Product Brochure

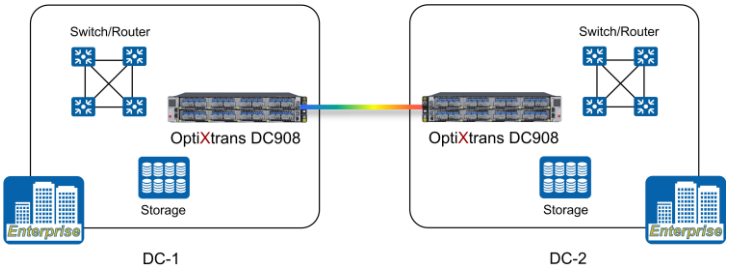
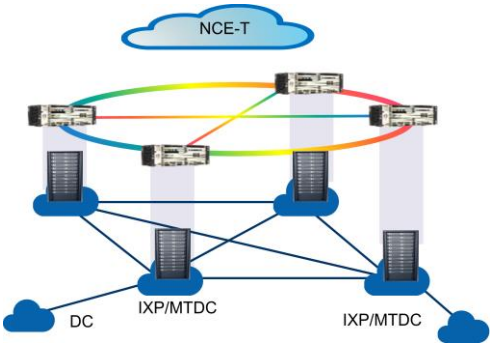
Huawei OptiXtrans DC908

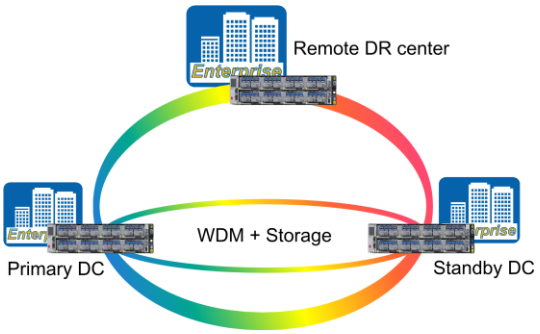
The Huawei OptiXtrans DC908 is an optical-electrical wavelength division multiplexing (WDM) transmission device designed for Data Center Interconnects (DCIs). Built to withstand the toughest challenges of the intelligent era, the OptiXtrans DC908 features simplified deployment in just eight minutes, ultra-broadband and high integration (with 48T per fiber, future-proofed for the next five years), and intelligent, AI ready, proactive operations and maintenance (O&M).

Huawei OptiXtrans DC908 can be widely applied in highly digitalized industries and enterprise DCI scenarios, such as OTT providers, MTDC, IXP, finance, education, government, healthcare, energy, transportation, and manufacturing.

Appearance of Huawei OptiXtrans DC908

Typical Application Scenarios of Huawei OptiXtrans DC908

Application Scenario	Typical Networking
Small-sized networks	**Point-to-point/Ring DWDM**: One OptiXtrans DC908 = High-density electrical-layer device + FOADM + OLA 
Medium- and large-sized networks	**Full mesh**: High-density DCI + ROADM device + NCE-T 

Application Scenario	Typical Networking
Disaster recovery	**Three centers in two cities:** DWDM 

Product Highlights

Simplified: Deployment in 8 Minutes, Low Skill Requirements

- Simplified fiber connections:
  - One optical-layer board integrates functions of N traditional optical-layer boards such as OA, multiplexer/demultiplexer, add/drop multiplexer, optical supervisory, and optical spectrum analysis boards. This reduces the number of fiber connections inside the optical layer by 90% to simplify the optical layer.
  - Conjoined fibers, double-layer profile core (DLC), are used to reduce the number of fiber connections by 50%, and port error-proof labels are added to reduce the fiber connection error rate.
- 5A deployment: Five automatic processes, including fiber auto-discovery, fiber connection auto-verification, wavelength auto-configuration, optical-layer auto-commissioning, and service auto-adaptation, are used to implement one-click automatic deployment and intelligent commissioning in seconds. The commissioning period is shortened from five days to hours.

Ultra-High Bandwidth and Integration: 48T/Fiber, No Need to Lease Fiber for the Next Five Years

- Ultra-broadband
  - 48 Tbit/s@C120 per fiber pair, continuous evolution: The single-fiber capacity is improved to support smooth upgrade to the C+L band in the future.
  - 100G to 600G programmable
- High integration
  - Optical-electrical integration: Optical-layer and electrical-layer boards are deployed in the same subrack, halving the required space. These boards suit IT and CT equipment rooms and can be deployed with IT equipment in the same cabinet.
  - Programmable Muxponder boards: The maximum capacity per slot is 1.2 Tbit/s, and the maximum capacity per chassis is 9.6 Tbit/s@2 U.

