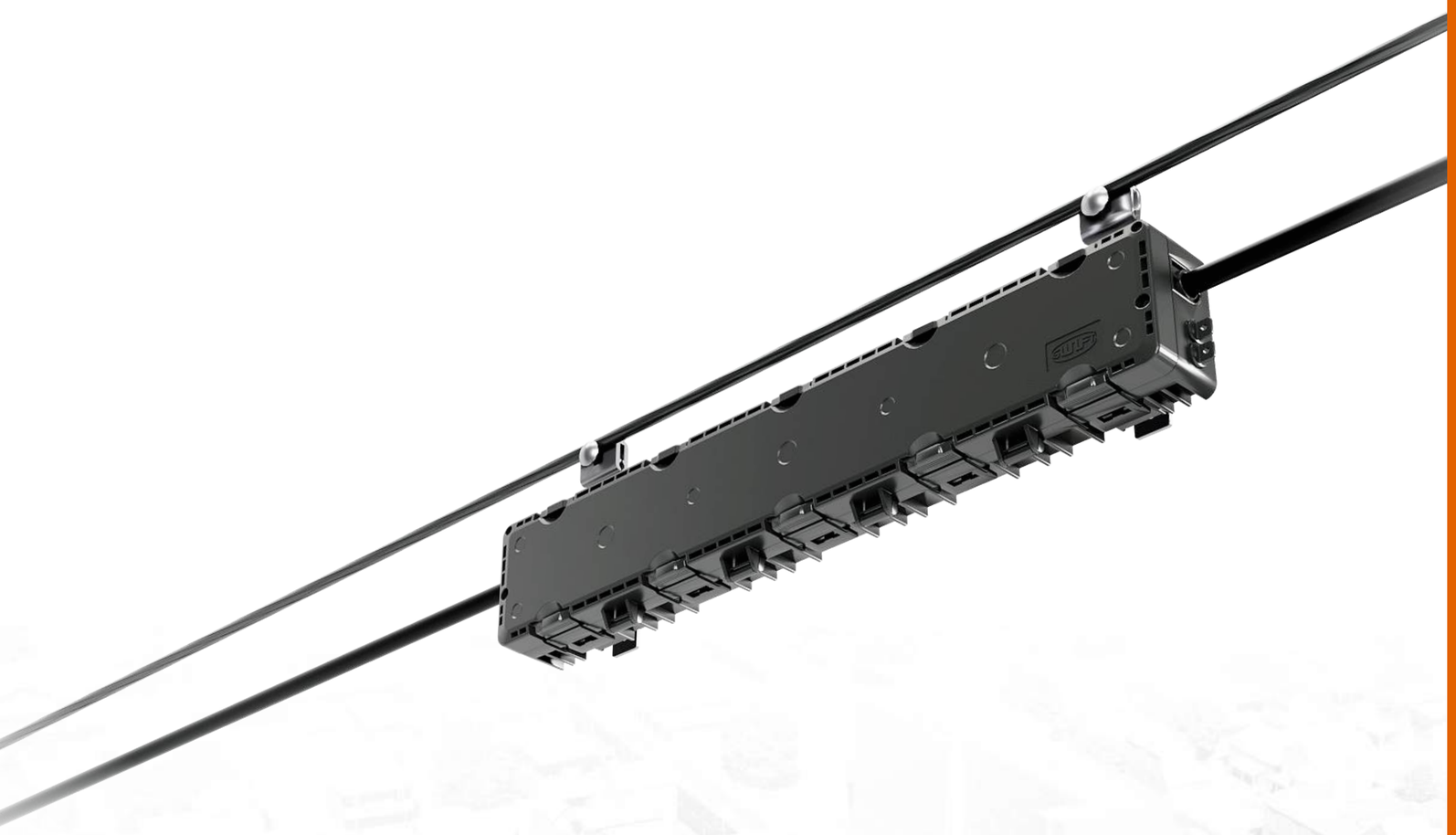
SWIFT-FX Solution

The Next Technology for Fiber to the Home



Scalable and Flexible Deployment of FTTH with SWIFT-FX

Existing, Expanding, and New FTTH Networks

UCL SWIFT

Index

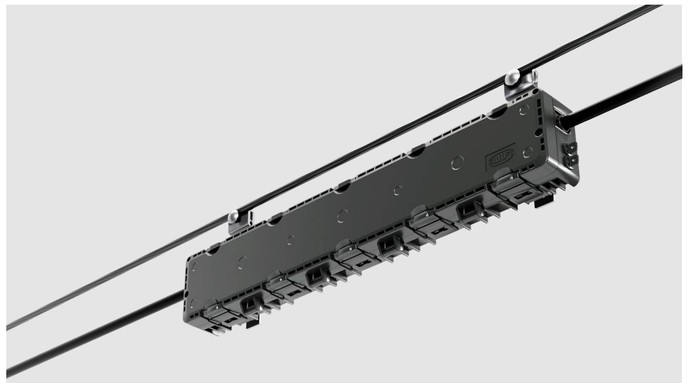
SWIFT-FX Revolutionizes Connectivity

SWIFT-FX Hardened Solutions, based on fusion splicing technology,
form a family of last-mile broadband solutions.

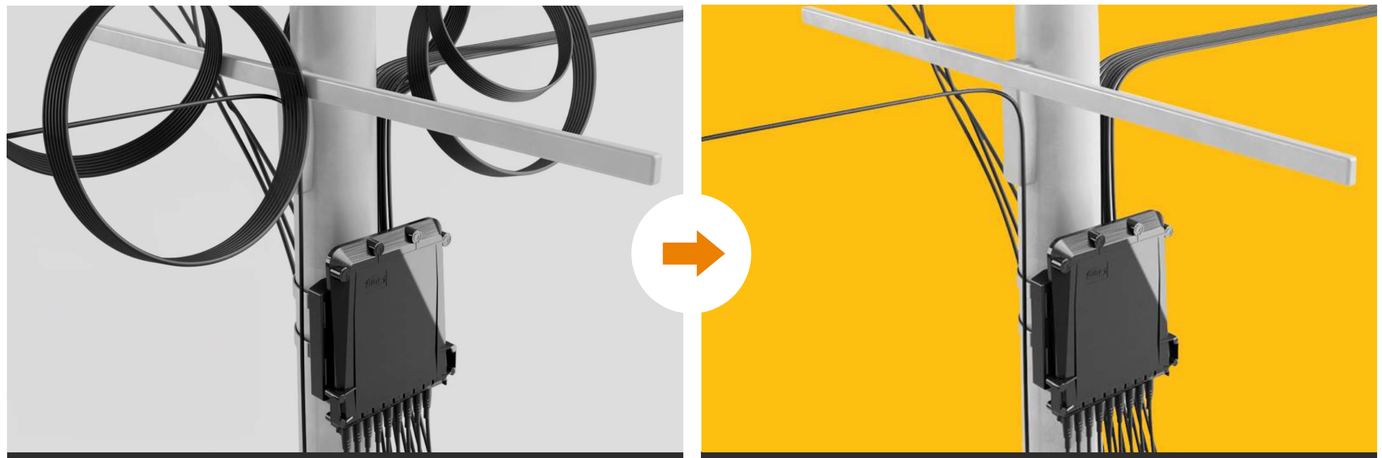
Reliability is at the core of SWIFT-FX solutions, with hardened and push-pull mating technologies guaranteeing a robust optical network and assured quality.

We offers unparalleled flexibility, allowing for the seamless integration of mid-span closures into existing, expanding, and new FTTH networks. This adaptability ensures that the networks are not only scalable but also maintain their performance as they grow.

Mid-span Closure and SWIFT-FX in FTTH Networks



Seamless network integration.
Applicable to existing, expanding, and new FTTH.



Pre-Connectorized Drop

SWIFT-FX Solution

Eliminate wasteful cable slack with on-site fusion splicing.

