

Hypercell®

RADIO FREQUENCY SOLUTIONS FOR MOBILE NETWORKS

2023 RELEASE

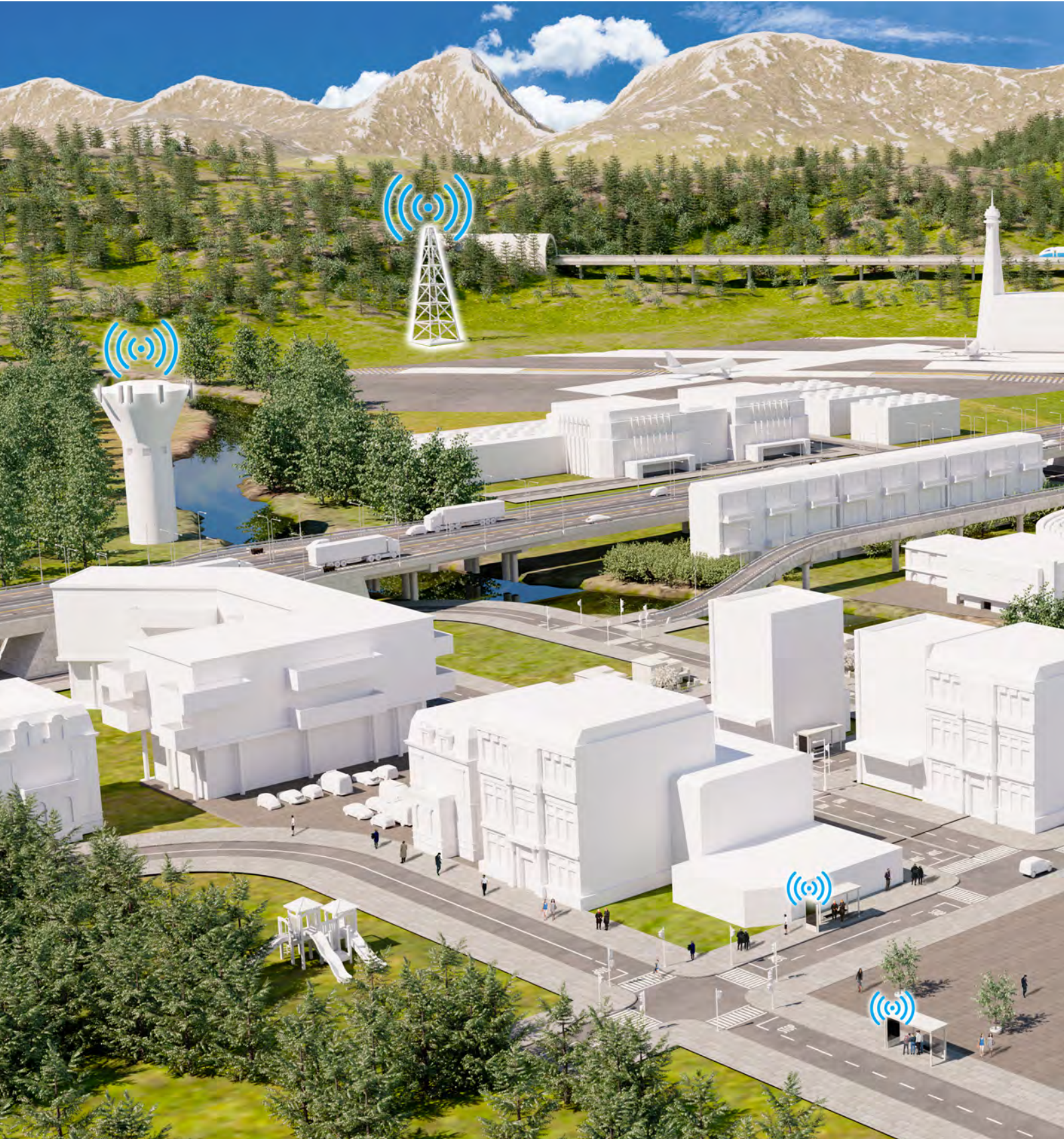


CREATE
YOUR 5G
with ACOME

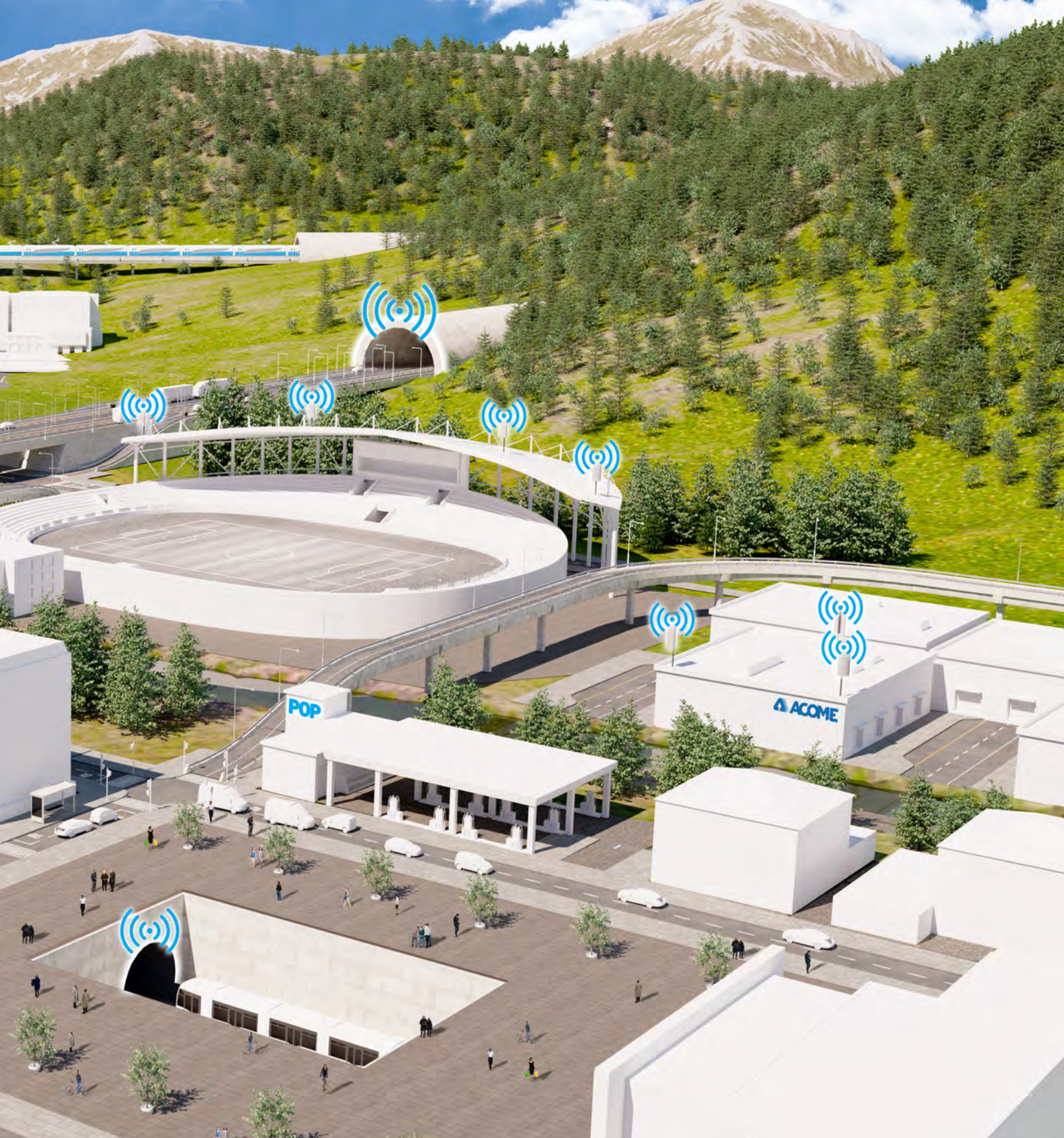
ACOME

ACOME Hypercell®

Radio Frequency Solutions



OUTDOOR
RF ANTENNA LINE – FIBER TO THE ANTENNA
MICROWAVE CABLING SYSTEMS
INDOOR
INDOOR DAS – TUNNELS AND TRANSPORTATION





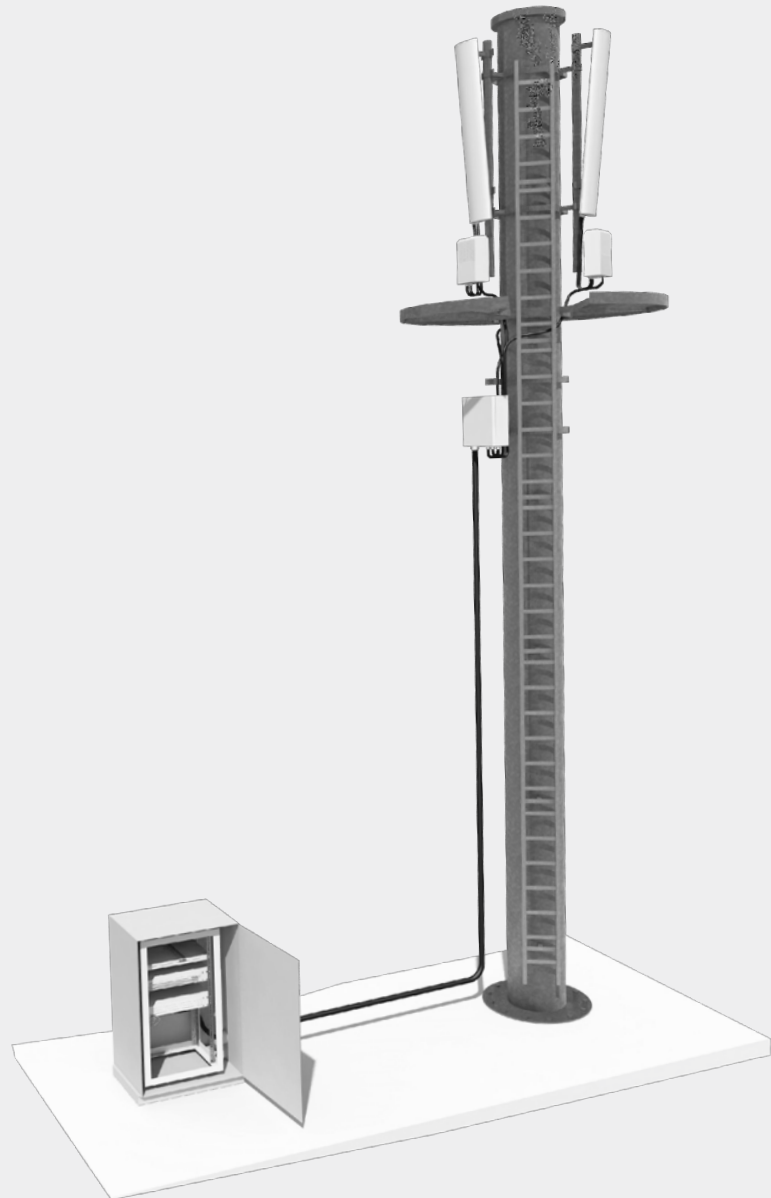
RF Antenna Line

ACOME HYPERCELL® Antenna line is covering complete range of RF passive components as feeder cables, connectors, jumpers, grounding kits, Surge arrestors, Hangers, and waterproofing kits.

