

OmniReach® FTTX Solutions

Passive Optical Splitter Modules

5th Edition



OmniReach® FTTX Solutions

Passive Optical Splitter Modules



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Passive Optical Splitter Modules

Introduction



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ADC KRONE's OmniReach® FTTX Solutions are the industry's first infrastructure solutions designed from the ground up to meet the unique requirements of FTTX networks. Designed for operational efficiency and scalability, ADC KRONE's OmniReach solutions simplify FTTX network installation, maintenance, and management from the central office/headend to the outside plant.

Installed in an outside plant enclosure, passive optical splitter modules give carriers the ability to split optical signals to multiple homes or businesses.

ADC KRONE splitter modules are protected from exposure and damage by their packaging. Surrounded by superior cable management, technicians need less time to route fiber in the cabinet, saving operating costs. Available in configurations from 1x4 up to 1x64, the modules can be ordered in adapter port or pigtailed versions.

Features

- Qualified to IEC 61300-3.
- Industry-leading low loss.
- Terminated with IEC 61300-3 certified connectors.
- Rugged package protects delicate splitters from installer handling.
- Variety of package styles allow adaptation to many applications.
- Wideband performance allows operation from 1260nm to 1650nm.

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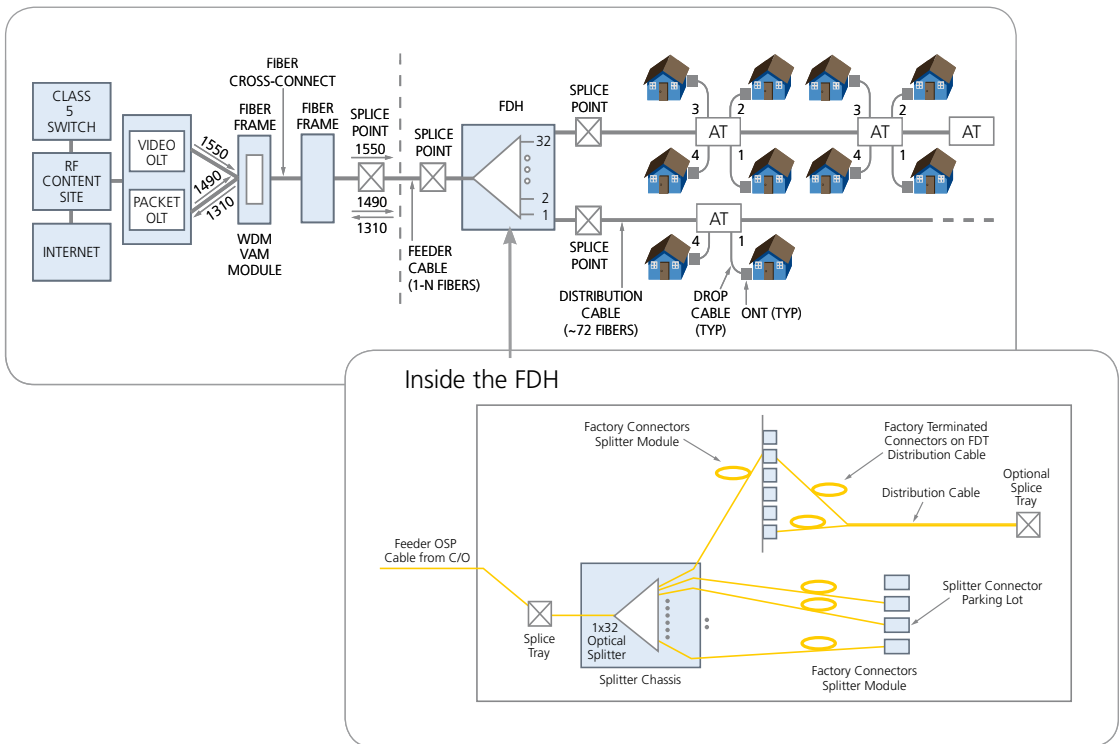
Applications

Centralized Splitting

There are two main approaches to FTTH optical splitters: centralized and cascaded. ADC KRONE recommends the centralized approach for several significant reasons.

- Maximizes the highest efficiency of expensive OLT cards. Since each home in this approach is fiber-connected directly back to a central hub, all ports on the OLT card are used and 100% efficiency is achieved.
- Provides easy testing and troubleshooting access. It is very difficult to use an optical time-domain reflectometer (OTDR) to test multiple splitters unless the network is built with each fiber characterized to enable the OTDR to recognize each individual fiber run.
- Minimizes signal loss by eliminating extra splices and and/or connectors from the distribution network. Each time an optical signal encounters a network component or connection, such as a splitter, it suffers a certain degree of signal loss. Therefore, when splitters are cascaded together, loss will occur at each device. The combined loss effect can reduce the distance a signal can travel, imposing distance limitations on fiber runs.
- Reduces the number of components in the network, thereby decreasing the number of opportunities for failure.