Smart Solutions for Enhancing City Aesthetics

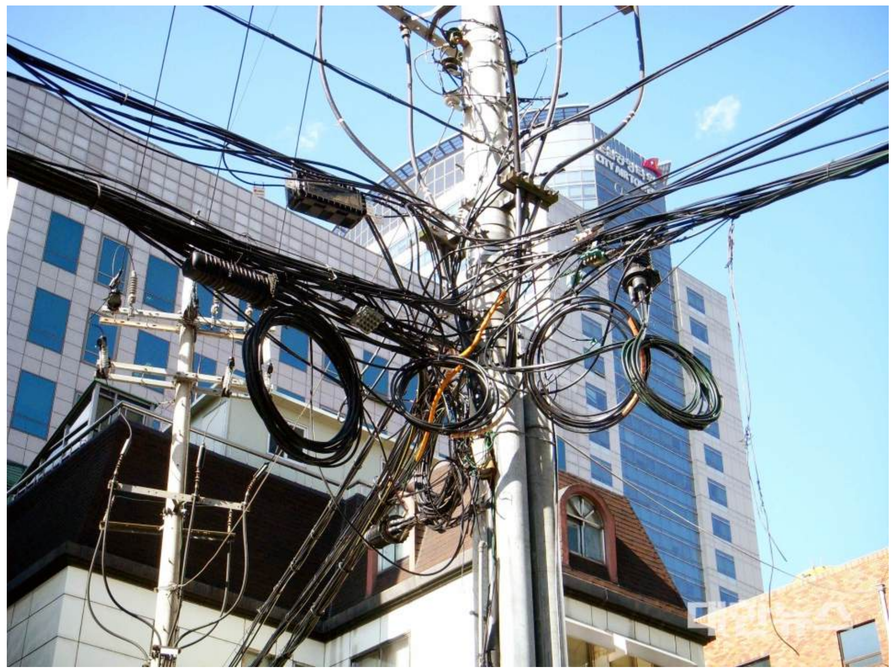
Innovative Cable Management Initiative in Korea

Since the 2010s, government agencies and telecommunications companies have launched initiatives
to tackle challenges such as haphazard wiring and improper FTTH network installation.
These challenges include issues like excessive cable slack and overloaded poles.

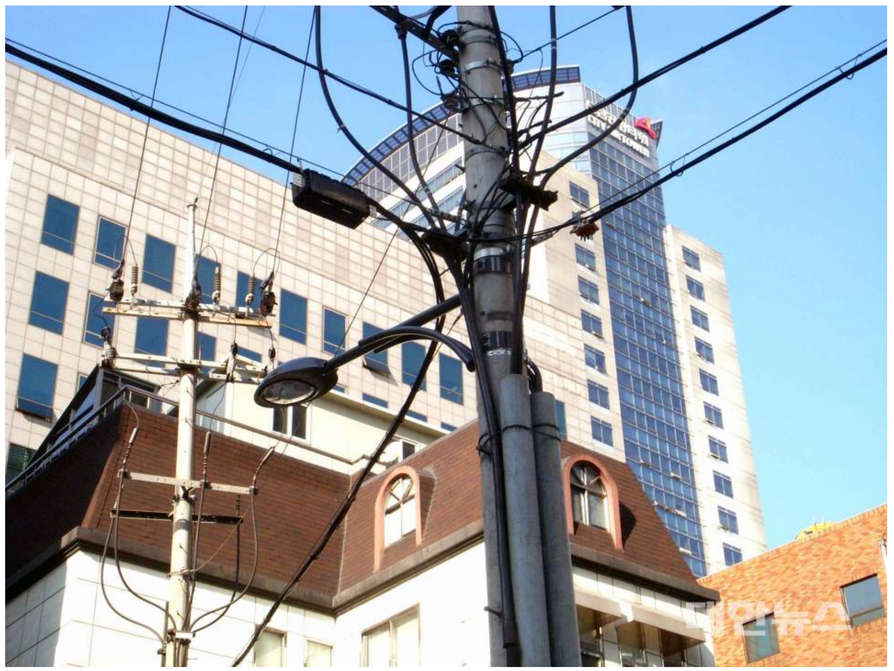
Significant investments have been made, including 2.85 trillion won allocated over five years starting in 2021,
and an additional 2 billion US dollars earmarked specifically for FTTH network improvements over a similar period.

The strategy is centered not only on the repair of existing lines but also on the installation of new cables.
These efforts aim to enhance urban aesthetics, improve resource efficiency,
and ensure the structural integrity of he network infrastructure.

Before Cable Slack Maintenance



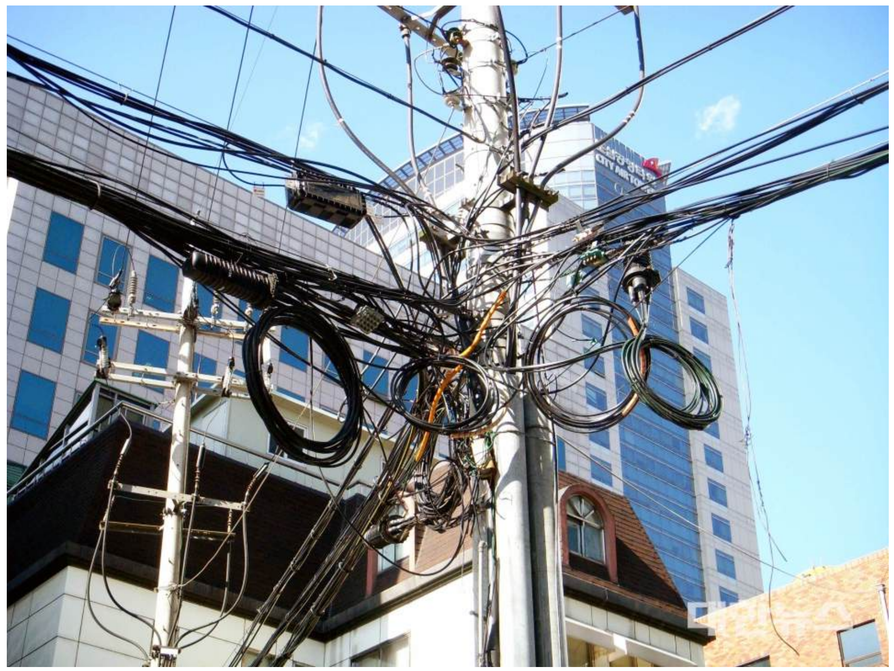
After Cable Slack Maintenance



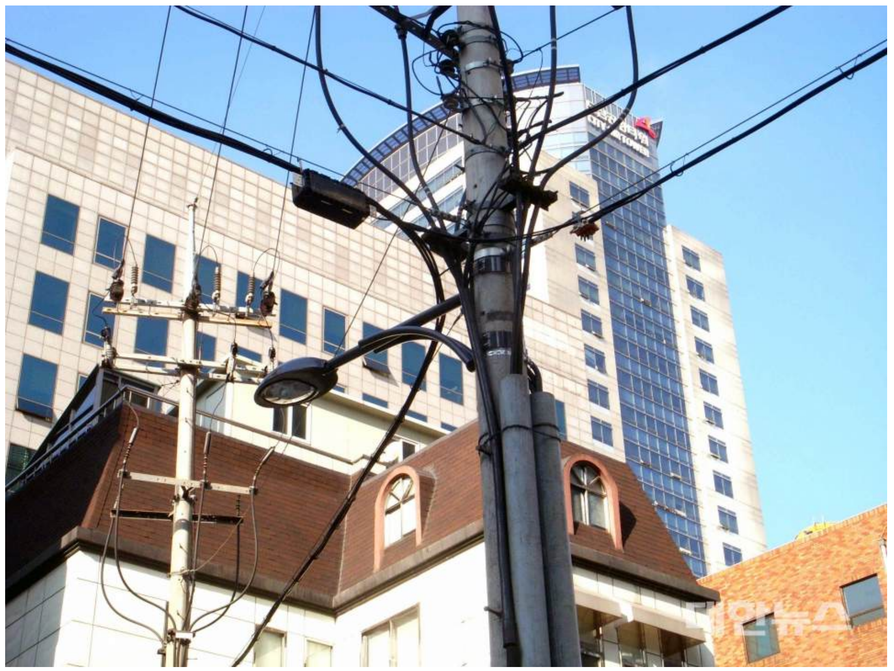
Smart Solutions for Enhancing City Aesthetics

To ensure both minimal future maintenance costs and the preservation of city aesthetics,
it is crucial to **install FTTH networks from the beginning with SWIFT-FX,**
ensuring that messy cables are not left behind.

