



# NETWORK CUBE > CWDM-MUX-4 Module

C-1643-Rev. A

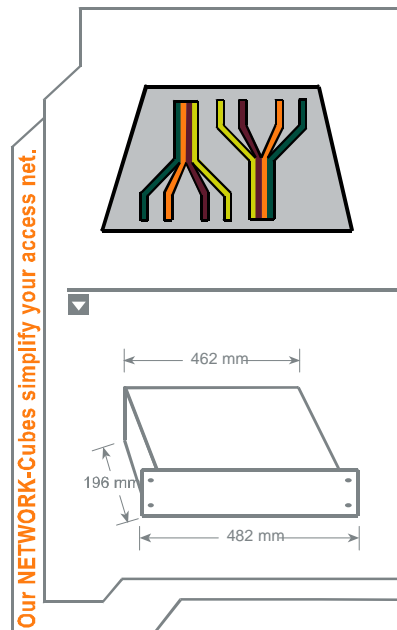
## Product Description

- CWDM module for integration in 1 slot of the CUBO NETWORK CUBE WDM-Modular-Shell (C-1608).
- The module contains 2 pieces of 4 channel CWDM multiplexers (1 mux, 1 demux).
- CWDM multiplexers to mux and demux 4 channels from 1511 to 1571nm; these correspond to the transceiver wavelengths from 1510 to 1570 nm.
- The CWDM multiplexers are compliant with the ITU G.694.2 standard and Telcordia GR1221 (former Bellcore) standard and are designed to meet NEBS level 3.
- The sub-system interoperates with any router, switch, DSLAM, SFP and GBIC, which supports the CWDM ITU G.694.2 standard.
- Front panel is equipped with adapters according to customer choice (see below).

- Product Description: NETWORK CUBE CWDM-MUX-4 Module
- Product Code: C-1643
- Connector Code: -XY (choose from table below)
- Revision Level: -Rev.A

(X) Common ports	(Y) CWDM channel 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

Example Order Code: C-1643-15-Rev.A for a module with SC/PC on all common / trunk ports and LC/PC on all CWDM channel ports



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## Revision History

No.	Description	Date	Created by	Approved by
A	Initial release	09.06.05	Sven Krüger	
A	Included typical insertion loss value	03.02.10	Islah Touhtouh	

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### General Specifications

Operating Temperature	+0°C to +70°C	
Storage Temperature	-40°C to +80°C	
Max. optical Power	< 250 mW	
Fiber Type	SMF-28 compatible	∅ 9 / 125 / 250µm
Optical Adapters		
Common ports	to be selected by customer	
CWDM channel ports	to be selected by customer	

### Optical Performance of each of the 2 Multiplexers (1 mux, 1 demux)

Operating Channels CWDM ports [nm]	C1=1511 C2=1531 C3=1551 C4=1571	
Channel Width CWDM channels	> 13 nm	
Insertion Loss CWDM channels	max <sup>1</sup> < 2.4 dB	typical <sup>2</sup> 1.6 dB
Isolation		
CWDM adjacent channel	> 30 dB	
CWDM non-adjacent channel	> 40 dB	
Isolation spectral range	1460 nm to 1620nm	
Optical Return Loss	> 45 dB	
Directivity	> 50 dB	
Polarization Dependent Loss	< 0.2 dB	

#### Notes:

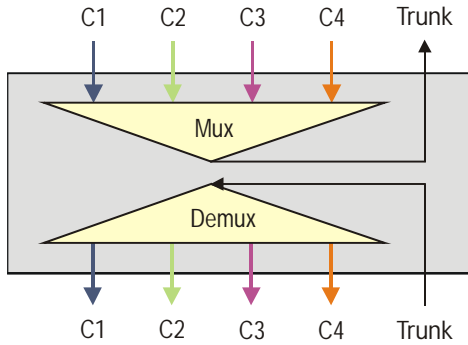
1. Max. insertion loss over channel bandwidth, valid over full operating temperature range and all states of polarization with optical connectors. The typical connector loss is 0.4 dB for a pair of connectors
2. Typical insertion loss is defined as typical value over channel bandwidth, full operating temperature range and methods from actual production data to reflect the majority of cases.

