NETWORK Cubes

HUBER+SUHNER
Cube Optics

NETWORK CUBE
CWDM-MUX-4 Module

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)   ⟶
- Revision Level: -Rev.A

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.

(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

Revision History

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

NETWORK Cubes

HUBER+SUHNER
Cube Optics

NETWORK CUBE
CWDM-MUX-4 Module

C-1643_Rev.A

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 $\varnothing$ 9 / 125 / 250µm
Optical Adapters	
Common ports	to be selected by customer via order code
CWDM channel ports	to be selected by customer via order code

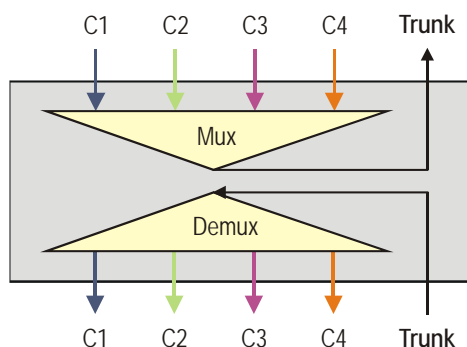### Optical Performance of each of the 2 Multiplexers (1 mux, 1 demux)

Operating channel		
CWDM ports [nm]	C1=1511 C2=1531 C3=1551 C4=1571	
Channel Width		
CWDM channels	>13 nm	
Insertion Loss	max [1]	typical [2]
CWDM channels	< 2.4 dB	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	

---

[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.
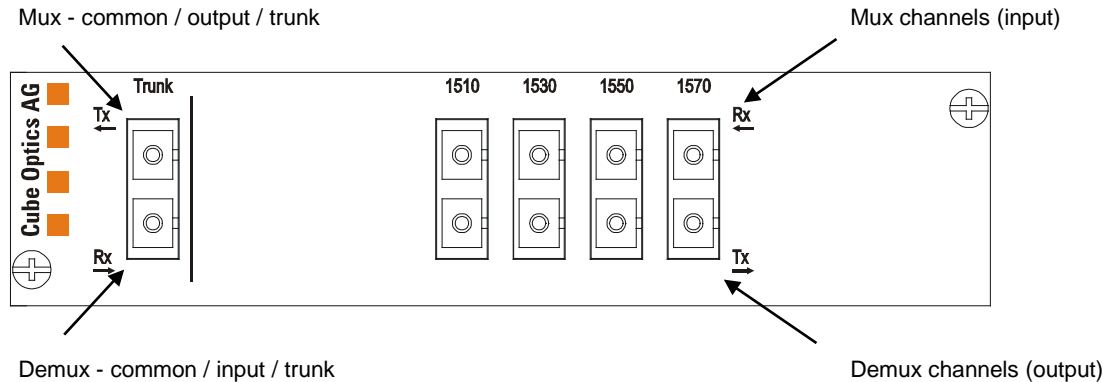
NETWORK Cubes

NETWORK CUBE
CWDM-MUX-4 Module

HUBER+SUHNER
Cube Optics

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.
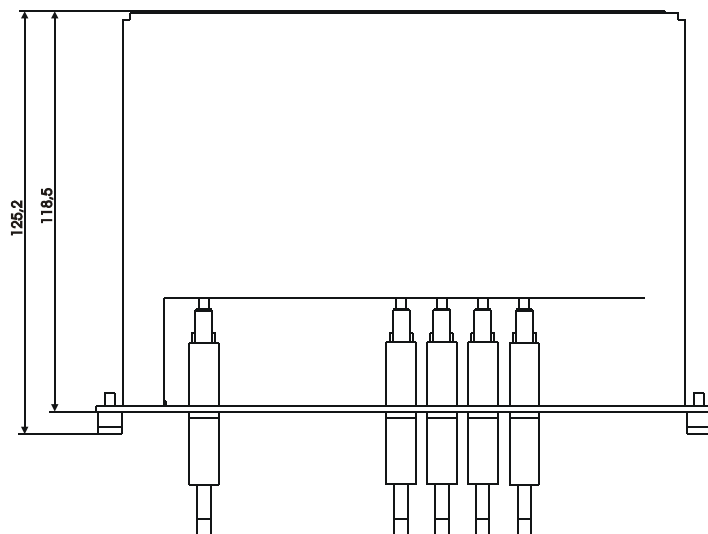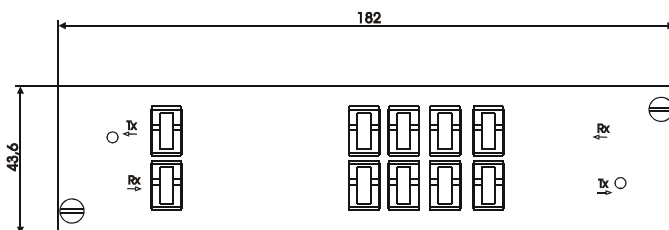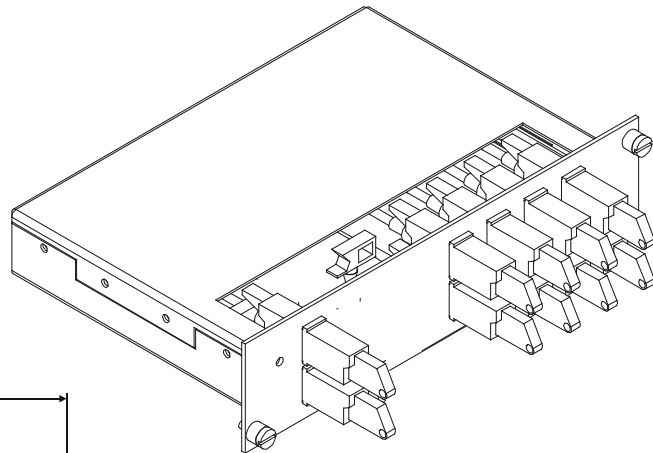
HUBER+SUHNER
Cube Optics

NETWORK CUBE
CWDM-MUX-4 Module

C-1643_Rev.A

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!

HUBER+SUHNER Cube Optics AG
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.

HUBER+SUHNER Cube Optics AG
Robert-Koch-Strasse 30
55129 Mainz
Germany

phone: +49-6131-69851-0
fax: +49-6131-69851-79
sales.cubo@hubersuhner.com

www.hubersuhner.com
www.cubeoptics.com