/8"

EMC Clip for double fixing on angle profile

Ref	Capacity		
40200	5 - 7 mm	+	5 - 7 mm
40201	5 - 7 mm	+	8 - 12 mm (1/4")
40202	5 - 7 mm	+	1/2"
40203	5 - 7 mm	+	7/8"
40204	8 - 12 mm (1/4")	+	8 - 1 mm (1/4")
40205	8 - 12 mm (1/4")	+	1/2"
40206	8 - 12 mm (1/4")	+	7/8"
40207	1/2"	+	1/2"
40208	1/2"	+	7/8"

EMC Clip for double fixing back-to-back

Ref	Capacity		
40209	5 - 7 mm	+	8 - 12 mm (1/4")
40210	5 - 7 mm	+	1/2"
40211	5 - 7 mm	+	7/8"
40212	8 - 12 mm (1/4")	+	8 - 12 mm (1/4")
40213	8 - 12 mm (1/4")	+	1/2"
40214	8 - 12 mm (1/4")	+	7/8"
40215	8 - 12 mm (1/4")	+	1.1/4" ou 1.5/8"
40216	1/2"	+	1/2"
40217	1/2"	+	7/8"
40218	1/2"	+	1.1/4" ou 1.5/8"
40219	7/8"	+	7/8"
40220	7/8"	+	1.1/4" ou 1.5/8"
40221	1.1/4" ou 1.5/8"	+	1.1/4" ou 1.5/8"

Clamps

Cable clamps are 2-part (plastic and stainless steel) fastening systems for coaxial, power and fiber cables, which secure the cable with a screw clamp.



Clamp power + FO



Coaxial clamp

Coaxial cable clamp

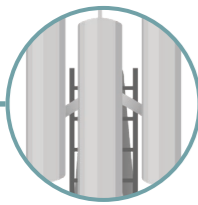
Ref	Capacity
40240	1 x 6 mm
40241	1 x 7 mm
40242	1 x 8 mm
40243	1 x 9 mm
40244	1 x 9 M
40245	1 x 10 mm
40246	1 x 11 mm
40247	1 x 12 mm
40248	1 x 13 mm
40249	1 x 1/2" S (14 mm)
40250	1 x 3/8" (16 mm)
40251	1 x 1/2" (17 mm)
40252	1 x 5/8" (23 mm)
40253	1 x 7/8" S (27 mm)
40254	1 x 7/8" (28 mm)
40255	1 x 7/8" M (30 mm)
40256	1 x 1.1/8" (38 mm)
40257	1 x 1.1/4" (40 mm)
40258	1 x 1.5/8" S (49 mm)
40259	1 x 1.5/8" (52 mm)
40260	1 x 2.1/4" (60 mm)
40261	1 x 62 mm
40262	1x3" (72 mm)
40263	1x3" M (76 mm)
40264	2 x 6 mm
40265	2 x 7 mm
40266	2 x 8 mm
40267	2 x 9 mm
40268	2x9M
40269	2 x 10 mm

Ref	Capacity
40270	2 x 11 mm
40271	2 x 12 mm
40272	2 x 13 mm
40273	2 x 1/2" S (14 mm)
40274	2 x 3/8" S (16 mm)
40275	2 x 1/2" (17 mm)
40276	2 x 5/8" (23 mm)
40277	2 x 7/8" S (27 mm)
40278	2 x 7/8" (28 mm)
40279	2 x 7/8" M (30 mm)
40280	2 x 1.1/8" (38 mm)
40281	2 x 1.1/4" (40 mm)
40282	2 x 1.5/8" S (49 mm)
40283	2 x 1.5/8" (52 mm)
40284	2 x 2.1/4" (60 mm)
40285	2 x 62 mm
40286	3 x 6 mm
40287	3 x 7 mm
40288	3 x 8 mm
40289	3 x 9 mm
40290	3 x 9 M (9-10 mm)
40291	3 x 10 mm
40292	3 x 11 mm
40293	3 x 12 mm
40294	3 x 13 mm
40295	3 x 1/2" S (14 mm)
40296	3 x 3/8" (16 mm)
40297	3 x 1/2" (17 mm)
40298	3 x 5/8" (23 mm)
40299	3 x 7/8" S (27 mm)

Power clamp and Optical fiber

Ref	Capacity
40222	2 x 7 mm
40223	2 x 9 mm
40224	2 x 11 mm
40225	2 x 14 mm
40226	2 x 19 mm
40227	2 x 24 mm
40228	4 x 7 mm
40229	4 x 9 mm
40230	4 x 11 mm
40231	4 x 14 mm
40232	4 x 19 mm
40233	4 x 24 mm
40234	6 x 7 mm
40235	6 x 9 mm
40236	6 x 11 mm
40237	6 x 14 mm
40238	6 x 19 mm
40239	6 x 24 mm

Ref	Capacity
40300	3 x 7/8" (28 mm)
40301	3 x 7/8" M (30 mm)
40302	3 x 1.1/8" (38 mm)
40303	3 x 1.1/4" (40 mm)
40304	3 x 1.5/8" S (49 mm)
40305	3 x 1.5/8" (52 mm)
40306	4 x 11 mm
40307	4 x 1/2" (17 mm)
40308	4x7/8" (28 mm)
40309	5 x 11 mm
40310	5 x 1/2" (17 mm)
40311	5 x 7/8" (28 mm)
40312	(2+2) 4 x 6 mm
40313	(2+2) 4 x 8 mm
40314	(2+2) 4 x 9 mm
40315	(2+2) 4 x 11 mm
40316	(2 + 2) 4 x 1/2" (17 mm)
40317	(2 + 2) 4 x 7/8" (28 mm)
40318	(2 + 2 + 2) 6 x 11 mm
40319	(2 + 2 + 2) 6 x 1/2" (17 mm)
40320	(2 + 2 + 2) 6 x 7/8" (28 mm)
40321	(2 + 2 + 2 + 2) 8 x 6 mm
40322	(2 + 2 + 2 + 2) 8 x 8 mm
40323	(2 + 2 + 2 + 2) 8 x 9 mm
40324	(2 + 2 + 2 + 2) 8 x 11 mm
40325	(2 + 2 + 2 + 2) 8 x 1/2" (17 mm)
40326	(2 + 2 + 2 + 2) 8 x 7/8" (28 mm)
40327	12 x 11 mm
40328	12 x 1/2" (17 mm)



ANTENNA MASTS

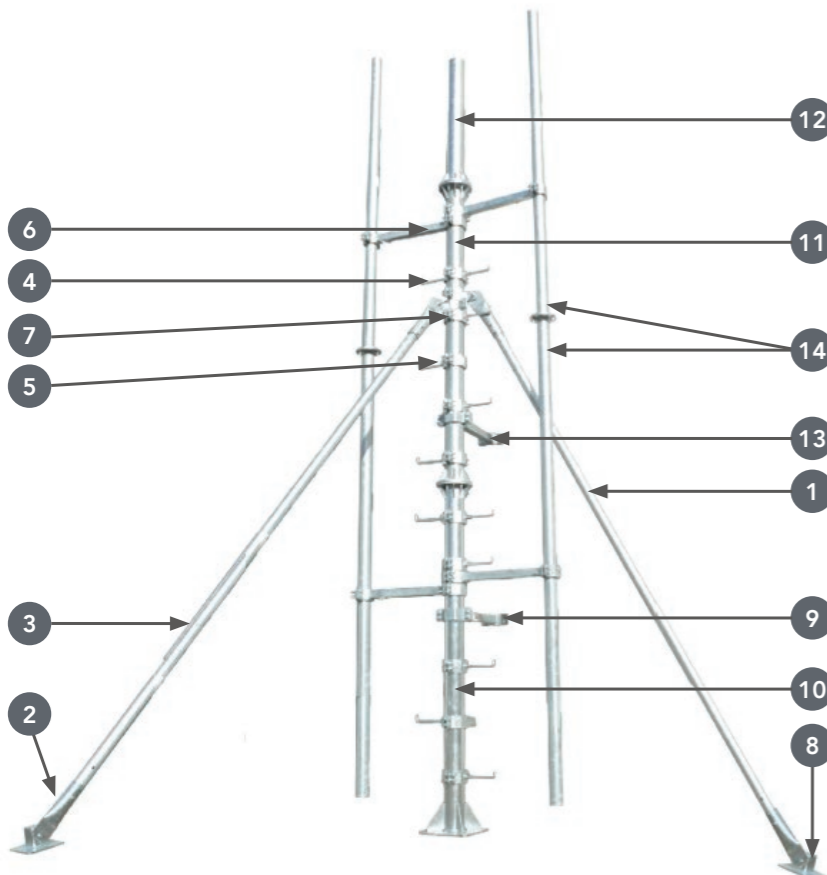
Telenco has a steel structure design and manufacturing unit, offering galvanised steel solutions for mobile sites such as towers and rooftop. The range includes masts, supports for RRUs, step clamps, interfaces, platforms, etc. Each element in the range can be adapted to suit each project, and every need.

