



Sub-appendix

Access specifikation

Dark fiber Light Business

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1. Background

This sub-appendix specifies the standardized Access Products, interfaces and other technical functions used to build City Networks specific Access Products for Operators and Service Providers. Delivery presupposes that the product can be connected to the operator's / Buyer's equipment through placement products and black fiber connection / s or in another way that City Network/ Seller can approve.

2. Dark fiber Light Business

2.1 The purpose of the access product

The purpose of the Dark Fiber Light Business access is to be able to offer operators a cost-effective fiber access to end customers. The product may only be used to deliver services to specific companies. The product may only be used to establish a connection between an end customer's connection point and node where the operator is established. Node can be an area node and / or MeetMe point.

2.2 Delivery measurement

After installation, delivery measurement of the Access is made and measurement protocols are prepared according to the method described in Robust fiber appendix 2 Robust networks, section 2.5.11 Delivery measurement of fiber connections.

2.3 Limit values

The access must meet the minimum requirements for limit values specified in Robust fiber appendix 2 Robust networks, section 2.5.12.1 Measurement results and limit values for fiber in cable.

3. Technical specifications

3.1 Technical specification Dark Fiber Light Business, Attributes

The table defines the attributes of the product type to create a product portfolio for Operators / Buyers' distribution of End Customer Services through a Dark fiber Access.

Product category: Access products	
Product type: Passive Access: Dark fiber	
Product: Dark fiber Light Business	
ATTRIBUTE (Technical properties)	
Variant:	Dark fiber Light Business
Interface Single mode fiber, 10 / 125µm. The connection interface consists of LC / SC ballasts / connectors in ODF or alternatively in an termination box or fiber tail (patch)	Yes
Type Optical fiber according to the standard ITU-T Rec. G.652C or later or ITU-T G.657 Category A	Yes
Attenuation Mean value in fiber cable for each wavelength range, including splice attenuation and excluding contact attenuation. 1310 nm: Max 0,40 dB/km average 0,37 dB/km 1550 nm: Max 0,25 dB/km average 0,22 dB/km 1625 nm: Max 0,40 dB/km average 0,30 dB/km	Yes
Reflection Reflection attenuation UPC contact: min 50 dB Reflection attenuation APC contact: min 60 dB	Yes
Weld / splice Maximum limit value access network (<10km): 0.25 dB	Yes
Connector Connector SC, according to ITU-T, of type SS-EN 61754-4 Connector LC, according to ITU-T, of type SS-EN 61754-20 Connector FC, according to ITU-T, of type SS-EN 61754-13	Yes
Service Level	SN Bas

3.2 Selective characteristics (Variables)

The table defines the product type variables for creating a product portfolio for Operators / Buyers' distribution of End Customer Services through a black fiber connection.

Product category: Access	
Product type: Passive Access: Dark fiber	
Product: Dark fiber Light Business	
Variable (Selective characteristics)	
Variant:	Dark fiber Light Business
Contract period	Optional
Installation and commissioning customer connection	Yes

4. Other technical functions and descriptions

This chapter is a supplementary description of the technical functions for Access Products and other requirements covered by the Agreement.

4.1 Use of the product

- The product may only be used to connect one (1) end customer
- The product may only be used to establish an Access between an end customer's connection point and node where the operator is established. Node can be an area node and / or MeetMe point.

4.2 Installation of the operator's media converter / CPE

Installation of media converter / CPE can be ordered when ordering Connection. Installation of electrical outlets for media converters is not included. The media converter is attached to the fiber socket or in the nearest living area from the fiber socket and connected to the fiber socket with a patch cable.

4.3 Deviations and additions

Deviations and additions to this appendix must be documented in Appendix Special Conditions.

5. Service Level

<p>5.1 SN BAS</p>	<p>The seller always provides the basic level Service level BAS, as below.</p> <table border="1" data-bbox="451 338 1114 678"> <thead> <tr> <th></th> <th>Cable Breakage</th> <th>Other Errors</th> </tr> </thead> <tbody> <tr> <td>Service time</td> <td>24 hours a day 365 days a year</td> <td>Working days 07.00- 17.00</td> </tr> <tr> <td>Error reporting</td> <td>24 hours a day 365 days a year</td> <td>Working days 07.00- 17.00</td> </tr> <tr> <td>Action time *</td> <td>4 working days</td> <td>4 working days</td> </tr> </tbody> </table> <p>* Action time presupposes that the End Customer leaves access to the Delivery Point, in which case this required for troubleshooting.</p>		Cable Breakage	Other Errors	Service time	24 hours a day 365 days a year	Working days 07.00- 17.00	Error reporting	24 hours a day 365 days a year	Working days 07.00- 17.00	Action time *	4 working days	4 working days
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<p>5.2 Availability</p>	<p>The Seller guarantees availability for Service Level SN Bas in such a way that Access shall be available 24/7/365 (6), with the exception of Scheduled Interruptions.</p>												
<p>5.3 Errors</p>	<p>Errors are divided into the following different error types:</p> <table border="1" data-bbox="451 1021 1517 1189"> <tbody> <tr> <td>Cable Breakage</td> <td>Cable breakage refers to a break in the fiber cable, which interferes with the delivery of the Access.</td> </tr> <tr> <td>Other Errors</td> <td>Errors of a less serious nature for the Buyer.</td> </tr> </tbody> </table>	Cable Breakage	Cable breakage refers to a break in the fiber cable, which interferes with the delivery of the Access.	Other Errors	Errors of a less serious nature for the Buyer.								
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<p>5.4 Compensation at Service level BAS</p>	<p>The amount of compensation is the monthly fee Buyer has paid to the Seller for Access to the End Customer. The compensation must be paid at the request of the Buyer.</p>												