

Optical Node Series

Small Form-factor Pluggables (SFP) 4.25 Gbps Digital Return Field Hardened SFPs

FEATURES

- Simplified logistics with Small Form-factor Pluggable (SFP) optics
- Tailor network demands with the following optics:
 - 1310
 - CWDM
 - DWDM
- For use in ARRIS Digital Return Path Transmitters:
 - OM6DTX-SFP-285-5A8
 - OM6DTX-SFP-285-5B8
 - DT7030N-85-01
 - DT7230N-85-02
 - SG4-DRT-2X-85



PRODUCT OVERVIEW

Small Form-factor Pluggable, MSA compliant optics are available in a variety of technologies designed to satisfy a wide range of network requirements. ARRIS provides these 4.25 Gbps, industrial temperature-rated SFPs to ensure the overall link performance is maintained. For short links less than 10 km, a low-power 1310 nm SFP is available that delivers a lower-cost solution than analog return transmitters on a per RF stream basis. To take advantage of longer links of up to 40 km, CWDM SFPs are available in 18 wavelengths. With the addition of ruggedized optical passives, multiple wavelengths can be aggregated for fiber savings.

For greater distances of up to 80 km, DWDM SFPs are available in 40 ITU wavelengths to maximize wavelength aggregation and design flexibility. Optical amplification can be utilized to extend distances as required by network designs.

SPECIFICATIONS

Characteristics	Specifications ¹		
	Min.	Typ.	Max.
10 km 1310 nm Transceiver SFP Specifications (1509443-001)			
Input Voltage, Vdc	3.1	3.3	3.5
Input Differential Impedance, ohm	—	100	—
Data Rate, Gbps	—	—	4.25
Single Ended Data Input Swing, Voltage In, mV p-p	100	—	500
Extinction Ratio, dB	5	—	—
Jitter, peak to peak, UI	—	—	0.07
Optical Wavelength, nm	1270	—	1360
Optical Output Power, dBm	-8	—	-1
Receiver Sensitivity (Input Power), dBm	—	—	-18
Return Loss, dB	12	—	—
Spectral Width (FWHM), nm	—	—	2.5
Dispersion Penalty (10 km), dB	—	—	2
40 km CWDM Transceiver SFP Specifications (1509444-xxx)			
Input Voltage, Vdc	3.135	3.3	3.465
Input Differential Impedance, ohm	—	100	—
Data Rate, Gbps	—	—	4.25
Single Ended Data Input Swing, Voltage In, mV p-p	100	—	500
Extinction Ratio, dB	5	—	—
Jitter, peak to peak, UI	—	—	0.07
Center Wavelength Spacing, nm	—	20	—
Optical Output Power, dBm	0	—	5
Receiver Sensitivity (Input Power), dBm	—	—	-23
Return Loss, dB	12	—	—
Spectral Width (-20 dB), nm	—	—	1
Side Mode Suppression Ratio (SMSR), dB	30	—	—
Relative Intensity Noise (RIN), dB/Hz	—	—	-120
80 km DWDM Transmitter SFP Specifications (1509445-xxx)			
Input Voltage, Vdc	3.135	3.3	3.465
Input Differential Impedance, ohm	—	100	—
Data Rate, Gbps	—	—	4.25
Transmitter Differential Input Voltage, mV	200	—	2000
Extinction Ratio, dB	5.0	—	—
Jitter, peak to peak, UI	—	—	75
Output Power, dBm	3	—	7
Center Wavelength Spacing, GHz	—	100 (approximately 0.8 nm)	—
Spectral Width (-20 dB), nm	—	—	0.3
Side Mode Suppression Ratio (SMSR), dB	35	—	—
Relative Intensity Noise (RIN), dB/Hz	—	—	-120
Environmental			
Case Operating Temperature	-40° to 92°C (-40° to 197.6°F)		
Storage Temperature	-40° to 85°C (-40° to 185°F)		
Storage Relative Humidity, %	5		95

NOTE:

1. The proper identification of an SFP transceiver or transmitter and other EMS/performance parameters are only guaranteed when using ARRIS recommended SFPs.