The key benefits:

- + Wide range
- + Customizable products
- + Robust design

Technical characteristics :

- + Galvanised steel
- + Designed and manufactured in our factories



- 1 Circular section metal prop
- 2 Strut Terminal
- 3 Strut union in 70 mm tube
- 4 Double step clamp for circular tubes
- 5 Metal clamp with single step for tubes of circular section
- 6 Square tube spacer arm
- 7 Bracing clamp
- 8 Base for fixing strut to floor/wall
- 9 Spacer arms
- 10 Mast base with flange
- 11 Flanged mast at both ends
- 12 End mast flanged at one end
- 13 Bracket for fixing mast to wall/ceiling
- 14 2x Galvanised metal interface with circular cross-section flanged

Technical characteristics :

- + Material S235
- + Galvanisation (M) 80.00 μ | hot according to ISO 1461 standard
- + Various dimensions on request

Circular section metal prop

- Dimensions 2500mm | 60.3x3.2mm



Ref	Designation
92799	Circular section metal prop

Strut Terminal

- Dimensions 300x70x3mm



Ref	Designation
92800	Strut Terminal

Strut union in 70 mm tube

- Dimensions 350mm long



Ref	Designation
92801	Strut union in 70 mm tube

Double step clamp for circular tubes

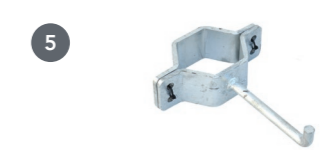
- Dimensions 220 x 8mm with 200mm step



Ref	Designation
92802	Double step clamp for circular tubes

Metal clamp with single step for tubes of circular section

- Dimensions 220 x 8mm with 200mm step



Ref	Designation
92803	Metal clamp with single step for tubes of circular section

Square tube spacer arm

- Dimensions 50x50x3mm



Ref	Designation
92804	Square tube spacer arm

Bracing clamp

- Dimensions Tube 220x8mm



Ref	Designation
92805	Bracing clamp

Base for fixing strut to floor/wall

- Dimensions Sheet 200x200x8mm
Corner L80x80x8



Ref	Designation
92806	Base for fixing strut to floor/wall

Spacer arms

- Dimensions 100 ou 150mm



Ref	Designation
92807	Spacer arms

Mast base with flange

- Dimensions 2000mm long
Ø114.3x4.5mm



Ref	Designation
92808	Mast base with flange

Flanged mast at both ends

- Dimensions 2000mm long
Ø114.3x4.5mm



Ref	Designation
92809	Flanged mast at both ends

End mast flanged at one end

- Dimensions 1000mm long
Ø114.3x4.5mm



Ref	Designation
92844	End mast flanged at one end

Bracket for fixing mast to wall/ceiling

- Dimensions Variable clearance for
114.3x4.5mm tube



Ref	Designation
92845	Bracket for fixing mast to wall/ceiling

2x galvanised metal interface with circular cross-section flanged

- Dimensions 4500mm long | 76x3.2mm



Ref	Designation
92846	2x galvanised metal interface with circular cross-section flanged

Complementary products

Top cover

- Dimensions Ø220x3 mm



Ref	Designation
92847	Top cover

Metal plate for cable support

- Dimensions 250x60x5mm



Ref	Designation
92848	Metal plate for cable support

Fixing slabs

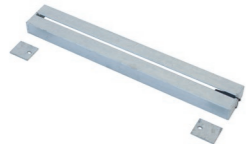
- Dimensions 350: 350mmx350mmx100mm
- Dimensions 500: 500mmx500mmx100mm



Ref	Designation
92849	Fixing slabs 350
92850	Fixing slabs 500

Equipment support crane

- Dimensions 45x45x5mm



Ref	Designation
92851	Equipment support crane

Support beam for stringer and equipment

- Dimensions 2000mm



Ref	Designation
92852	Support beam for stringer and equipment

Metal ground support base for mast

- Dimensions 300x300x10mm



Ref	Designation
92859	Metal ground support base for mast

Galvanised metal interface with circular cross-section

- Dimensions 4000mm



Ref	Designation
92860	Galvanised metal interface with circular cross-section

Postcabinet for RRU's

- Dimensions 1500mm | Base Ø 76.1x3.2mm



Ref	Designation
92861	Postcabinet for RRU's

Postal for Ø88.9 pipes

- Dimensions 2000mm



Ref	Designation
92862	Postal for Ø88.9 pipes

Tower additions

- Customisable base according to the type of tower



Ref	Designation
92863	Tower additions

Interface wall brackets

- Dimensions 60x60x6mm



Ref	Designation
92864	Interface wall brackets

Clamp Safety ring



Ref	Designation
92867	Clamp Safety ring

Platform



Ref	Designation
92869	Platform

Top ring

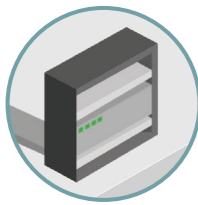


Ref	Designation
93051	Top ring

Top ring for tower addition



Ref	Designation
93052	Top ring for tower addition



OUTDOOR CABINETS



Telenco possesses expertise in the development and manufacture of outdoor cabinets, enabling us to produce solutions tailored to the constraints of mobile deployments.

Our UK-based factory, Rainford Solutions, draws on its 40 years of experience in the telecom market and in the design of **active and passive cabinet solutions**.

Our solutions help to ensure network availability and reduce total lifetime costs, thanks to the reliability, security and quality of our products.

The Rainford line of outdoor cabinets offers solutions perfectly adapted to the constraints of mobile networks. The smart Vanguard® thermal management system minimizes the cabinet's maintenance frequency while extending the life of the air filter, thus reducing the overall cost of cabinet life. Three levels of thermal management are available and can be interchanged, allowing the cabinet to be upgraded to meet changing needs. Our cabinets are delivered fully assembled and ready for deployment.



The key benefits:

- + Developed and manufactured in our factory
- + Configurable
- + High environmental resistance



DESIGN & MANUFACTURING

A DEDICATED RANGE FOR MOBILE SOLUTIONS



«Bus stop» cabinets



Outdoor cabinets



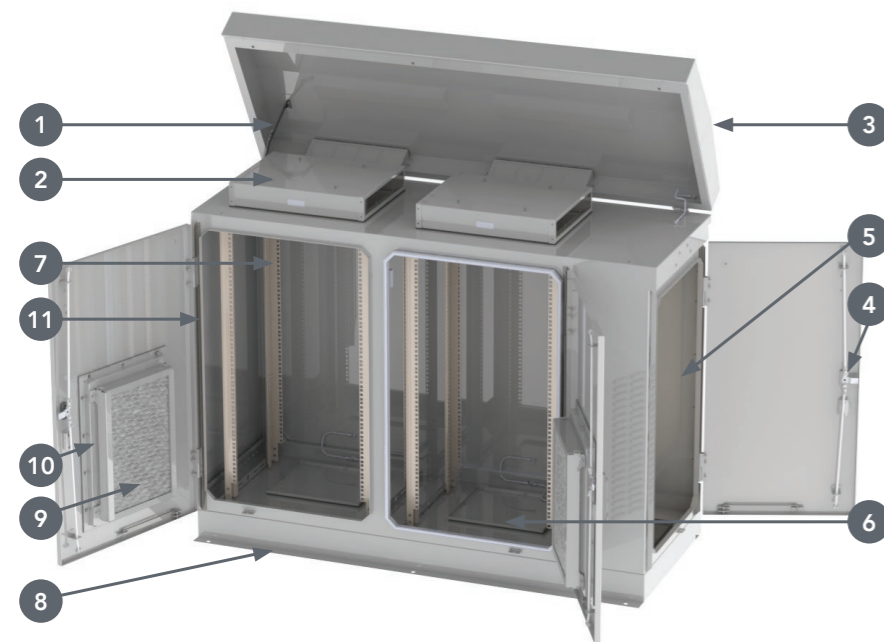
Indoor Rack




RRU support

OUTDOOR CABINETS

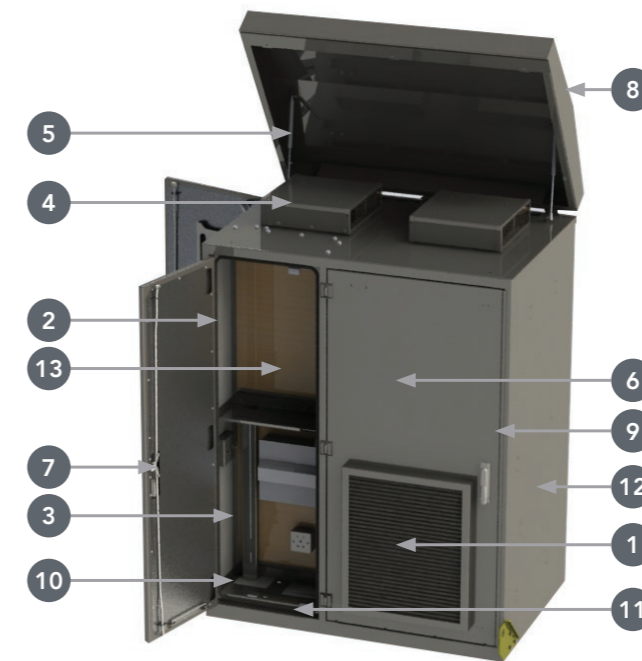
Passive outdoor cabinet single-skin




Passive outdoor cabinet Single-skin 2 compartments+Module 25U

- 
- 1 Stainless steel lift off hinges
 - 2 Intelligently controlled fan tray
 - 3 Pitched roof
 - 4 3-point locking system with the option of vandal resistant locking handle
 - 5 Option: wooden back board offering mounting for power distribution.
 - 6 Removable gland plate for cable entry
 - 7 19 inch, ETSI or DIN rail mounting options
 - 8 Steel extension base with cables management
 - 9 High efficiency, long-life, low-maintenance filter
 - 10 Louvered door design to optimise air flow
 - 11 Balloon seals for high IP rating