ACOME ADVANTAGES

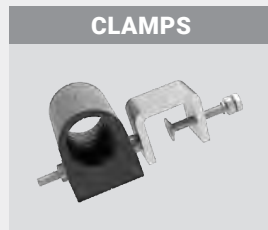
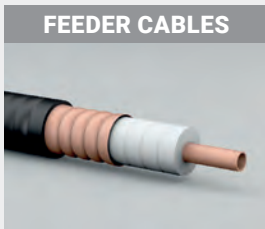
- *Broadband solution including 5G frequencies.*
- *Low PIM products.*

All these components are designed and manufactured to ensure the best performance of the transmission system in the most severe environment.



OUTDOOR RF ANTENNA LINE

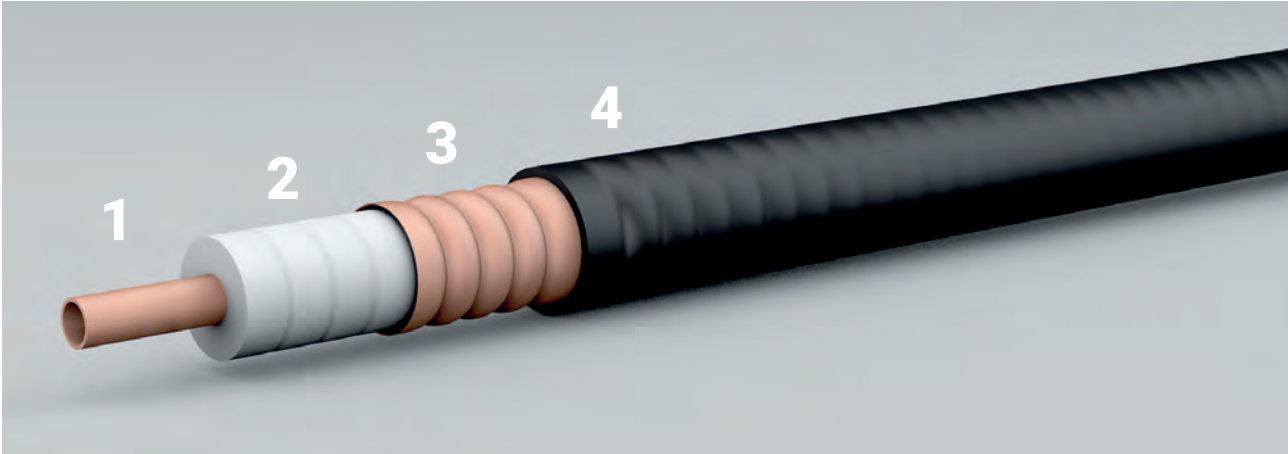
Products



Feeder Cables



HYPERCELL® Low loss feeder for RF signal transmission between equipments.



1. INNER CONDUCTOR

Copper-clad aluminium wire, smooth or corrugated copper tube.

2. DIELECTRIC

Low-loss dielectric made of foamed polyethylene with homogeneous and closed cells.

3. OUTER CONDUCTOR

Corrugated outer conductor allows continuous EMI/RFI shielding while offering great mechanical strength and adequate flexibility for an easy installation.

4. OUTER JACKET

The black polyethylene jacket is fully waterproof and ultraviolet resistant, allowing long term operation for outdoor applications. It ensures high mechanical and environmental resistance.

- **Fire-retardant Low Smoke and "0" Halogen**

HYPERCELL® Fire-retardant LSOH cables have been designed to fully match to IEC (International Electrotechnical Commission) standards. This Indoor / Outdoor Jacket perfectly matches all "In-Buildings" and "Inter-Buildings applications". This range of cables meets the requirements of the

Dca-s2,d2,a2 Euroclass according to the Construction Product Regulation (EN50575).

MFR LSOH :

This Indoor / Outdoor Jacket perfectly matches all "In-Buildings" and "Inter-Buildings applications".

This range of cables meets the requirements of the **Cca-s1a,d1,a1** Euroclass according to the Construction Product Regulation (EN50575).

BENEFITS

- *Each cable drum is 100% controlled in both sides.*
- *Low attenuation products for better network coverage.*
- *Low PIM and broadband products for better network capacity (including 5G frequencies).*

OUTDOOR
RF ANTENNA LINE

Cable	FLEXIBLE						SUPER FLEXIBLE		
	1/4" F	3/8" F	1/2" F	7/8" LA	1-1/4" LA	1-5/8" LA	1/4" SF	3/8" SF	1/2" SF
PE jacket	M2930Z	M6041Z	M1473Z	M5407Z	M2937Z	M2939Z	M2929Z	M5458Z	M2839Z
LSOH Jacket Dca,s2,a2, d2	M2932Z	M6047Z	M2831Z	M5422Z	M2938Z	M2940Z	M2931Z	M5554Z	M2830Z
MFR Jacket Cca-s1a,d1,a1	—	—	M5884Z	M5885Z	M5886Z	—	—	—	—



Connectors

HYPERCELL® feeder line connectors connect feeder cables to jumpers and equipments.



BENEFITS

- Use our preparation tool for an easier, faster and safer installation of connectors.



OUTDOOR RF ANTENNA LINE

INTERFACES

- 7/16 DIN (IEC 60169-4).
- N (IEC 60169-16).
- 4.3-10 (IEC 60169-54).

in straight and elbow type.

REDUCE INVENTORY & OPEX

- New plating fitting both aluminium and copper cables.

PERFORMANCES

- Excellent VSWR.
- Low PIM ensured.
- Including 5G frequencies.

EASY TO USE

- 2-piece connectors.
- Fast, Easy and Reliable assembly.
- Tools available for the installation.

ENVIRONMENT

- IP 68 waterproofing level (3 meters/3 hours) ensured by O-rings inside the body, and silicon gaskets in the coupling nuts.
- Compliance to REACH and ROHS.

Cable	FLEXIBLE						SUPERFLEXIBLE		
	1/4" F	3/8" F	1/2" F & ALU	7/8" ALU & LA	1-1/4" ALU & LA	1-5/8" ALU & LA	1/4" SF	3/8" SF	1/2" SF
N Female	C0056E	C0062E	C0059E	C0657E	C0057E	C0067E	C0038E	C4271E	C0044E
N Male	C0066E	C6264E	C0375E	C0656E	C0058E	C0068E	C0036E	C2863E	C0042E
N Male Elbow	C0065E	C0063E	C0060E	C1055E	C1056E	C1057E	C0037E	C4272E	C0043E
7/16 DIN Female	C2386E	C0051E	C0001E	C0631E	C0003E	C0004E	C4993E	C4273E	C0032E
7/16 DIN Male	C2385E	C0053E	C0006E	C0632E	C0049E	C0054E	C0806E	C4274E	C0005E
7/16 DIN Male Elbow	C1060E	C0052E	C0050E	C1061E	C1062E	C1063E	C0980E	—	C0031E
4.3-10 Female	—	—	C2355E	C2279E	C2664E	—	—	—	C2418E
4.3-10 Male	C4084E	—	C2354E	C2421E	C2759E	—	C5755E	—	C2276E
4.3-10 Male elbow	—	—	C2419E	C2422E	C4087E	—	C5756E	—	C2420E
Preparation tool	—	—	C1574X	C0351X	C0352X	C0353X	C0233X	C0234X	C1573X

FIND OUR VIDEOS OF INSTALLATION AND IMPLEMENTATION

1/2" SF connectors: <https://youtu.be/MtaSsH2xLmA> - https://youtu.be/l8_e_UH5ZJw

1/2" F connector: https://www.youtube.com/watch?v=l8_e_UH5ZJw

7/8" connectors: <https://youtu.be/ltClSjVQJYk>

1-1/4" connectors: <https://www.youtube.com/watch?v=WEUxhu6ANDI>

1-5/8" connectors: <https://youtu.be/sw0gLzPESfc> - <https://youtu.be/sw0gLzPESfc>

Jumper Cables



HYPERCELL® jumpers provide flexibility to antenna line radiofrequency connectors.



INTERFACES

- N (IEC 60169-16).
- 7/16 DIN (IEC 60169-4).
- 4.3-10 (IEC 60169-54).
- Nex10® (IEC 46F/483/NP).
- MQ4 (IEC 63138-2:2020).
- MQ5 (IEC 63138-3:2020).

FLEXIBILITY

- Low bending moment to avoid any mechanical stress.

JACKET

- Polyethylen (PE).
- Indoor/Outdoor LSOH
Fire-retardant UL available.

PERFORMANCES

- Soldered connectors to ensure Low VSWR and passive intermodulation.
- 100% Factory-controlled.
- Broadband including 5G frequencies.

WATERPROOFNESS

- IP 68 Waterproof.

BENEFITS

- Available in Flexible, Super Flexible & Extra Flexible type.
- Available with factory installed proofing roots.

OUTDOOR
RF ANTENNA LINE

Waterproofing boots

HYPERCELL® Waterproofing boots protect antenna ports and jumper interfaces.



APPLICATION

Protects IP67 connectors and jumpers to antenna interfaces from moisture or water ingress.

BENEFITS

- IP 68 connectors do not need using any waterproofing kit.

WATERPROOFING BOOT

1/2" SF & 1/2F 4.3-10 connector C5866X

To help you installing the boot easily, we propose an installation tool to install on connector interface.

WATERPROOFING BOOT INSTALLATION TOOL

1/2" SF & 1/2F 4.3-10 connector C5877X





Jumper Cables

OUTDOOR RF ANTENNA LINE

FLEXIBLE	1/4" F	PE Jacket	N Male - N Male		
		LSOH Jacket	Please contact our sales office		
	1/2" F	PE Jacket	N Male - N Male	7/16 DIN Female - 7/16 DIN Female	4.3-10 Male - 7/16 DIN Male
				7/16 DIN Male - 7/16 DIN Female	4.3-10 Male - 4.3-10 Male
			7/16 DIN Male - N Female	4.3-10 Male - 7/16 DIN Male elbow	
	LSOH Jacket	N Male - N Male	7/16 DIN Male - 7/16 DIN Male	4.3-10 Male - 4.3-10 Male	
SUPERFLEXIBLE	1/4" SF	PE Jacket	N Male - N Male	7/16 DIN Female - 7/16 DIN Female	4.3-10 Male - Nex10 Female
				7/16 DIN Male - 7/16 DIN Male	
				7/16 DIN Male - 7/16 DIN Male elbow	
				7/16 DIN Male elbow - 7/16 DIN Male elbow	
	3/8" SF	PE Jacket	N Male - N Female	7/16 DIN Male elbow - 7/16 DIN Male elbow	MQ4 Male - 4.3-10 Male
			N Male - N Male elbow		MQ4 Female - Nex10 Male
			N Female - N Male elbow		MQ5 Female - Nex10 Male
					MQ4 Female - 4.3-10 Female
					MQ5 Female - 4.3-10 Female
	1/2" SF	PE Jacket	N Male - N Male	7/16 DIN Male elbow - 7/16 DIN Female	4.3-10 Male - 4.3-10 Male
			N Male - N Male elbow	7/16 DIN Male - 7/16 DIN Female	4.3-10 Male - 4.3-10 Male elbow
			N Male - N Female elbow	7/16 DIN Male - 7/16 DIN Male elbow	Nex10 Male - 4.3-10 Male
				7/16 DIN Male - 7/16 DIN Male	Nex10 Male - Nex10 Male
			7/16 DIN Male - N Male		
			7/16 DIN Male - N Female		
			7/16 DIN Male - N Male elbow		
1/2" SF	PE Jacket	N Male - N Male	7/16 DIN Female - 7/16 DIN Female	4.3-10 Male	
		N Male - N Female	7/16 DIN Female - N Male	4.3-10 Male - 7/16 DIN Male	
		N Male - N Male elbow	7/16 DIN Female - N Female	4.3-10 Male elbow - 4.3-10 Female	
			7/16 DIN Female - N Male elbow	4.3-10 Male - 4.3-10 Female	
			7/16 DIN Male - 7/16 DIN Female		
			7/16 DIN Male - 7/16 DIN Male elbow		
			7/16 DIN Male - 7/16 DIN Male		
			7/16 DIN Male - N Female		
			7/16 DIN Male - N Male		
			7/16 DIN Male - N Male elbow		
	7/16 DIN Male elbow - 7/16 DIN Female				
	7/16 DIN Male elbow - N Male				
1/2" SF	LSOH FR Jacket	N Male - N Male	7/16 DIN Male - 7/16 DIN Male	4.3-10 Male	
		N Male - N Female	7/16 DIN Male - 7/16 DIN Male elbow	4.3-10 Male - 7/16 DIN Male	
		N Male - N Male elbow		4.3-10 Male - 7/16 DIN Male Elbow	
EXTRA FLEXIBLE	1/4" XF	PE Jacket	Please contact our sales office		
		LSOH Jacket	Please contact our sales office		
	3/8" XF	PE Jacket	N Male - N Male		
		LSOH Jacket	N Male - N Male		