Before Cable Slack Maintenance



After Cable Slack Maintenance

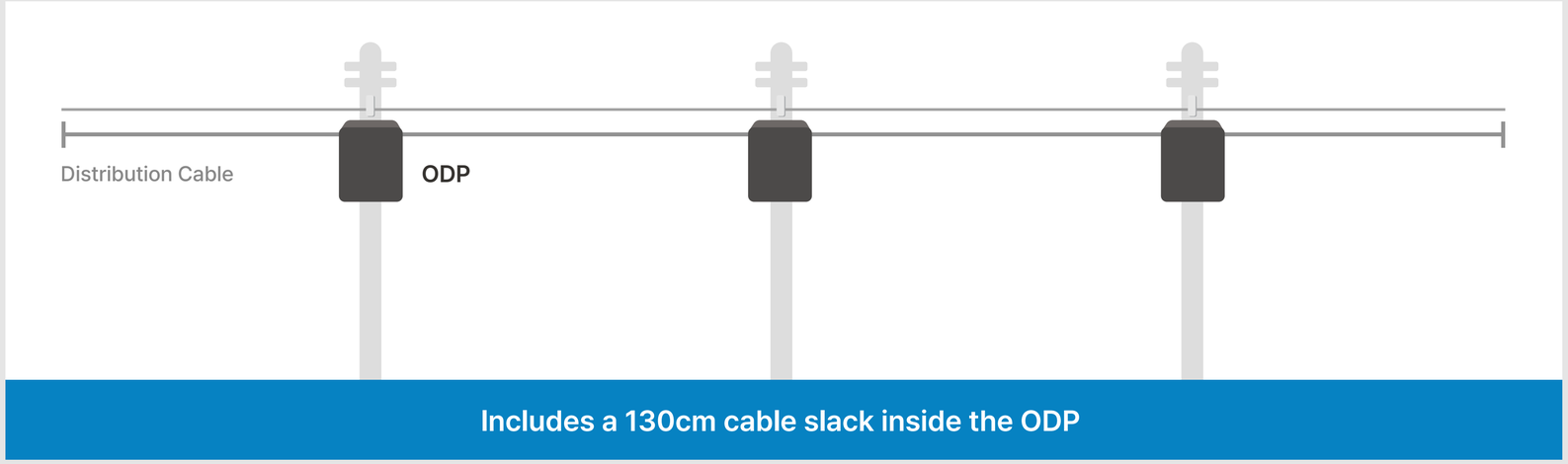


In the traditional method,
laying distribution cables and ODPs requires leaving extra slacks of 130cm.

1 Installing ODPs when laying distribution cable

→ 130cm of cable slack must be reserved for future network expansion.

→ High initial cost incurred from pre-installing 8 channel ODPs.

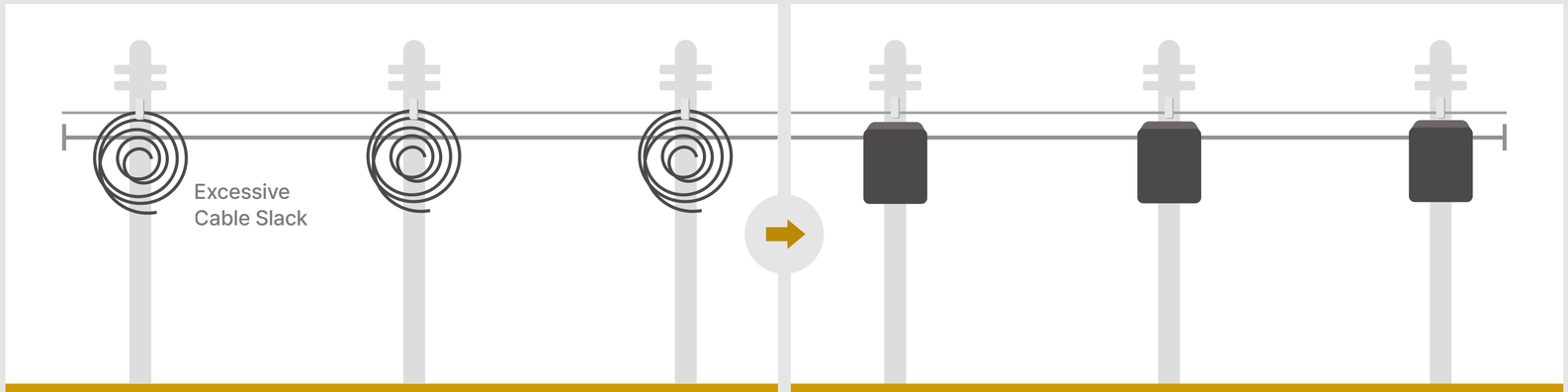


Includes a 130cm cable slack inside the ODP

2 Installing ODPs after laying distribution cable

→ Cable cables are exposed to utility poles, damaging the cityscape.

→ Cable waste and increased overall costs.



A 130cm cable slack is reserved at each utility pole

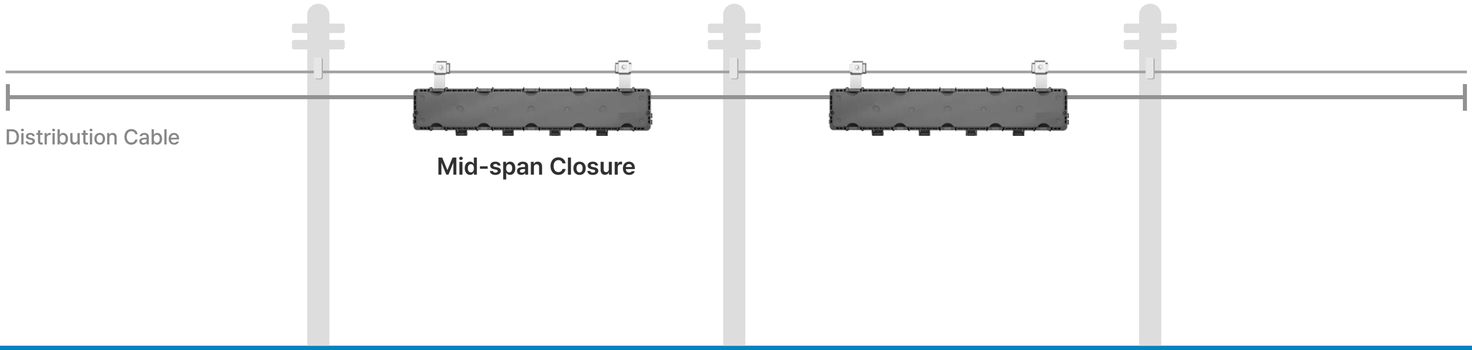
ODPs installed at a later stage

Mid-Span Closure fits both existing and expanding FTTH networks.
Its streamlined installation **eliminates excessive cable slacks,**
cutting costs and improving aesthetics around poles and subscriber properties.

1 Installing Mid-span Closure when laying distribution cable

→ Flexible product installation and network expansion based on subscribers and location.

→ Lower initial cost.



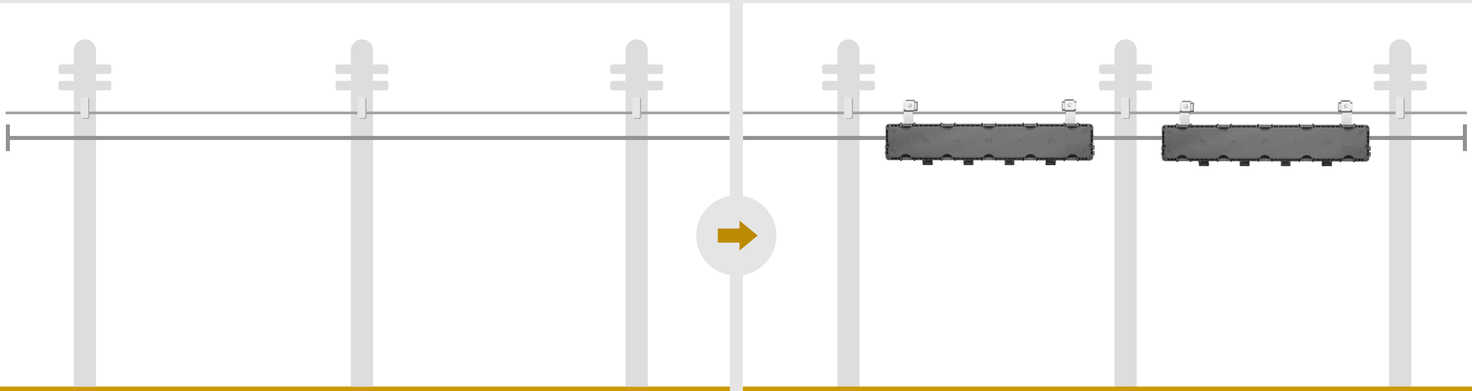
Mid-span Closure can be installed without any cable slack, or with 130cm of cable slack remaining.

2 Installing Mid-span Closure after laying distribution cable

→ Unlike with existing ODPs installations, there's no need to reserve the cable slack for future mid-span closure.

→ Mid-span can be easily applied anywhere.