Active outdoor cabinet double-skin



Active outdoor cabinet double-skin 3 compartments 30U

- 
- 1 High efficiency, long-life, low-maintenance filter
 - 2 Balloon seals for high IP rating
 - 3 19 inch, ETSI or DIN rail mounting options
 - 4 Intelligently controlled fan tray
 - 5 Stainless steel lift off hinges
 - 6 Louvered door design to optimise air flow
 - 7 3-point locking system with the option of vandal resistant locking handle
 - 8 Pitched roof
 - 9 Anti-pry protection strips
 - 10 Removable gland plate for cable entry
 - 11 Steel extension base with cables management
 - 12 Simple wall Stainless steel or double wall stainless steel/aluminium
 - 13 Option: wooden back board offering mounting for power distribution.

Passive outdoor cabinet single-skin

Specifications:

Material	Stainless steel grade 1.4003
Finish	"Polyester powder coating, available in 2 standard colours: Green (RAL 6005) or Grey (RAL 7035)"
Watertightness	IP55 (EN60529)
Integration size	19" ou ETSI, depth-adjustable
Openings	Stainless steel hinged doors with die cast swivel handle(s), 3-point locking systems
Cable entries	Gland plate in each bay with 2x PG29 and 4xPG21
Lifting	Removable lifting brackets
Earthing	Structure-mounted

Thermal management options:

- + Convection cooling: 100W per bay, ΔT 15°C
- + Thermostatically controlled roof fans:-
- + Intensive use: 1.0 kW per bay, ΔT 10 ° C
- + Light duty: 1.0 kW per bay, ΔT 20°C
- + Anti-condensation heating
- + Long-life filters

Accessories:

- + Various lock and handle options
- + Equipment mounted on ETSI or DIN rail
- + Rear panel for equipment mounting
- + Sensors and alarms for door opening, overheating and fan failure
- + AC/DC power distribution
- + Battery shelves and cable trays

Ref	Designation	Cabinet format	Cooling	Width	Depth	Height
92792	Passive outdoor cabinet Single-skin 1 compartment 25U	Single bay	650 mm	600 mm	1494 mm	25U
92793	Passive outdoor cabinet Single-skin 1 compartments+Module 25U	Single bay + end pod	950 mm	600 mm	1494 mm	25U
92794	Passive outdoor cabinet Single-skin 2 compartments 25U	Double bay	1335 mm	600 mm	1494 mm	25U
92795	Passive outdoor cabinet Single-skin 2 compartments+Module 25U	Double bay +end pod	1610 mm	600 mm	1494 mm	25U

All cabinets have the option of being fitted with a heat management system as an option.

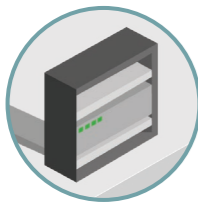
Specifications:

Structure	Double skinned
Material	External: stainless steel grade 1.4003 Internal: aluminium
Finish	External: Polyester powder coating, available in 2 standard colours: Green (RAL 6005) or Grey (RAL 7035) Internal: White RAL 9003
Watertightness	IP45 (EN60529)
Openings	Stainless steel hinged doors with diecast swivel handle(s), 3-point locking systems
Cable entries	Open base
Lifting	Removable lifting brackets
Earthing	Structure-mounted

Cooling	Active by thermostatically speed-controlled roof-mounted 48V DC fans, capable of maintaining:
	- 2 compartments: 1.0kW heat output (3,412 BTU/hr) total to within 20°C of ambient air temp
	- 3 compartments: 4.5kW heat output (15,350 BTU/hr) total to within 20°C of ambient air temp
	- 4 compartments: 7.5kW heat output (25,600 BTU/hr) total to within 20°C of ambient air temp
Alarm	Sensors and alarms for door opening, overheating and fan failure

Ref	Designation	Cabinet format	Cooling	Width	Depth	Height	Equipment height
92796	Active outdoor cabinet double-skin 2 compartments 30U	Single bay	1.0 kW, ΔT 20°C	520 mm	860 mm	1696 mm	30U
92797	Active outdoor cabinet double-skin 3 compartments 30U	Single bay + end pod	4.5 kW, ΔT 20°C	1300 mm	860 mm	1696 mm	30U
92798	Active outdoor cabinet double-skin 4 compartments 30U	Double bay	7.5 kW, ΔT 20°C	1940 mm	860 mm	1696 mm	30U





TRANSCEIVERS

Transceivers

The product line of XG-BASE-compatible transceivers is available in a wide range of form factors: SFP, SFP+, QSFP+, QSFP28, etc., standardized by industry agreements known as Multi-Source Agreements (MSA). Telenco draws on its experience and expertise to offer transceivers that are compatible with all equipment on the market, reducing network costs and the number of references to be stocked.



Specifications:

Available compatibility	Cisco ; Juniper ; Huawei ; ZTE ; Nokia...		
Form factor	SFP	SFP+	QSFP28
Data rate	1G	10G	100G
Dimensions (mm)	13 x 8,5 x 57	13 x 8,5 x 57	18 x 8,5 x 78+44
Transmission distance	300m up to 80km		
Wavelengths	850 to 1610 nm		
Connector	LC simplex ; LC duplex ; MTP/MPO		
Fiber type	Singlemode or Multimode		
Norm	Bidirectional or Monodirectional		
Certification	RoHS compliant		
Temperature	0°C à 70°C (-40°C à 85°C possible upon request)		
Humidity	0% à 85%		

The key benefits:

- + Wide range of form factor and data rates
- + Compatibility with all market equipment
- + Dedicated technical team

Network	Form factor	Data rate	Wavelengths	Transmission distance	Connector	Compatibility
Backbone	SFP	1G	1310nm	10km	LC Duplex	Nokia, Ericsson, Huawei, Cisco... etc
			1310nm	40Km	LC Duplex	
			1550nm	40km	LC Duplex	
			1550nm	80km	LC Duplex	
	SFP+	10G	1310nm	10km	LC Duplex	
			1310nm	40km	LC Duplex	
			1550nm	40km	LC Duplex	
			1550nm	80km	LC Duplex	
			TX1270/RX1330nm	20km	LC Simplex	
			TX1330/RX1270nm	20km	LC Simplex	
4G	SFP+	10G	1310nm	2km	LC Duplex	
			CWDM	10km/40km/80km	LC Duplex	
			DWDM	80km	LC Duplex	
			Bidi	10km/20km/40km /60km/80km	LC Duplex	
5G	SFP28	25G	1310nm	2km	LC Duplex	
			1xxxnm	10km	LC Duplex	
			1xxxnm	15km	LC Duplex	
			TX1xx0/RX1xx0	10km	LC Simplex	

Other versions available on request

i-CODE Box

The i-CODE box is a device for switching transceiver compatibility. The i-CODE box enables the transceiver to adapt to all types of manufacturer's devices (Cisco, Nokia, Huawei ...). It is compact, portable and supports a wide range of form factors (SFP, SFP+, QSFP+, QSFP28...).



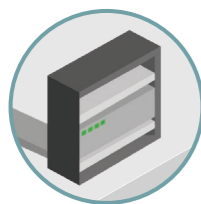
Specifications:

Available compatibility	Cisco ; Juniper ; Huawei ; ZTE ; Nokia ...
Accepted form factor	SFP ; SFP+ ; XFP ; SFP28 ; SFP56 ; QSFP+ ; QSFP28 ; QSFP
Dimensions	30 x 100 x 160 mm
Power	5V
Software	Windows 10
Connector	USB
Temperature	10°C à 60°C

The key benefits:

- + The i-Code Box provides autonomous coding

Ref	Designation
1002005	i-CODE box



PATCH PANELS

Patch panels

Developed and manufactured in our factory in Portugal, The FTTH optical patch panel feature premium optical connectivity and are perfectly compatible with FTTH 4G/5G installations. Our Patch panels are 100% configurable to suit all types of installation. Their design in corrosion-resistant steel makes them robust and perfectly suited to harsh environments.