Surge arrestors



HYPERCELL® surge arrestors protect equipments to lightning currents.



Quarterwave Type

POWER

- Up to 2500W.

DISCHARGE

- Current discharge up to 100kA.

MAINTENANCE

- Maintenance free.

SURGE ARRESTOR	QUARTERWAVE TYPE
7/16 DIN Female - 7/16 DIN Male, bulkhead	C0600A
7/16 DIN Female - 7/16 DIN Male	C0876A
7/16 DIN Female - 7/16 DIN Female, bulkhead	C0602A
7/16 DIN Female - 7/16 DIN Female	C0877A



Gas tube Type

POWER

- Up to 1000W.

DISCHARGE

- Current discharge up to 20kA.

BANDWIDTH

- Broadband.

SURGE ARRESTOR	GAS TUBE TYPE
7/16 DIN Male - 7/16 DIN Male	C1046A
7/16 DIN Male - 7/16 DIN Female, bulkhead	C0878A
7/16 DIN Female - 7/16 DIN Female, bulkhead	C0879A

OUTDOOR
RF ANTENNA LINE



Grounding Kits

HYPERCELL® grounding kits connect outer conductor to the grounding bar.



OUTDOOR
RF ANTENNA LINE

TYPE

- Framework type for an integrated solution.

COMPATIBILITY

- Fit both copper and aluminum cables.

EASY TO INSTALL

- Easy, fast and reliable installation.

SIZE

- Ground cable available in 0.6m and 1.0m length.

WATERPROOFNESS

- IP68 waterproof thanks to a vulcanizing rubber integrated.
- Corrosion resistant.

GROUNDING KITS

	With 0.6m Grounding Cable	With 1m Grounding Cable	Preparation tool
1/4" XF	C0275F	Y0275X	–
3/8" XF	C0270F	C0270X	–
1/4" F	C0270F	C0270X	–
3/8" F	C1114F	C1114X	–
1/2" F	C0271F	C0271X	C2841X
7/8" LA	C0272F	C0272X	C2840X
1-1/4" LA	C0273F	C0273X	–
1-5/8" LA	C0274F	C0274X	–



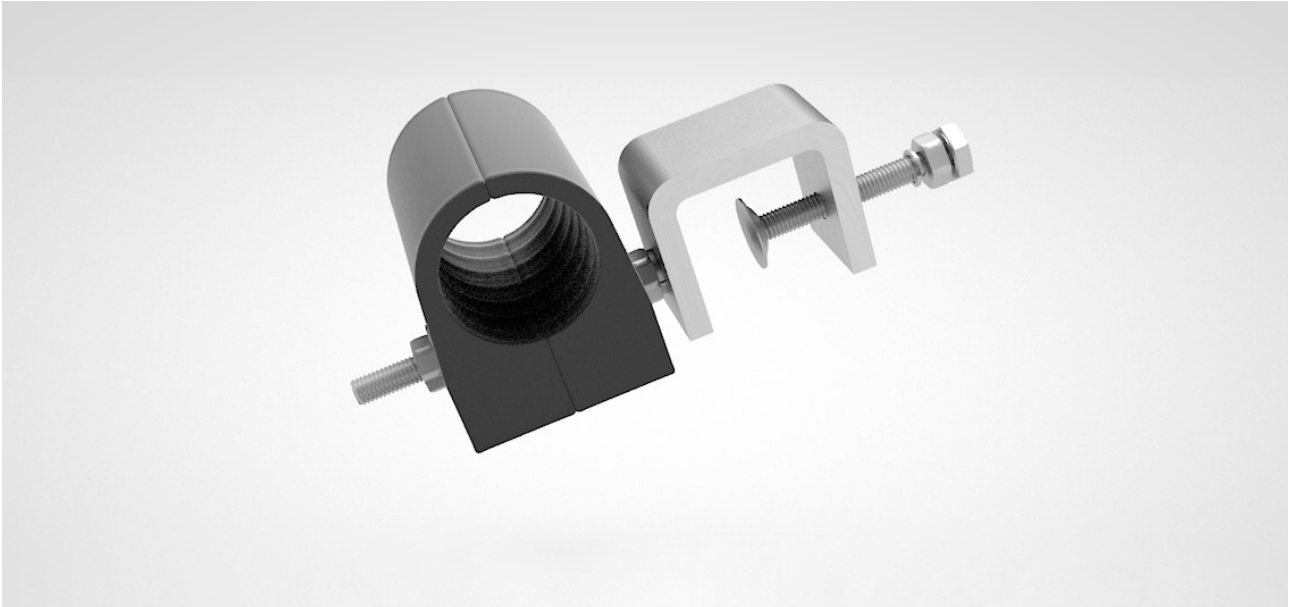
FIND OUR VIDEOS OF INSTALLATION

https://www.youtube.com/watch?v=_yllAbhSHc8&t=6s

Clamps



HYPERCELL® clamps fix antenna line to the site infrastructure.



FUNCTION

Support the cable every meter to avoid any risk of slippage or longitudinal deformation which could be induced by the cable weight, the wind velocity, gusts induced turbulences and the vibrations of the tower.

IN SEVERE CONDITIONS

In some critical areas, ice accumulation will increase the overall loading. In such case, a reduction in the hanger spacing is necessary.

BENEFITS

- *The advised 1.00 meter hanger spacing has been determined for wind velocity of 160km/h and 10mm of radial ice.*
- *If one of these variable is changed, the spacing between hangers must be brought back to 0.60m.*

OUTDOOR
RF ANTENNA LINE

		EXTRA FLEXIBLE		FLEXIBLE					
Cable		1/4"XF	3/8"XF	1/4"F	3/8"F	1/2"F	7/8"LA	1-1/4" LA	1-5/8" LA
Simple Clamp	1 hole	C0999S	C1042S	C1154S	C1044S	C0108S	C0111S	C0114S	C0117S
	2 holes		C1173S	C1155S	C1176S	C0109S	C0112S	C0115S	C0118S
	3 holes		C1174S	C1156S	C1177S	C0110S	C0113S	C0116S	C0119S
	4 holes		C1175S	C1157S	C1178S	C0781S	C0655S	C0782S	C0783S
Double Clamp	2 holes					C1034S	C1035S	C1036S	C1037S
	4 holes					C1150S	C1151S	C1152S	C1153S
	6 holes					C0651S	C0652S	C0653S	C0654S



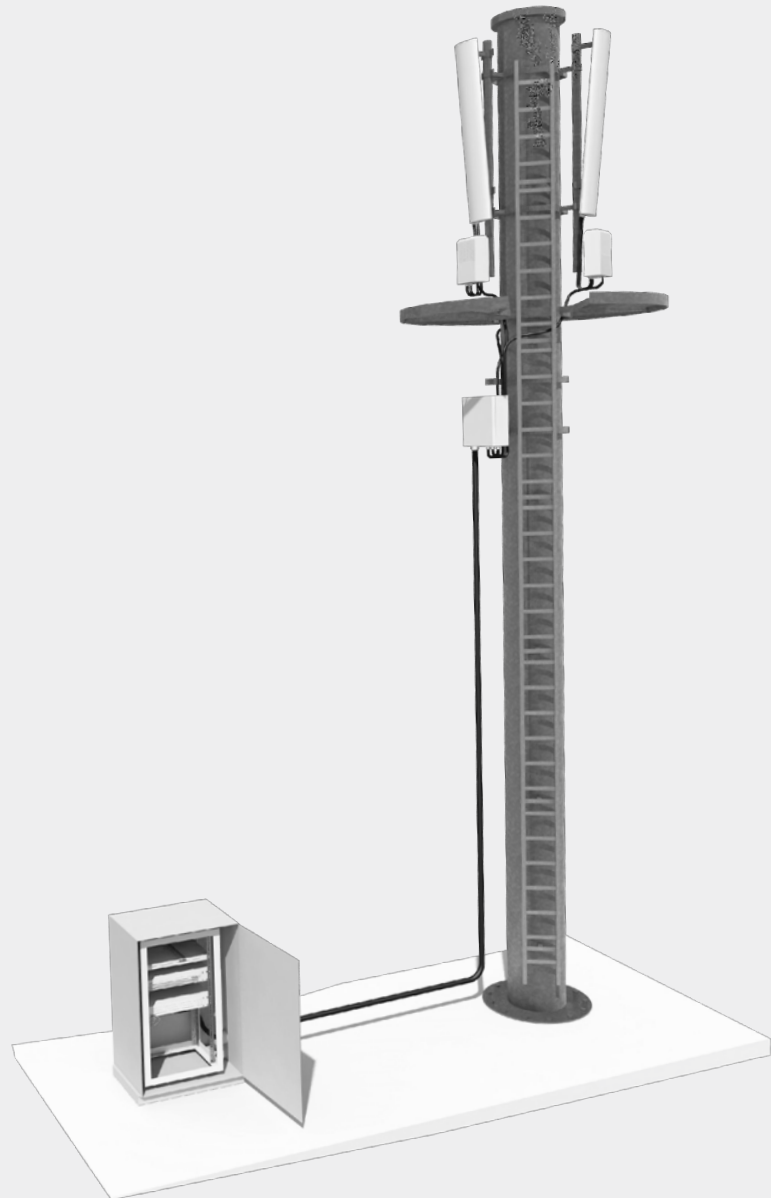
Fiber To The Antenna

ACOME HYPERCELL® FTTA line is covering complete range of optical cabling system to connect RRUs to the BBU including trunk cables, distribution boxes, assemblies, and accessories.

ACOME ADVANTAGES

- Broadband solution including 5G frequencies.
- Low PIM products.

All these components are designed and manufactured to ensure the best performance of the transmission system in the most severe environment.