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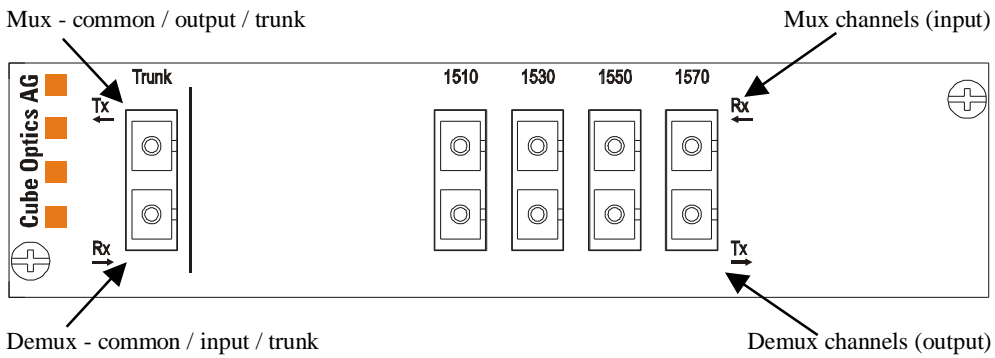
Package Dimensions and Front Plate design

Logical setup:



Connection Scheme:

- The module contains the adapters for one multiplexer (C1-C4) on the top and one demultiplexer (C1-C4) on the bottom.
- The channels are marked with “1510”, “1530”, “1550” and “1570” corresponding to the 4 corresponding transceiver wavelengths 1511-1571.
- The common ports are marked as “Trunk”.



Please, note that the actual layout depends on the chosen connector type as well as other factors. However, the principal scheme stays the same.

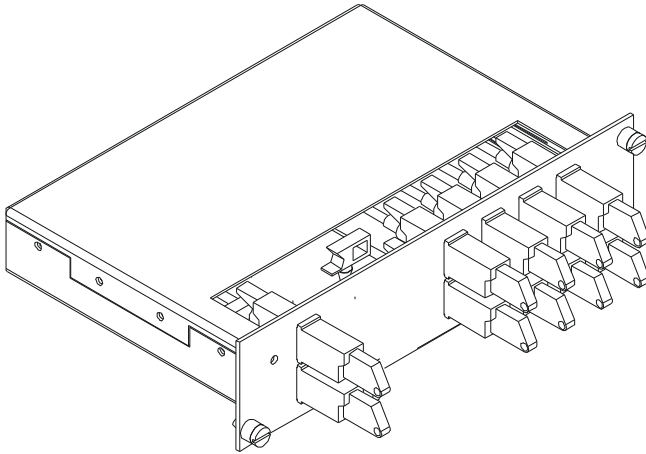
Layout and dimensions (see also next page)

- Width: 166 / 182 mm
- Height: 25.75 / 44 mm
- Depth: 118.5 / 125.2 mm
- The color of the module is light gray
- All fonts and labels are printed in black.

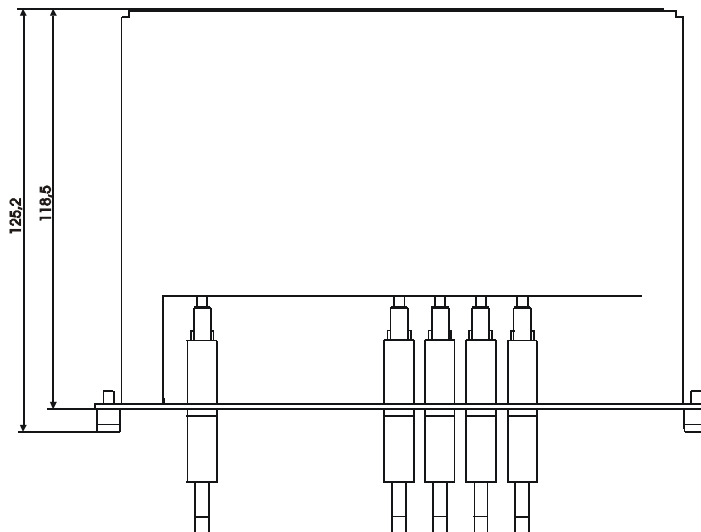
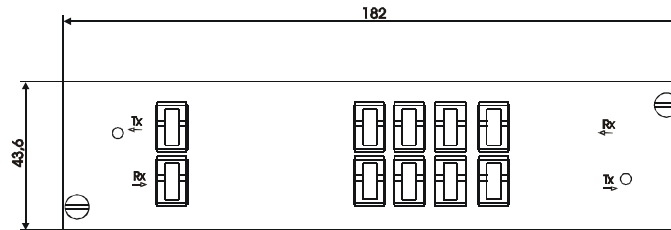


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Please, note that the drawings shown here only show the dimensions and do not the specific configuration of the module!



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