→ Preserve city aesthetics and reduce costs.



No Cable slack is needed for Mid-span Closure

Flexible network expansion

How to Install Mid-span Closure

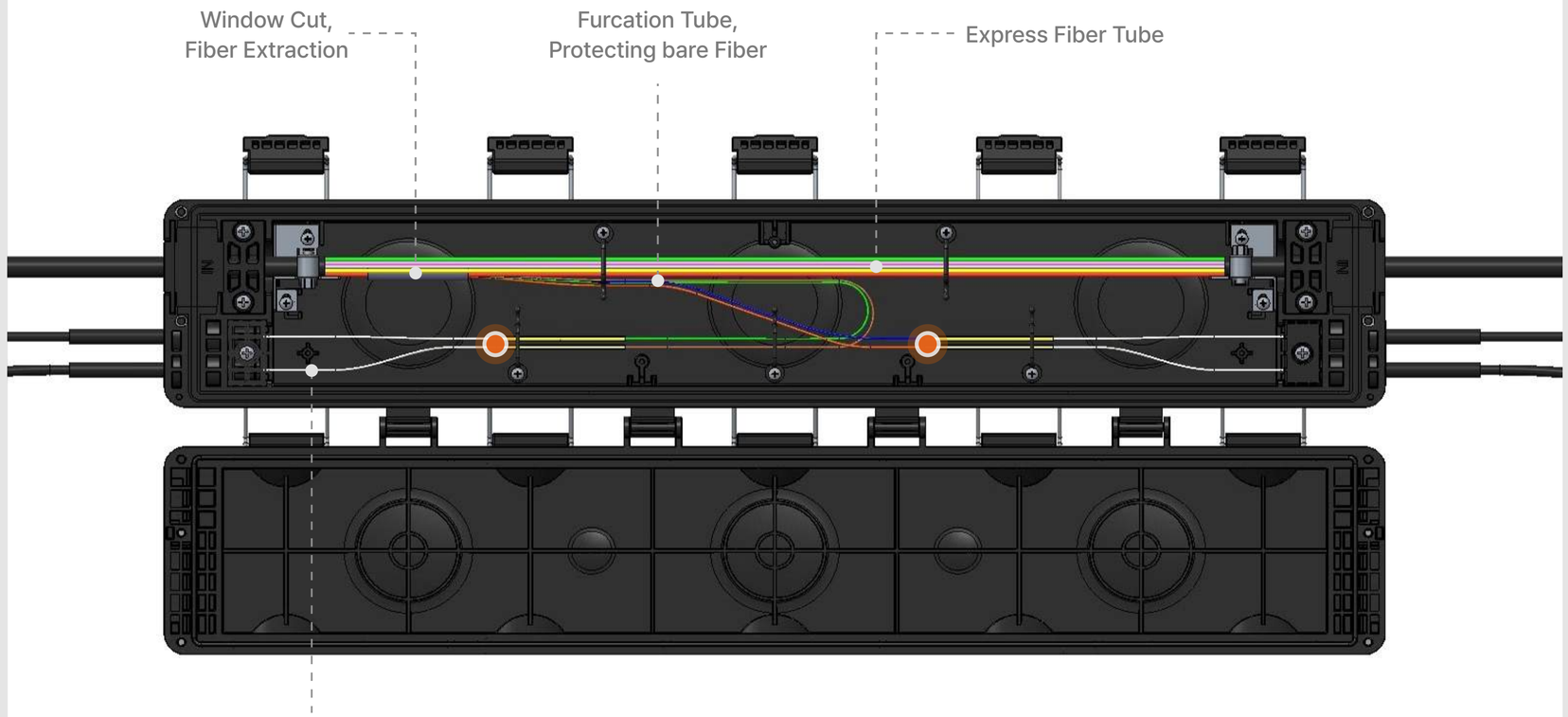
Installation Procedure

Cable Preparation
Outer jacket stripping, 45cm

Loose tube Stripping
Take out Max 4 fibers

Fusion Splicing
Branch Cable connection
(Left and Right 2ports each)

Mid-span Closure access by stripping 45cm outer jacket. No cable slack.



How to Install Mid-span Closure

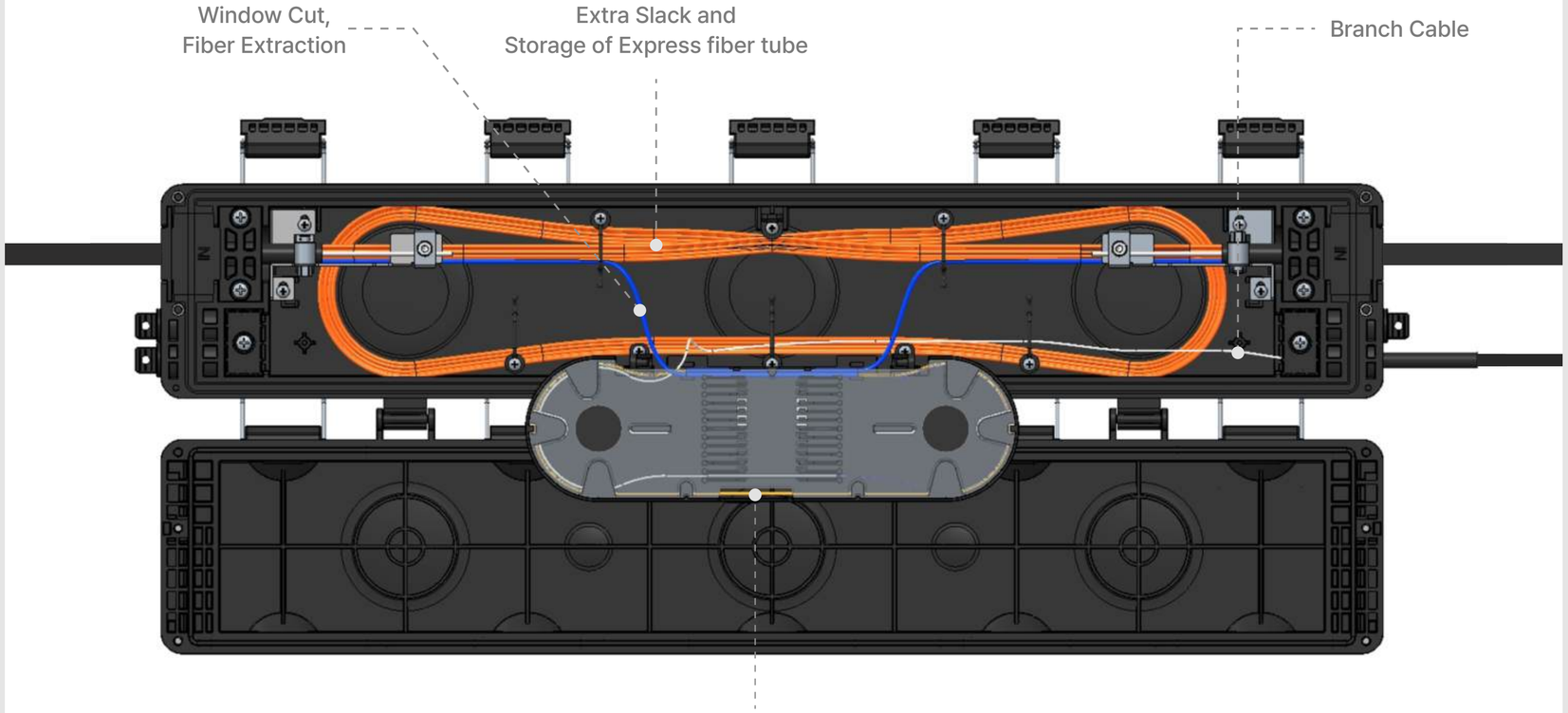
Installation Procedure

Cable Preparation
Outer jacket stripping, 130cm

Loose tube Stripping
Take out Max 4 fibers

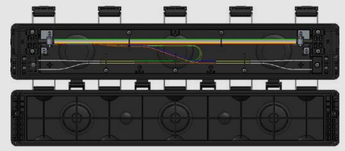
Fusion Splicing
Branch Cable connection
(Left and Right 2ports each)

Mid-span Closure access by stripping 130cm outer jacket. Storing cable slack inside of it.