OUTDOOR FIBER TO THE ANTENNA

Products

<p>TRUNK CABLES</p>	<p>FTTA CORDS</p>	<p>FTTA BOXES</p>	<p>PTTA BOXES</p>
<p>HYBRID CABLES</p>	<p>HYBRID BOXES</p>	<p>FTTA CLAMPS</p>	



FTTA Trunk Cables



HYPERCELL® FTTA trunk cables will transport CPRI signal from site base to the top distribution box.



1. OPTICAL FIBER

- G652D 9/125µm.
- IEC 60793-2-50 compliant.

2. TERMINATION

- Dual LC/UPC on both side.
- IEC 61754-20 compliant.

3. FAN-OUT

Yellow LSOH tube 2,0 mm.

4. OUTER JACKET

The black LSOH jacket is fully waterproof and ultraviolet resistant, allowing long term operation for outdoor applications. It ensures high mechanical and environmental resistance.

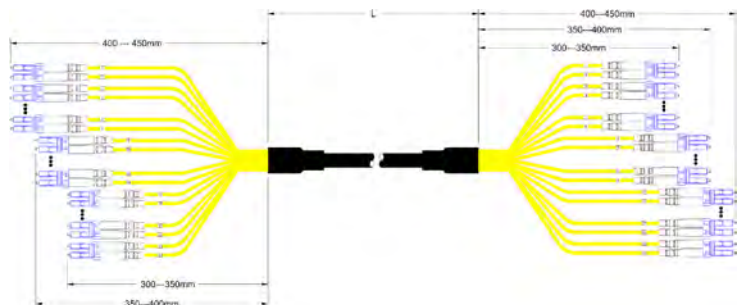
BENEFITS

- Indoor / Outdoor cable jacket.
- Each cable is 100% pre-terminated on both sides.

OUTDOOR
FIBER TO THE ANTENNA

FTTA TRUNK CABLES

Longueur	12 FO G652D	24 FO G652D
10 m	C3471A-L10	C3281A-L10
20 m	C3471A-L20	C3281A-L20
30 m	C3471A-L30	C3281A-L30
40m	C3471A-L40	C3281A-L40
50 m	C3471A-L50	C3281A-L50
60 m	C3471A-L60	C3281A-L60
70 m	C3471A-L70	C3281A-L70
80 m	C3471A-L80	C3281A-L80
90 m	C3471A-L90	C3281A-L90
100 m	C3471A-L100	C3281A-L100
120 m	C3471A-L120	C3281A-L120
150 m	C3471A-L150	C3281A-L150
200 m	C3471A-L200	C3281A-L200





FTTA Cords

HYPERCELL® FTTA cords will transport CPRI signal to the RRUs.



OUTDOOR FIBER TO THE ANTENNA

1. OPTICAL FIBER

- G657A2 9/125µm.
- IEC 60793-2-50 compliant.

2. TERMINATION

- Dual LC/UPC on both side.
- IEC 61754-20 compliant.

3. FAN-OUT

- Yellow LSOH tube 2,0 mm.

4. OUTER JACKET

The black LSOH jacket is fully waterproof and ultraviolet resistant, allowing long term operation for outdoor applications. It ensures high mechanical and environmental resistance. Cable fire resistance is compliant to IEC 60332-3C.

BENEFITS

- Indoor / Outdoor cable jacket.
- Each cable is 100% pre-terminated on both sides.

FTTA CORDS			
Longueur	2FO G657A2 (HUAWEI 5mm)	2FO G657A2 (ERICSSON 4,8mm)	2 FO G657A2 (NOKIA 7mm)
1 m	C3271A-L1	C3276A-L1	C3011A-L1
2 m	C3271A-L2	C3276A-L2	C3011A-L2
3 m	C3271A-L3	C3276A-L3	C3011A-L3
5m	C3271A-L5	C3276A-L5	C3011A-L5
10 m	C3271A-L10	C3276A-L10	C3011A-L10
15 m	C3271A-L15	C3276A-L15	C3011A-L15
20 m	C3271A-L20	C3276A-L20	C3011A-L20
25 m	C3271A-L25	C3276A-L25	C3011A-L25
30 m	C3271A-L30	C3276A-L30	C3011A-L30
35 m	C3271A-L35	C3276A-L35	C3011A-L35
40 m	C3271A-L40	C3276A-L40	C3011A-L40
50 m	C3271A-L50	C3276A-L50	C3011A-L50



Hybrid Trunk Cables



ACOME Hybrid trunk cable is designed for the connection between TJB (top junction box) and BJB (base junction box), or BBU patch panel and PDU (power distribution unit) directly.



OUTDOOR
FIBER TO THE ANTENNA

FEATURES

- Standard size 7/8".
- Corrugated aluminum armor – good mechanical and shielding protection.
- 4 Dual Band RRUs version: 16 optical fibers + 8 power wires.
- RRU power max. 500W

HYBRID TRUNK CABLE LENGTH	PRODUCT NUMBER
20(-0/+0.5)	C1680A-L20
30(-0/+0.5)	C1680A-L30
40(-0/+0.5)	C1683A-L40
50(-0/+0.5)	C1683A-L50
60(-0/+0.5)	C1686A-L60
70(-0/+0.5)	C1686A-L70
80(-0/+0.5)	C1686A-L80
90(-0/+0.5)	C1686A-L90
100(-0/+0.5)	C1686A-L100



ACOME HYPERCELL HYBRID CABLE FAN-OUT EXTENSION

https://www.youtube.com/watch?v=JW1_5KDbt50&t=12s





FTTA / PTTA / HTTA Distribution Boxes

HYPERCELL® FTTA / PTTA / HTTA boxes will distribute CPRI signal and power to active antennas (AAUs) and remotes (RRUs).



OUTDOOR FIBER TO THE ANTENNA

1. FTTA BOXES

FTTA boxes will connect trunk cable optical fibers to BBUs and each RRUs cords.

2. PTTA BOXES

PTTA boxes will connect Power conductors from PTTA cables to distribute the power to each RRUs/ AAUs

3. HTTA BOXES

HTTA boxes will connect Power conductors and fibers to distribute power and CPRI signal to each RRUs/AAUs.

BENEFITS

- > IP 67 water ingress index.
- > Very good mechanical resistance
- > Easy installation & operations

	FTTA BOXES
FTTA Box 12 OF	C3477A
FTTA Box 24 OF	C3533A
PTTA Box 3 RRUs	C3481A
HTTA 2 RRUs	C3769A
HTTA 8 RRUs	C3744A



FTTA Clamps



HYPERCELL® FTTA clamps will attach FTTA & PTTA cables to the site infrastructure.



FUNCTION

Support the cable every meter to avoid any risk of slippage or longitudinal deformation which could be induced by the cable weight, the wind velocity, gusts induced turbulences and the vibrations of the tower.

IN SEVERE CONDITIONS

In some critical areas, ice accumulation will increase the overall loading. In such case, a reduction in the hanger spacing is necessary.

BENEFITS

- We advise 1.00 meter hanger spacing for areas where wind velocity <160km/h and radial ice <10mm. If one of these both characteristics is increased, we advice to reduce hanger spacing to 0.60 meter.

FTTA CLAMPS	
1 x optical cable (4-7 mm) + 1 x optical cable (4-7 mm)	C3764S
1 x optical cable (4-7 mm) + 1 x power cable (9-15 mm)	C3269S
1 x optical cable (4-7 mm) + 1 x power cable (16-22 mm)	C2958S
1 x optical cable (4-7 mm) + 1 x power cable (22-29 mm)	C2959S
2 x optical cable (4-7 mm) + 2 x power cable (6-12 mm)	C3759S
2 x optical cable (4-7 mm) + 2 x power cable (9-15 mm)	C2370S
2 x optical cable (4-7 mm) + 2 x power cable (16-22 mm)	C2960S
2 x optical cable (4-7 mm) + 2 x power cable (22-29 mm)	C2961S
3 x optical cable (4-7 mm) + 3 x power cable (9-15 mm)	C2371S
3 x power cable (9-15 mm) + 2 x power cable (9-15 mm)	C3765S
3 x optical cable (4-7 mm) + 3 x power cable (16-22 mm)	C2962S
3 x optical cable (4-7 mm) + 3 x power cable (22-29 mm)	C2963S
4 x power cable (9-15 mm) + 4 x power cable (6-12 mm)	C3760S
4 x optical cable (4-7 mm) + 4 x power cable (9-15 mm)	C3766S
4 x optical cable (4-7 mm) + 4 x power cable (16-22 mm)	C3767S

OUTDOOR
RF ANTENNA LINE



Microwave Link Cabling Systems

ACOME offers all passive components of IDU (Indoor Unit)-ODU (Outdoor Unit) link for point-to-point communication systems (Microwave, GPS...).

Products

CABLES



GROUNDING KITS



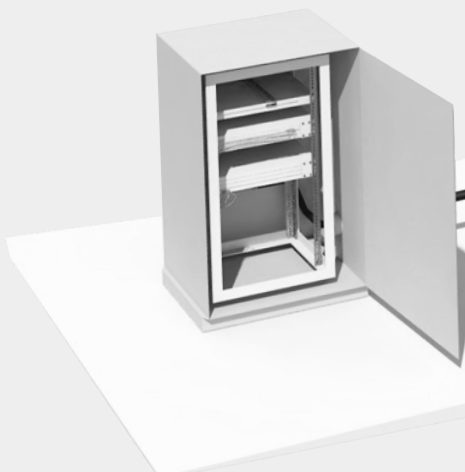
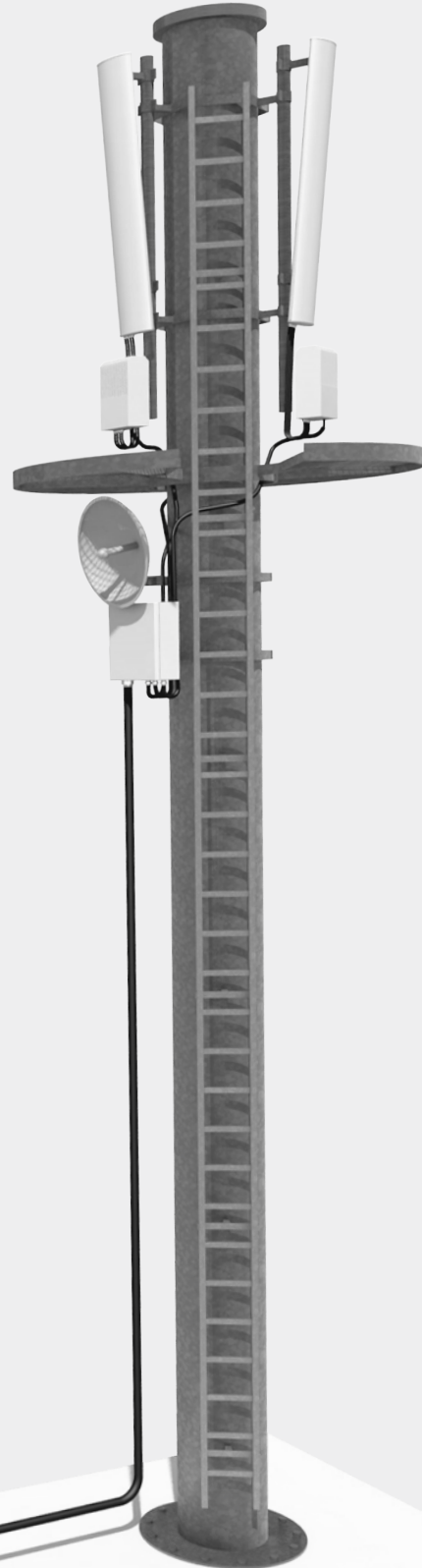
CONNECTORS



