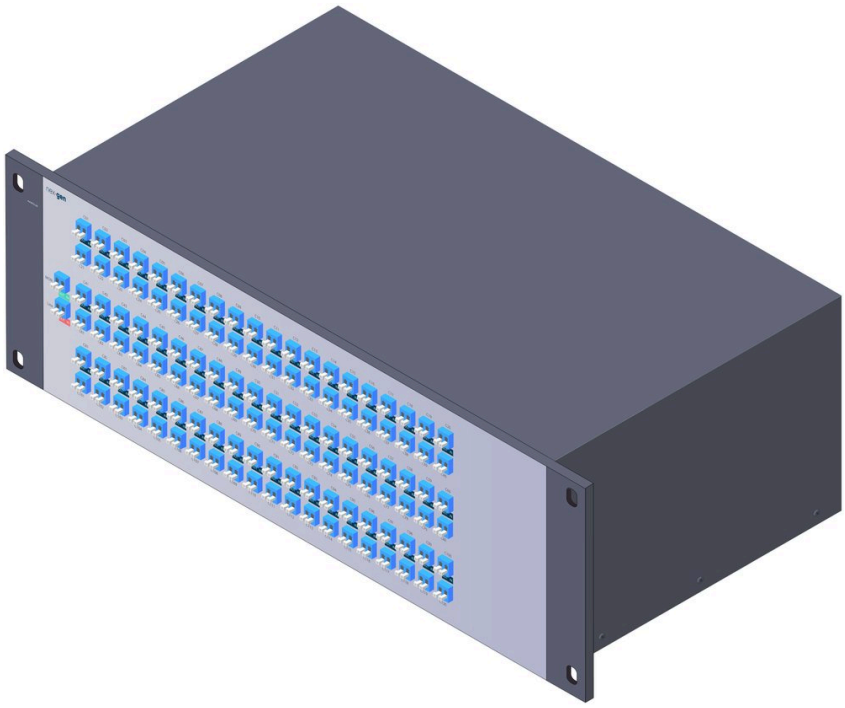
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OTN SYSTEMS DCI PLATFORMS

AAWG 120-Channel 50GHz MuxDemux Rack

The AAWG (Athermal Array Waveguide Grating) is a passive 120-channel multiplexing and demultiplexing rack for ultra-wide C-band DWDM systems, on the 50GHz grid. It multiplexes 120 individually-wavelengthed signals onto a single fibre, or separates a combined DWDM signal back into its 120 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 120-wave × 200Gbps high-capacity DWDM systems.



HIGHLIGHTS

120 fixed channels, 50GHz spacing

Ultra-wide C-band, 190.7–196.65 THz (CH01 to CH120); the highest channel count in the AAWG family.

Athermal AWG technology

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

High-capacity DWDM

Suited to 120-wave × 200Gbps systems; non-adjacent channel isolation ≥30dB.

Combined-port monitoring

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

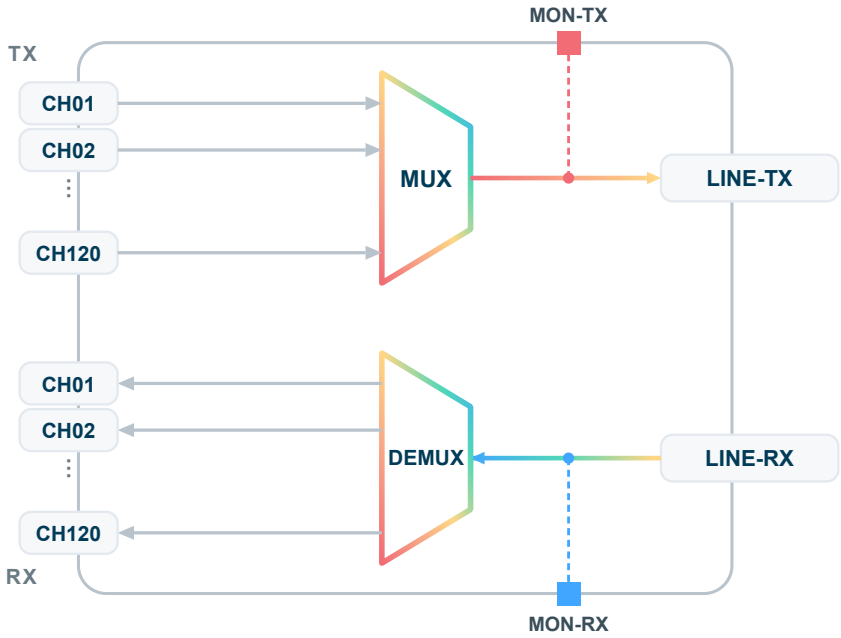
Chassis-managed via RJ-45

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).

3U rack unit

133mm (H) × 442mm (W) × 220mm (D); standalone rack-mount unit, not a chassis card.

