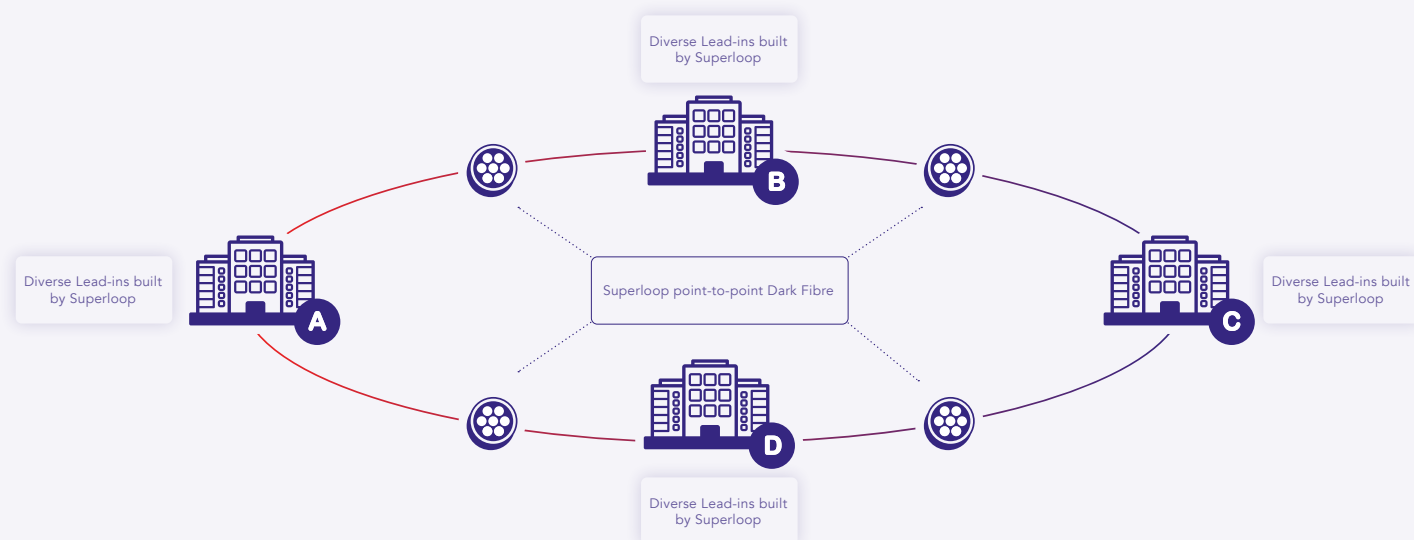




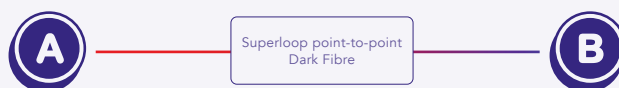
Dark Fibre.



THE LOOP



POINT-TO-POINT



PRODUCT FEATURES:

- Dark Fibre, the product, is unlit optical fibre sold on Superloop's fibre infrastructure
- Sold as a passive service, customers are responsible for plugging their own devices at the end of the Dark Fibre service
- No bandwidth restrictions from Superloop, being a passive service. Customer end devices and Optics control the use and limit on bandwidth
- Layer 1 (OSI Model) service with no dependency on Superloop's active network
- Each service is P2P, dedicated between end-points, spliced end-to-end
- Latency is dependant only on distance. High performance product due to zero overhead from Superloop (doesn't go through Superloop switches and routers) and highly secure. Superloop does not have visibility on customer traffic traversing Dark Fibre services.
- Minimal points of failures being only layer 1

PRODUCT RULES:

- Superloop DF can be deployed as Point-to-Point and/or Loop
- Each service is deployed as a Point-to-Point segment
- Loop topology including >3 sites require pre-sales engagement
- Standard Product Offering:
 - 2 Cores or 1 Pair per service default
 - Can only be offered within a Metro Area/single state. NOT available interstate, International
 - Standard handoff is LCA (LC-Angled)
 - Pricing is distance based

TYPICAL DEPLOYMENT:

A Dark Fibre service is physically spliced along the designated run, covering any and all joints and pits along the way.

A Dark Fibre service does not enter the Superloop active network at any point. The only demarcations will be the FTP (or FPP) and the FTP ports in a commercial building and DC, respectively. The ports are passive, so is the service, meaning the customer is responsible for using the appropriate Optics (SFPs) to light the service. Service handoff in a DC needs to be extended by Cross-Connects from the Superloop Demarcation. This process to be managed by customer.

INSTALLATION PROCESS:

Upon receiving an order Superloop will liaise with Building Management, Local Authorities and relevant Third Parties to organise all approval to complete any installation required to get Superloop cables and infrastructure to the locations required by the customer.

Once the cables are installed (can be completed concurrently with installations, or will commence immediately if the Superloop infrastructure already exists).

Superloop will bi-directionally test the fibres delivered and supply Insertion Loss results at 1550 and 1310 and OTDR results at 1550.

This installation process enables Superloop to deliver a consistent quality Dark Fibre product.

TYPICAL DEPLOYMENT & INSTALLATION



Parameter	Value
Acrylate Coating Diameter	245 ± 5 µm
Cladding Diameter	125 ± 1 µm
Cladding Non-circularity	≤1.0%
Core/Cladding Concentricity Error	≤0.5 µm
Attenuation at 1310 nm	0.40 dB/km maximum increasing by .01 dB/km/year on the anniversary of the first RFS Date for the remainder of the Service Term
Attenuation at 1550 nm	0.3 dB/km maximum increasing by .01 dB/km/year on the anniversary of the first RFS Date for the remainder of the Service Term
Mode Field Diameter at 1310 nm Cabled	9.2 ± 0.4 µm
Cutoff Wavelength	Less than 1260 nm
Minimum Zero Dispersion Wavelength	1300 nm
Maximum Zero Dispersion Wavelength	1322 nm
Dispersion Slope (maximum at □°)	0.092 ps/(nm ² km)
Dispersion Window 1285 - 1330 nm	3.5ps/(nm.km)
Maximum Dispersion at 1550 nm	18 ps/(nm.km)
Proof Test Strain	1.0%

Glossary of Terms	
Cores	Core means the cable count for fibre. 2x Cores = 1 Pair. 1x Core is a single strand of fibre and will need Bi-Directional SFP to light.
Optical Distribution Frame (ODF)	An Optical Distribution Frame (ODF) is a frame used to provide cable interconnections between communication facilities, which can integrate fiber splicing, fiber termination, fiber optic adapters & connectors and cable connections together in a single unit.
FTP/FPP/FOBOT	Stands for Fibre Termination Panel/Fibre Patch Panel/Fibre Optic Break Out Tray . These are passive termination devices for fibre cables, housing an amount of pre-spliced fibre cores. These serve as Superloop Demarcation Points for Dark Fibre services for customers.
SFP	Stands for Small Form-factor Pluggable . Also known as optics, transceivers . These are the modules that plug into the network port of devices and determine what bandwidth will run over a fibre link over specific distances.
LC-A (LC Angled)	Connector type Superloop uses to terminate fibre services.
Latency	Latency refers to the delay before a transfer of data begins following an instruction for its transfer. Latency only applies to the transfer of the data to the service destination but not back again.
RTT/RTD	Round Trip Time/Round Trip-Delay Time Time it takes for a signal to be sent and received over a single link. Often calculated as 2x latency.
Attenuation	Attenuation is a general term that refers to any reduction in the strength of a signal. Sometimes called loss, attenuation is a natural consequence of signal transmission over long distances. The extent of attenuation is usually expressed in units called decibels (dBs).