The key benefits:

- + Simple, robust design
- + High optical performance
- + Flexible integration to suit requirements
- + Manufactured and integrated in our factory

Specifications:

Dimensions	1U 19"- L 482 mm x H 44 mm x D 220 mm 2U 19"- L 482 mm x H 88 mm x D 220 mm
Material	Corrosion-resistant steel - Coated
Capacity	48 FO / U
Colour	Grey RAL7035
Equipment	« Trunk » version : Adaptors « Splice » version : Adaptors - Pigtailed - Splice cassette
Connectors	LC/UPC Duplex - LC/APC Duplex SC/UPC - SC/APC
Fiber type	Singlemode : G.652 - G.657A2 (Multimode available upon request)
Splice cassette	24 splices/cassette
Temperature	-40°C / +75°C
Included accessories	4 x cage nuts + Screws - 4 x plastic ties « For Splicing » version: smoooves



Characteristics:

All breakout connectors are available : SC/UPC, SC/APC, LC/UPC, LC/APC.

Performances:

IEC-61300	100% compliant
Insertion Loss (IL)	Singlemode ≤ 0,15 dB
Return Loss (RL)	Singlemode ≥ 60 dB

Telenco reserves the right to change these specifications without further notice

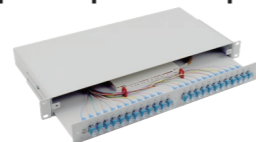
19" sliding patch panel – Trunk version



19" sliding patch panel 1U 36FO LC/UPC DX – Trunk version

Ref	Height	Fiber count	Fiber type	Connector type
92169	1U	24	Singlemode	SC/APC
92034	1U	36		
92036	1U	48		
92865	2U	72		
92866	2U	96		
50064	1U	24		
92033	1U	36	LC/UPC	
50076	1U	48		
92858	2U	72		
92868	2U	96		

19" sliding patch panel – Splicing version



19" sliding patch panel 1U 48FO LC/UPC DX – Splicing version

Ref	Height	Fiber count	Fiber type	Connector type
15411	1U	24	G.657A2	SC/APC
92004	1U	36		
91874	1U	48		
92588	2U	72		
92589	2U	96		
91998	1U	24		
92002	1U	36	LC/UPC	
92008	1U	48		
92585	2U	72		
92586	2U	96		



WDM SOLUTIONS

WDM solutions

Wavelength Division Multiplexing or WDM enables multiple circuits to be transmitted over a single fibre or a pair of fibre, optimizing thus the use of leased fibres or cables in a similar situation. Passive multiplexers accept at their input a certain number of «coloured» optical signals, i.e. emitted at a specific wavelength. They combine them passively and purely optically, while also ensuring isolation between adjacent channels. These same signals then come out multiplexed over a single fibre. The reverse operation is called demultiplexing.

A distinction is often made between the «CWDM» (up to 18 circuits over a fibre pair) and the «DWDM» (up to 18 circuits over a fibre pair). In combination with the coloured optical modules described above, passive multiplexers/demultiplexers enable the transmission of very high data rates over a single fibre or a pair of fibres, from 1Gbit/s to several Tbit/s, at very attractive costs over distances from a few dozen to more than a hundred of kilometers.

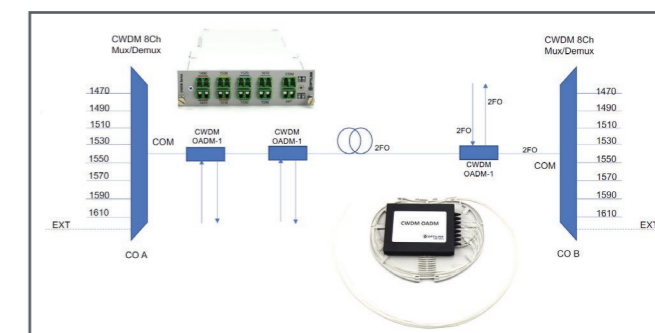
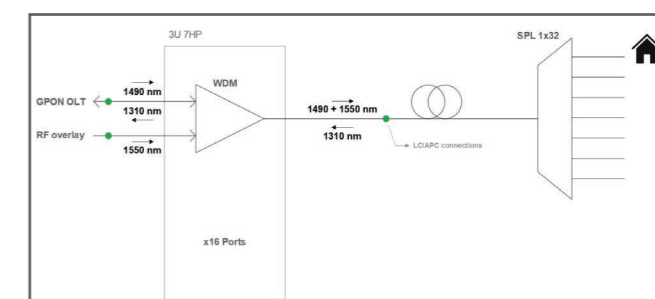
Numerous operators and companies use this technique to interconnect two datacenters, to collect traffic from network access equipment (DSLAMs, OLTs or radio sites), or to build a very high speed backbone between core network routers

To optimize optical networks for mobile sites, Telenco draws on its experience to develop solutions based on WDM (wavelength division multiplexing), optical filters and splitters.

Our solutions have enabled us to implement optimized 10Gb service networks on just 2 optical fibers, while guaranteeing redundancy.

The key benefits:

- + Developed and manufactured in our factory
- + Adaptable to all network structures
- + Modular, scalable solutions



Indoor wireless & Private wireless



New mobile technologies are greatly improving the performance of wireless networks. But they also lead to contradictory phenomena:

- access to a high-quality mobile network everywhere, all the time
- deploying large-scale connected solutions, as in industry.

But also :

- the difficulty of new-generation mobile networks to guarantee a quality network in buildings, and even more so in underground spaces such as tunnels.
- the difficulty of securing public networks for sensitive use.

This is why Telenco is committed to the development of Indoor Wireless and Private Wireless networks, through its specialist subsidiary NGIS, and through the development of dedicated and innovative solutions.

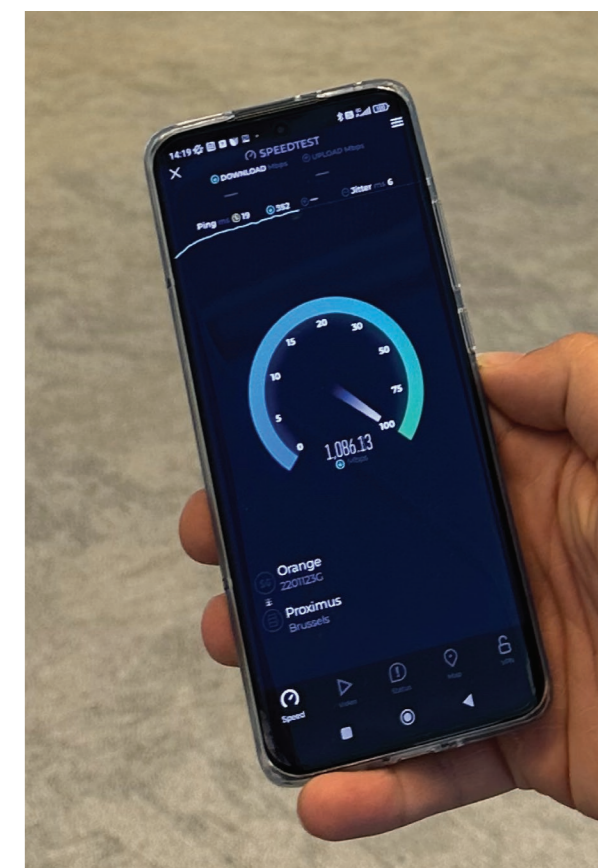
When the configuration of buildings or tunnels does not allow for homogeneous mobile coverage, the deployment of an ADAS (Active Distributed Antenna System) solution is the ideal answer. These distributed antenna arrays can accommodate several operators and enable the deployment of a high-performance 2G, 3G+, 4G+ and 5G mobile network.



