FTTH Network

Preconnectorized Deployment Solutions
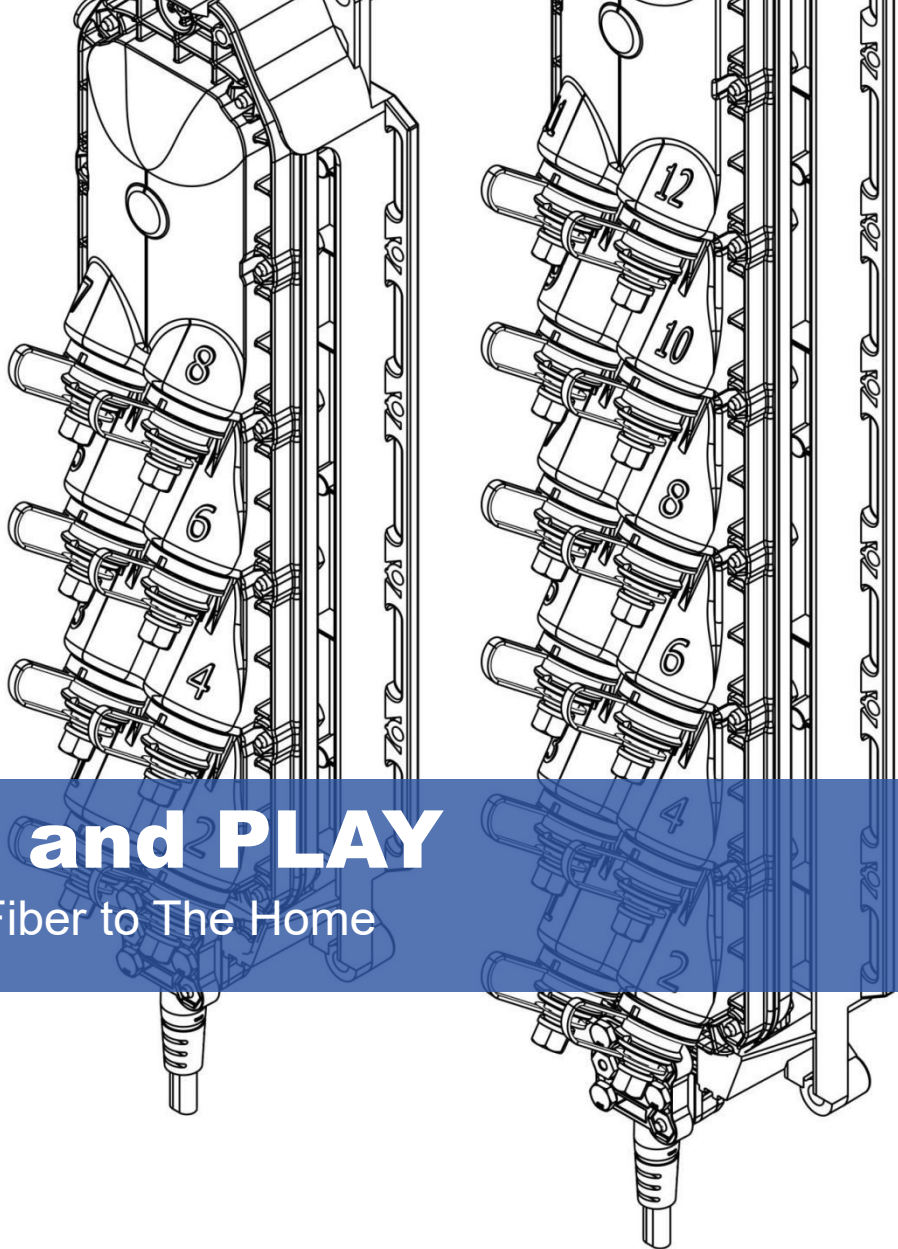
2023
PRODUCTS CATALOGS

neatel

Exploring More Connectivity Solutions

PLUG and PLAY
Bring Fiber to The Home

INTRODUCTION

The concept of outdoor waterproof pre-connected ODN provided by **NEATEL** itself hopes to simplify fiber splicing and improve installation efficiency. The main consideration of our waterproof pre-connected concept products is that the labor cost is relatively low. Many parts are tested and assembled in the factory in advance, which makes the user install faster, plug and play, and simple maintenance. The outdoor MST Boxes no need to be opened repeatedly, and overhead splicing is not often performed. After knowing the principle and installation mode of the product, even low skilled personal can simply install and use it.