CLAMPS



SURGE ARRESTORS

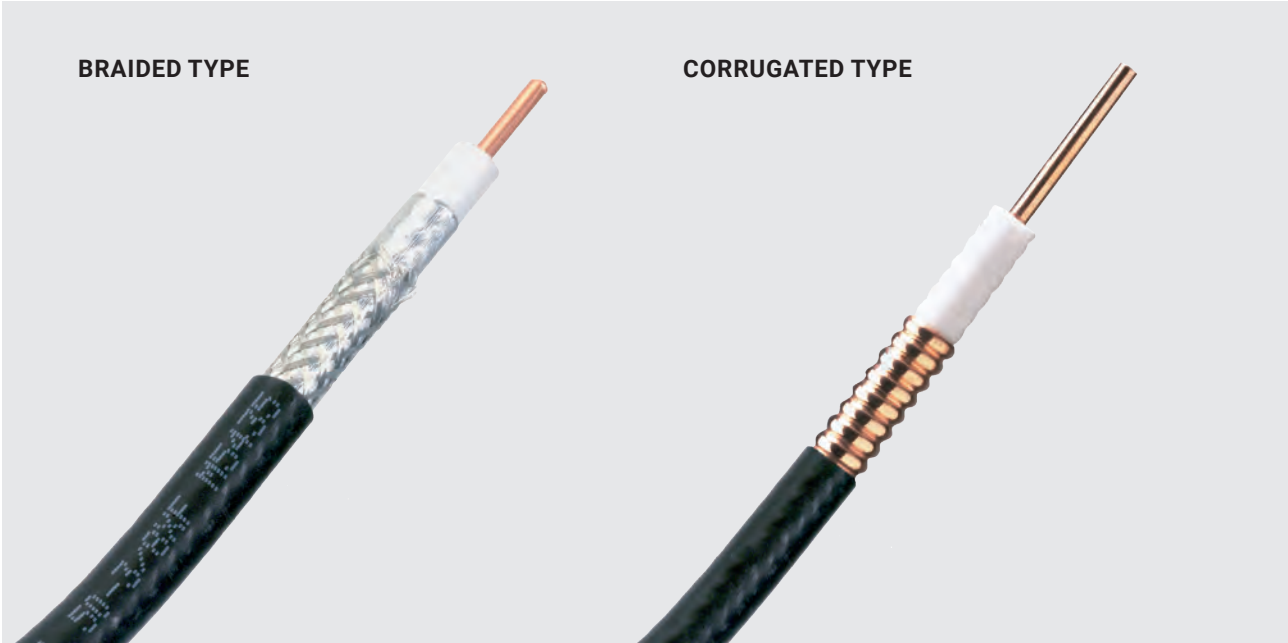


OUTDOOR
MICROWAVE LINK CABLING SYSTEMS

Cables



HYPERCELL® microwave cables connect IDU (Indoor Unit)-ODU (Outdoor Unit).



SIZE

- 1/4", 3/8" and 1/2" all available.

TYPE

- Extra Flexible: Braided type (screening effectiveness >88dB).
- Flexible: Corrugated type (screening effectiveness >120 dB).

JACKET

- PE.
- Indoor/Outdoor LSOH Fire retardant Jacket.

FLEXIBLE					
1/4" F		3/8" F		1/2" F	
PE Jacket	LSOH FR Retardant	PE Jacket	LSOH FR Retardant	PE Jacket	LSOH FR Retardant
M2930Z	M2932Z	M6041Z	M6047Z	M1473Z	M2831Z

EXTRA FLEXIBLE		
1/4" XF	3/8" XF	
LSOH FR Retardant	PE Jacket	LSOH FR Retardant
M5361Z	M5437T	M5435T

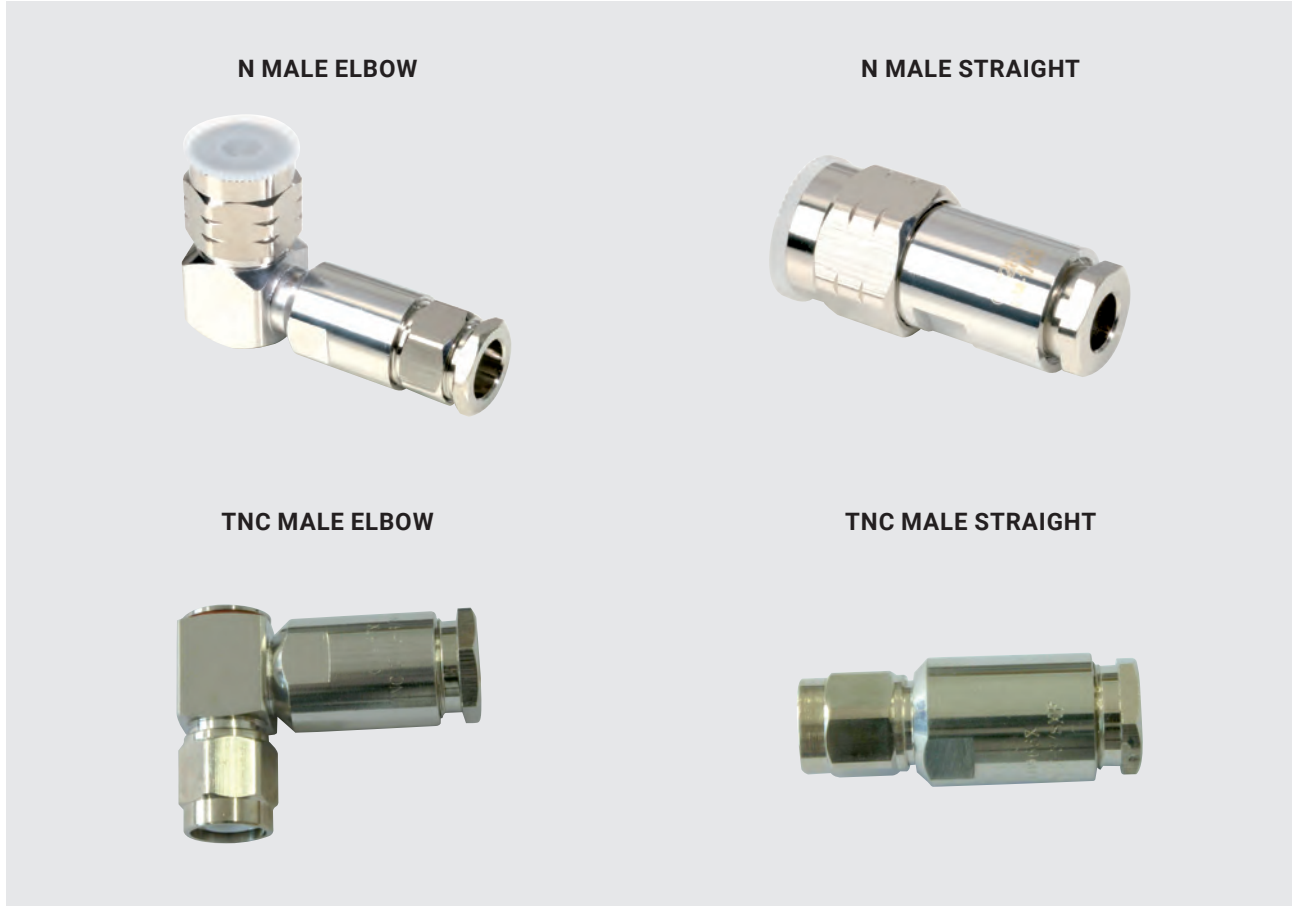
OUTDOOR
MICROWAVE LINK CABLING SYSTEMS



Connectors

HYPERCELL® microwave connectors connect microwave cable to the IDU (Indoor Unit)-ODU (Outdoor Unit).

OUTDOOR MICROWAVE LINK CABLING SYSTEMS



INTERFACES

- N (IEC 60169-16).
- TNC (IEC 60169-17).

TYPE

- Straight and Elbow type available.

WATERPROOFNESS

- IP68.

	EXTRA FLEXIBLE		FLEXIBLE		
	1/4" XF	3/8" XF	1/4" F	3/8" F	1/2" F
N Female	C1048E	C0327E	C0056E	C0062E	C0059E
N Male	C0288E	C0045E	C0066E	C0064E	C0375E
N Male elbow	C0324E	C0326E	C0065E	C0063E	C0060E
TNC Male	C0976E	C1172E	C1049E	C1050E	C1051E
TNC Male elbow	C0977E	C0967E	C1052E	C1053E	C1054E

Surge Arrestors



HYPERCELL® surge arrestors protect IDU (Indoor Unit)-ODU (Outdoor Unit) link and equipment to lightning current.

GAS TUBE TYPE



OUTDOOR
MICROWAVE LINK CABLING SYSTEMS

TYPE

- N Type.
- Bulkhead.

PERFORMANCES

- Power up to 1000W.
- Current discharge up to 20kA.
- Low VSWR and insertion loss.
- Bi-directional.

OPERATING FREQUENCIES

- Broadband including DC.

SURGE ARRESTOR	GAS TUBE TYPE
N Female/N Female, bulkhead	C0604A
N Male/N Female, bulkhead	C0603A



Grounding Kits

HYPERCELL® Grounding kits connect IDU (Indoor Unit)-ODU (Outdoor Unit) link outer conductor to the grounding bar.



OUTDOOR MICROWAVE LINK CABLING SYSTEMS

TYPE

- Framework type for an integrated solution.

COMPATIBILITY

- Fit both aluminum and copper material.

EASY TO INSTALL

- Easy, fast and reliable installation.

SIZE

- Ground cable available in 0.6m and 1.0m length.

WATERPROOFNESS

- IP 68 waterproof thanks to a vulcanizing rubber integrated.
- Corrosion resistant.

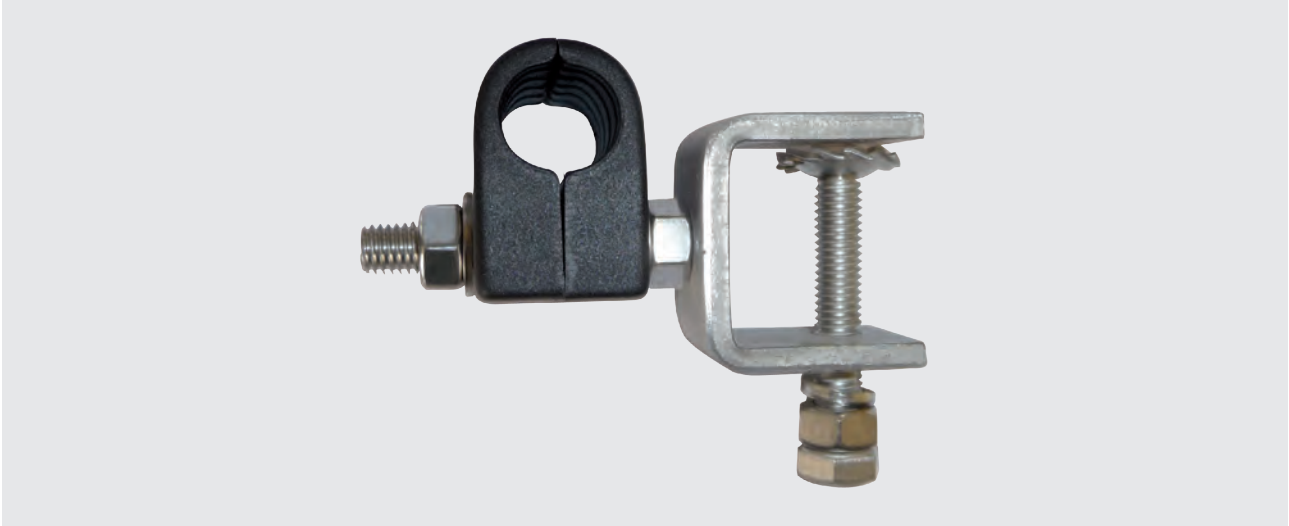
GROUNDING KITS

	With 0.6m Grounding Cable	With 1m Grounding Cable
1/4" XF	C0275F	Y0275X
3/8" XF	C0270F	C0270X
1/4" F	C0270F	C0270X
3/8" F	C1114F	C1114X
1/2" F	C0271F	C0271X

Clamps



HYPERCELL® clamps fix IDU (Indoor Unit)-ODU (Outdoor Unit) units link to the infrastructure.



