

NETWORK CUBE

> CWDM-OADM-2 Module

C-1709-Rev. B

Product Description

- CWDM module for integration in 1 slot of the CUBO NETWORK CUBE WDM-Modular-Shell (C-1608).
- The module contains two pieces of two channel Add&Drop components for redundant (“East-and-West-traffic”) OADM ring architectures.
- Each Add&Drop component to add and drop the same one CWDM channel (any out of 1271nm to 1611nm); these correspond to the transceiver wavelengths from 1270 and 1610 nm; the rest of the band will be transmitted.
- 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 System interoperates with any router, switch, DSLAM, SFP and GBIC, which supports the CWDM ITU G.694.2 standard.

■ Product Description: NETWORK CUBE CWDM-OADM-2 Module

■ Product Code: C-1709

■ Channel Code 1: -AA (choose from table below)

■ Channel Code 2: -BB (choose from table below)

■ Connector Code: -XY (choose from table below)

■ Revision Level: -Rev.B

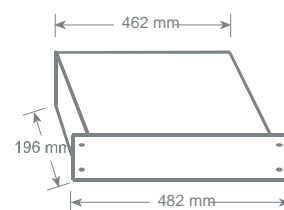
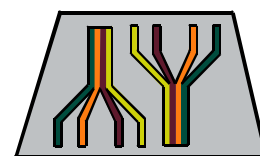
Example Order Code: C-1709-47-49-15-Rev.B

for a module with 1471 and 1491 nm add&drop channels, SC/PC on all common / trunk ports and LC/PC on all add&drop ports

(X) Common ports (Y) Add&drop 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

Channel	Code	Channel	Code
1271 nm	27	1451 nm	45
1291 nm	29	1471 nm	47
1311 nm	31	1491 nm	49
1331 nm	33	1511 nm	51
1351 nm	35	1531 nm	53
1371 nm	37	1551 nm	55
1391 nm	39	1571 nm	57
1411 nm	41	1591 nm	59
1431 nm	43	1611 nm	61

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Revision History

No.	Description	Date	Created by	Approved by
A	Initial release	31.03.06	Thomas Paatzsch	
B	Updated insertion loss values	10.01.08	Thomas Paatzsch	

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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	Ø 9 / 125 / 250µm
Optical Adapters		
Common ports	to be selected by customer via order code	
add & drop ports	to be selected by customer via order code	

Optical Performance of each of the 2 components of 2 channel Add&Drop

Number of channels	CWDM: 2 add channel, 2 drop channel, 16 pass channels	
Operating Channel		
CWDM add & drop channel (C1, C2)	any channels out of 1271, 1291, 1311, ..., 1611 nm (to be defined via order code)	
Channel Width		
CWDM channels	> 13 nm (around center wavelength)	
Insertion Loss ¹		
In to Drop	< 1.6 dB (including connectors and adapters)	
Add to Out	< 1.6 dB (including connectors and adapters)	
In to Out	< 2.0 dB (including connectors and adapters)	
Isolation		
CWDM adjacent ch's at CWDM drop port	> 30 dB	
CWDM non-adj. ch's at CWDM drop port	> 40 dB	
Add channels at drop ports	> 50 dB	
Drop channels at output port	> 27 dB	
Isolation spectral range	1260 nm to 1620nm	
Optical Return Loss	> 45 dB (for the component, also depends on connectors)	
Polarization Dependent Loss	< 0.2 dB	

Notes:

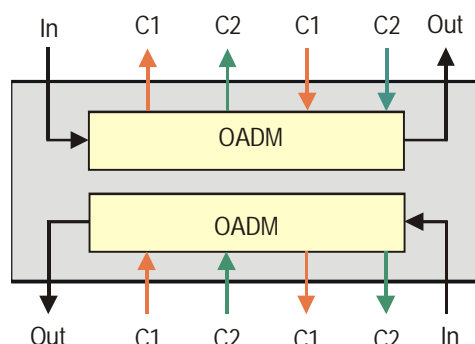
1. Max. insertion loss over channel bandwidth, valid over full operating temperature range and all states of polarization with optical connectors. The typical connector loss is 0.4 dB for a pair of connectors