NEATEL's SuperTap® Solution series products has relatively high requirements for factory assembly, especially the various types of pre-connected cables including MPO, LC duplex and SC simplex stable data transmission, and extremely high requirements for waterproof performance, tensile strength, and UV aging resistance. **NEATEL** has passed the ISO9001 quality system certification. Quality control of priority saying that our technology in R&D and producing process both very mature, which can meet the use requirements of major communication operators in various countries.

Visit us at

- www.neatel.com -
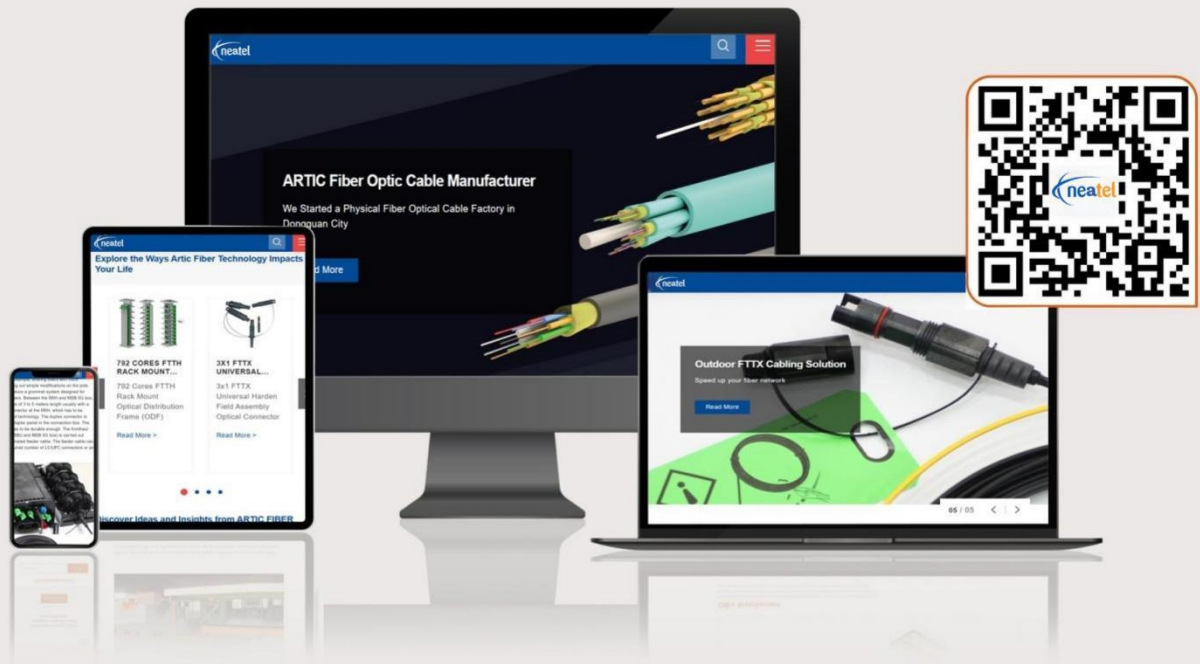
Review our technical files, manuals, videos and catalogs at