FUNCTION

Support the cable every meter to avoid any risk of slippage or longitudinal deformation which could be induced by the cable weight, the wind velocity, gusts induced turbulences and the vibrations of the tower.

IN SEVERE CONDITIONS

In some critical areas, ice accumulation will increase the overall loading. In such case, a reduction in the hanger spacing is necessary.

BENEFITS

- *We advise 1.00 meter hanger spacing for areas where wind velocity <160km/h and radial ice <10mm. If one of these both characteristics is increased, we advise to reduce hanger spacing to 0.60 meter.*

	EXTRA FLEXIBLE		FLEXIBLE		
Cable	1/4" XF	3/8" XF	1/4" F	3/8" F	1/2" F
1 hole	C0999S	C1042S	C1154S	C1044S	C0108S

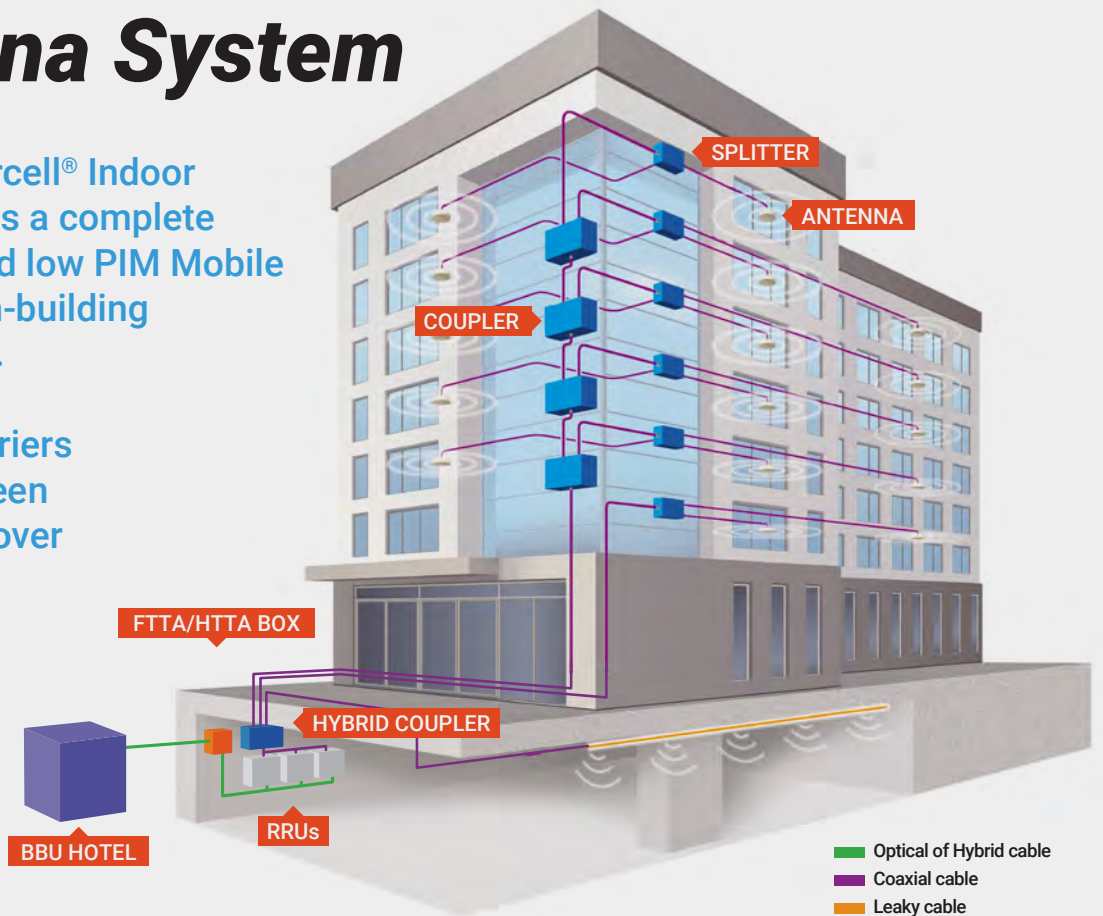
OUTDOOR
MICROWAVE LINK CABLING SYSTEMS



Indoor Distributed Antenna System

ACOME Hypercell® Indoor DAS solution is a complete broadband and low PIM Mobile Network for in-building environments.

This multi-carriers system has been designed to cover all wireless applications in the building including 5G.



- Optical of Hybrid cable
- Coaxial cable
- Leaky cable

INDOOR DISTRIBUTED ANTENNA SYSTEM

Products

FTTA TRUNK CABLES 	HYBRID CABLES 	FTTA/HTTA BOXES 	
LSOH FEEDER CABLES 	LEAKY CABLES 	CONNECTORS 	JUMPERS
ANTENNAS 	CHAMBER COUPLERS 	POWER SPLITTERS 	HYBRID COUPLERS
COMBINERS 	ATTENUATORS 	TERMINAL LOADS 	

FTTA Trunk Cables



HYPERCELL® FTTA trunk cables will transport CPRI signal from BBUs hotel or edge datacenter to remoted radio units & active antennas.



1. OPTICAL FIBER

- G657A2 9/125µm.
- IEC 60793-2-50 compliant.
- Compact tube optical module, easy to strip on few meters for splices management.

2. OUTER JACKET

The ivory LSOH jacket is fully waterproof and ultraviolet resistant. It ensures high mechanical and environmental resistance.

BENEFITS

- *Indoor cable jacket.*
- *Compact design with small bending radius for easy installation*
- *Cca-s1a,d1,s1 Euroclass according to the Construction Product Regulation (EN50575)*

FTTA TRUNK CABLES	
6 FO G657A2	H0098A
12 FO G657A2	N9448A
24 FO G657A2	N9443A
36 FO G657A2	H0192B

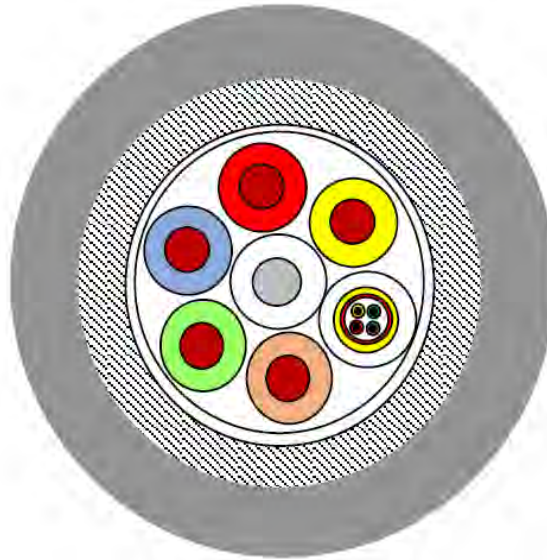
INDOOR
DISTRIBUTED ANTENNA SYSTEM





Hybrid Trunk Cables

HYPERCELL® hybrid trunk cables will transport CPRI signal and power from BBUs hotel or edge datacenter to remoted radio units & active antennas.



INDOOR DISTRIBUTED ANTENNA SYSTEM

1. OPTICAL FIBER

- G657A2 9/125µm.
- IEC 60793-2-50 compliant.
- Loose buffer 1000µm easy to strip on few meters for splices management if necessary.

2. ELECTRICAL CONDUCTORS

- IEC 60228 Class 1 compliant.

3. OUTER JACKET

The black LSOH jacket is fully waterproof and ultraviolet resistant, allowing long term operation for outdoor applications. It ensures high mechanical and environmental resistance.

BENEFITS

- *Indoor cable jacket.*
- *One cable only to supply CPRI signal and Power to active radio equipment.*

HYBRID TRUNK CABLES	
2 FO G657A2 + 2 x 1,5mm ²	M7011A
2 FO G657A2 + 2 x 2,5mm ²	M7012A
4 FO G657A2 + 3 x 2,5mm ²	M7021A
4 FO G657A2 + 5 x 2,5mm ²	M7022A



FTTA / PTTA / HTTA Distribution Boxes



HYPERCELL® FTTA / PTTA / HTTA boxes will distribute CPRI signal and power to active antennas (AAUs) and remotes (RRUs).



1. FTTA BOXES

FTTA boxes will connect trunk cable optical fibers to BBUs and each RRUs cords.

2. PTTA BOXES

PTTA boxes will connect Power conductors from PTTA cables to distribute the power to each RRUs/ AAUs

3. HTTA BOXES

HTTA boxes will connect Power conductors and fibers to distribute power and CPRI signal to each RRUs/AAUs.

BENEFITS

- > *IP 67 water ingress index.*
- > *Very good mechanical resistance*
- > *Easy installation & operations*

	FTTA BOXES
FTTA Box 12 OF	C3477A
FTTA Box 24 OF	C3533A
PTTA Box 3 RRUs	C3481A
HTTA 2 RRUs	C3769A
HTTA 8 RRUs	C3744A

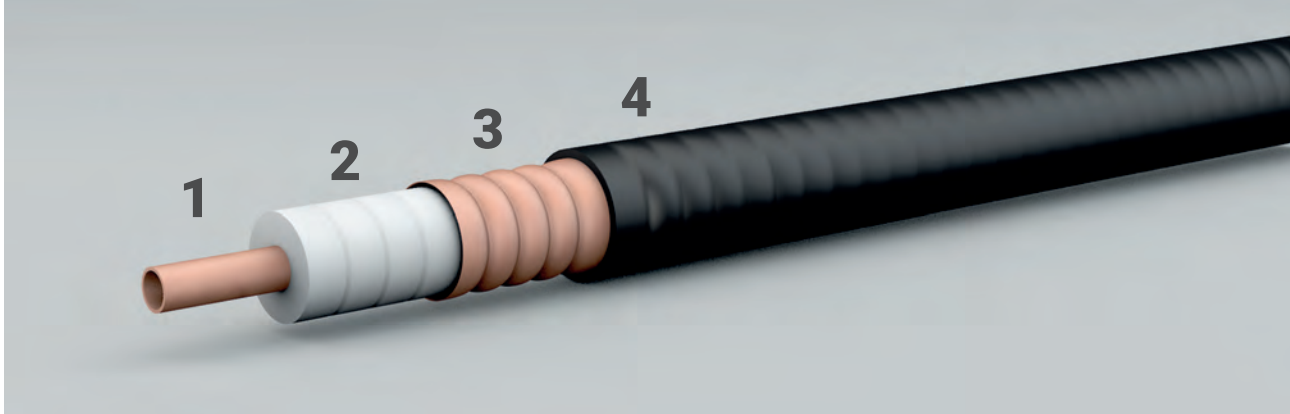
INDOOR DISTRIBUTED ANTENNA SYSTEM





LSOH Feeder Cables

HYPERCELL® low loss feeder cables for radiofrequency signal transmission in the Distributed Antenna System (DAS) network.