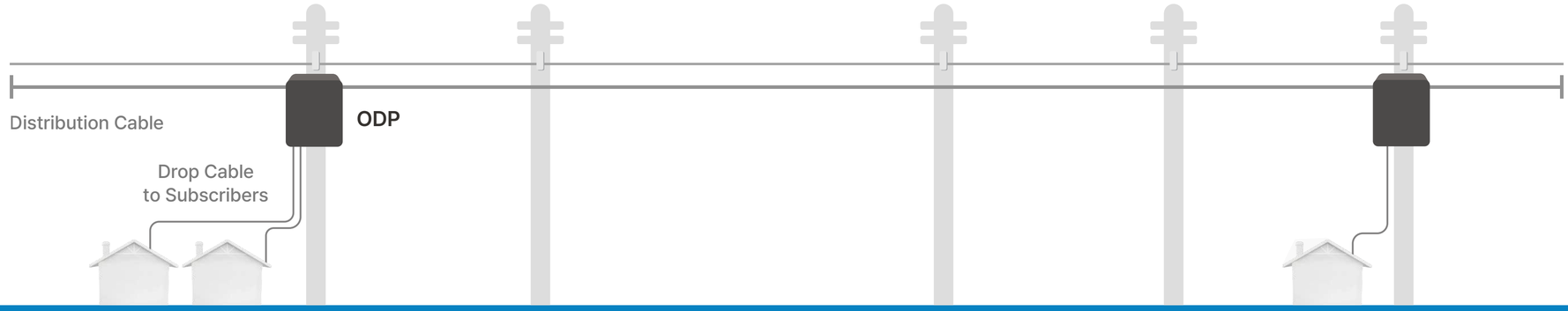
SWIFT-FX for Existing FTTH Network

Only SWIFT-FX Any place **Mid-span Closure** access on the distribution cable installed **without slack.** Flexible network expansion based on subscriber growth.

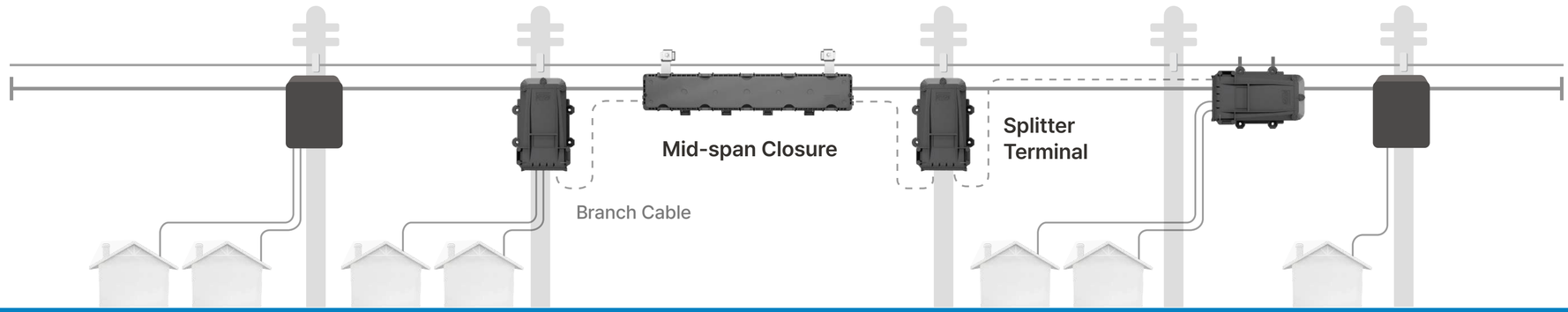


Stripping 45cm outer jacket

1 Installing **when** laying distribution cable



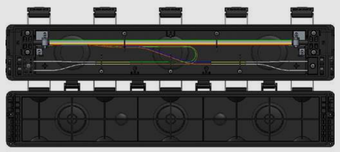
Before. Existing FTTH deployments with distribution cables and ODPs



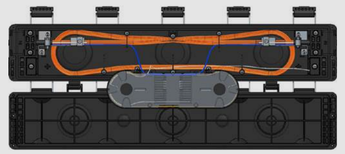
After. Apply SWIFT-FX anywhere in the existing FTTH network

SWIFT-FX for Existing FTTH Network

Mid-span Closure is additionally applied where cable slack is reserved.

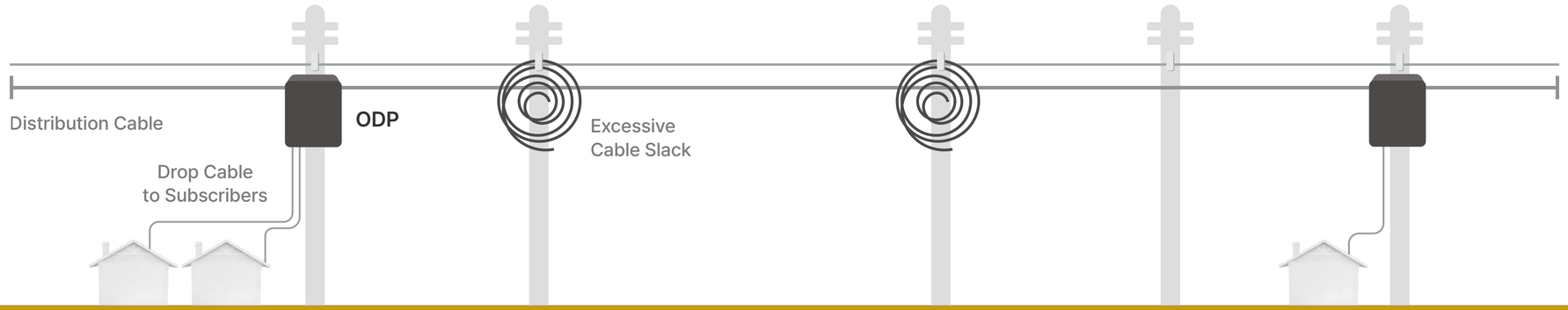


Stripping 45cm outer jacket

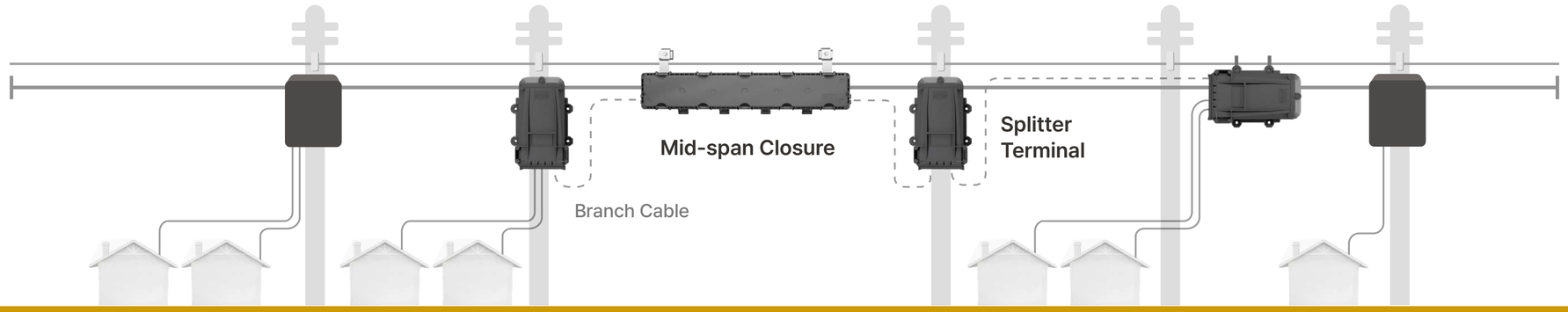


Stripping 130cm outer jacket

2 Installing after laying distribution cable - 1



Before. Existing FTTH network with reserved cable slack



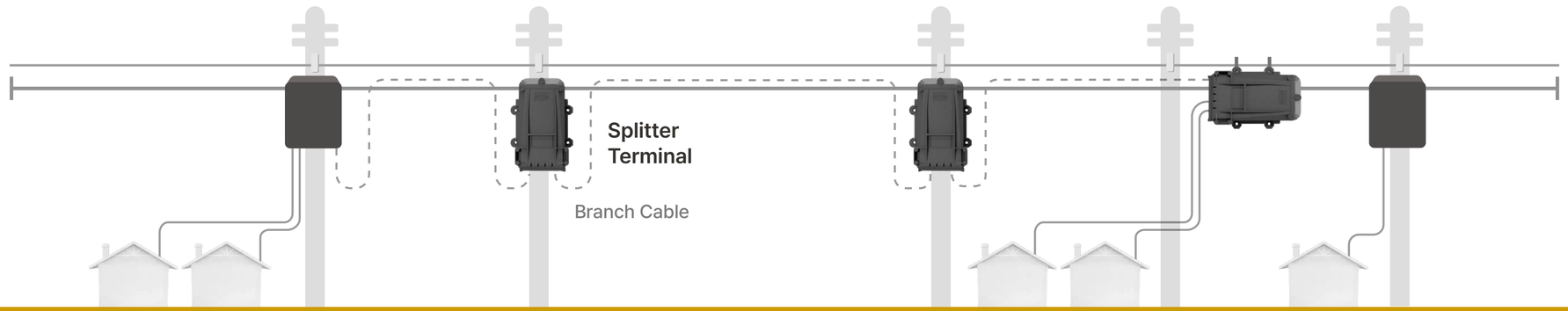
After. Apply SWIFT-FX solution where cable slack is reserved

SWIFT-FX for Existing FTTH Network

Apply branch cables from the installed ODP to the SWIFT-FX Terminal.
Mid-span Closure is not required.