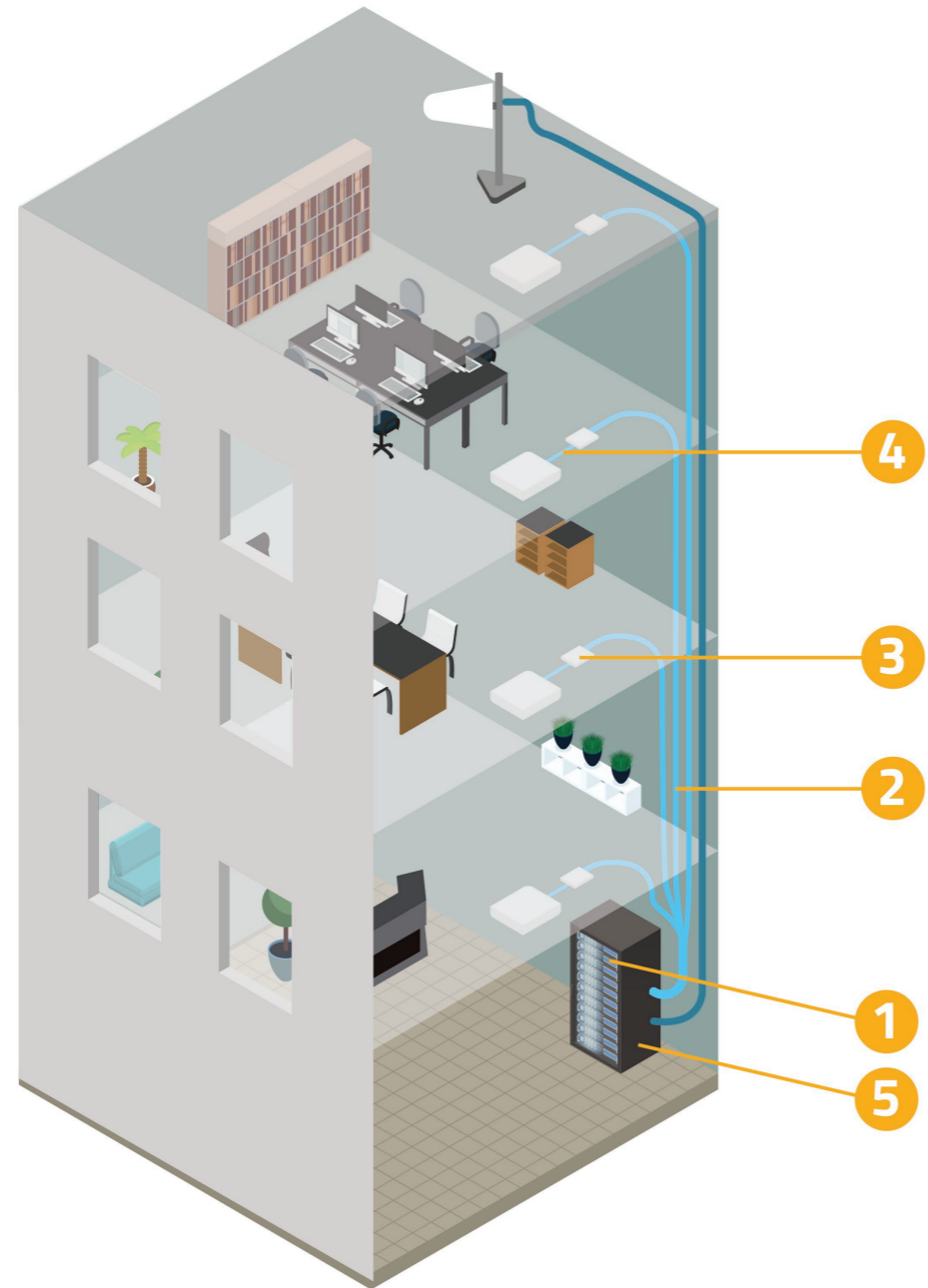
Wireless indoor architecture

WIRELESS INDOOR ADAS
WIRELESS UNDERGROUND ADAS

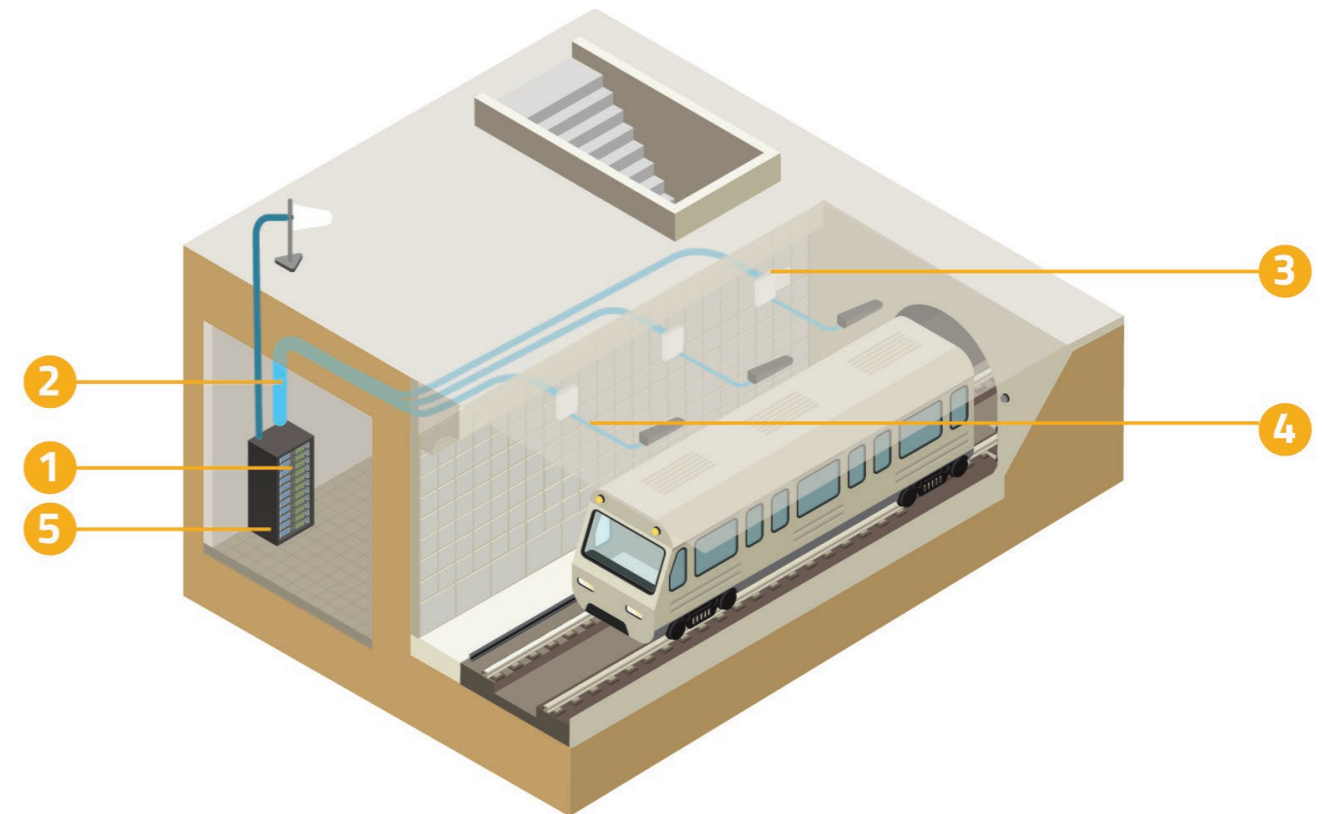
51
52



WIRELESS INDOOR ADAS



WIRELESS UNDERGROUND ADAS



Legend

- 1 XG-optic hybrid patchpanel
- 2 XG-optic hybrid cable B2ca
- 3 XG-optic hybrid Boxes
- 4 XG-optic hybrid patchcords
- 5 Server cabinets