INDOOR DISTRIBUTED ANTENNA SYSTEM

1. INNER CONDUCTOR

Copper-clad Aluminium wire, Smooth or Corrugated Copper tube.

2. DIELECTRIC

Low-loss dielectric made of foamed Polyethylene with homogeneous and closed cells.

3. OUTER CONDUCTOR

Corrugated outer conductor allows continuous EMI/RFI shielding while offering great mechanical strength and adequate flexibility for an easy installation.

4. OUTER JACKET: 2 TYPES

- **Fire-retardant Low Smoke and "0" Halogen**

HYPERCELL® Fire-retardant LSOH cables have been designed to fully match to IEC (International

Electrotechnical Commission) standards.

This Indoor / Outdoor Jacket perfectly matches all "In-Buildings" and "Inter-Buildings applications".

This range of cables meets the requirements of the Construction Product Regulation (CPR) Euroclass Dca-s2,d2,a2.

- **MFR LSOH :**

This Indoor / Outdoor Jacket perfectly matches all "In-Buildings" and "Inter-Buildings applications".

This range of cables meets the requirements of the Cca-s1a,d1,a1 Euroclass according to the Construction Product Regulation (EN50575).

- **HFR LSOH :**

For specific environments such as Public Welcoming Facilities and tunnels applications (road, rail, metro...), ACOME offers a range of

cables complying to NFC 32070.2.2 (C1) and RATP K26 (Parisian Metro) specifications.

UL 1666 Listed cables are also available.

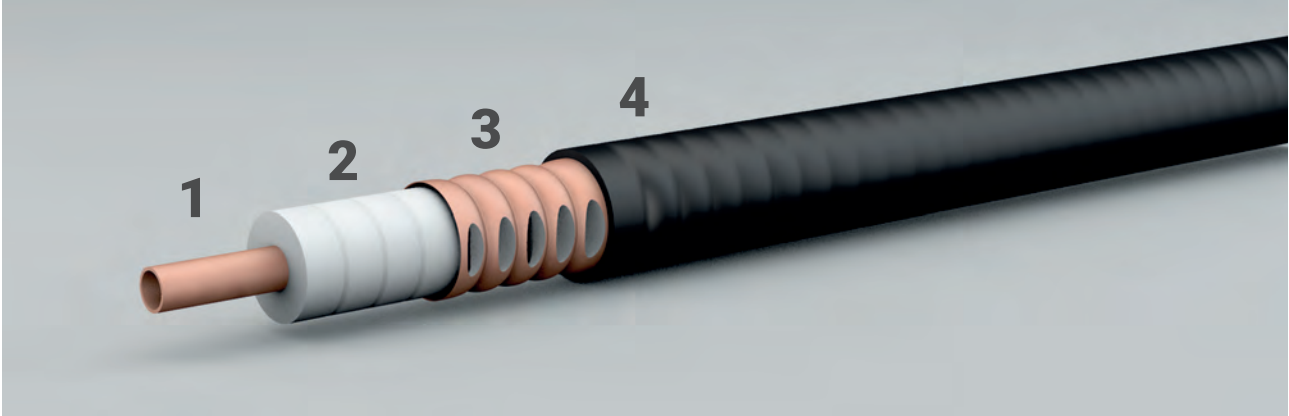
This range of cables meets the requirements of the B2ca Euroclass according to the Construction Product Regulation (EN50575).

	FLEXIBLE						SUPER FLEXIBLE			EXTRA FLEXIBLE	
	1/4" F	3/8" F	1/2" F	7/8" LA	1-1/4" LA	1-5/8" LA	1/4" SF	3/8" SF	1/2" SF	1/4" XF	3/8" XF
LSOH Jacket Dca-s2,d2,a2	M2932Z	M2936Z	M2831Z	M5422Z	M2938Z	M2940Z	M2931Z	M5554Z	M2830Z	M5361Z	M5435Z
MFR Jacket Cca-s1a,d1,a1			M5884Z	M5885Z	M5886Z						
HFR Jacket B2ca-s1a,d1,a1			M5322Z	M5434Z	M5358Z		M5302Z	M5540Z	M5308Z	M5332Z	M5333Z

Leaky Cables



HYPERCELL® Leaky cables transport, transmit and receive Radiofrequency signals.



SIZE

- Whole range available: from 1/2" to 1-5/8.

MODE

- Coupled mode type.

JACKET

LSOH Fire-retardant:

- **B2ca classified** according to Construction Product Regulation (EN50575).
- IEC 60332.1 Tests on a single vertical cable under fire conditions.
- IEC 60332.3C Tests on bunched vertical cables under fire conditions.
- IEC 60754-2 : Acidity index of gases.
- IEC 61034 : Smoke generation of solid material.

BENEFITS

- *To optimize transmission performances, we advise to use specific clamps*



INDOOR
DISTRIBUTED ANTENNA SYSTEM

LSOH JACKET LEAKY CABLES

1/2" RM	7/8" RM	1-1/4" RM	1-5/8" RM
M5398	M5510	M5400	M5404

CLAMPS FOR LEAKY CABLES

1/2" RM	7/8 RM	1-1/4RM	1-5/8 RM
C0771X	C0772X	C0773X	C0774X

METALLIC CLAMPS FOR LEAKY CABLES

1/2" RM	7/8RM	1-1/4RM	1-5/8RM
C4384S	C4385S	C4386S	C4387S



Connectors

HYPERCELL® connectors connect Radiofrequency cables to jumpers and equipments.



INDOOR DISTRIBUTED ANTENNA SYSTEM

INTERFACES

- Available in straight and elbow type N (IEC 60169-16).

PERFORMANCES

- Excellent VSWR.
- Low PIM ensured.
- Including 3.5GHz 5G frequencies.

EASY TO USE

- 2-piece connectors.
- Fast, Easy and Reliable assembly.
- Tools available for the installation.

ENVIRONMENT

Compliance to REACH and ROHS European standards.

BENEFITS

- *Use our preparation tool for an easier, faster and safer installation of connectors.*



	FLEXIBLE						SUPER FLEXIBLE			EXTRA FLEXIBLE		RM				
	1/4" F	3/8" F	1/2" F	7/8" LA	1-1/4" LA	1-5/8" LA	1/4" SF	3/8" SF	1/2" SF	1/4" XF	3/8" XF	1/2" RM	7/8" RM	1-1/4" RM	1-5/8" RM	
N Female	C0056E	C0062E	C0059E	C0657E	C0057E	C0067E	C0038E	C4271E	C0044E	C1048E	C0327E	C0059E	C0657E	C0057E	C0067E	
N Male	C0066E	C6264E	C0375E	C0656E	C0058E	C0068E	C0036E	C2863E	C0042E	C0288E	C0045E	C0375E	C0656E	C0058E	C0068E	
N Male elbow	C0065E	C0063E	C0060E	C1055E	C1056E	C1057E	C0037E	C4272E	C0043E	C0324E	C0326E	C0060E	C1055E	C1056E	C1057E	
4.3-10 Male	C4084E	—	C2354E	C2421E	C2759E	—	C5755E	—	C2276E	—	—	C2354E	C2421E	C2759E	—	
4.3-10 Female	—	—	C2355E	C2279E	C2664E	—	—	—	C2418E	—	—	C2355E	C2279E	C2664E	—	
4.3-10 Male Elbow	—	—	C2419E	C2422E	C4087E	—	C5756E	—	C2420E	—	—	C2419E	C2422E	C4087E	—	
Preparation Tool	—	—	C1574X	C0351X	C0352X	C0353X	C0233X	C0234X	C1573X	—	—	C1574X	C0351X	C0352X	C0353X	
ADAPTORS																
	N Male N Male		N Female N Female			N Male elbow N Female			4.3-10 Female N Female		4.3-10 Female N Male					
	C0095E		C0094E			C0097E			C2946E		C2945E					
	N Male Elbow N Male		4.3-10 Female 4.3-10 Female			4.3-10 Male 4.3-10 Male			4.3-10 Male N Female		4.3-10 Male 4.3-10 Female elbow					
	C4830E		C2947E			C4946E			C5902E		C5990E					



FIND OUR VIDEOS OF INSTALLATION AND IMPLEMENTATION

1/2 SF connectors: <https://youtu.be/MtaSsH2xLmA> - https://youtu.be/l8_e_UH5ZJw

1/2" F connector: https://www.youtube.com/watch?v=l8_e_UH5ZJw

7/8' connectors: <https://youtu.be/ltCljsjVQJYk>

1-1/4' connectors: <https://www.youtube.com/watch?v=WEUxhu6ANDI>

1-5/8' connectors: <https://youtu.be/sw0gLzpEsFc> - <https://youtu.be/sw0gLzpEsFc>

Jumpers



HYPERCELL® jumpers provide flexibility to Distributed Antenna System (DAS) Radiofrequency connections.



INTERFACES

- N and 4.3-10 interfaces, in straight and elbow type available.

FLEXIBILITY

- Low bending moment to avoid any mechanical stress.

JACKET

- Indoor/ Outdoor LSOH Fire-retardant.
- Underwriters Laboratories 1666 / CATVR available.

PERFORMANCES

- Soldered connectors to ensure Low VSWR and passive intermodulation.
- 100 % Factory-controlled.

BENEFITS

- Available in Flexible & Super Flexible type.

INDOOR
DISTRIBUTED ANTENNA SYSTEM

JUMPERS				
1/4" SF	1/4" F	3/8" SF	1/2" SF	1/2" F
LSOH FR Jacket	LSOH FR Jacket	LSOH FR Jacket	LSOH FR Jacket	LSOH FR Jacket
N Female – N Male Elbow	N Male – N Male	N Male – N Male	N Male – N Male	N Male – N Male
N Male – N Female	4.3-10 Male – 4.3-10 Male		N Male – N Female	4.3-10 Male – 4.3-10 Male
N Male – N Male elbow			N Male – N Male elbow	
			4.3-10 Male – 4.3-10 Male	



Antennas

HYPERCELL® Indoor antennas transmit and receive Radiofrequency signals in the building.



INDOOR DISTRIBUTED ANTENNA SYSTEM

ACOME indoor antennas are designed to support broadband wireless services in the building. Antennas are built from lightweight material suitable for ceiling mounting.

TYPES

- Omni-directional Antenna.
- Omni-directional Antenna MIMO.
- Panel direction Antenna.
- Panel direction Antenna MIMO.
- Bi-directional Antenna.

INTERFACES

- 1 x N Female.
- 2 x N Female (MIMO).
- 1 x 4.3-10 Female.
- 2 x 4.3-10 Female (MIMO).

