NETWORK Cubes

HUBER+SUHNER
Cube Optics

NETWORK CUBE
CWDM-OADM-1 Module

C-1660-Rev.B

Product Description

- CWDM module for integration in one slot of the CUBO NETWORK CUBE WDM-Modular-Shell (C-1608).
- The module contains two pieces of one channel CWDM Add&Drop (1 add and 1 drop port) for redundant ("East-and-West-traffic") OADM ring architectures.
- CWDM Add&Drop to add and drop the same one channel (any out of 1271nm to 1611nm) out of a band from 1260 nm to 1620 nm; 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-1 Module
- Product Code: C-1660
- Channels Code: -ZZ (choose from table)
- Connector Code: -XY (choose from table)
- Revision Level: -Rev.B

Example Order Code: **C-1660-45-15-Rev.B** for a module with 1451nm add&drop channel, SC/PC on all common / trunk ports and LC/PC on all add&drop ports.

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

(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
B	Updated insertion loss values	10.01.08	Thomas Paatzsch

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General Specifications

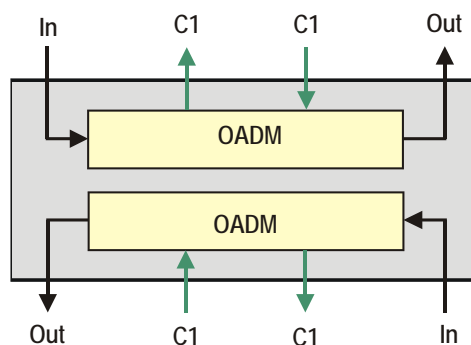|	
Operating Temperature	+0°C to +70°C
Storage Temperature	-40°C to +80°C
Max. optical Power	< 250 mW
Fiber Type	SMF-28 compatible ⌀ 9 / 125 / 250µm
Optical Adapters	
Common ports	to be selected by customer via order code
add&drop ports	to be selected by customer via order code

Optical Performance of each of the 2 components of 1 ch. Add&Drop

Number of channels	1 add channel, 1 drop channel
Operating channel	to be defined by customer via order code
add = drop channel	any channel out of 1271, 1291, 1311, ..., 1611 nm
Channel Width	>13 nm
Insertion Loss [1]	< 1.2 dB (including connectors and adapters)
Isolation	
CWDM adjacent ch's at drop port	> 30 dB
CWDM non-adj. ch's at drop port	> 40 dB
add channel at drop port	> 50 dB
drop channel at output (Trunk Tx)	> 27 dB
isolation spectral range	1260 nm to 1620 nm
Optical Return Loss	> 45 dB (for the component, also depends on connectors)
Polarization Dependent Loss	< 0.2 dB

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[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
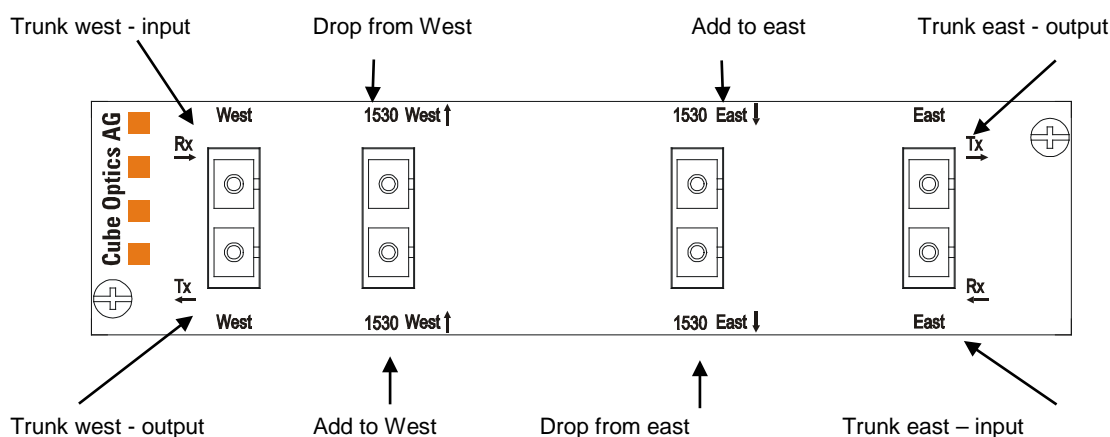
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Package Dimensions and Front Plate design

Logical setup

Connection Scheme

- The add and drop ports (C1) 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 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.
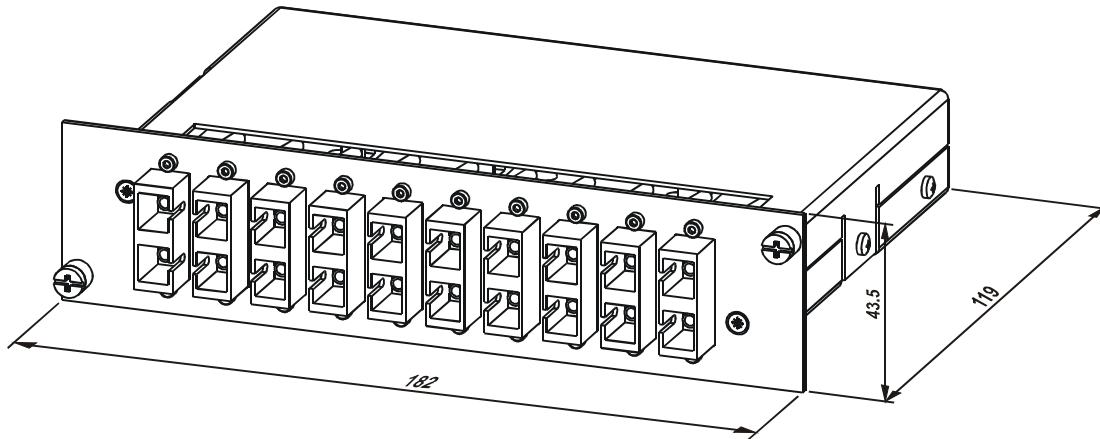
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Layout and dimensions

- 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 drawings shown here only show the dimensions and do not the specific configuration of the module!