

# Products and Solutions for Access and FTTx

LIACC Fiber Optic Access Solutions
LIN25 Fiber Optic Cabling Solutions

# 20 years of experience

APS designs, manufactures and supplies standard and special cables and cabling solutions.

With over 20 years of experience in the cable production and commerce, with the right expertise on standard and tailor made cables, APS operates on the most demanding sectors worldwide.

Along the years APS has answered successfully to the calls for a dynamic, technologically advanced company capable of developing, manufacturing and guaranteeing the quality of wires and cables and cabling solutions for the most diverse applications.

Nowadays APS delivers its cables and solutions to PTT and carriers, system engineering companies, diverse industries, distributors and wholesalers. OEM and harness manufacturers.

APS offers mainly cover the following applications:

- Telecommunication and data transmissions
- Data center solutions
- Fiber Optic systems
- · Railways rolling stock and signalling
- Shipboard
- On- & Offhore
- Instrumentation and measurement
- Control and signalling
- Sensoring and detection
- Low Voltage power transmission
- Audio and Video
- Automotive
- Fire Resistant
- Home and Industrial electrical appliances
- Automotive
- Industrial Automation & Robotics
- Defense
- Green Energy (Wind and Solar)

Contact us for your standard and special requirements. We will have the right cable solution to your needs.





#### We aim at...

...exceeding our costumers' expectations contributing to improve their efficiency by means of an excellent service and advanced technical solutions.

...consolidating our reputation of trustable and reliable partner for the design, development, production and supply of cables and cables solutions.

...constantly achieving newer goals as cable partner, as motivating and pleasant working environment, as profitable business organization.

# **Our history**

2005 establishment of AP Solutions Oy, Finland

2008 establishment or stocks and resale activities in North Europe, first DNV approvals

2009 new main warehouse in Helsinki

2011 establishing of telecom production unity in Estonia, APS trade mark registered

2012 new EPR and CRM, new website

2013 new DNV and 3P approvals

2014 establishment of AP MOG Solutions Pte Ltd, Singapore

2015 new DNV and ABS approvals

2015 establishment of AP MOG Engineering Pte Ltd, Singapore

2017 establishment of AP Solutions Kenya Pte Ltd

# Happy to share our success

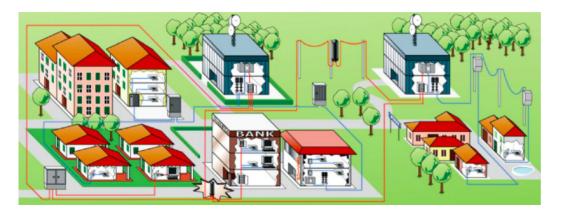
Firmly believing in the importance of education we regularly supports worldwide the schooling programs of Plan.







# Solutions for all applications



#### **Telecommunication Networks**

Copper and optical fiber products and solutions for transport and access networks, air-blown installation, subscriber distribution, telephone exchanges, cross connection, DDFs, ODFs.

#### **Structured Cabling Systems**

Integrated solutions for LAN, WAN and MAN as copper (Cat.5e, 6, 6, 7 and 7<sub>A</sub>) and optical fibre, with 25 years system warranty.

#### **Copper and Optical Fibre Cables**

Twisted Pair, Quad, Coaxial and Optical Fibre Cables for Telecommunication and Data, according to National and International Standards or to the customer's specifications.

### **OEM Manufacturing**

According to customers's specifications racks, pre-connectorized copper, fiber and hybrid cables, pre-loaded panels.

## Specialists of telecom & data networks

#### **Business and Private Networks**

Structured cabling systems Cat.5e to Cat.7, optical fibre and hybrid.

25 years warranty.

Pre- and after sales technical assistance.

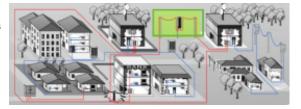


#### **Optical Fiber Networks**

Optical cables for transport and access networks, FTTx.

Splice closures.

Optical fibre cabling and antenna distribution.



#### Solutions for cross-connections

Cross connection terminations for indoor & outdoor applications.

Cross-connect cabinets and distribution enclosures.

Optical fibre distribution.



## **Outside plant**

Aerial, duct and buried cables.

Heath shrinkable, in-line and dome closures for copper and fiber cables.