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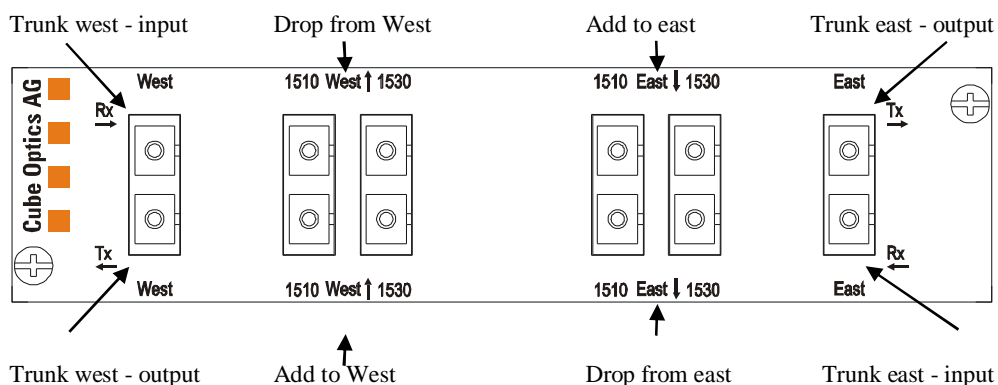
Package Dimensions and Front Plate design

Logical setup:



Connection Scheme:

- The add and drop ports are marked with the corresponding transceiver wavelengths. (Instead of e.g. "1511" it is printed "1510" etc.).
- The common ports are marked as "Trunk" where "Rx" is the Add&Drop input and "Tx" the Add&Drop output, both to be connected to the transmission line.
- All ports are equipped with adapters to be defined by the customer via order code.
- The drawing below shows the front plate of an 1510 + 1530 nm Add&Drop, other wavelength version is equivalent.



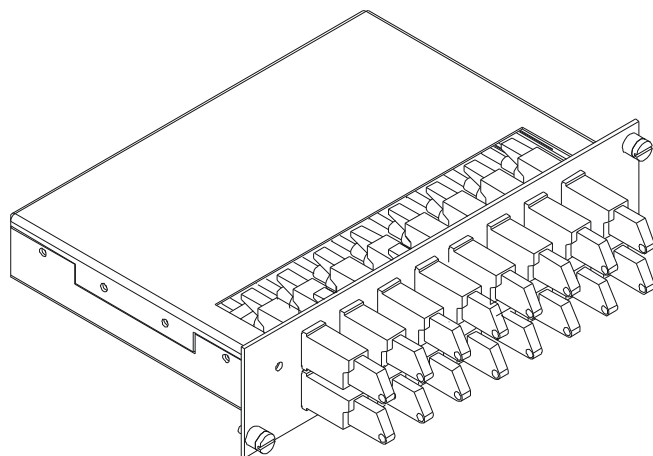
Please, note that the actual layout depends on the chosen connector type as well as other factors. However, the principal scheme stays the same.

Layout and dimensions (see also next page)

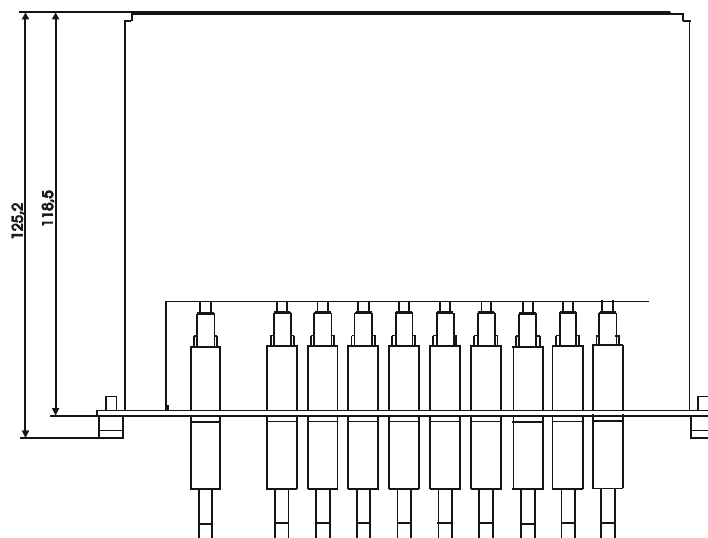
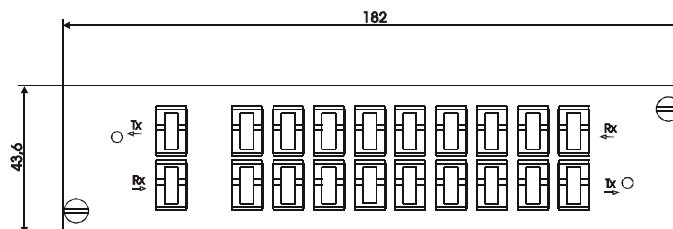
- Width: 166 / 182 mm
- Height: 25.75 / 44 mm
- Depth: 118.5 / 125.2 mm
- The color of the module is light gray
- All fonts and labels are printed in black.

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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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