2 **Installing after laying distribution cable - 2**

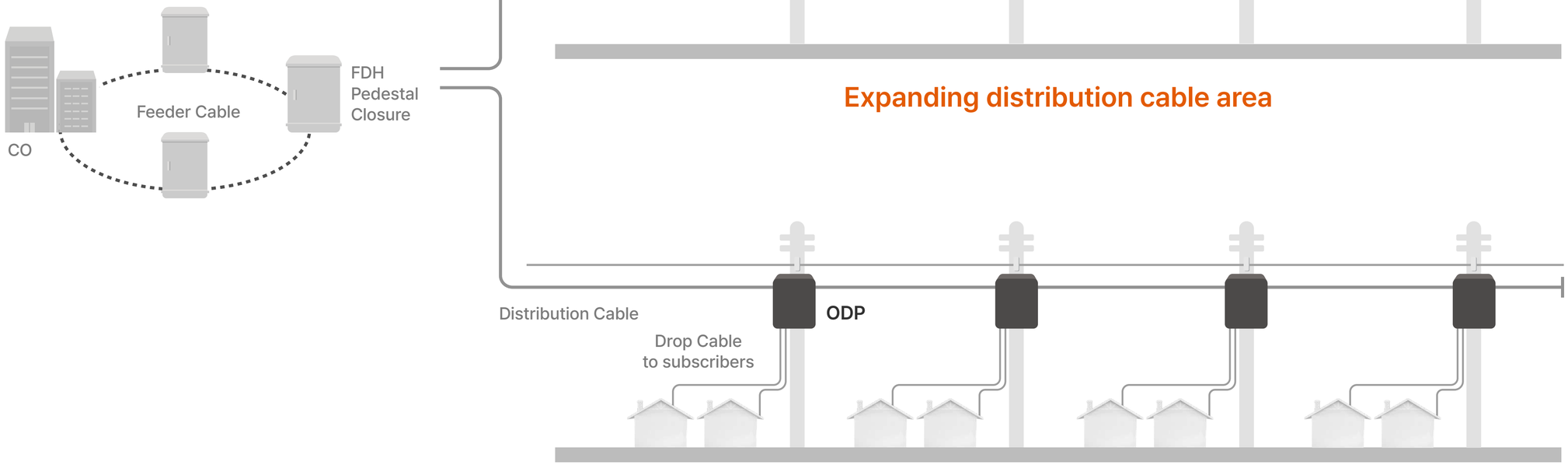
Before. Existing FTTH deployments with distribution cables and ODPs