# **Solutions for Exchanges**

Twisted pair, coaxial and optical fibre solutions for MDF's, DDF's and ODF's within exchange environments.

Splitters.







# LIACC

# Fiber Optic Cabling Solutions for Subscriber Access and FTTx

APS offers a wide series of products as well as integrated solutions for the access of the subscriber to the operators' main fiber optic network and FTTx. The offer consists of a series of outdoor and indoor/outdoor cables and splicing and termination accessories. LIACC is completed by our LIIN25, a complete series of indoor cables and accessories for indoor use.



APS offers a wide range of fiber optic cables for outdoor and indoor/outdoor installations.

From aerial Figure-8 and ADSS to DIRECT BURIAL, from air-blown MICRO CABLES to DROP, from DUCT to MICRO UNITS APS has plenty to offer to meet virtually any kind of demand for Access and FTTx.



APS pre-terminated cables are produced from high quality cables and connectors for the longest possible operation time. Pre-terminated cables are made upon order to meet the always specific exigencies of each installation.





APS offers a range of Outdoor Distribution Boxes (OTB) and Indoor Terminal Boxes (ATB) for the managerment of the fibers from the outer walls to the wall points.

APS offers a **2 years war- ranty** on all its products for
Access and FTTx and a **Sytem Support** to all its partner installers and customers on all
the complete APS cabling solutions for Access and FTTx.

With the APS System Support customers and partners have access to our specialized assistance on-site.

Join us as a certified installer to be entitled to all the benefits of the APS Partnership Program and Extended System Warranty!



APS offers a complete range of accessories to splice, joint and terminate, also mechanically, all types of cables either made from 250 or 900 µm fiber.

The offer includes also attenuators, PLC splitters, fused couplers, media converters, transceivers.