Technical focus

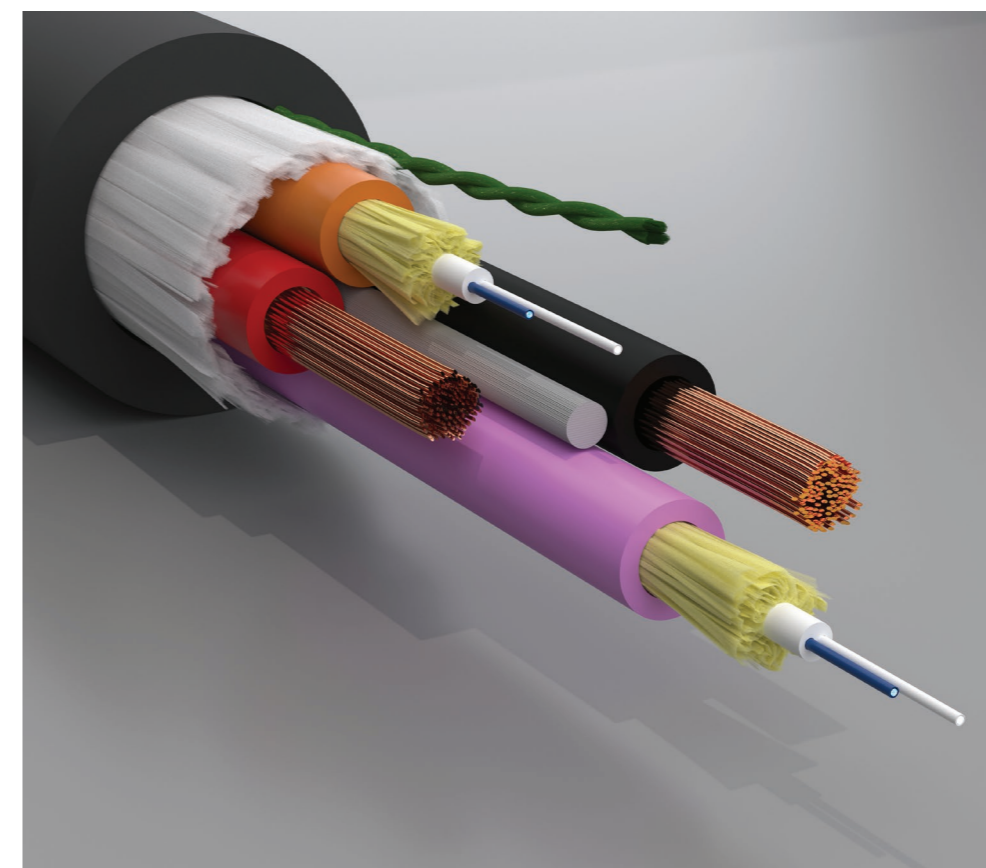
Glossary

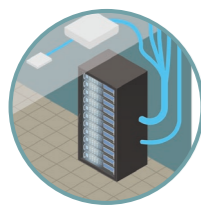
- **DAS** = Distributed Antenna System
- **ADAS** = Active Distributed Antenna System
- **Hi-Dense WiFi** = Advanced wireless networking solution engineered to address high-density areas
- **TETRA** = Terrestrial Trunked Radio, is a digital radio standard specifically designed for public safety agencies and other mission-critical organizations
- **Indoor Wireless Network** = Public Wireless Networks such as WiFi or 3G/4G/5G deployed in a building, stadium or tunnel
- **Private Wireless Network** = Private and secure wireless networks such as WiFi or 3G/4G/5G deployed in a company or industrial building
- **MPN** = Mobile Private Networks
- **MNO** = Mobile Network Operator
- **Hybrid** = Designed to manage the optical data network and the power network
- **Passive Network** = Link for data and power to interconnect the active equipments and antennas
- **DAS / ADAS** = Defining Distributed Antenna System (DAS) & Active DAS: Distributed Antenna System (DAS) and Active DAS are innovative wireless communication solutions designed to expand wireless coverage and capacity in challenging environments. DAS involves a network of antennas strategically placed to distribute cellular signals, while Active DAS integrates signal amplification to enhance performance and overcome signal degradation.



Wireless indoor Networks offer

XG-optic HYBRID PATCHPANEL	54
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XG-optic HYBRID PATCH PANEL

Hybrid patch panel

The hybrid patchpanel Telenco has been specially designed to manage 12 hybrid cables including 24 copper wires and up to 48 fibers. It makes it easy the connections in 2 stages, copper then fibers, guaranteeing the protection of the optical fibers. It has a great ease of access, yet is very compact, enabling it to be installed in a crowded rack without interacting negatively with the rest of the equipment.



The key benefits:

- + Wide and easy access
- + Hybrid cable compatible
- + Easy & secured copper/fibers management
- + Solution all integrated

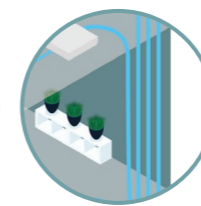
Characteristics:

- + FO connectors LC/APC
- + Fast copper connectors
- + Up to 48FO splices
- + 12 Hybri cables (24 copper wires)

Ref	Designation
1000494	Hybrid patchpanel 19" 1U - 24FO LCA - 24x Copper wires

Specifications:

Raw material	Painted metal / Plastic
Installation	19" rack with standard cage nuts/screws
Size	L482.6mm x H88.0mm x D515.0mm (D592.00mm with cable guide in front)
Capacity of cables	12x hybrid cables (4FO/2copper wires)
Optical connectors	14x LC/APC Duplex (24FO+4FO)
Optical fiber type	G.657A2
Pigtail qty/colors	24x pigtails LC/APC (blue/white)
Splice capacity	48FO (2 cassettes with 24 splices each)
Copper wires capacity	24x wires
Copper connectors section	Up to 4mm ²
Copper connections	Wago connectors (without tools)



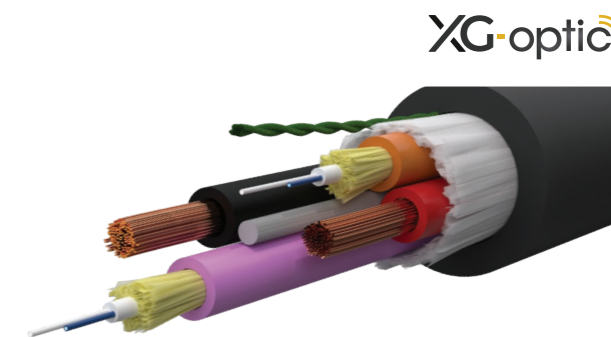
XG-optic HYBRID CABLE B2ca

Hybrid cable B2ca

Telenco's hybrid cable is specially developed for indoor deployment. It's strong and flexible for an easy installation.

Hybrid cable Telenco is certified B2ca, compliant with the deployment in all the building with public.

It's composed of 2 copper wires and 4 optical fibers, the fibers are 2 by 2 in flexible buffer 900µm for a easy and secured management.



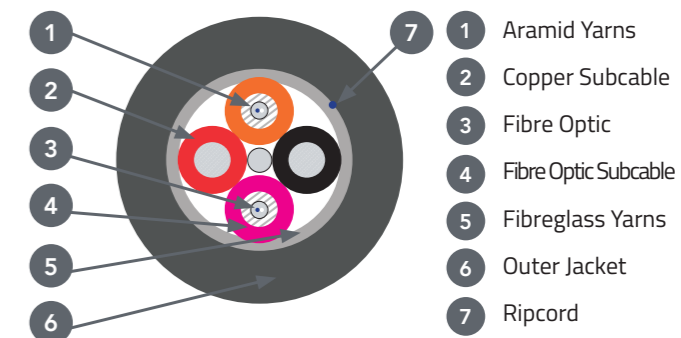
The key benefits:

- + Quick & simple installation
- + Small diameter strong & flexible
- + Fibers in flexible tube
- + Color identification to avoid wiring errors

Characteristics:

- + 2x 2FO G.657A2
- + Fibers in flexible tubes
- + 2x Copper wires 1,5mm²
- + CPR: B2ca

B2ca

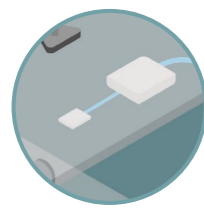


Ref	Designation
1002024	Hybrid cable 4FO G.657A2 - 2x1,5mm ² /m

Specifications:

Cable type	In/Outdoor
Outer sheath material	LSZH XtremFire B2ca
Outer sheath colour	Black
Outer diameter	9.7mm +/-0.5mm
Ripcord	Yes (x2)
Copper cables diameter	2.5mm
Copper sheath colour	Red / Black
Copper wire section	2x1.5mm ²
Fibre cable diameter	2.5mm +/-0.3mm
Fibers sheath colour	Orange / Purple
Fibers by fiber cable	2FO
Colour of the 900µm fibers	Blue / Write
Strength members	Fiber glass Yarns + Aramid yarns + FRP (Ø1.2mm)
Max. tensile	1500N
Max. crush	1000N/dm
Min. bending radius	20 x Ø
Max. Operating Voltage	300V
Conductor Resistance	≤ 13.3Ω Km. At 20°C
Temperature range	-20°C / +70°C
CPR	B2ca





XG-optic HYBRID BOXES

Hybrid boxes

Telco's hybrid boxes are specially developed for indoor mobile deployment to be close to the antennas and simplify their installation. Their small footprint and baseplate make it easy to install on walls or false ceilings, while allowing comfortable copper and fibre connections in all conditions. Their steel structure gives it great strength and enables it to manage very rigid hybrid cables. Telco's hybrid box unique design means it can be handled without tools.



The key benefits:

- + Quick & simple installation
- + No tools required
- + Easy to connect
- + Small & strong

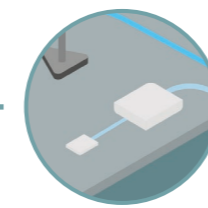
Characteristics:

- + FO connectors LC/APC
- + Fast copper connectors
- + 2FO or 4FO / 2 copper wires
- + Pigtails colors: Blue/White

Ref	Designation
1000495	Hybrid box - 2FO LCA - 2x copper wires
1002028	Hybrid box - 4FO LCA - 2x copper wires

Specifications:

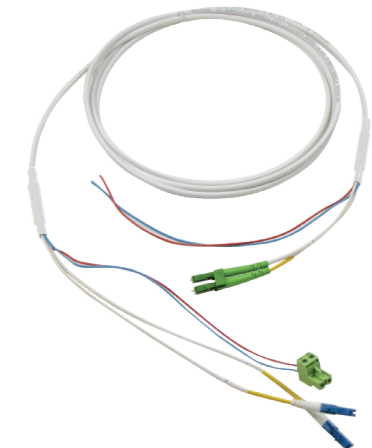
Installation	Ceiling / Wall / Cable tray
Raw material	Painted metal / Plastic
Size	L155.0mm x H36.0mm x D156.0mm
Optical connectors	1 or 2 LC/APC Duplex
Optical fiber type	G.657A2
Splice capacity	4FO
Pigtails/Fibers colors	Blue/White
Copper wires capacity	2 wires
Copper connections	Wago connectors (without tools)
Copper connectors capacity	Up to 4mm ²



XG-optic HYBRID PATCHCORDS

Hybrid patchcords

Telco's XG-optic hybrid patchcords have been developed to connect easily and without error the active equipment to the hybrid patchpanel or the hybrid box to the antenna. Its design and very small diameter make a very discrete solution when the antennas are visible. Its great flexibility make installation easier and faster.