Advance Intelligence: AI Ready and Proactive O&M

- The built-in Huawei-proprietary AI chip (Ascend 310) collects optical parameters in seconds.
  - Sub-health prediction: Faults are predicted based on the trend and fluctuation and 90% of gradual faults can be predicted in advance, shifting from passive to proactive O&M.
  - Correlative alarm suppression and precise troubleshooting: The intelligent analysis, locating, and demarcation functions enable one alarm to be generated for one fault, shortening the troubleshooting time from days to minutes.
- Hierarchical and diversified management and control solutions match different network scales.
  - The CLI/WebGUI/NET-T/eSight management and control solutions flexibly match different network scales and solutions.
  - eSight: Unified O&M capabilities are provided for the Storage + DCI active-active solution.

High Security

- High security: The high-security AES256 algorithm is used to encrypt services at the L1 layer.
- High reliability: Various multi-layer network-level and equipment-level protection schemes are provided. The protection switching latency is less than 50 ms, guaranteeing superior protection performance.

Product Specifications

Parameter		Description
Chassis	Dimensions (H x W x D)	86.1 mm x 442 mm x 500 mm
	Maximum capacity	9.6 Tbit/s
	Number of service board slots	8
	Applicable cabinet	19-inch cabinet
Line-side port	Rate	• 100G (PDM_QPSK) programmable • 100G (PDM_wDCM_QPSK) programmable • 200G (PDM_16QAM) programmable • 200G (PDM_16QAM-H) programmable • 200G (PDM_e16QAM) programmable • 200G (PDM_QPSK) programmable • 400G (PDM_16QAM) programmable • 600G (PDM_64QAM) programmable • 800G (PDM_64QAM) programmable
	Optical module	• Fixed wavelength-tunable optical module (MSA) • Pluggable wavelength-tunable CFP2
Client-side port	Access Service Type	10GE, 40GE, 100GE, 400GE, OTU4, OTU2, OTU2e, STM-64, FC800, FC1200, FC1600, FC3200, and 10GWAN
	Optical module	• Pluggable SFP+ • Pluggable QSFP28, QSFP+, and QSFP-DD
Optical power management		ALS, AGC, eALC, APE, and IPA
Maximum number of wavelengths		Fixed grid: 120 wavelengths @ 50 GHz
Channel spacing		Fixed grid: 50 GHz/75 GHz/100 GHz/150 GHz
Center frequency range		190.7 THz to 196.65 THz
Center wavelength range		1524.50 nm to 1572.06 nm
Protection		• Optical line protection • Intra-board 1+1 protection • Client 1+1 protection • LPT
Management interface		CLI/GUI/SNMP/NCE-T/NETCONF
Power supply	Backup	1+1 power supply backup
	AC	• Rated voltage range

Parameter		Description
		– 100 V AC to 120 V AC (50/60 Hz) – 200 V AC to 240 V AC (50/60 Hz) • Maximum voltage range: 90 V AC to 264 V AC (47 Hz to 63 Hz)
	High-voltage DC	• Rated voltage: 240 V HVDC • Maximum voltage range: 192 V HVDC to 288 V HVDC
	DC	• Rated voltage: –48 V DC • Maximum voltage range: –40 V DC to –72 V DC
Heat dissipation		• Air intake from front and air exhaust from rear • 2+1 fan tray assembly backup
Typical power consumption		• 200G: 947 W • 100G: 721 W
Typical heat dissipation		• 200G: 3231BTU/h • 100G: 2460BTU/h
Weight		32 kg when service boards are fully configured
Operating environment	Operating temperature	0°C to 45°C (0 m to 1800 m) **NOTE** For altitudes from 1800 m to 5000 m, the highest operating temperature decreases by 1°C for every increase of 220 m in altitude.
	Transportation/Storage temperature	-40°C to +70°C
	Humidity	5% to 95% (non-condensing)
	Altitude	< 5000 m
	Noise (sound pressure at room temperature 27°C)	< 78 dBA
MTTR		4 hours
MTBF		33.4 years

Copyright © Huawei Technologies Co., Ltd. 2019. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Huawei Technologies Co., Ltd.

Trademarks and Permissions

HUAWEI and other Huawei trademarks are trademarks of Huawei Technologies Co., Ltd.

All other trademarks and trade names mentioned in this document are the property of their respective holders.

Notice

The purchased products, services and features are stipulated by the contract made between Huawei and the customer. All or part of the products, services and features described in this document may not be within the purchase scope or the usage scope. Unless otherwise specified in the contract, all statements, information, and recommendations in this document are provided "AS IS" without warranties, guarantees or representations of any kind, either express or implied.

The information in this document is subject to change without notice. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute a warranty of any kind, express or implied.

Huawei Technologies Co., Ltd.

Address:Huawei Industrial Base Bantian, Longgang Shenzhen 518129 People's Republic of China

Website:www.huawei.com