# LIACC

# Fiber Optic Cabling Solutions for Subscriber Access and FTTx

Duct Cables UTE/MTE	P/N	Packaging
Unitube 2-24 / Glass Yarns / PE	UTE 00 xxx yy D2	2000m/drum
Multiitube 2-192 / Glass Yarns / PE	MTE 000 xxx yy D2	2000m/drum
000 = fiber count xxx = fiber type yy = pulling tension (es 1500 = 15)		
Underground Cables UT9E/MT9E	P/N	Packaging
Unitube 2–24 / Glass Yarns / CST Armour / PE	UT9E 00 xxx yy D2	2000m/drum
Multiitube 2–192 / Glass Yarns / CST Armour / PE	MT9E 000 xxx yy D2	2000m/drum
000 = fiber count xxx = fiber type yy = pulling tension (es 2500 = 25)		
Aerial Cables Figure-8 UT8E / MT8E	P/N	Packaging
Unitube 2-24 / Glass Yarns / PE with steel messenger	UT8E 00 xxx yy D2	2000m/drum
Multiitube 2-192 / Glass Yarns / PE with steel messenger	MT8E 000 xxx yy D2	2000m/drum
000 = fiber count $xxx = fiber type$ $yy = pulling tension (es  3000 = 30)$		
Acrist Ockles ADOC LITAE / MATAE	D/N	Da also store
Aerial Cables ADSS UTAE / MTAE	P/N	Packaging
Unitube 2–24 / PE / Aramide Yarns / PE	UTAE 00 xxx yyy D2	2000m/drum
Multitube 2–192 / PE / Aramide Yarns / PE	MTAE 00 xxx yyy D2	2000m/drum
000 = fiber count xxx = fiber type yyy = span (ASP = short span, AMS	s = mid span, ALS = long span)	
Aerial DROP Cables BOWA self-supporting dielectric	P/N	Packaging
Aerial DROP Cables BOWA self-supporting dielectric 2-4 G657A1 PE with FRP messenger and pulling elements	<b>P/N</b> DRBA × 7A1 D1	Packaging
	•	5 5
2–4 G657A1 PE with FRP messenger and pulling elements  xxx = fiber type	DRBA x 7A1 D1	1000m/drum
2–4 G657A1 PE with FRP messenger and pulling elements  xxx = fiber type  MICRO Cables for air–blown VBBX/HBBX	DRBA x 7A1 D1	1000m/drum
2–4 G657A1 PE with FRP messenger and pulling elements  xxx = fiber type  MICRO Cables for air–blown VBBX/HBBX  Unitube 2–24 / PE	P/N VBBX 00 xxx D4	1000m/drum  Packaging 4000m/drum
2–4 G657A1 PE with FRP messenger and pulling elements  xxx = fiber type  MICRO Cables for air–blown VBBX/HBBX  Unitube 2–24 / PE  Multitube 2–192 / PE	DRBA x 7A1 D1	1000m/drum
2–4 G657A1 PE with FRP messenger and pulling elements  xxx = fiber type  MICRO Cables for air–blown VBBX/HBBX  Unitube 2–24 / PE	P/N VBBX 00 xxx D4	1000m/drum  Packaging 4000m/drum
2–4 G657A1 PE with FRP messenger and pulling elements  xxx = fiber type  MICRO Cables for air–blown VBBX/HBBX  Unitube 2–24 / PE  Multitube 2–192 / PE	P/N VBBX 00 xxx D4	1000m/drum  Packaging 4000m/drum
2–4 G657A1 PE with FRP messenger and pulling elements  xxx = fiber type  MICRO Cables for air–blown VBBX/HBBX  Unitube 2–24 / PE  Multitube 2–192 / PE  000 = fiber count  xxx = fiber type	P/N VBBX 00 xxx D4 HBBX 000 xxx D4	Packaging 4000m/drum 4000m/drum
2–4 G657A1 PE with FRP messenger and pulling elements  xxx = fiber type  MICRO Cables for air–blown VBBX/HBBX  Unitube 2–24 / PE  Multitube 2–192 / PE  000 = fiber count	P/N  VBBX 00 xxx D4  HBBX 000 xxx D4  P/N	Packaging 4000m/drum 4000m/drum
2–4 G657A1 PE with FRP messenger and pulling elements  xxx = fiber type  MICRO Cables for air–blown VBBX/HBBX  Unitube 2–24 / PE  Multitube 2–192 / PE  000 = fiber count	P/N VBBX 00 xxx D4 HBBX 000 xxx D4 P/N ATB2SSE	Packaging 4000m/drum 4000m/drum Packaging 1 pc/ctn
2–4 G657A1 PE with FRP messenger and pulling elements  xxx = fiber type  MICRO Cables for air–blown VBBX/HBBX  Unitube 2–24 / PE  Multitube 2–192 / PE  000 = fiber count	P/N VBBX 00 xxx D4 HBBX 000 xxx D4 P/N ATB2SSE ATB1SSL	Packaging 4000m/drum 4000m/drum Packaging 1 pc/ctn 1 pc/ctn
2–4 G657A1 PE with FRP messenger and pulling elements  xxx = fiber type  MICRO Cables for air–blown VBBX/HBBX  Unitube 2–24 / PE  Multitube 2–192 / PE  000 = fiber count	P/N VBBX 00 xxx D4 HBBX 000 xxx D4 P/N ATB2SSE ATB1SSL	Packaging 4000m/drum 4000m/drum Packaging 1 pc/ctn 1 pc/ctn
2–4 G657A1 PE with FRP messenger and pulling elements  xxx = fiber type  MICRO Cables for air–blown VBBX/HBBX  Unitube 2–24 / PE  Multitube 2–192 / PE  000 = fiber count	P/N VBBX 00 xxx D4 HBBX 000 xxx D4 HBBX 000 xxx D4  P/N ATB2SSE ATB1SSL ATB2SSL	Packaging 4000m/drum 4000m/drum Packaging 1 pc/ctn 1 pc/ctn
2–4 G657A1 PE with FRP messenger and pulling elements  xxx = fiber type  MICRO Cables for air–blown VBBX/HBBX  Unitube 2–24 / PE  Multitube 2–192 / PE  Multitube 2–192 / PE  000 = fiber count	P/N VBBX 00 xxx D4 HBBX 000 xxx D4  P/N ATB2SSE ATB1SSL ATB2SSL  P/N ADMJ259	Packaging 4000m/drum 4000m/drum Packaging 1 pc/ctn 1 pc/ctn 1 pc/ctn
2–4 G657A1 PE with FRP messenger and pulling elements  xxx = fiber type  MICRO Cables for air–blown VBBX/HBBX  Unitube 2–24 / PE  Multitube 2–192 / PE  000 = fiber count	P/N VBBX 00 xxx D4 HBBX 000 xxx D4 HBBX 000 xxx D4  P/N ATB2SSE ATB1SSL ATB2SSL	Packaging 4000m/drum 4000m/drum 4000m/drum  Packaging 1 pc/ctn 1 pc/ctn 1 pc/ctn

# LIIN25

# Fiber Optic Cabling Solutions for Indoor Networks

APS offers integrated solutions for Single Mode and Multi Mode cabling of indoor private and business premises, be Local Area Networks, Access Networks, FTTx, ... The system consists of a series of indoor cables, panels, pigtails and patchcords, adapters, accessories and pre-terminated cables. Each system component is tested to compliy with the applicable company own internal and international standards.