The key benefits:

- + Small diameter
- + Flexible & strong
- + Prevents wiring errors
- + Discrete Installation

Characteristics:

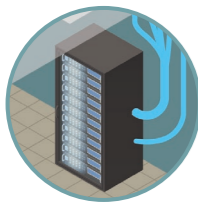
- + FO Simplex or Duplex
- + Connectors LC/UPC and/or LC/APC
- + 2x copper wires 0,5mm²
- + Copper wires with or without connector

Ref	Designation
1001183	Hybrid patchcord DX LC/APC-LC/UPC G.657A2 2x0,5mm ² Ø4,2mm White Lg 3m
1001184	Hybrid patchcord SX LC/APC-LC/UPC G.657A2 2x0,5mm ² Ø4,2mm White Lg 3m

Specifications:

Cable type	Indoor
Outer sheath material	LSZH
Outer sheath colour	White
Outer diameter	4.2mm +/-0.2mm
Copper wire diameter	1.5mm
Copper sheath colour	Red / Black
Copper wires section	2x0.5mm ²
Fibre capacity	1FO or 2FO
Fibre type	G.657A2
Fibre cable diameter	2mm
Fiber sheath colour	White
Strength members	Aramid yarns
Fibre connectors type	LC/APC - LC/UPC
Copper connector	With or without
Max. tensile	200N
Max. crush	100N/dm
Min. bending radius	15 x Ø
Max. Operating Voltage	300V
Conductor Resistance	≤ 38Ω Km. At 20°C
Temperature range	-40°C / +70°C





RAINFORD SERVER CABINETS

Server cabinets

Our range of flexible and modular 19" free-standing server cabinets have been designed for mission critical operations such as data storage, server housing and infrastructural cabling. They can also offer solutions for hot/cold corridor data centre architecture.



Technical Specifications:

- + Height options: 27U, 36U, 42U, 52U, 54U, 60U
- + Depth options: 1000mm, 1100mm, 1200mm
- + Width options: 600mm, 800mm
- + Load capacity up to 2000 kg
- + Standard finishes:
 - Jet Black RAL 9005
 - Light Grey RAL 7035
- + 2 pairs of fully adjustable 19" , ETSI or ANSI mounting profiles
- + Front & rear mesh doors – 80% open area
- + 3-point door locking for security
- + Removable doors, hinged left or right
- + 2 pairs of horizontally divided side panels with locks
- + Large cable aperture in base
- + 2 vertical cable trays fitted at rear (1 per side)
- + Brushed cable entry in roof
- + 10 way x 80 A earth bar fitted in base at the rear
- + Fully earth bonded
- + Conforms to IEC 60297-3, EIA 310-D and BS 3192
- + Cabinet supplied fully assembled

Optional Features:

- + Wide range of accessories
- + Double (wardrobe style) rear doors for easy handling
- + Active airflow management multiple fan tray options and features

Specifications:

Material	Steel
Colour	RAL 7035 light grey or RAL 9005 black
Compliance	RoHS, UL Certified
Packaging	Assembled with option of flat packed (unassembled)
Maximum static load	Up to 1500kg
Finish	Frame, doors, side panels, top and bottom panels powder coated
19" mounting rails	Zinc-plated

Standard Configuration Include:

- + Perforated front and rear doors.
- + Front & rear doors with swing handle Multi point locking
- + Solid Side Panels with cylinder locks and latches
- + Roof with 3 cable entries for 800 width, 1 cable entry for 600 width racks and additional multi-purpose cut-outs
- + 2 Pairs of depth adjustable heavy duty 19" Mounting Rails
- + 2 Pairs of Adjustable Feet
- + Bottom cover with 3 cable entries for 800 width, 1 cable entry for 600 width racks

Width	600	800
Height	42U	47U
Depth	1000	1200
Colour	RAL 7035 Grey RAL 9005 Black	

Options: A wide range of options for locking, door styles and accessories are available upon request.



We design and manufacture enclosures for critical infrastructure operators, systems integrators and global OEMs spanning markets including rail, fixed and mobile networks, road, data centres, defence, water and energy utilities.

Our outdoor enclosures and indoor racks and cabinets in 19" , ETSI and ANSI formats for compute, data storage and networking hardware are designed and manufactured in the UK by our experienced team of engineers.

We are specialists in developing enclosure solutions to challenges with heat and cold, electro-magnetic fields (RF/EMC), seismic activity in earthquake zones, shock and vibration, ingress protection (IP), and vandals, which can be certified to global civilian and military standards.

Our Consult, Design, Make and Protect process serves our customers with individual solutions to their challenges quickly and cost effectively. Our modern factory can produce in volume to support national scale infrastructure projects. We also offer factory pre-wiring saving you valuable time on site.

The "Rainford Way" means your equipment will perform at its best, achieving the highest levels of reliability and minimum in-life maintenance cost.



TELENCO: INNOVATION AT THE SERVICE OF WORLDWIDE NETWORKS

Telenco is a group of entities specialised in the design, manufacture and global marketing of future-proof solutions for telecom and connectivity infrastructures. Since 1999, the Group has organised its business activity on offering innovative solutions meeting the field challenges of each specific market.