Schematic Diagram of PON Architecture



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Mini Plug and Play Splitter Modules/Splitter Specifications

ADC KRONE's Mini Plug and Play Splitter Modules support centralized splitting architectures. The modules are available in a wide range of split ratios and are used in ADC KRONE's FDH 3000 series cabinets, chassis, and rack mounts. The rugged packaging is built for high performance, while the true plug and play design reduces installation time.



Features:

- Bend-optimized fiber and ruggedized extreme temperature cabling
- Superior loss performance at 1490 and 1550 wavelengths
- Allows pass-through of up to 2 fibers per splitter set
- Easy to insert and remove without affecting adjacent splitters
- Reversible dust cap makes test and turn-up easy
- Universal module designed for use across applications – cabinets, chassis and frames

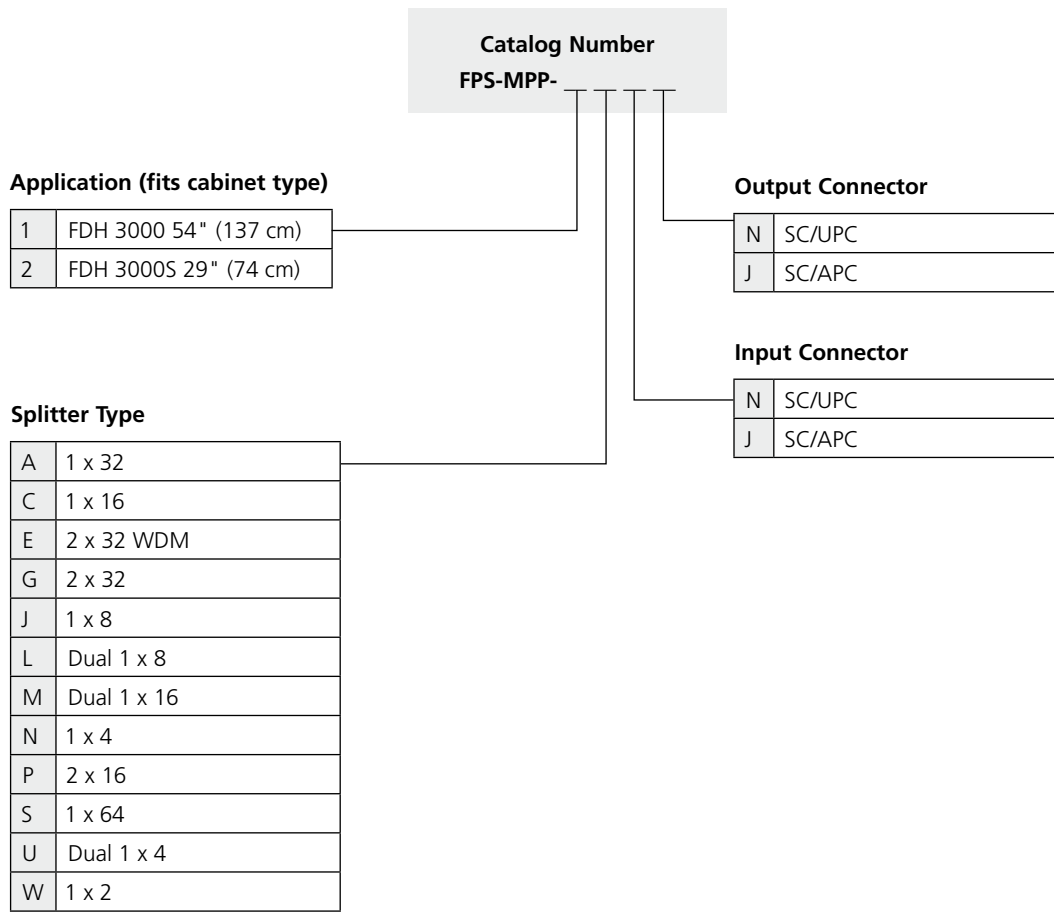
Performance Specifications

Splitter Type	Max Loss	Typical Loss	Uniformity	Return Loss	Directivity	PDL
1 x 2	3.7 dB	3.1 dB	0.8 dB	≥55 dB	≥55 dB	0.3 dB
1 x 4	7.2 dB	6.6 dB	0.8 dB	≥55 dB	≥55 dB	0.3 dB
1 x 8	10.3 dB	9.7 dB	1.0 dB	≥55 dB	≥55 dB	0.3 dB
1 x 16	13.5 dB	12.8 dB	1.0 dB	≥55 dB	≥55 dB	0.3 dB
1 x 32	16.7 dB	16.0 dB	1.3 dB	≥55 dB	≥55 dB	0.4 dB
1 x 64	20.4 dB	19.7 dB	2.0 dB	≥55 dB	≥55 dB	0.4 dB
2 x 16	14.1 dB	12.9 dB	2.0 dB	≥55 dB	≥55 dB	0.4 dB
2 x 32	17.4 dB	16.2 dB	2.0 dB	≥55 dB	≥55 dB	0.4 dB