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NEATEL SuperTap®
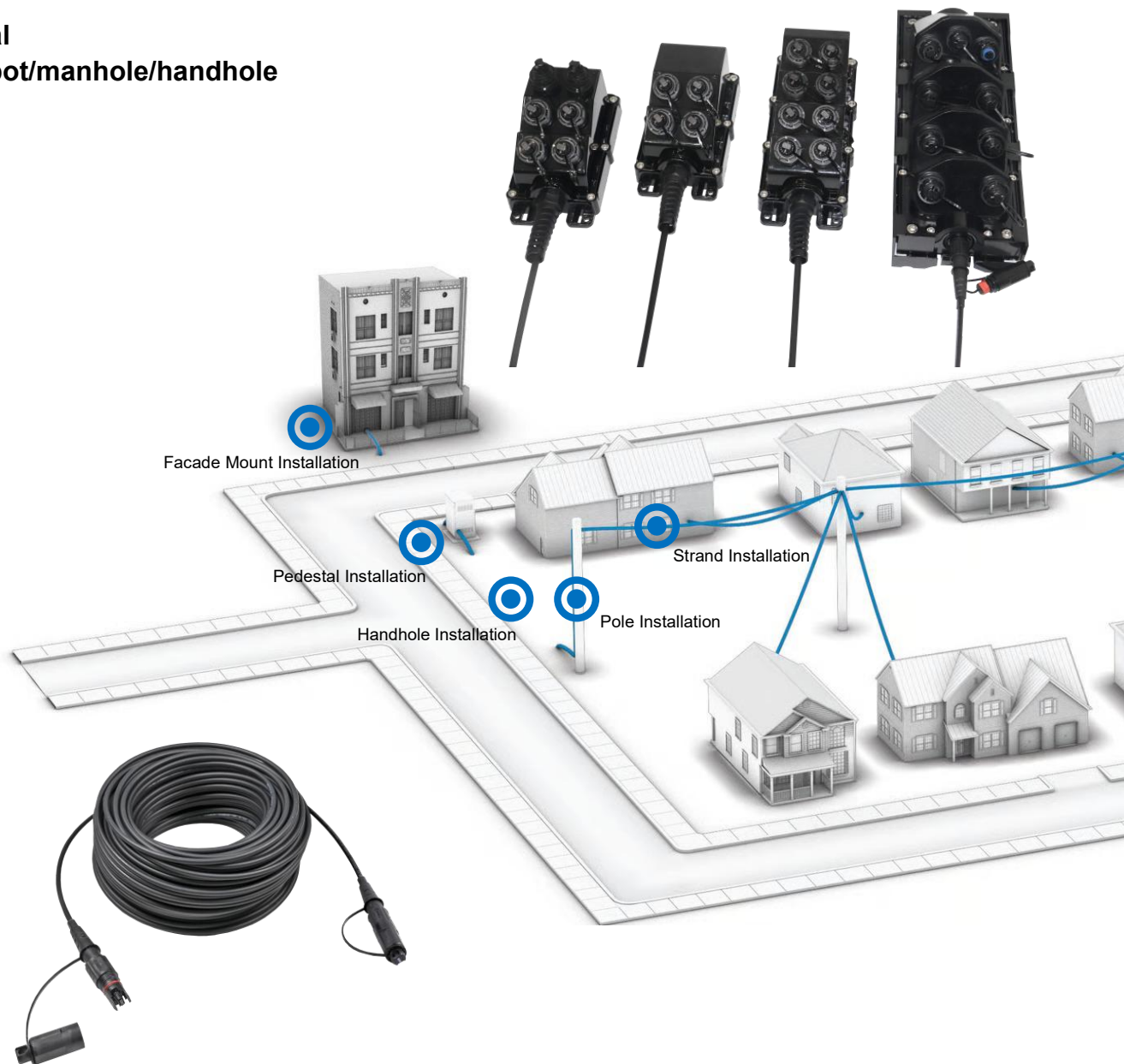# SOLUTIONS

NEATEL OPTIC TECHNOLOGY CO.,LTD

Application

NEATEL SuperTap® Solution

THE SMALL FOOTPRINT FITS IN EXISTING INFRASTRUCTURE TO LIMIT CIVILS COSTS

Where do NEATEL SuperTap® Solution Terminals fit within an optical communications network?

- **Pole**
- **Strand/messenger**
- **Façade**
- **Pedestal**
- **Flowerpot/manhole/handhole**

Facade Mount Installation

Pedestal Installation

Handhole Installation

Pole Installation

Strand Installation

NEATEL - Phone: +86 135 4428 9665 - E-mail: sales@neatel.com - www.neatel.com

Cable Assembly

NEATEL SuperTap® Solution

NEATEL SuperTap® cable assemblies provide the most cost-effective method of deploying optical fiber in outside plant distribution networks at speeds significantly fast than traditional field installations.The assemblies guarantee an easy, one-step connection system with the combined push-pull insertion and nut-style mechanical latch, **NEATEL** SuperTap® cable assembly provides quick installation solutions and has good performance on mating with SuperTap® adapter. Cable can be armored or non-armored. NEATEL SuperTap® connector utilizes optical fiber cables upon which network access points are pre-installed at customer-specified locations along the length of the cable.

► Technical Parameter

Standard	Comply with GR-3120, GR-3152, IEC 61753-1, IEC 61754-4
Insertion Loss (SuperTap®/SC/LC)	Max.0.60dB, Min 0.35dB (8° Angled APC)
Insertion Loss (SuperTap®/MPO)	Max.0.60dB, Min 0.35dB (8° Angled APC)
Return Loss (SuperTap®/SC/LC)	Min 60dB (8° Angled APC)
Return Loss (SuperTap®/MPO)	Min 60dB (8° Angled APC)
Operation Temp.	-40℃ to +85℃
Storage Temp.	-40℃ to +85℃
Cable Dimension	5.0mm, 7.0mm, 4.5x7.0mm Flat Drop
Dust Cap Max.Pulling Force	100lb
Waterproof Level	IP68

