

### NETWORK CUBE DWDM-MUX-4 Unit

C-1755\_Rev.C

#### Product Description

- Passive DWDM System for 19" rack type installation (1 HU)
- The module contains 2 pieces of 4 channel DWDM multiplexers (1 mux + 1 demux)
- DWDM multiplexer to mux and demux 4 DWDM channels in the C or L-band.
- The DWDM multiplexers are compliant with ITU-T G.694.1 and Telcordia GR1221 (former Bellcore) standards and are designed to meet NEBS level 3
- The sub-system interoperates with any router, switch, DSLAM, SFP and GBIC, which supports the DWDM ITU standard
- The systems comprise fixed (not exchangeable) modules
- The fixed front panel is equipped with adapters according to customer choice
- (see below)

- Product Description: NETWORK CUBE DWDM-MUX-4 Unit
- Product Code: C-1755
- Channel Code: -Z1 (first ITU channel number)
- Connector Code: -XY (choose from table)
- Revision Level: -Rev.C

Example Order Code: **C-1755-21-55-Rev.C** for a system with ITU channels C21-C24 and LC/PC connectors on all ports.

(X) Common ports (Y) CWDM / UG ports	Code
SC/PC	1
FC/PC	2
SC/APC	3
FC/APC	4
LC/PC	5
MU/PC	6
E2000	7
E2000/HRL	8
ST/PC	9



#### Revision History

No	Description	Date	Created by
A	Initial release	14.09.06	Thomas Paatzsch
B	Integrated channel plan	12.10.06	Thomas Paatzsch
C	Reduced insertion loss	31.10.06	Thomas Paatzsch
C	Included typical insertion loss	12.03.10	Islah Touhtouh

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#### General Specifications

<b>Operating Temperature</b>	+0°C to +70°C
<b>Storage Temperature</b>	-40°C to +85°C
<b>Max. optical Power</b>	< 250 mW
<b>Fiber Type</b>	SMF-28 compatible    Ø 9 / 125 / 250µm
<b>Optical Adapters</b>	
Trunk (Dx Input / Mx Output)	According to customer's choice, to be selected with order code
DWDM Channel Ports	According to customer's choice, to be selected with order code

#### Optical Performance of the DWDM Mx/Dx

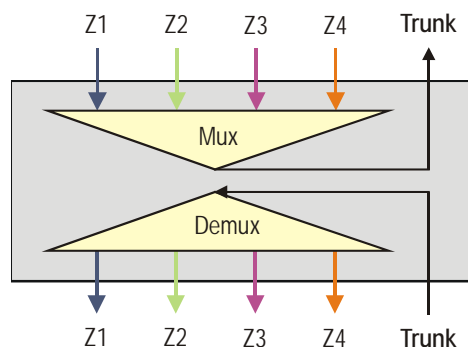
<b>Operating channel</b>		
DWDM ports	Any ITU channels out of C- and L-Band, to be selected via order code	
<b>Channel Spacing</b>		
DWDM channels	100 GHz	
<b>Insertion Loss</b>	<b>max</b> <sup>1</sup>	<b>typical</b> <sup>2</sup>
DWDM channels	< 2.2 dB	1.3 dB
<b>Isolation</b>	<b>Mx</b>	<b>Dx</b>
DWDM adjacent channel	> 12 dB	> 25 dB
DWDM non-adjacent channel	> 12 dB	> 40 dB
<b>Optical Return Loss</b>	> 45 dB (for the component, also depends on selected connector type)	
<b>Directivity</b>	> 50 dB	
<b>Polarization Dependent Loss</b>	< 0.15 dB	

<sup>1</sup> Max. insertion loss over channel bandwidth, valid over full operating temperature range and all states of polarization with optical connectors. The typical connector loss is 0.4 dB for a connector pair.

<sup>2</sup> Typical insertion loss is defined as typical value over channel bandwidth, full operating temperature range and methods from actual production data to reflect the majority of cases.

#### Package Dimensions and Front Plate design

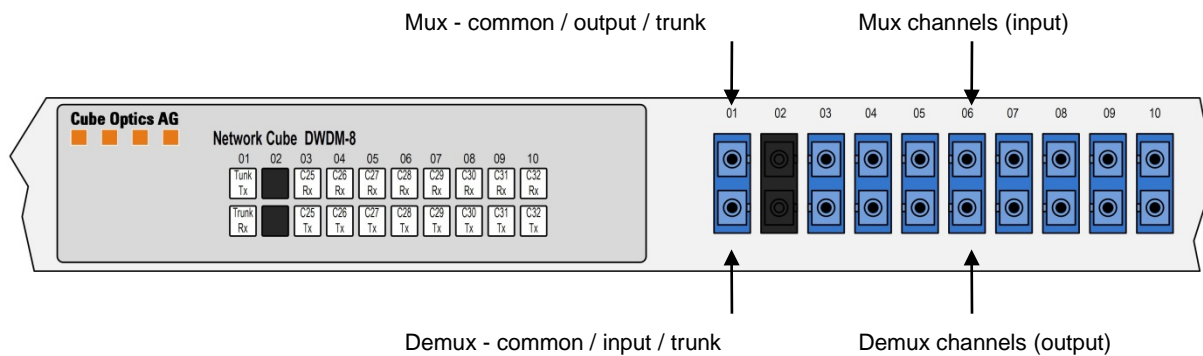
##### Logical setup



The descriptions Z1-Z16 correspond to above specified DWDM channel numbers

##### Connection Scheme

- The module contains the adapters for one multiplexer at the top and one demultiplexer at the bottom.
- The channels are marked with above specified ITU channel numbers (e.g. C24, C25, ...).
- The common ports are marked as "Trunk".