SFP ORDERING INFORMATION

Part Number	Description
10 km 1310 nm SFP Transceiver¹	
1509443-001	4.25 Gbps, 1310 nm, LC/UPC, 0.16mW, -40° to +92°C, DDM
40 km CWDM SFP Transceivers²	
1509444-271	4.25 Gbps, 1271 nm, LC/UPC, 1.0 mW, -40° to +92°C, DDM
1509444-291	4.25 Gbps, 1291 nm, LC/UPC, 1.0 mW, -40° to +92°C, DDM
1509444-311	4.25 Gbps, 1311 nm, LC/UPC, 1.0 mW, -40° to +92°C, DDM
1509444-331	4.25 Gbps, 1331 nm, LC/UPC, 1.0 mW, -40° to +92°C, DDM
1509444-351	4.25 Gbps, 1351 nm, LC/UPC, 1.0 mW, -40° to +92°C, DDM
1509444-371	4.25 Gbps, 1371 nm, LC/UPC, 1.0 mW, -40° to +92°C, DDM
1509444-431	4.25 Gbps, 1431 nm, LC/UPC, 1.0 mW, -40° to +92°C, DDM
1509444-451	4.25 Gbps, 1451 nm, LC/UPC, 1.0 mW, -40° to +92°C, DDM
1509444-471	4.25 Gbps, 1471 nm, LC/UPC, 1.0 mW, -40° to +92°C, DDM
1509444-491	4.25 Gbps, 1491 nm, LC/UPC, 1.0 mW, -40° to +92°C, DDM
1509444-511	4.25 Gbps, 1511 nm, LC/UPC, 1.0 mW, -40° to +92°C, DDM
1509444-531	4.25 Gbps, 1531 nm, LC/UPC, 1.0 mW, -40° to +92°C, DDM
1509444-551	4.25 Gbps, 1551 nm, LC/UPC, 1.0 mW, -40° to +92°C, DDM
1509444-571	4.25 Gbps, 1571 nm, LC/UPC, 1.0 mW, -40° to +92°C, DDM
1509444-591	4.25 Gbps, 1591 nm, LC/UPC, 1.0 mW, -40° to +92°C, DDM
1509444-611	4.25 Gbps, 1611 nm, LC/UPC, 1.0 mW, -40° to +92°C, DDM
80 km DWDM SFP Transmitters³	
1509445-201 ⁴	4.25 Gbps, Channel 20, 1561.42 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-211	4.25 Gbps, Channel 21, 1560.61 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-221	4.25 Gbps, Channel 22, 1559.79 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-231	4.25 Gbps, Channel 23, 1558.98 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-241	4.25 Gbps, Channel 24, 1558.17 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-251	4.25 Gbps, Channel 25, 1557.36 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-261	4.25 Gbps, Channel 26, 1556.56 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-271	4.25 Gbps, Channel 27, 1555.75 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-281	4.25 Gbps, Channel 28, 1554.94 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-291	4.25 Gbps, Channel 29, 1554.13 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-301	4.25 Gbps, Channel 30, 1553.33 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-311	4.25 Gbps, Channel 31, 1552.52 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-321	4.25 Gbps, Channel 32, 1551.72 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-331	4.25 Gbps, Channel 33, 1550.92 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-341	4.25 Gbps, Channel 34, 1550.12 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-351	4.25 Gbps, Channel 35, 1549.32 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-361	4.25 Gbps, Channel 36, 1548.51 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-371	4.25 Gbps, Channel 37, 1547.72 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-381	4.25 Gbps, Channel 38, 1546.92 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-391	4.25 Gbps, Channel 39, 1546.12 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-401	4.25 Gbps, Channel 40, 1545.32 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-411	4.25 Gbps, Channel 41, 1544.53 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-421	4.25 Gbps, Channel 42, 1543.73 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-431	4.25 Gbps, Channel 43, 1542.94 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-441	4.25 Gbps, Channel 44, 1542.14 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-451	4.25 Gbps, Channel 45, 1541.35 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-461	4.25 Gbps, Channel 46, 1540.56 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-471	4.25 Gbps, Channel 47, 1539.77 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-481	4.25 Gbps, Channel 48, 1538.98 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-491	4.25 Gbps, Channel 49, 1538.19 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-501	4.25 Gbps, Channel 50, 1537.40 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-511	4.25 Gbps, Channel 51, 1536.61 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-521	4.25 Gbps, Channel 52, 1535.82 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-531	4.25 Gbps, Channel 53, 1535.04 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-541	4.25 Gbps, Channel 54, 1534.25 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-551	4.25 Gbps, Channel 55, 1533.47 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-561	4.25 Gbps, Channel 56, 1532.68 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-571	4.25 Gbps, Channel 57, 1531.90 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-581	4.25 Gbps, Channel 58, 1531.12 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-591	4.25 Gbps, Channel 59, 1530.33 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM
1509445-601	4.25 Gbps, Channel 60, 1529.55 nm, LC/UPC, 2.0 mW, -40° to +92°C, DDM

SFP ORDERING INFORMATION (CONTINUED)

Part Number	Description
Fiber Optic Pigtails with Bulkhead Connectors*	
Opti Max OM2741	
1505889	Kit, Opti Max OM4100 LC/UPC to SC/APC 1.6 mm jacketed, 0.5 meter
1505890	Kit, Opti Max OM4100 LC/UPC to SC/UPC 1.6 mm jacketed, 0.5 meter
Opti Max OM4100	
1505889	Kit, Opti Max OM4100 LC/UPC to SC/APC 1.6 mm jacketed, 0.5 meter
1505890	Kit, Opti Max OM4100 LC/UPC to SC/UPC 1.6 mm jacketed, 0.5 meter
Opti Max OM4120	
1505889	Kit, Opti Max OM4100 LC/UPC to SC/APC 1.6 mm jacketed, 0.5 meter
Opti Max OM6000	
1505890	Kit, Opti Max OM4100 LC/UPC to SC/APC 1.6 mm jacketed, 0.5 meter

NOTES:

1. Replaces legacy Motorola p/n 586027-001-00
2. Replaces legacy Motorola p/n 586019-TAB-00
3. Replaces legacy Motorola p/n 586020-TAB-00

* Must order fiber optic pigtail with bulkhead connectors. Refer to the applicable Opti Max Optical Node Equipment Manual for more information.

RELATED PRODUCTS

CHP Chassis	Optical Patch Cords
Power Supplies	Optical Passives
Management Module	Installation Services

Customer Care

Contact Customer Care for product information and sales:

- United States: 866-36-ARRIS
- International: +1-678-473-5656

Note: Specifications are subject to change without notice.

Copyright Statement: © 2018 ARRIS Enterprises LLC. All rights reserved. ARRIS and the ARRIS logo are trademarks of ARRIS International plc and/or its affiliates. All other trademarks are the property of their respective owners. No part of this publication may be reproduced in any form or by any means or used to make any derivative work (such as translation, transformation, or adaptation) without written permission from ARRIS International plc ("ARRIS"). ARRIS reserves the right to revise this publication and to make changes in content from time to time without obligation on the part of ARRIS to provide notification of such revision or change.

1512767-RevA_4.25 SFP_DS_07SEP18

(rev 9-2018)

Ask us about the complete Access Technologies Solutions portfolio:

Node-SFP