※ *Note: SuperTap/SCA harden connector is compatible for Corning OptiTap™*
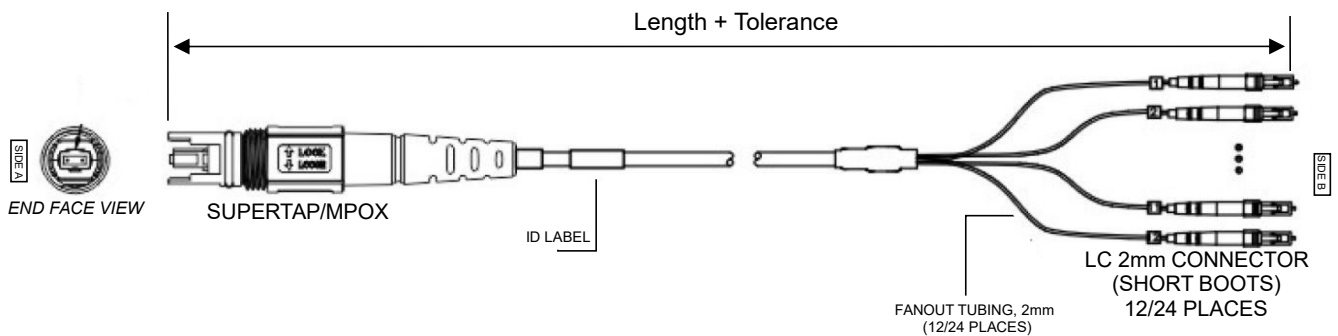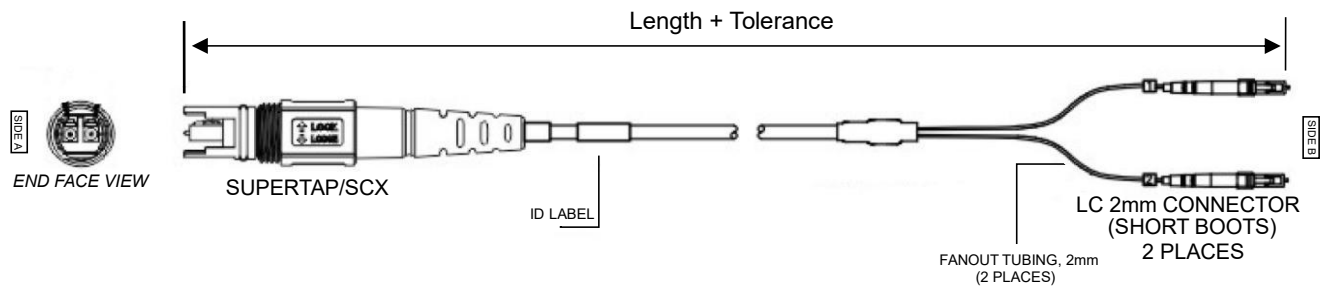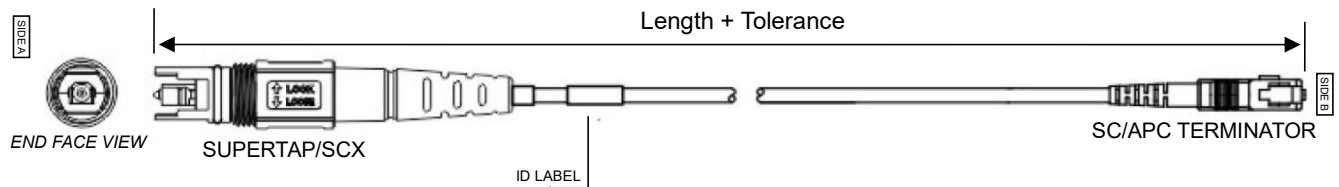
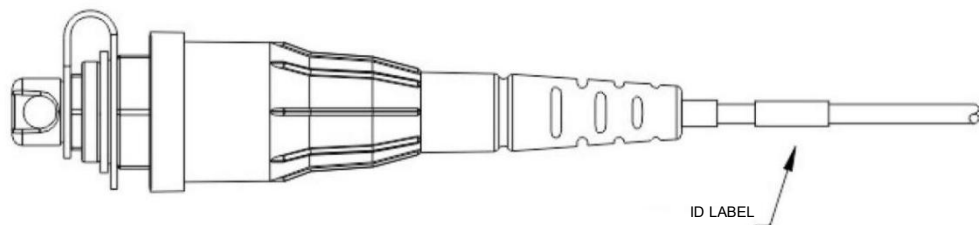# Cable Assembly