FUNCTIONAL STRUCTURE



FORMAT

3 U

SPECIFICATIONS

Function	Multiplexing and demultiplexing of 120 DWDM optical signals in ultra-wide C-band
Dimensions (H × W × D)	3U: 133mm × 442mm × 220mm
Spectral Type	Flat top
Frequency Range	190.7–196.65 THz
Channel Spacing	50GHz (0.4nm)
Number of Optical Channels	120
ITU Passband Frequency	±6.25GHz
Wavelength Accuracy	≤0.05nm
Channel Insertion Loss	≤8.5dB
Insertion Loss Uniformity	≤1.5dB
-0.5dB Bandwidth	≥30GHz
-3dB Bandwidth	≥44GHz
Adjacent Channel Isolation	≥20dB
Non-Adjacent Channel Isolation	≥30dB
Total Crosstalk	≥22dB
Return Loss	≥40dB
Polarization Dependent Loss	≤0.7dB
Polarization Mode Dispersion	≤0.5ps
Dispersion	±20ps
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–CH120, 50GHz Grid)					
Ch.	**Freq. (THz)**	**λ (nm)**	**Ch.**	**Freq. (THz)**	**λ (nm)**
CH001	196.65	1524.5	CH061	193.65	1548.11
CH002	196.6	1524.89	CH062	193.6	1548.51
CH003	196.55	1525.27	CH063	193.55	1548.91
CH004	196.5	1525.66	CH064	193.5	1549.32
CH005	196.45	1526.05	CH065	193.45	1549.72
CH006	196.4	1526.44	CH066	193.4	1550.12
CH007	196.35	1526.83	CH067	193.35	1550.52
CH008	196.3	1527.22	CH068	193.3	1550.92
CH009	196.25	1527.61	CH069	193.25	1551.32
CH010	196.2	1528	CH070	193.2	1551.72
CH011	196.15	1528.38	CH071	193.15	1552.12
CH012	196.1	1528.77	CH072	193.1	1552.52
CH013	196.05	1529.16	CH073	193.05	1552.93
CH014	196.0	1529.55	CH074	193.0	1553.33
CH015	195.95	1529.94	CH075	192.95	1553.73
CH016	195.9	1530.33	CH076	192.9	1554.13
CH017	195.85	1530.73	CH077	192.85	1554.54
CH018	195.8	1531.12	CH078	192.8	1554.94
CH019	195.75	1531.51	CH079	192.75	1555.34
CH020	195.7	1531.9	CH080	192.7	1555.75
CH021	195.65	1532.29	CH081	192.65	1556.15
CH022	195.6	1532.68	CH082	192.6	1556.55
CH023	195.55	1533.07	CH083	192.55	1556.96
CH024	195.5	1533.47	CH084	192.5	1557.36
CH025	195.45	1533.86	CH085	192.45	1557.77
CH026	195.4	1534.25	CH086	192.4	1558.17
CH027	195.35	1534.64	CH087	192.35	1558.58
CH028	195.3	1535.04	CH088	192.3	1558.98
CH029	195.25	1535.43	CH089	192.25	1559.39
CH030	195.2	1535.82	CH090	192.2	1559.79
CH031	195.15	1536.22	CH091	192.15	1560.2
CH032	195.1	1536.61	CH092	192.1	1560.61
CH033	195.05	1537	CH093	192.05	1561.01

Ch.	Freq. (THz)	λ (nm)	Ch.	Freq. (THz)	λ (nm)
CH034	195.0	1537.4	CH094	192.0	1561.42
CH035	194.95	1537.79	CH095	191.95	1561.83
CH036	194.9	1538.19	CH096	191.9	1562.23
CH037	194.85	1538.58	CH097	191.85	1562.64
CH038	194.8	1538.98	CH098	191.8	1563.05
CH039	194.75	1539.37	CH099	191.75	1563.46
CH040	194.7	1539.77	CH100	191.7	1563.86
CH041	194.65	1540.16	CH101	191.65	1564.27
CH042	194.6	1540.56	CH102	191.6	1564.68
CH043	194.55	1540.95	CH103	191.55	1565.09
CH044	194.5	1541.35	CH104	191.5	1565.5
CH045	194.45	1541.75	CH105	191.45	1565.91
CH046	194.4	1542.14	CH106	191.4	1566.31
CH047	194.35	1542.54	CH107	191.35	1566.72
CH048	194.3	1542.94	CH108	191.3	1567.13
CH049	194.25	1543.33	CH109	191.25	1567.54
CH050	194.2	1543.73	CH110	191.2	1567.95
CH051	194.15	1544.13	CH111	191.15	1568.36
CH052	194.1	1544.53	CH112	191.1	1568.77
CH053	194.05	1544.92	CH113	191.05	1569.18
CH054	194.0	1545.32	CH114	191.0	1569.59
CH055	193.95	1545.72	CH115	190.95	1570.01
CH056	193.9	1546.12	CH116	190.9	1570.42
CH057	193.85	1546.52	CH117	190.85	1570.83
CH058	193.8	1546.92	CH118	190.8	1571.24
CH059	193.75	1547.32	CH119	190.75	1571.65
CH060	193.7	1547.72	CH120	190.7	1572.06

ORDERING INFORMATION

NAME	AAWG (Athermal Array Waveguide Grating) 120-Channel 50GHz MuxDemux Rack
DESCRIPTION	AAWG (Athermal Array Waveguide Grating) passive 120-channel ultra-wide C-band DWDM multiplexer/demultiplexer, 3U rack unit. Silicon-substrate AWG technology, athermal packaging, 50GHz spacing, 190.7-196.65THz (CH01-CH120), flat-top spectral response, suited to 120-wave x 200Gbps systems; LINE port power monitoring; RJ-45 management to the DCI-OTN-8S-2U rear interface board.
PART NUMBER	**DCI-AAWG-50-F-120-3U**

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