For more information, please contact ADC KRONE's Technical Assistance Center +32 2 712 6542

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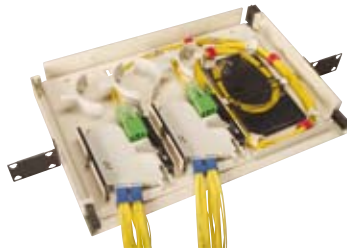
Mini Plug and Play Splitter Modules



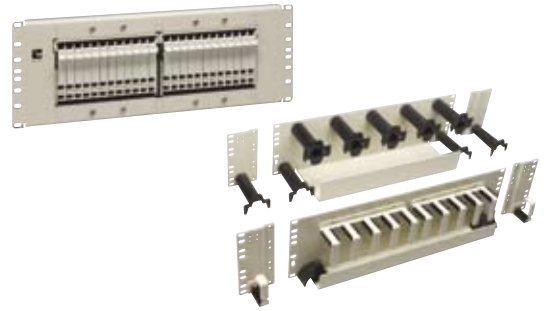
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Rack Mounts for Mini Plug and Play Splitters

ADC KRONE's Rack Mounts for Mini Plug and Play Splitters are configurable for use in Central Office, Multiple Dwelling Unit (MDU) applications as well as laboratory environments. These chassis come equipped to fit both 19- and 23-inch rack mount frames.



1RU Splitter drawer



Rack Mount Splitter Chassis

Ordering Information

Description	Dimensions	Catalog Number
1RU splitter drawer with splice tray – accommodates up to 4 Mini Plug and Play splitters	19/23" x 1.7" x 12" (48.3/58.4 cm x 4.3 cm x 30.5 cm)	FPS-MPPACCRMPNL
Rack mount splitter chassis – accommodates up to 24 Mini Plug and Play splitters	19/23" x 6.94" (48.3/58.4 cm x 17.6 cm)	FPS-MPPRACKMT24
Cable management for rack mount splitter chassis	19/23" x 5.19" (48.3/58.4 cm x 13.2 cm)	FPS-MPPRACKMTCM
Parking lot panel for rack mounts	19/23" x 3.5" (48.3/58.4 cm x 8.9 cm)	ACE-ACC200-PKLT3

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Cabinet Mount Splitter Modules

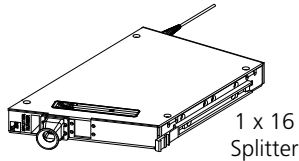
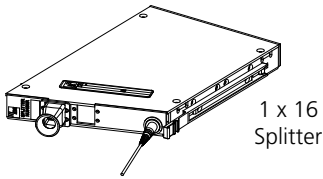
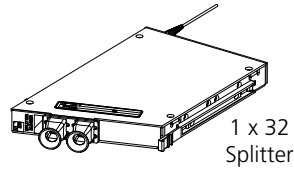
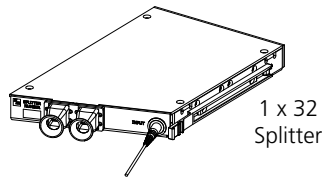
ADC KRONE's Cabinet Mount Splitter Modules support the installed base of distribution hubs for turning up services to additional customers. The splitters are designed for ADC KRONE's legacy fiber distribution hub cabinets.



Cabinet Mount Splitter Module

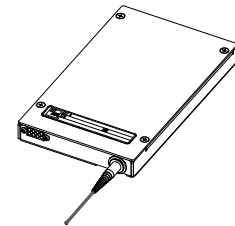
Features:

- Rugged 2mm jacketing allows technicians to handle as a standard jumper.
- Strain relief boot protects pigtails from macrobends.
- Splitter outputs labeled with port number, splitter serial number for easy port identification.
- Pull-proof jumpers prevent handling damage.