APS offers a wide range of fiber optic cables for indoor/outdoor installations both as 250 and 900 µm. While "FTMS" 900µm type has been chosen as the stock series for indoor premises, a variety of other choices are also available: from traditional Loose Tube design to the innovative "Dryco™" and "MIFFE™" or the fire resistant "LuxFire™" APS has plenty to offer to meet virtually any kind of demand.

# FIBER OPTIC SYSTEM WARRANTED

SPLICE & MECHANICAL JOINT



APS offers a wide range of 19" Optical Distribution Frames, Patch Panels, Racks as well as distribution and termination boxes and outlets. Upon request panels can be supplied pre-loaded according to customer's request.

APS produces its pigtails, patchcords, fan-out and pre-terminated cables from high quality cables and connectors for the longest possible operation time. Pre-terminated cables are made upon order to meet the always specific exigencies of each installation.



APS offers an extended system warranty of 25 years to all its copper, fiber and hybrid structured cabling systems. Join us as a certified installer to be entitled to all the benefits of the APS Partnership Program and Extended System Warranty!



APS offers a complete range of accessories to splice, joint and terminate, also mechanically, all types of cables either made from 250 or 900 µm fiber.

The offer includes also attenuators, PLC splitters, fused couplers, media converters, transceivers.



Cables	P/N	O.D.	Packaging
TB FTMS 4 fibers indoor	FTMS04xx	5.5mm	2000m/drum
TB FTMS 8 fibers indoor	FTMS08xx	6.8mm	2000m/drum
TB FTMS 12 fibers indoor	FTMS12xx	7.2mm	2000m/drum
TB FTMS 24 fibers indoor	FTMS24xx	8.6mm	2000m/drum
TB FTMS 48 fibers indoor (design 4 x 12)	FTMS48xx	16.0mm	2000m/drum
xx = fiber type = OS2 Yellow, OM1 Grey, OM2 Orange, OM3 Aqua, OM4 Violet, OM5 Purple			

Patch Panels	P/N	Packaging
Patch panel 19" 1U 24 ports SC SX / LC DX	ODF124SCS	1 pc/ctn
Patch panel 19" 1U 24 ports SC DX / LC QUAD	ODF124SCD	1 pc/ctn

Pigtails and Patchcords		P/N	Packaging
Pigtail		PT xxx oo a 00	1 pc/ctn
Patchcord		PC xxx y oo a oo a 00	1 pc/ctn
xxx = fiber type = OS2, 7A1, OM1, OM2, OM3, OM4	y = SX=S, DX=D	oo = connector type = SC, LC, FC, ST.	
a = U for UPC, A for APC.		00 = lengths (for example 15 for 1.5 meters)	)

Adapters	P/N	Packaging
Adapter	AD xxx oo a bb	25 pcs/ctn
xxx = fiber type = OS2, OM1, OM2, OM3, OM4.	oo = connector type = SC, LC, FC, ST.	
a = U for UPC, A for APC.	bb = SX, DX or QU (for QUAD)	
Splice protection tubes	P/N	Packaging
Splice protection tube 45mm	VTERM45	100 pcs/bag
Splice protection tube 60mm	VTERM60	100 pcs/bag
FTTH termination boxes and kit	P/N	Packaging
Access Ternination Box (ATB) for 2 SC SX, Empty	ATB2SSE	1 pc/ctn
Access Termination Box (ATB) kit 1 SC/APC SX	ATB1SSL	1 pc/ctn
Access Termination Box (ATB) kit 2 SC/APC SX	ATB2SSL	1 pc/ctn
ATB kit includes ATB, adapter(s), pigtail(s) and splice protection tube(s)		

! Important note: contact your sales representative for any product that you cannot find from this page.





#### Contact us for your needs on special cables and cable solutions...

#### Headquarters

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