After. Connect installed ODP to SWIFT-FX terminal

SWIFT-FX for Expanding FTTH Network

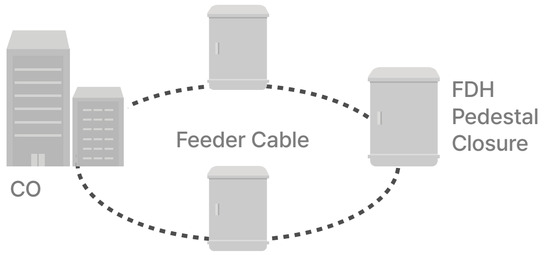
Expanding distribution cable area

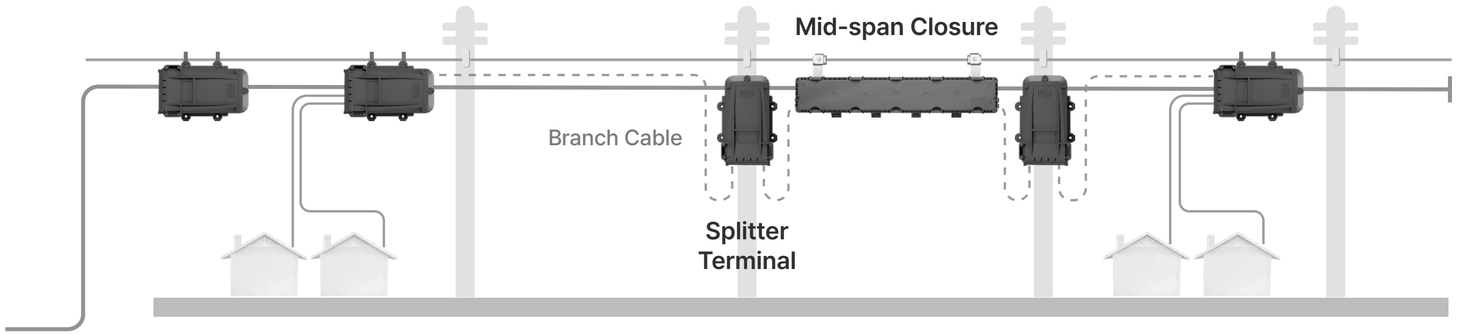


Existing distribution cable area & opened network

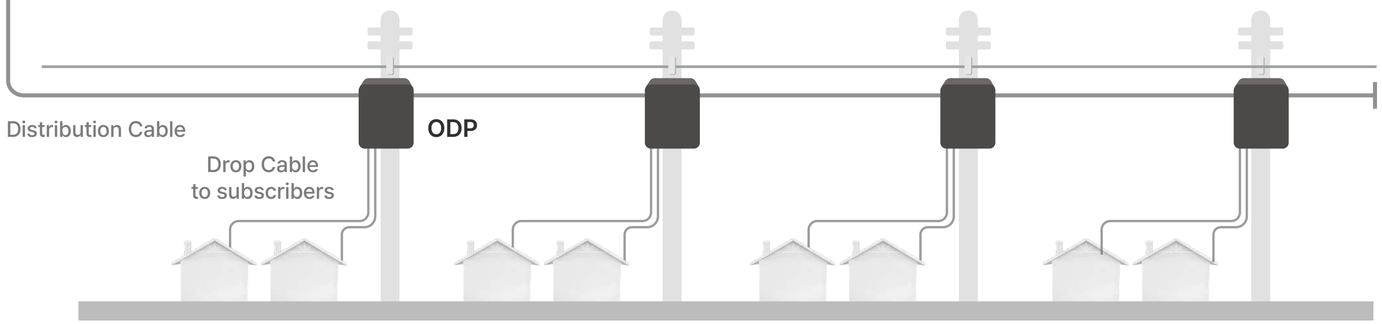
SWIFT-FX for Expanding FTTH Network

Expanding distribution cable area





SWIFT-FX can be applied anywhere in the expanding distribution cable area



Existing distribution cable area & opened network

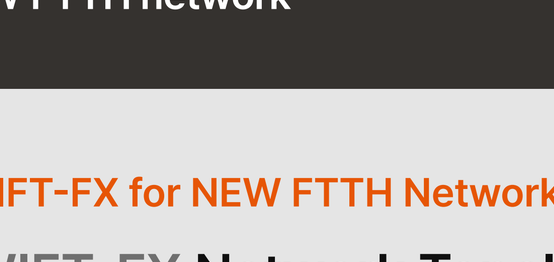
SWIFT-FX for NEW FTTH Network

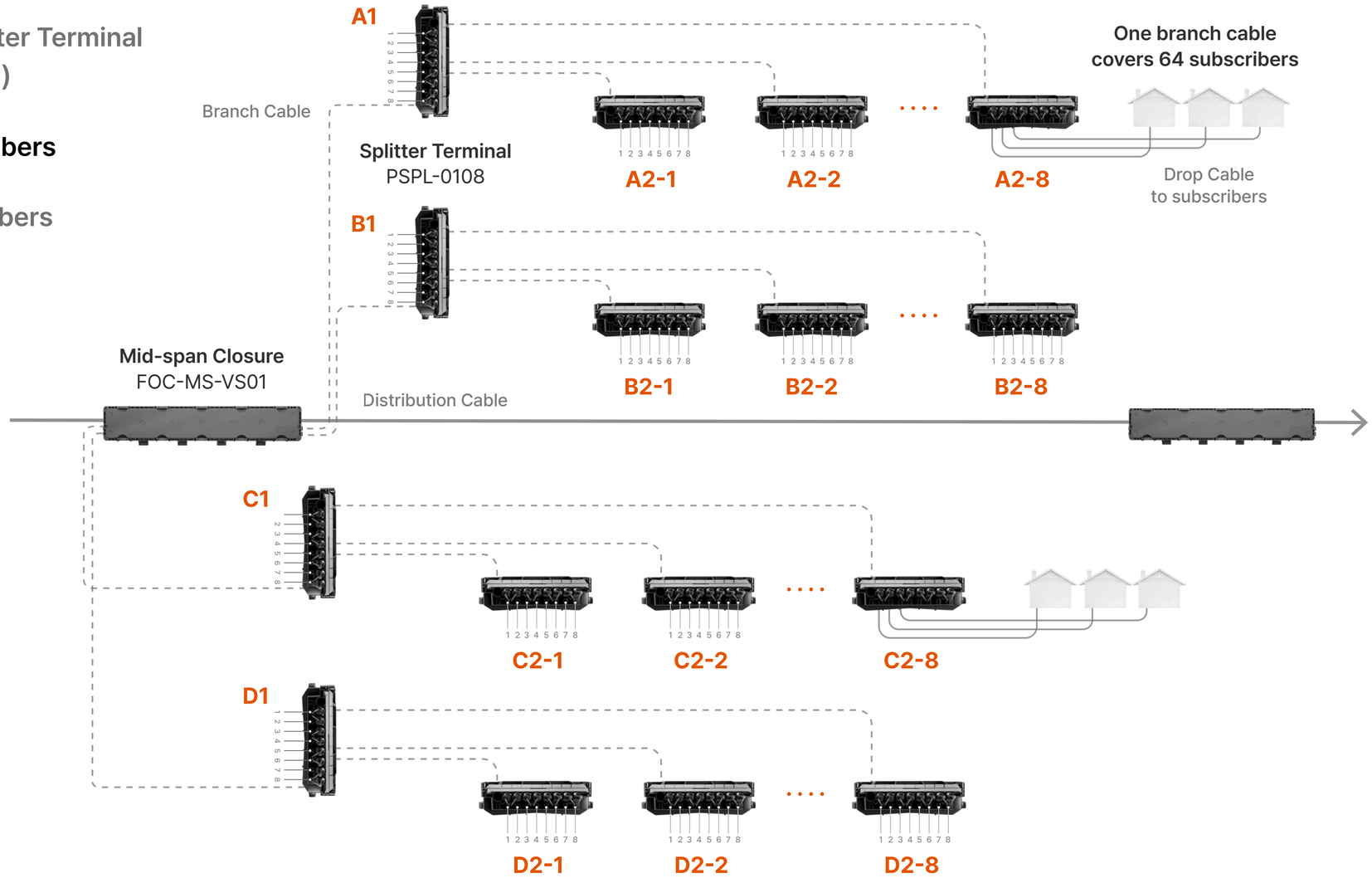
SWIFT-FX Network Topology

Mid-Span Closure → PSPL Hardened Splitter Terminal
→ PSPL Hardened Fusion SOC (KF4A-HDC)

One Mid-Span Closure covers 256 Subscribers

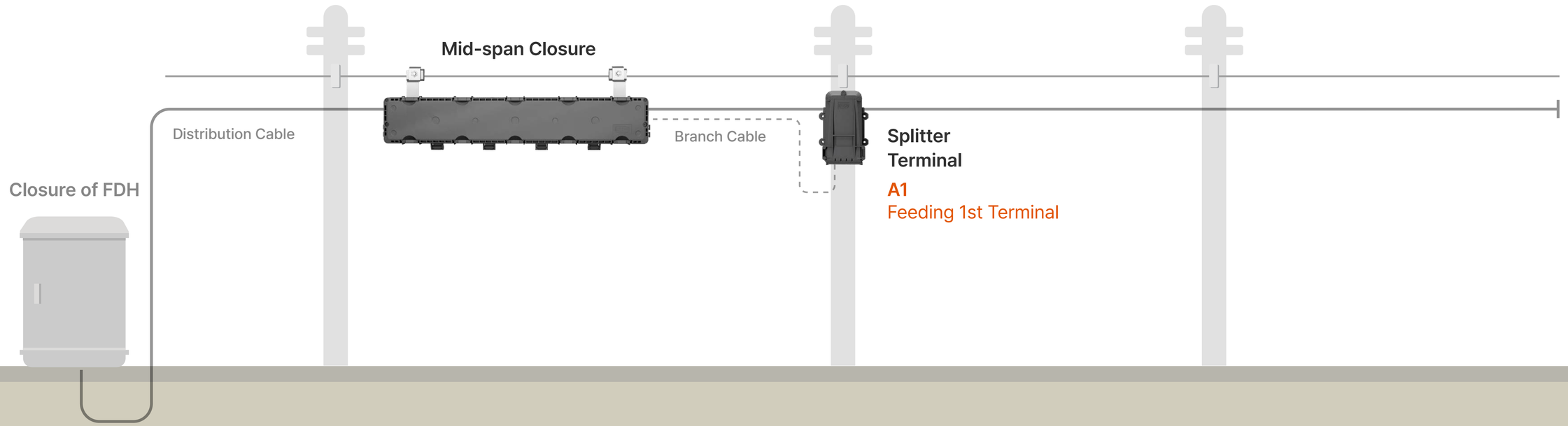
Mid-span Closure → 4 Branch Cables,
Each has 64 subscribers





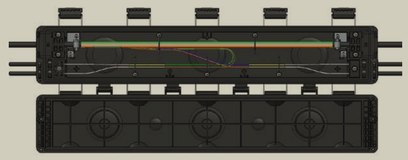
SWIFT-FX for NEW FTTH Network

SWIFT-FX on the Aerial Infrastructure



Step 1 Installing Mid-Span Closure on the distribution cable, whether it is being installed or has already been installed The branch cable, spliced with the fiber in the closure, connects to the 1st input splitter terminal.

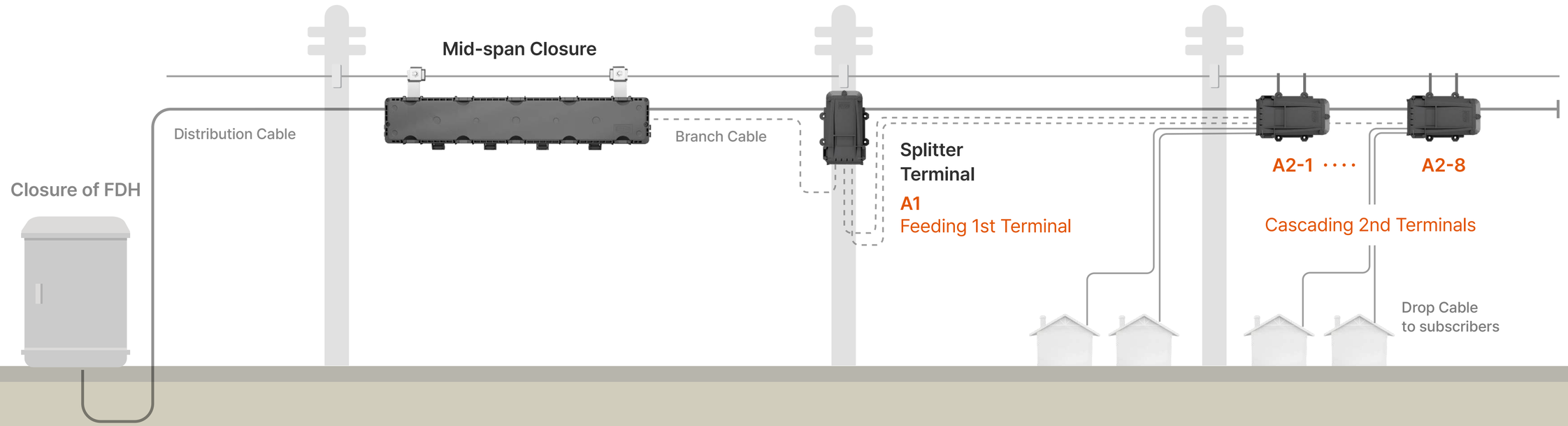
4 Branch
Mid-span Closure



Dimension(mm) : 570 × 100 × 60
Distribution Cable Port
: One port each In & Out
Feeding Cable Port
: 2 ports each at left and right side

SWIFT-FX for NEW FTTH Network

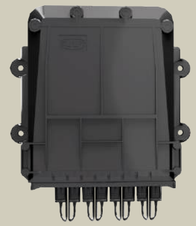
SWIFT-FX on the Aerial Infrastructure



Step 2 Connect the output of the 1st terminal to the input of the 2nd terminal (PSPL Hardened FSOC + KF4A-HDC).