NEATEL SuperTap® Solution

SuperTap/SCX

SuperTap/LCX

SuperTap/MPOX

SIDE A
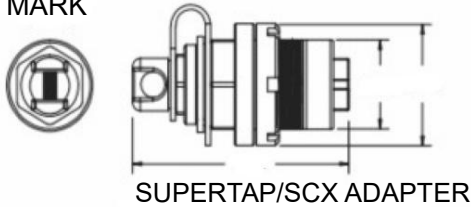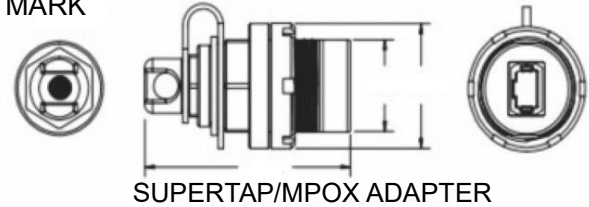
END FACE VIEW

Length + Tolerance

SUPERTAP/SCX

ID LABEL

SC/APC TERMINATOR

SIDE B

SIDE A

END FACE VIEW

Length + Tolerance

SUPERTAP/SCX

ID LABEL

FANOUT TUBING, 2mm
(2 PLACES)

LC 2mm CONNECTOR
(SHORT BOOTS)
2 PLACES

SIDE B

SIDE A

END FACE VIEW

Length + Tolerance

SUPERTAP/MPOX

ID LABEL

FANOUT TUBING, 2mm
(12/24 PLACES)

LC 2mm CONNECTOR
(SHORT BOOTS)
12/24 PLACES

SIDE B

SuperTap PLUG & SuperTap FEMALE MATING

ID LABEL

SuperTap Adapter Family

SuperTap/SCA MATING

SuperTap/LCU MATING

SuperTap/MPOU MATING

Cable Assembly

NEATEL SuperTap® Solution

DUST CAP
MARK

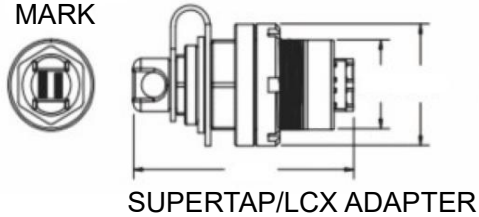SUPERTAP/SCX ADAPTER

DUST CAP
MARK

SUPERTAP/MPOX ADAPTER

DUST CAP
MARK

SUPERTAP/LCX ADAPTER

► Ordering Information

SuperTap Plug Cable Assembly Order Information

SIDE A	SIDE B	CABLE TYPE	FIBER Q'TY	FIBER TYPE	LENGTH
SPX: SuperTap/SCX Plug	SPX: SuperTap/SCX Plug	5: 5.0mm Round Cable	1: 1F	D: G652D	
LPX: SuperTap/LCX Plug	LPX: SuperTap/LCX Plug	7: 7.0mm Round Cable	2: 2F	A2: G657A2	xxxM
MPX: SuperTap/MPOX Plug	MPX: SuperTap/MPOX Plug	F: 4.5x7.0mm Flat Cable	12: 12 F	O3: OM3	
	Customized		Customized	Customized	

※ Note: "X" in side A&B means polishing type. "A" means 8° polish and "U" means UPC polish

Cable Assembly

NEATEL SuperTap® Solution

SuperTap Female Cable Assembly Order Information

SIDE A	SIDE B	CABLE TYPE	FIBER Q'TY	FIBER TYPE	LENGTH
SFX: SuperTap/SCX Female	SFX: SuperTap/SCX Female		1: 1F	D: G652D	
LFX: SuperTap/LCX Female	LFX: SuperTap/LCX Female	5: 5.0mm Round Cable	2: 2F	A2: G657A2	xxxxM
MFX: SuperTap/MPOX Female	MFX: SuperTap/MPOX Female		12: 12 F	O3: OM3	
	Customized		Customized	Customized	

※ *Note: SuperTap female connector only suitable for 5.0mm round cable*

"X" in side A&B means polishing type. "A" means 8° polish and "U" means polish

SuperTap Adapter Order Information

PART NUMBER	ITEM DESCRIPTION
TAP-SC-ADP	SuperTap/SC Adapter
TAP-LC-ADP	SuperTap/LC Adapter
TAP-MPO-ADP	SuperTap/MPO Key up-down Adapter
TAP-MPO-ADP1	SuperTap/MPO Key up-up Adapter

