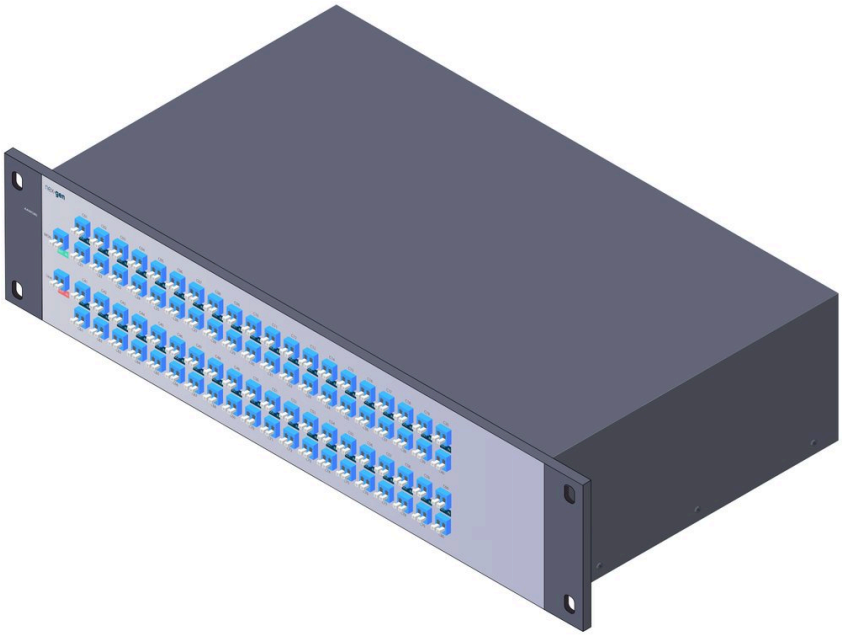
nex·gen

OTN SYSTEMS DCI PLATFORMS

AAWG 80-Channel 75GHz MuxDemux Rack

The AAWG (Athermal Array Waveguide Grating) is a passive 80-channel multiplexing and demultiplexing rack for ultra-wide C-band DWDM systems, on the 75GHz grid. It multiplexes 80 individually-wavelengthed signals onto a single fibre, or separates a combined DWDM signal back into its 80 channels. Built on silicon-substrate waveguide grating technology with an athermal package for precise, temperature-stable channel coupling, low insertion loss and high channel isolation, suited to 80-wave × 400Gbps high-capacity DWDM systems.



HIGHLIGHTS

80 fixed channels, 75GHz spacing

Ultra-wide C-band, 190.7125–196.6375 THz (CH01 to CH80); equivalent to combining a UMD40 C-EVEN and a UMD40 C-ODD grid at 150GHz into one 75GHz system.

Athermal AWG technology

Silicon-substrate waveguide grating with athermal packaging for stable performance without active temperature control.

High-capacity DWDM

Suited to 80-wave × 400Gbps systems.

Combined-port monitoring

LINE port optical power monitoring, 1% splitting ratio (21–23dB).

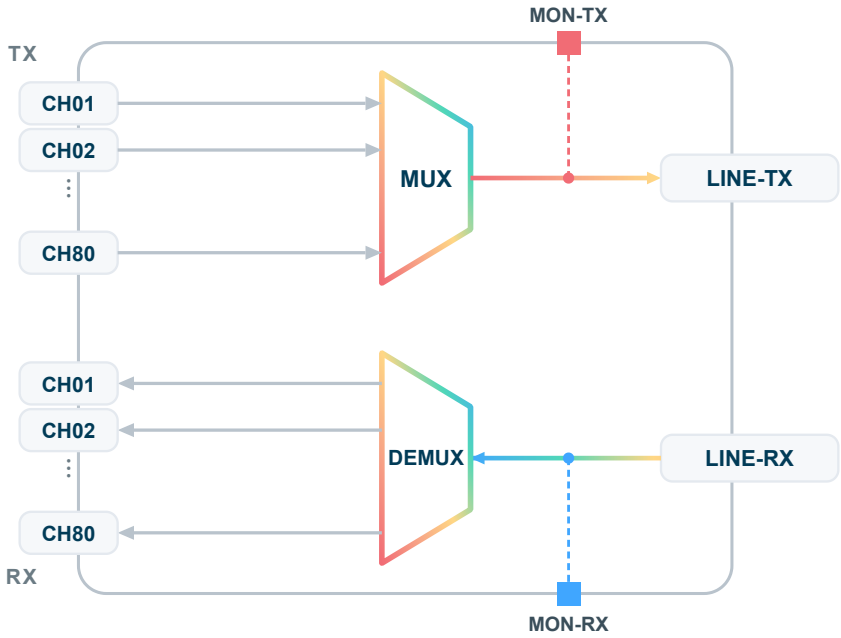
Chassis-managed via RJ-45

RJ-45 management interface to the DCI-OTN-8S-2U rear interface board; reports SN/model/PN and in-place/out-of-place status to the network management system (dumb resource management).

Compact 2U rack unit

88mm (H) × 442mm (W) × 220mm (D); standalone rack-mount unit, not a chassis card.

