

NETWORK CUBE

CWDM-OADM-1+1310 Module

C-1704-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 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 1471nm to 1611nm) and to add and drop a 1310 nm WWDM channel; 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-1+1310 Module
- Product Code: C-1704
- Channels Code: -ZZ (choose from table)
- Connector Code: -XY (choose from table)
- Revision Level: -Rev.B

Example Order Code: **C-1704-47-15-Rev.B** for a module with 1471nm add&drop channel, SC/PC on all common / trunk ports and LC/PC on all add&drop ports.

Channel	Code
1471nm	47
1491nm	49
1511nm	51
1531nm	53
1551nm	55
1571nm	57
1591nm	59
1611nm	61

(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

Revision History

No	Description	Date	Created by
A	Initial release	12.03.06	Thomas Paatzsch
B	Changed insertion loss for in>out	15.01.08	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

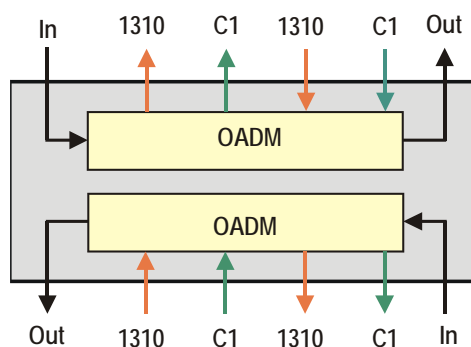
Optical Performance of each of the 2 components of (1 ch + 1310) Add&Drop

Number of channels	CWDM: 1 add channel, 1 drop channel, 7 pass channels WWDM: 1 add channel, 1 drop channel
Operating channel	
CWDM add & drop channel (C1)	any channel out of 1471, 1491, 1511, ..., 1611 nm (to be define via order code)
WWDM add & drop channel	1310nm
Channel Width	
CWDM channels	> 13 nm (around center wavelength)
WWDM channel	1260-1360 nm
Insertion Loss ¹	
In to Drop	< 2.0 dB (including connectors and adapters)
Add to Out	< 2.0 dB (including connectors and adapters)
In to Out	< 2.8 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
WWDM channel at CWDM drop port	> 45 dB
CWDM channels at WWDM drop port	> 45 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

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

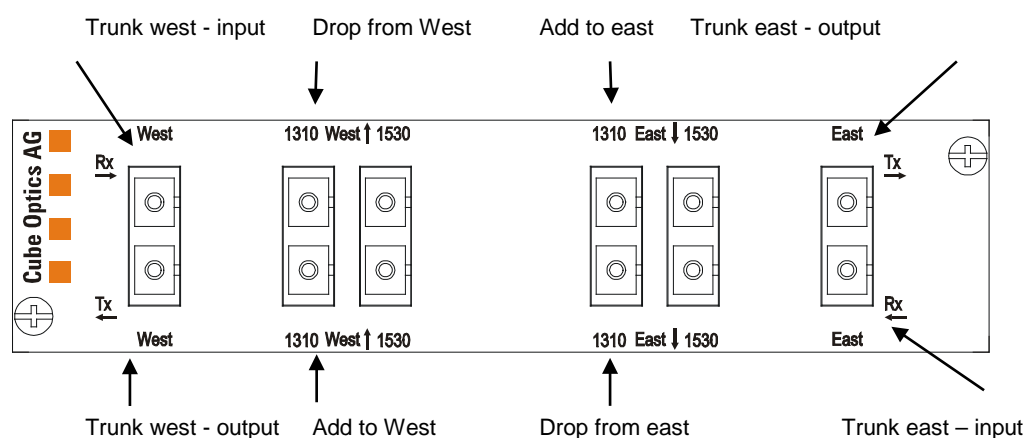
Package Dimensions and Front Plate design

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 1530nm + 1310 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.

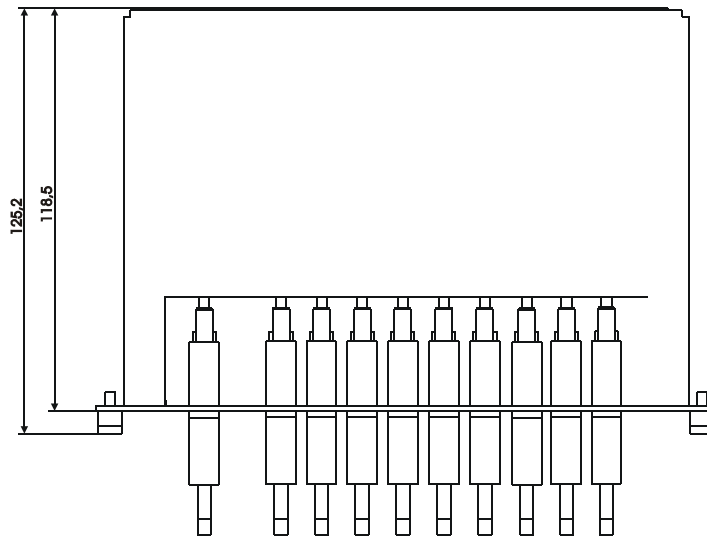
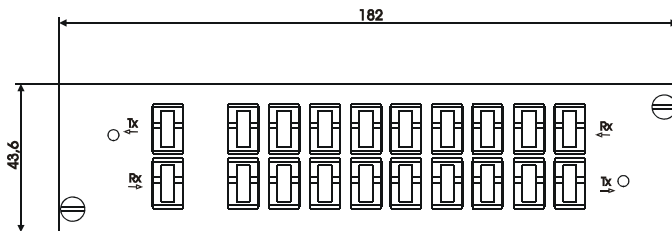
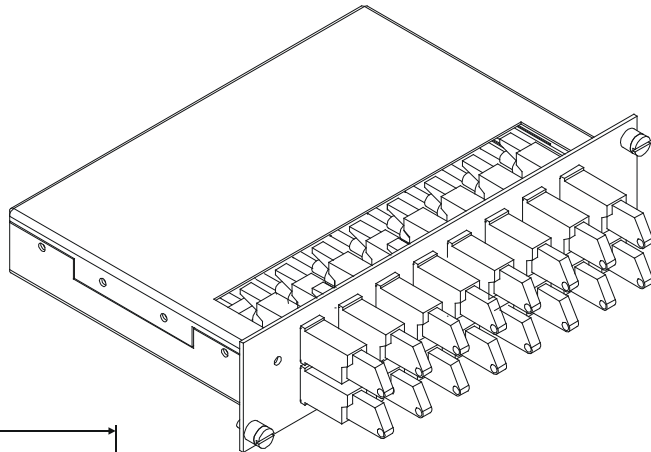
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Layout and dimensions

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

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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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