※ *Note: SuperTap female connector only suitable for 5.0mm round cable*

"X" in side A&B means polishing type. "A" means 8° polish and "U" means polish

► Features and Benefits

* Provides moisture and dust protection for use in harsh industrial environments.
* IP68 protection, salt-mist proof, humidity proof, dust proof.
* Drastically reduces field splicing with a predetermined loss at each waterproof tether access point.
* Utilize traditional field installation techniques for aerial, below ground and duct applications.
* Reduce installation time by as much as 50 percent per network access point.
* 100% optically tested to ensure quality performance assemblies.
* Available in single mode and multimode styles to work with any common fiber type.
* Broad temperature range (-40 to+85°C)is ideal for indoor or outdoor applications.
* Mark on dust cap can help people who cannot distinguish between colors to operate.

Multi-ports Service Terminals

MST Boxes

NEATEL SuperTap® Solution

Optical distributed taps, known also as uneven-split or asymmetric terminals, are most appropriate for rural FTTx applications where lean distribution runs are desired. Each run supports 32 or 64 subscriber ONTs with cascaded terminals utilizing preconnectorized single fiber assemblies in the distribution. The fully pre-connectorized system reduces installation costs while increasing the speed of deployment.

This solution is comprised of an array of power split ratios to customize each run for optimal signal reach. Tap splits of 90/10, 85/15, 80/20, 70/30, and 60/40 split ratios can be cascaded, or daisy-chained, to accommodate a wide variety of deployment scenarios.

Each terminal includes both the uneven, asymmetric splitter as well as a standard 1x8 splitter to support 8 customer connections and pass through to subsequent terminals in the run in a single form factor. The number of terminals in an individual run and the variation of terminals used is dependent upon the distances between terminals and subscribers to maintain an acceptable link loss budget.

By limiting the number of terminal options and utilizing pre-connectorized **NEATEL** SuperTap® drop cables, FTTx designs and material inventories can be simplified.

► Features and Benefits

SuperTap Cable Assembly Connector Ports for Drop Termination

* Lower installation cost and increased speed of customer inter-connection.

Stubless Compact Terminal

* Reduces distribution cable fiber count; allows deferring cost of splitter until the first customer is connected, without requiring splicing.

Full Pre-Connectorized Single Fiber Architecture

* A cost effective solution that diverts a portion of power to support a typical run of 32 to 64 ONTs.

Factory-Installed and -Tested Connectors

* Connector designs providing stability, reliability, and durability.

Supports Various Power Split Ratios

* Solutions available to accommodate numerous combinations of power split ratio designs.