Step 3 Connect the output of the 2nd terminal to the subscriber using a drop cable (PSPL Hardened FSOC + KF4A-HDC).

Feeding 1st and Cascading 2nd PSPL Terminal



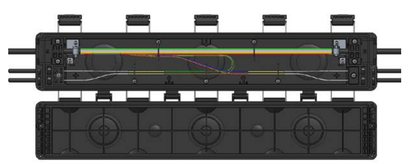
Dimension(mm) : 203 × 140 × 84
Input : 1port
Output : 8 ports
Mating : Push & Pull, SC/APC

SWIFT-FX for NEW FTTH Network

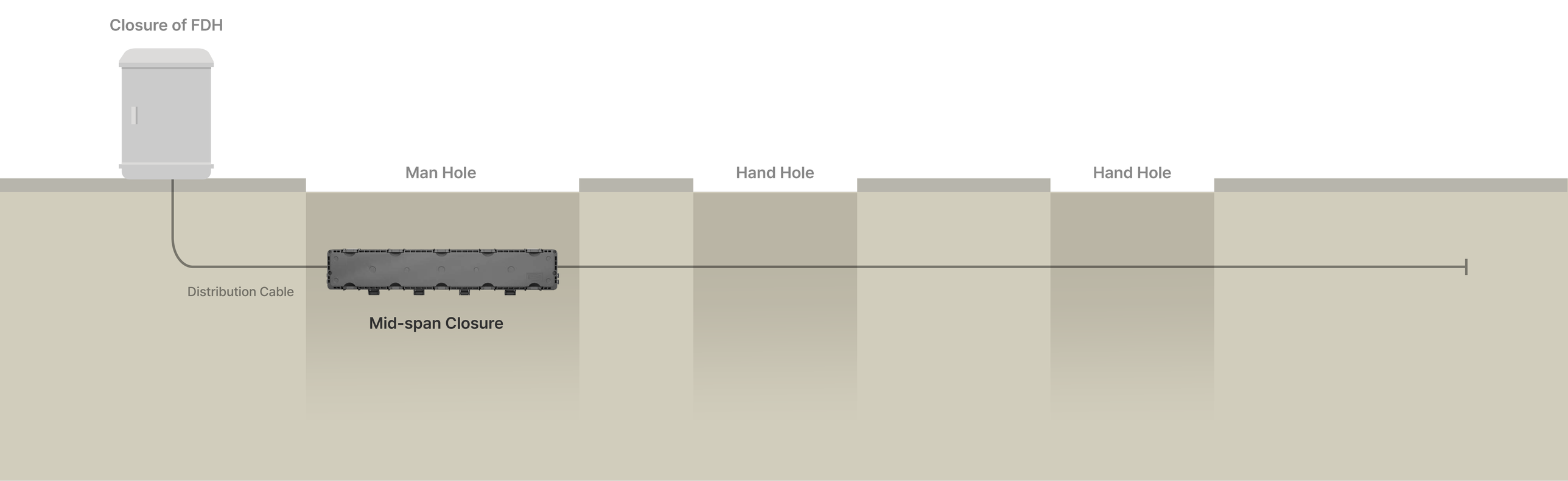
SWIFT-FX on the Underground Infrastructure

Step 1 Installing Mid-Span Closure on the distribution cable, whether it is being installed or has already been installed The branch cable, spliced with the fiber in the closure, connects to the 1st input splitter terminal.

4 Branch Mid-span Closure



Dimension(mm) : 570 × 100 × 60
Distribution Cable Port
: One port each In & Out
Feeding Cable Port
: 2 ports each at left and right side



SWIFT-FX for NEW FTTH Network

SWIFT-FX on the Underground Infrastructure

Step 2 The 8 output ports of the double-step terminal are connected to the input port of the 2nd terminal via branch cables. The remaining 8 ports are connected to subscribers via drop cables through on-site fusion splicing.

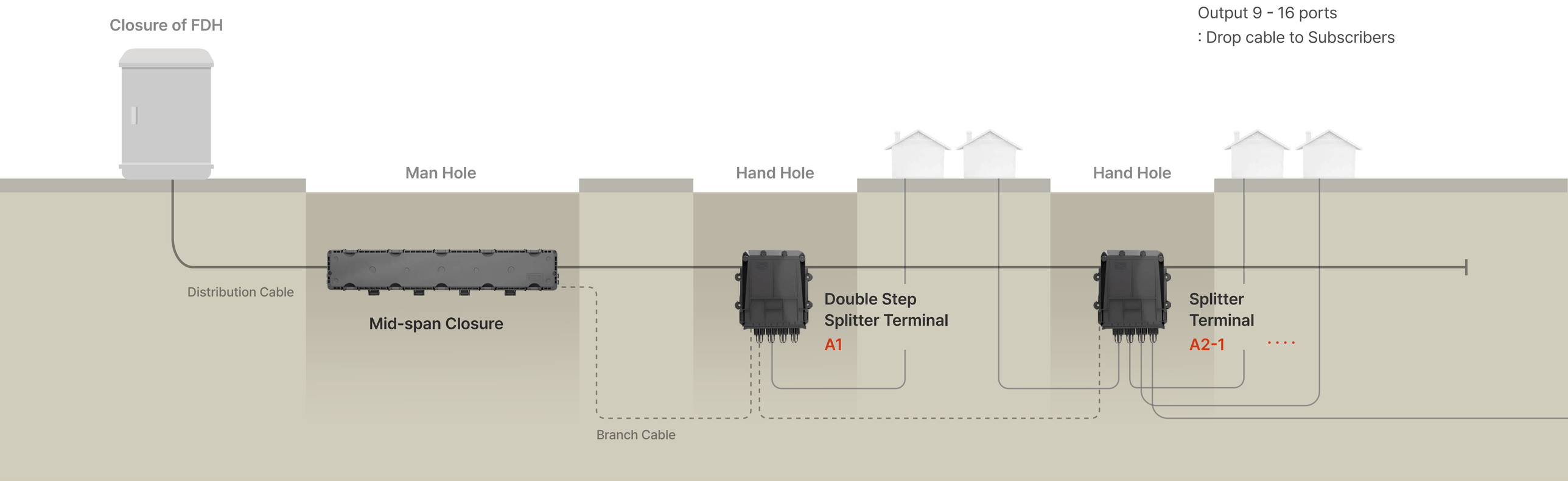
Step 3 Connect the output of the 2nd terminal to the subscriber using a drop cable (PSPL Hardened FSOC + KF4A-HDC).

Double Step Splitter Terminal

Dimension(mm) : 203 × 200 × 84
Input : 1port
Output : 16 ports
Mating : Push & Pull, SC/APC

Output 1 - 8 ports
: Branch cable to 2nd Terminal

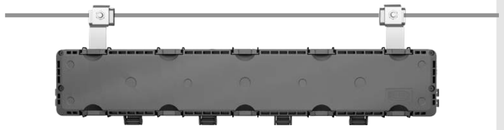
Output 9 - 16 ports
: Drop cable to Subscribers



Mid-span Closure and SWFT-FX Products

Mid-span Closure

Design to mid-span cabling access

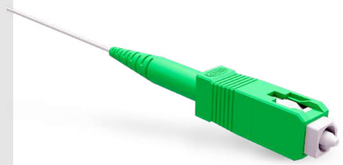


SPL Terminal (Push-Pull mating)

Push-Pull mating technology
Mating with PSPL hardened fusion connector
Mounting : pole, stand, handhole, wall

Branch Cable & Drop Cable

Flat cable (8.1mm x 4.5mm),
Aerial application (Pole to Pole)



Fusion Splice On Connector (Indoor)

No cable slack, Just-In-Length installation
Inventory efficiency
Assembled on KF4A (All-In-One splicer)

Hardened FSOC and KF4A

Push-Pull mating technology
No cable slack, Just-In-Length installation
Inventory efficiency & Small form factor
Assembled on KF4A (All-In-One splicer)

Fiber Optic Outlet (Rotatable)

0.9mm invisible cable
Up to 40meter cable length