FUNCTIONAL STRUCTURE



FORMAT

2U

SPECIFICATIONS

Function	Multiplexing and demultiplexing of 80 DWDM optical signals in ultra-wide C-band
Dimensions (H × W × D)	2U: 88mm × 442mm × 220mm
Spectral Type	Flat top
Frequency Range	190.7125–196.6375 THz
Channel Spacing	75GHz (0.6nm)
Number of Optical Channels	80
ITU Passband Frequency	±31.5GHz
Wavelength Accuracy	≤±9.0GHz
Channel Insertion Loss	≤7.0dB
Insertion Loss Uniformity	≤1.7dB
-0.5dB Bandwidth	≥40GHz
-3dB Bandwidth	≥70GHz
Adjacent Channel Isolation	≥7dB
Non-Adjacent Channel Isolation	≥27dB
Total Crosstalk	≥4dB
Return Loss	≥40dB
Polarization Dependent Loss	≤0.7dB
Polarization Mode Dispersion	≤1ps
Dispersion	±33ps
Operating Temperature	-5 to +65°C
Storage Temperature	-40 to +85°C
MON Port	21–23dB splitting ratio (1%)

Management	RJ-45 interface to the DCI-OTN-8S-2U rear interface board; reports SN/model/PN and in-place/out-of-place status via the network management system (dumb resource management)

Channel List (CH01–CH80, 75GHz Grid)					
Ch.	**Freq. (THz)**	**λ (nm)**	**Ch.**	**Freq. (THz)**	**λ (nm)**
CH01	196.6375	1524.595	CH41	193.6375	1548.215
CH02	196.5625	1525.176	CH42	193.5625	1548.815
CH03	196.4875	1525.758	CH43	193.4875	1549.415
CH04	196.4125	1526.341	CH44	193.4125	1550.016
CH05	196.3375	1526.924	CH45	193.3375	1550.617
CH06	196.2625	1527.508	CH46	193.2625	1551.219
CH07	196.1875	1528.092	CH47	193.1875	1551.821
CH08	196.1125	1528.676	CH48	193.1125	1552.424
CH09	196.0375	1529.261	CH49	193.0375	1553.027
CH10	195.9625	1529.846	CH50	192.9625	1553.631
CH11	195.8875	1530.432	CH51	192.8875	1554.235
CH12	195.8125	1531.018	CH52	192.8125	1554.839
CH13	195.7375	1531.605	CH53	192.7375	1555.444
CH14	195.6625	1532.192	CH54	192.6625	1556.05
CH15	195.5875	1532.779	CH55	192.5875	1556.656
CH16	195.5125	1533.367	CH56	192.5125	1557.262
CH17	195.4375	1533.956	CH57	192.4375	1557.869
CH18	195.3625	1534.545	CH58	192.3625	1558.477
CH19	195.2875	1535.134	CH59	192.2875	1559.084
CH20	195.2125	1535.724	CH60	192.2125	1559.693
CH21	195.1375	1536.314	CH61	192.1375	1560.302
CH22	195.0625	1536.905	CH62	192.0625	1560.911
CH23	194.9875	1537.496	CH63	191.9875	1561.521
CH24	194.9125	1538.087	CH64	191.9125	1562.131
CH25	194.8375	1538.679	CH65	191.8375	1562.742
CH26	194.7625	1539.272	CH66	191.7625	1563.353
CH27	194.6875	1539.865	CH67	191.6875	1563.965
CH28	194.6125	1540.458	CH68	191.6125	1564.577
CH29	194.5375	1541.052	CH69	191.5375	1565.189
CH30	194.4625	1541.647	CH70	191.4625	1565.802
CH31	194.3875	1542.241	CH71	191.3875	1566.416
CH32	194.3125	1542.837	CH72	191.3125	1567.03

Ch.	Freq. (THz)	λ (nm)	Ch.	Freq. (THz)	λ (nm)
CH33	194.2375	1543.432	CH73	191.2375	1567.645
CH34	194.1625	1544.029	CH74	191.1625	1568.26
CH35	194.0875	1544.625	CH75	191.0875	1568.875
CH36	194.0125	1545.222	CH76	191.0125	1569.491
CH37	193.9375	1545.82	CH77	190.9375	1570.108
CH38	193.8625	1546.418	CH78	190.8625	1570.725
CH39	193.7875	1547.016	CH79	190.7875	1571.342
CH40	193.7125	1547.615	CH80	190.7125	1571.96

ORDERING INFORMATION

NAME	AAWG (Athermal Array Waveguide Grating) 80-Channel 75GHz MuxDemux Rack
DESCRIPTION	AAWG (Athermal Array Waveguide Grating) passive 80-channel ultra-wide C-band DWDM multiplexer/demultiplexer, 2U rack unit. Silicon-substrate AWG technology, athermal packaging, 75GHz spacing, 190.7125-196.6375THz (CH01-CH80), flat-top spectral response, suited to 80-wave x 400Gbps systems; LINE port power monitoring; RJ-45 management to the DCI-OTN-8S-2U rear interface board.
PART NUMBER	**DCI-AAWG-75-F-80-2U**

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