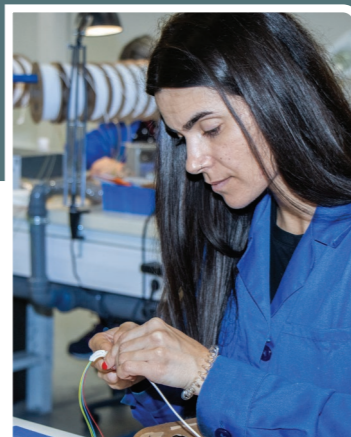
A PROVEN EXPERTISE

DESIGN



Over **20 years** of R&D expertise and an integrated test laboratory

MANUFACTURE



18 000 m² of production units in Europe and Tunisia

LOGISTICS



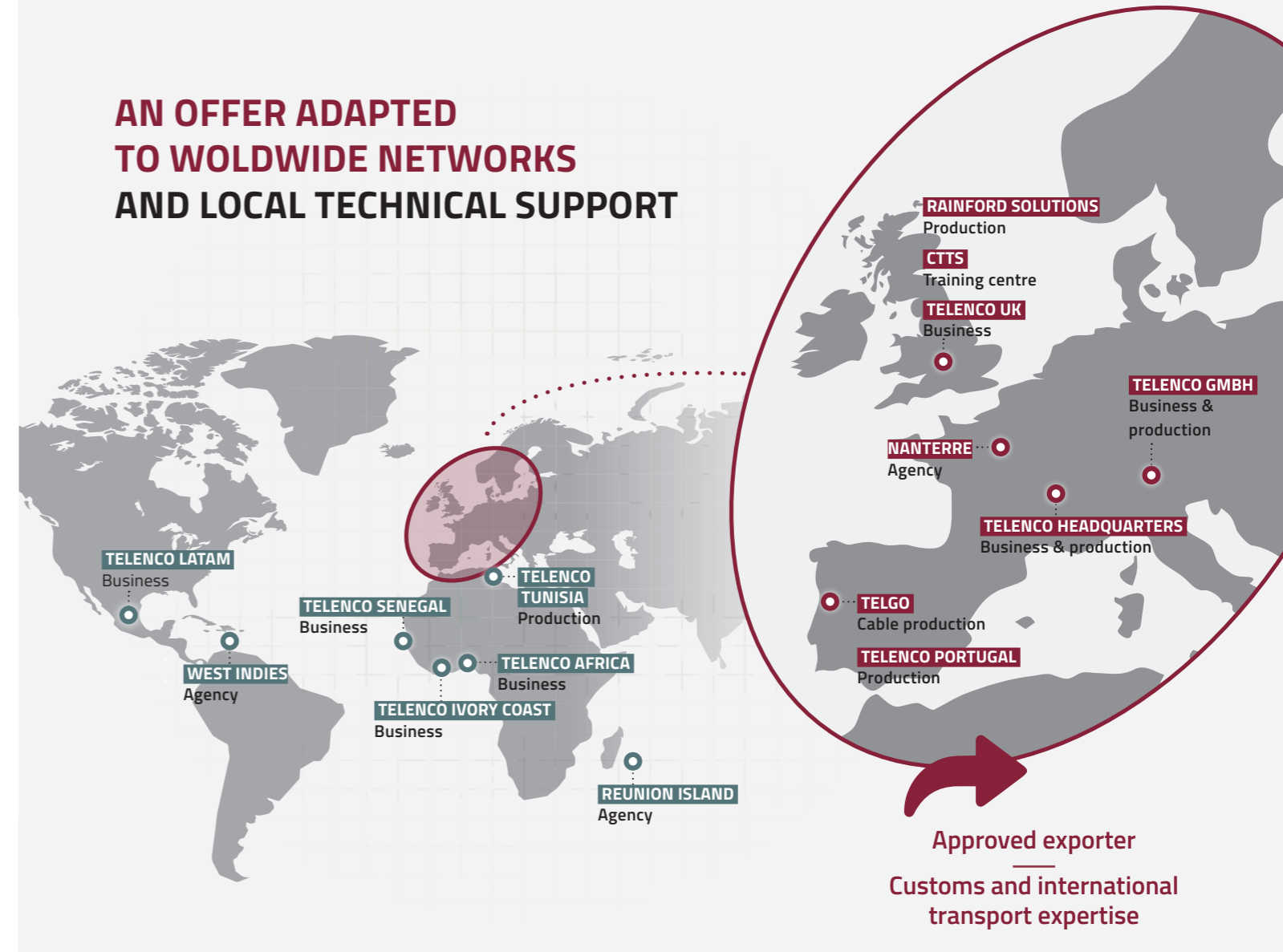
21 000 m² of storage area in the world

OUR INDUSTRIAL KNOW-HOW AT THE HEART OF EXPERT TELECOM ORGANISATIONS

Member of ARCEP expert committee



AN OFFER ADAPTED TO WORLDWIDE NETWORKS AND LOCAL TECHNICAL SUPPORT



A RESPONSIBLE & SUSTAINABLE COMPANY

Committed to its employees, the environment and social inclusion



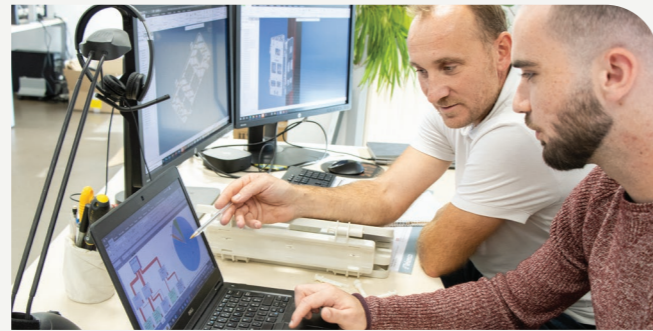
Discover all of our CSR actions on: www.telenco.com

DESIGNER OF FUTURE-PROOF AND RELIABLE SOLUTIONS FOR TELECOMMUNICATIONS NETWORKS

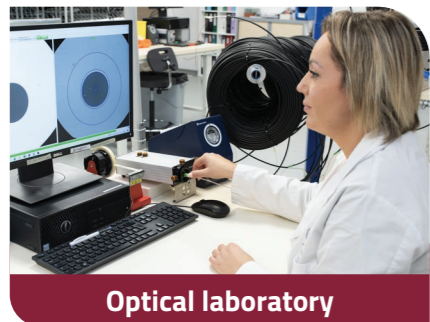
The Telenco Group has an integrated value chain with the design, production, qualification and distribution of its products. Telenco's expertise and investment in Research and Development have been proven, with the design of innovations that are recognised in the telecommunications market. The Group has its own production units in production units in France, Portugal, Tunisia, Germany and the United Kingdom.

3 RESEARCH & DEVELOPMENT CENTRES

Based in France (Moirans, Evreux) and in the United Kingdom (St Helens), our design offices, which are experts in the fields of metallurgy, plastics processings, mechanical engineering, optics and design, develop products with a pragmatic approach that enables us to meet the challenges of the most diverse fields.



INTEGRATED TEST LABORATORIES FOR SYSTEMATIC PRODUCT QUALIFICATION



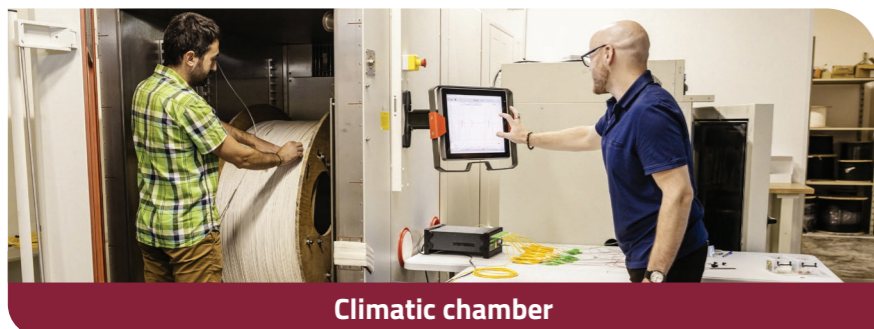
Optical laboratory



Mechanical laboratory

The integrated test laboratories enable product qualification and testing to be carried out in-house. The Group is equipped with the latest technology (wind vibration bench, high-frequency 4kHz power meter for vibration tests, extensometer, etc.) for accurate results, guaranteeing the efficiency and durability of the product on the network.

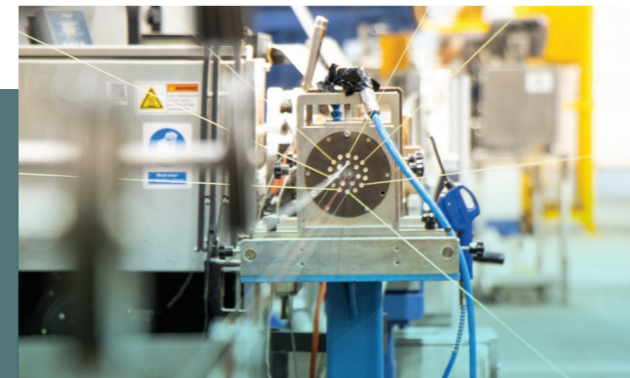
Telenco also works with a network of accredited external laboratories if it is necessary to carry out specific tests (salt spray, for example) or to obtain CPR accreditation.



Climatic chamber

EXPERTISE IN MANUFACTURING PROCESSES AT OUR 7 PLANTS

The Group Operations Department ensures that all the products leaving our production units meet the same quality and performance requirements, whatever their speciality:



CABLE EXTRUSION



OPTICAL CONNECTORISATION



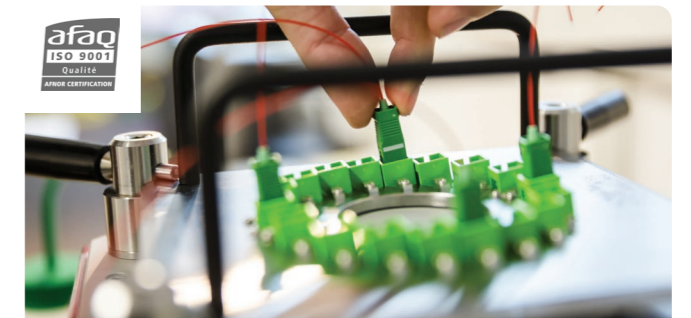
METAL WORK (laser cutting, forming, welding, painting)



MECHANICAL AND OPTICAL ASSEMBLY

A CERTIFIED MANUFACTURER

In our constant quest for quality, we ensure to offer you products that meet your expectations, tested and validated in our laboratories. (ici il manque le point en version FR) The CE marking of a product is the guarantee that it meets the requirements defined by the European Union and can circulate freely on the market.





Contact our teams!

Telenco

ZA Valmorge
Rue Séraphin Martin
38430 Moirans

+33 4 76 35 00 15

sales@telenco.com

www.telenco.com

Telenco UK

Unit 3 Westerngate
Langley Road
Swindon SN5 5WN

+44 1793 848 123

sales.uk@telenco.com

www.telenco.uk

Telenco GmbH

SKM Skyline GmbH
Ammerthalstrasse 30
85551 Kirchheim-Heimstetten

+49 89 431982-0

info.germany@telenco.com

www.telenco.de

Telenco LATAM

Avenida Oaxaca #96
201C Colonia Roma Norte
06700 CDMX

+52 55 5025 3962

ventas@telenco.com

www.telenco-latam.com

Telenco Sénégal

HLM Grand Yoff
DAKAR Lot 2

+221 33 827 57 76

agencedakar@telenco.com

www.telenco-afrique.com

Telenco Côte d'Ivoire

Marcory Zone 4C
Rue des Alizées
Abidjan

+225 58 30 90 74

agenceabidjan@telenco.com

www.telenco-afrique.com