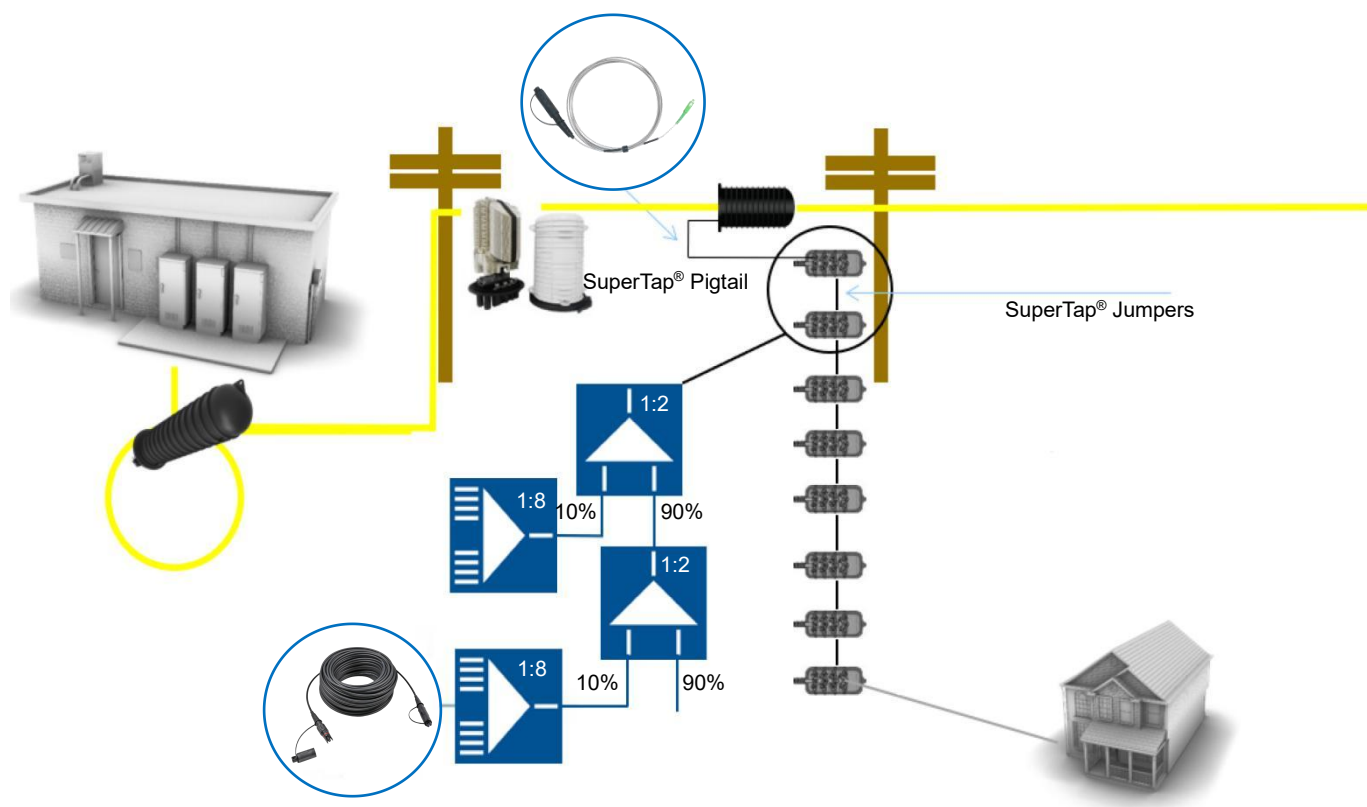# MST Boxes

NEATEL SuperTap® Solution

      The distributed tap architecture leverages a cascade network of uneven-split, or asymmetric split, terminals to ensure sufficient signal reaches subscribers along the route. As the first terminal is closest to the signal source (OLT), a lower amount of signal is needed to feed the subscribers served from terminal one's 1x8 splitter. In many cases, the first terminal will utilize a 90/10 power split where the 10% feeds the subscriber ports and the 90% passes on to feed subsequent terminals downstream. Subsequent terminals in the chain either maintain a similar uneven-split ratio or a higher ratio of local power depending upon the distances between terminals and the total link budget. In higher density environments with short distances between terminals, operators may serve more than the standard 32 or 64 subscribers. However, in low density rural runs spanning long distances, operators may serve fewer subscribers per route as this is heavily dependent upon the link budget.

Architectural Diagram

SuperTap® Pigtail

SuperTap® Jumpers

1:2

1:8   10%   90%

1:2

1:8   10%   90%

MST Boxes

NEATEL SuperTap® Solution

► Specifications

Mechanical Characteristics

Application	Aerial, Duct, Direct Buried
Dimension	381 mm x 101 mm x 147 mm (15.0 in x 4.0 in x 5.8 in)
Weight	1.1 kg (2.4 lb)
Packaging	Individual Packaging
Product Type	Distributed Tap Stubless Multiport
Termination	OptiTap Connector Assemblies

Optical Specifications

Splitter Type	Insertion Loss, Maximum per Multiport Tap Terminal	Insertion Loss, Typical per Multiport Tap Terminal	Reflectance, Typical
Multiport-Splitter 1x2 (90/10)	1.20	0.74	-55
Multiport-Splitter 1x8 (90/10)	22.20	19.06	-55
Multiport-Splitter 1x2 (85/15)	1.50	1.00	-55
Multiport-Splitter 1x8 (85x15)	20.00	17.52	-55
Multiport-Splitter 1x2 (80/20)	1.80	1.29	-55
Multiport-Splitter 1x8 (80/20)	18.60	16.24	-55
Multiport-Splitter 1x2 (70/30)	2.40	1.77	-55
Multiport-Splitter 1x8 (70/30)	16.80	14.83	-55
Multiport-Splitter 1x2 (60/40)	3.10	2.72	-55
Multiport-Splitter 1x8 (60/40)	15.50	13.42	-55

Environmental Characteristics

Temperature Rating	-20 to +85°C (-4 to 185°F)
RoHS	Free of hazardous substances according to RoHS 2011/65/EU

| 90/10	85/15	80/20	70/30	60/40	1/8

Others

1x4 FST Fiber Squid Splitters MINI Terminal Male to Female

Splitter Access Terminal provide the most cost-effective method of deploying optical fiber in outside plant distribution networks at speeds significantly fast than traditional field installations.