Package Style F, M

Package Style G, N, K



Package Style J

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Cabinet Mount Splitter Modules

Ordering Information

Cabinet Type/Splitter Module	Catalog Number
ACE 92/102/132, splitter style F: input/output connector type: SC/APC	
1x32 Splitter	FPS-SPF1AJJ
1x16 Splitter	FPS-SPF1CJJ
Dual 1x16 Splitter	FPS-SPF1MJJ
Quad 1x8 Splitter	FPS-SPF1ZJJ
ACE 142, splitter style K: input/output connector type: SC/APC	
1x32 Splitter	FPS-SPK1AJJ
1x16 Splitter	FPS-SPK1CJJ
Dual 1x16 Splitter	FPS-SPK1MJJ
Quad 1x8 Splitter	FPS-SPK1ZJJ
ACE 152, splitter style M: input/output connector type: SC/APC	
1x32 Splitter	FPS-SPM1AJJ
1x16 Splitter	FPS-SPM1CJJ
Dual 1x16 Splitter	FPS-SPM1MJJ
Quad 1x8 Splitter	FPS-SPM1ZJJ
ACE 204, splitter style G: input/output connector type: SC/APC	
1x32 Splitter	FPS-SPG1AJJ
1x16 Splitter	FPS-SPG1CJJ
Dual 1x16 Splitter	FPS-SPG1MJJ
Quad 1x8 Splitter	FPS-SPG1ZJJ
ACE 214/304, splitter style N: input/output connector type: SC/APC	
1x32 Splitter	FPS-SPN1AJJ
1x16 Splitter	FPS-SPN1CJJ
Dual 1x16 Splitter	FPS-SPN1MJJ
Quad 1x8 Splitter	FPS-SPN1ZJJ
Legacy ADC KRONE Fiber Access Terminal, splitter style I: input/output connector type: SC/APC	
1x16 Splitter	FPS-SPJ1CJJ
1x8 Splitter	FPS-SPJ1JJJ
1x4 Splitter	FPS-SPJ1NJJ

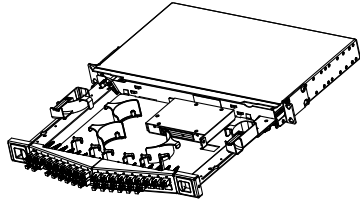
Other connector types, including SC/UPC are available.

Other splitter configurations are available, please contact ADC KRONE's Technical Assistance Center +32 2 712 6542

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FMT Splitter Module

ADC KRONE's FMT Splitter Module is configured for fiber distribution racks in a wide variety of applications. It is a self-contained 36 port 1RU chassis with front-access adapter ports that promote easy configuration and reconfiguration of rack mount setups.



ISO Top View

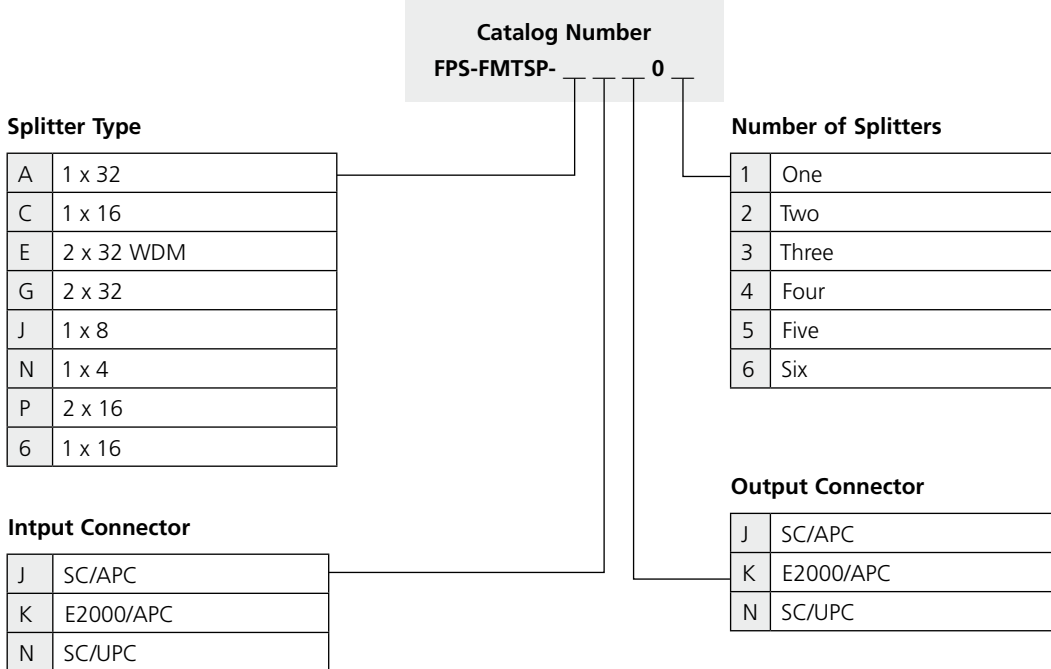
Features:

- A non-modular, high-density self-contained unit.
- Flexible applications — fitting in any 19" or 23" rack unit.
- Designed to fit in 1 RU (44.45mm).
- Features angle right/angle left adapter panels for strain relief.
- Both standard power and WDM splitter capabilities offered

Splitter Capacity

(Standard SC form factor connector)

Splitter Type	1 x 32	1 x 16	1 x 8	1 x 4
Number of splitters	1	2	3	6



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