

NETWORK CUBE

CWDM-MUX-4+Exp Module

C-1705_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 + express port CWDM multiplexers (one mux, one demux).
- CWDM multiplexers to mux and demux 4 channels 1471, 1491, 1591 and 1611; these correspond to the transceiver wavelengths from 1470 to 1610 nm.
- The Express port may either be used as upgrade for up to 4 further CWDM channels (1511-1571) or as upgrade for one additional "broadband" (1504.5- 1577.5 nm) channel. Typical applications for the Express port: 10G XFP transceivers, standard FP laser , OTDR channel.
- 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+Exp Module
- Product Code: C-1705
- Connector Code: -XY (choose from table)
- Revision Level: -Rev.A

(X) Common ports (Y) CWDM 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-1705-11-Rev.A** for a module with SC/PC connectors on all ports



Revision History

No	Description	Date	Created by
A	Initial release	21.03.06	Sven Krüger
A	Included typical insertion loss value	26.01.10	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
Package Dimensions	Width: 166 / 182 mm, Height: 25.75 / 44 mm, Depth: 118.5 / 125.2 mm
Fiber Type	SMF-28 compatible \varnothing 9 / 125 / 250µm
Optical Adapters	to be selected by customer via order code

Optical Performance of each of the 2 Multiplexers (1 mux, 1 demux, incl. Ug)

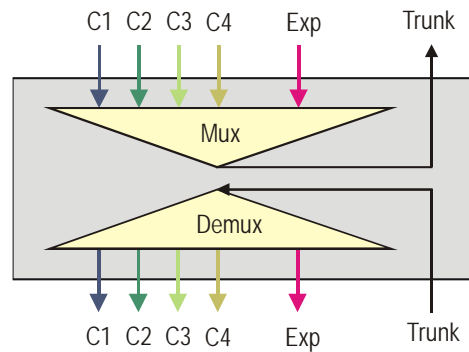
Operating channel			
CWDM [nm]	C1=1471	C2=1491	C3=1591 C4=1611
Express [nm]	Exp = 1511 - 1571		
Channel Width			
CWDM channels	>13 nm		
Express ("Exp") channel	1504.5-1577.5 nm		
Insertion Loss	max ¹	typical ²	
	CWDM channels	< 2.5 dB	1.8 dB
	Express ("Exp") channel	< 2.5 dB	1.5 dB
Isolation			
CWDM adjacent channel	> 30 dB		
CWDM non-adjacent channel	> 40 dB		
CWDM channels at Exp port	> 28 dB		
Exp channel at CWDM ports	> 30 dB		
Isolation spectral range	1460 nm to 1620nm		
Polarization Dependent Loss	< 0.2 dB		

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.

Package Dimensions and Front Plate design

Logical setup

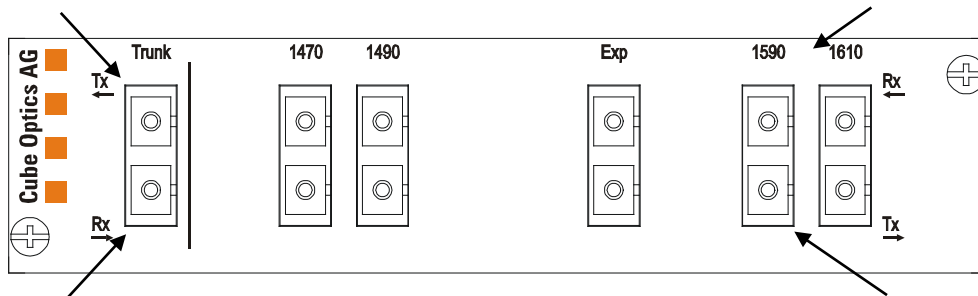


Connection Scheme

- The module contains the adapters for one CWDM multiplexer including express channel (top) and one CWDM demultiplexer including express channel.
- The channels are marked with "1470", "1490", "1590" and "1610" corresponding to the 4 corresponding transceiver wavelengths, respectively as "exp" for the express port.
- The common ports are marked as "Trunk".

Mux - common / output / trunk

Mux channels (input)



Demux - common / input / trunk

Demux channels (output)

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

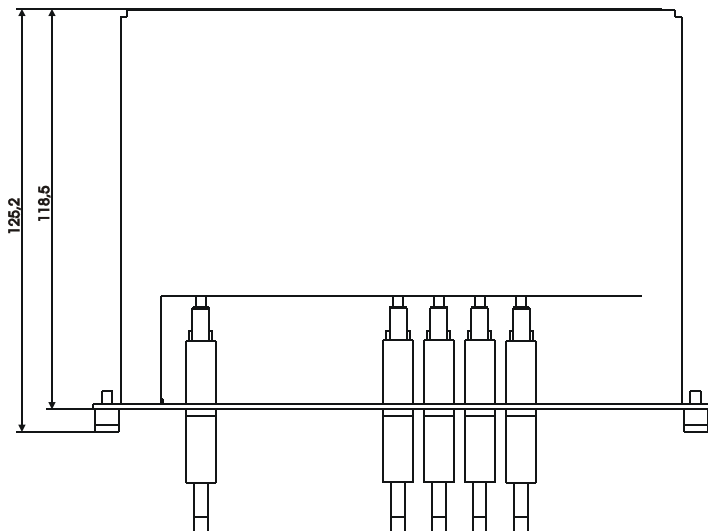
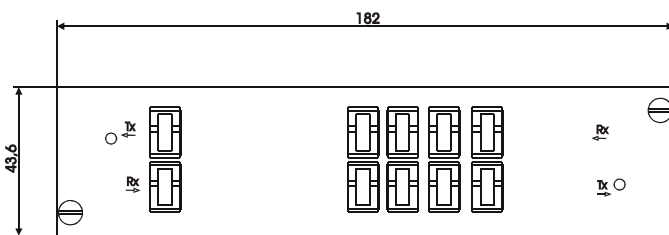
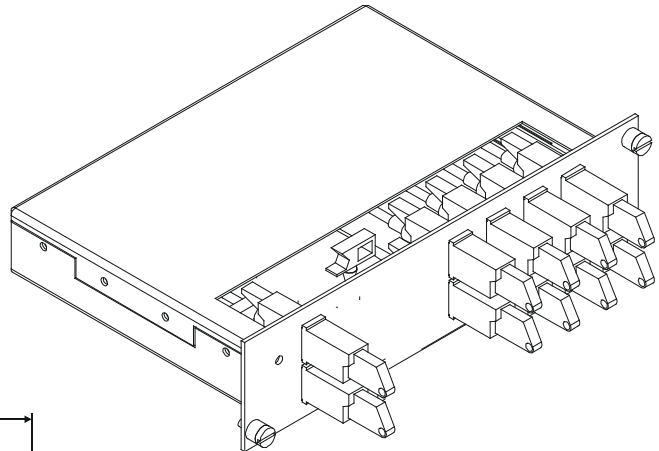
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Layout and dimensions

- 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.



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

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is certified according to ISO 9001.

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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