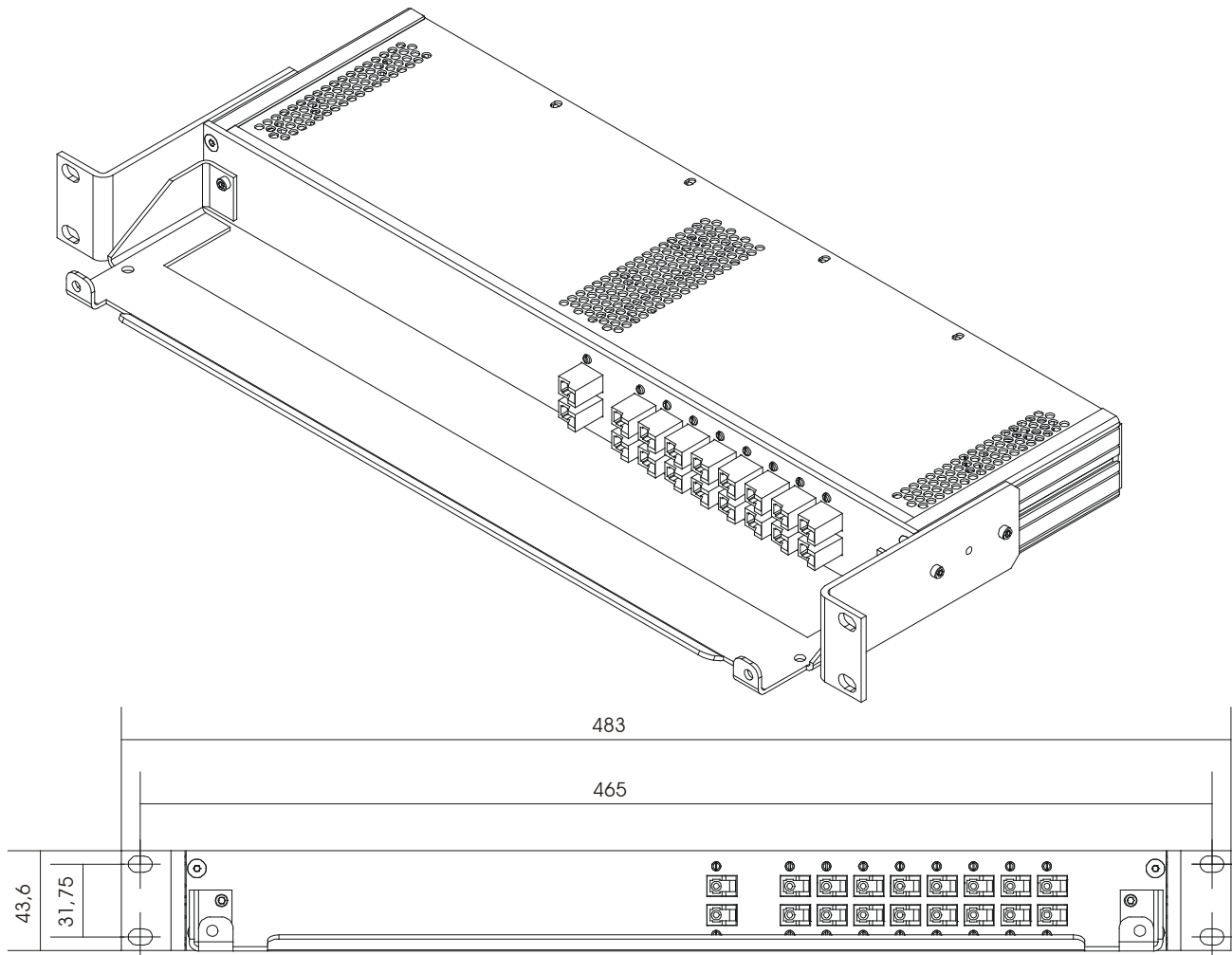
Please note, that above layout refers to a DWDM-MUX-8 Unit and is taken only as example. The actual layout of the unit described in this document depends on a number of factors such as channel number and connector type. However, the principal scheme will stay the same.

## NETWORK CUBE DWDM-MUX-4 Unit

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### Layout and dimensions

- Width: 483 mm (19"), 532 mm (ETSI)
- Height: 43.6 mm (1.732") / 1HU
- Depth: 125 / 214.2 mm (without / with patch cord shelf)
- The color of the module is light gray
- All fonts and labels are printed in black.



Please note, that the drawings shown here only show the dimensions and do not the specific configuration of the module!

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### WAIVER

It is exclusively in written agreements that we provide our customers with warrants and representations as to the technical specifications and/or the fitness for any particular purpose. The facts and figures contained herein are carefully compiled to the best of our knowledge, but they are intended for general informational purposes only.

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