CHARACTERISTICS

- Wide frequency band: 698MHz~4000MHz.
- Low insertion loss and return loss.
- Low intermodulation: $\leq -153\text{dBc}@2\times 33\text{dBm}$.
- High Gain.

ANTENNAS					
	Omni directional antenna 5150	Panel directional antenna 5150	Omni directional antenna-MIMO	Panel directional antenna-MIMO	Bi-directional antenna
N female	C4022E	C4045E	C4270E	C4046E	C5878E
4.3-10 Female	C5800E	C5801E	C5850E	C5881E	C6007E

Chamber Couplers



HYPERCELL® Chamber couplers are designed to divide one input signal into two unequal output signals.



FEATURES

- Wide frequency band: 698~3800MHz.
- Low intermodulation.
- High power.
- Low insertion loss.
- Easy installation.

INDOOR
DISTRIBUTED ANTENNA SYSTEM

		CHAMBER COUPLERS								
		5dB	6dB	7dB	8dB	10dB	13dB	15dB	20dB	30dB
N Female		C5884E	C1849E	C2215E	C1850E	C1851E	C2267E	C1852E	C1853E	C2241E
4.3-10 Female		C5886E	C2462E	C4309E	C2464E	C2465E	C2466E	C2467E	C2468E	C4564E



Chamber Power Splitters

HYPERCELL® Power splitters are designed to divide input signal into several equal output signals.



INDOOR DISTRIBUTED ANTENNA SYSTEM

TYPES

- 2 ways, 3 ways, 4 ways.

INTERFACES

- N Female.
- 4.3-10 Female.

CHARACTERISTICS

- Wide frequency band: 698MHz~3800MHz.
- Low insertion loss and return loss.
- Low intermodulation.
- Indoor.

CHAMBER POWER SPLITTERS			
	2-ways	3-ways	4-ways
N Female	C1854E	C1855E	C1856E
4.3-10 Female	C2661E	C2662E	C2663E

Hybrid couplers



HYPERCELL® Hybrid couplers equally combine wireless signals and transfer the combined signal to output ports.



TYPES

- 2 in 2 out, 4 in 4 out.

INTERFACES

- N Female.
- 4.3-10 Female.

CHARACTERISTICS

- Wide frequency band: 698MHz~3800MHz.
- Low insertion loss and return loss.
- Low intermodulation.
- Indoor.

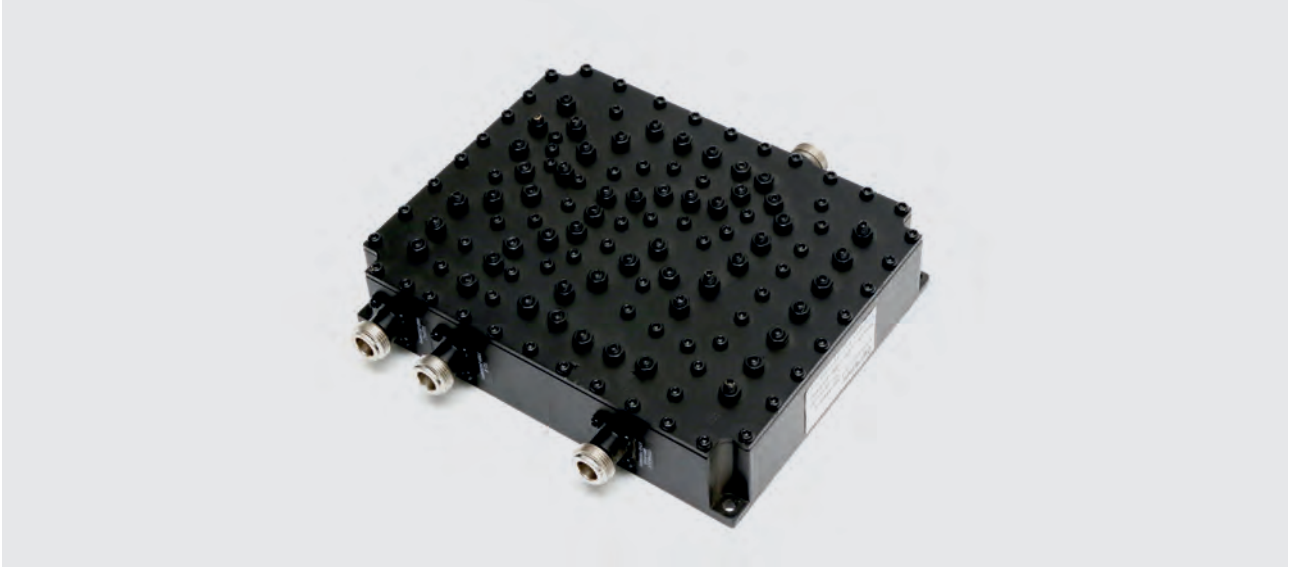
INDOOR
DISTRIBUTED ANTENNA SYSTEM

HYBRID COUPLERS		
	2 in/2 out ports	4 in/4 out ports
N Female	C1857E	C2252E
4.3-10 Female	C2474E	C2475E



Combiners

ACOME Combiners mix signals of different frequency range to the indoor DAS system.



INDOOR DISTRIBUTED ANTENNA SYSTEM

INTERFACES

- N Female.
- 4.3-10 Female.

CHARACTERISTICS

- High Power.
- Low insertion loss.
- Low PIM (-155 dBc@2x43dBm).
- Easy installation.

COMBINERS			
	Dual Band 790-960 MHz 1710-2700 MHz	Triple Band 790-960 MHz 1710-1880 MHz 1920-2170 MHz	Quadruple band 690-960 MHz 1710-1880 MHz 1920-2170 MHz 2300-2770 MHz
N Female	C2650X	C2399X	C2789X
4.3-10 Female	C4571X	C6202X	C4468X

Attenuators



ACOME Attenuators reduce the power of a signal at defined value without distorting its waveform.



INTERFACES

- 4.3-10 Male – 4.3-10 Female.

CHARACTERISTICS

- Wide frequency band: DC~3000MHz.
- Low return loss .
- Low PIM (-155dBc).

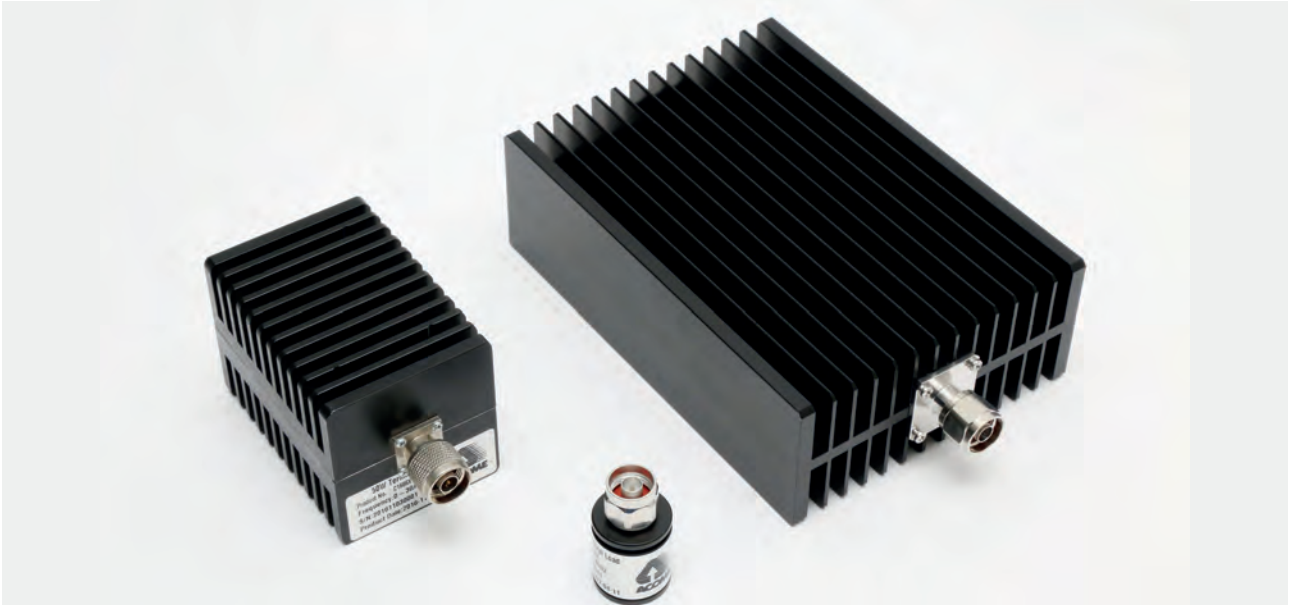
ATTENUATORS						
	3dB	6dB	10dB	15dB	20dB	30dB
5W	C6095E-A3	C6095E-A6	C6095E-A10	C6095E-A15	C6095E-A20	C6095E-A30
10W	C6096E-A3	C6096E-A6	C6096E-A10	C6096E-A15	C6096E-A20	C6096E-A30
20W	C6097E-A3	C6097E-A6	C6097E-A10	C6097E-A15	C6097E-A20	C6097E-A30
25W	C6098E-A3	C6098E-A6	C6098E-A10	C6098E-A15	C6098E-A20	C6098E-A30
50W	C6099E-A3	C6099E-A6	C6099E-A10	C6099E-A15	C6099E-A20	C6099E-A30
100W	C6200E-A3	C6200E-A6	C6200E-A10	C6200E-A15	C6200E-A20	C6200E-A30
200W	C6201E-A3	C6201E-A6	C6201E-A10	C6201E-A15	C6201E-A20	C6201E-A30

INDOOR
DISTRIBUTED ANTENNA SYSTEM



Terminal loads

HYPERCELL® terminal loads are commonly used as dummy loads of antennas and transmitters. They are also used as match ports in many multiport microwave devices such as circulators and directional couplers.



INDOOR DISTRIBUTED ANTENNA SYSTEM

TYPE

- N Male interface.
- N Female.
- 4.3-10 Male.
- 4.3-10 Female.

WIDE FREQUENCY RANGE

- 380-3 800MHz.

PERFORMANCES

- Low Return Loss.
- Low intermodulation.
- N: ≤ -153 dBc (PIM3@2x43dBm)
- 4.3-10: ≤ -160 bDc (PIM3@2x43dBm).

TERMINAL LOADS

	2W	5W	10W	20W	25W	30W	50W	80W	100W	200W
N Male	C2317E	C1684E	C2324E	C2328E	C2679E	C2283E	C1686E	C2703E	C2683E	C2687E
N Female	C2318E	C2321E	C2325E	C2329E	C2680E	C2332E	C2334E	C2704E	C2684E	C2688E
4.3-10 male	C5991E	C5993E	C4017E	C5994E	C5997E	C5995E	C5996E	C5998E	C5999E	C6000E
4.3-10 Female	C2478E	C5893E	C4698E	C4558E	C4314E	C2487E	C4559E	C6003E	C2490E	C5901E

Contacts

ACOME Group

52, rue du Montparnasse
75014 Paris – France

Sales

T. +33(0)643050689
jbf@acome.fr

Marketing

T. +33(0)0688753694
lyb@acome.fr

ACOME XINTAI CABLES Co. Ltd

Room 906, Baohua Building,
No 1211 Changde Road
Shanghai, 200060
P.R. China
Tel : +86 21 3221 2916-11
acome@acome.cn





52 rue du Montparnasse
75014 Paris - France
T. +33 1 42 79 14 00

www.acome.com