The assemblies guarantee an easy, one-step connection system with the combined push-pull insertion and nut-style mechanical latch. SAT provides quick installation solutions and has good performance on mating with H Optitap Inline SC/APC connector. Cable with ultra flexible TPU tube protection. This MultiPort flex splitter terminal is designed for use in outside plant fiber access networks, where a splitter is preferred. In particular, its reliability makes it ideal for fiber to the home (FTTH) applications. This innovative terminal provides sealed environmental protection, as well as easy incremental connection of subscriber drop cables. And this MultiPort flex splitter terminal is built with Corning® ClearCurve® optical fiber the revolutionary bend-insensitive optical fiber and cable that ensures virtually no attenuation loss, even in tight bends with a bend radius of 5mm.

This SAT MultiPort accelerates FTTH community acceptance through its ability to fit inside some of the most compact pedestals and handholes on the market. The terminal is equipped with either the OptiTap® or in-line OptiTap as the input connector. Designed to effortlessly enhance your network reach, it offers the option to branch off to an existing terminal and add extra ports when needed. It is also available in three configurations: 1x2, 1x4, and 1x8 splitter terminals. This allows for lower initial deployment costs by connecting multiple drops to one fiber.
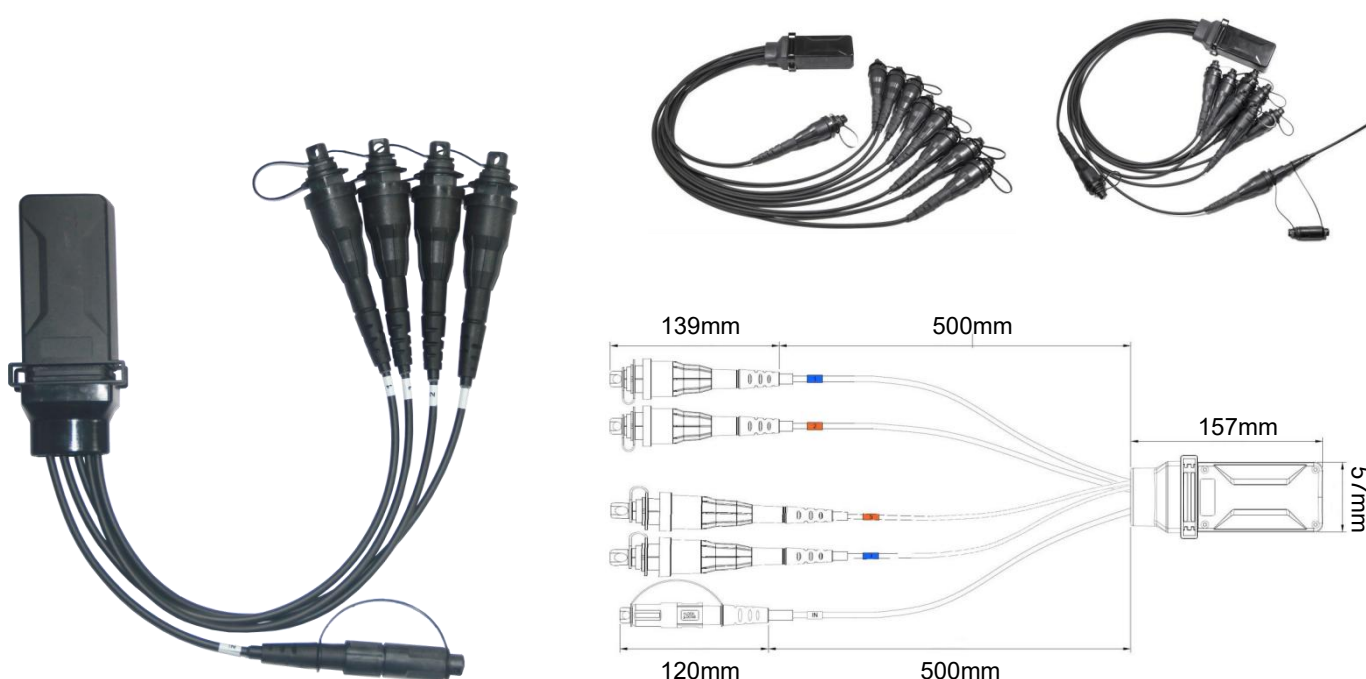
NEATEL OPTIC TECHNOLOGY CO.,LTD

No.812, Zhuangyu Business Building, Songgang Str,
Baoan Zone, Shenzhen 518105, China

sales@neatel.com
www.neatel.com
+86 135 4428 9665