

Mini-Size, Full Service Access

—OptiX OSN 1800





Product Brochure

Mini-Size, Full Service Access — OptiX OSN 1800 Product Description

Introduction

At present, enterprise informatization are developing rapidly and the continued explosion in bandwidth demand combined with larger capacity and longer distance also raise. Application of leased bandwidth and fiber direct connection can't meet the requirement of enterprise customer. The OptiX OSN 1800 Multi-Service Mini-WDM/OTN System combines the OTN and WDM features and provide unified transmission of all services over WDM/OTN. The OptiX OSN 1800 is designed for edge of metropolitan layer and provide a cost-efficient and high broadband solution for Energy/Government/Finance/Education/Enterprise customers.

Though there are different requirement of customers in access layer, let us focus on the top3 challenges transmission network faced as below:

01.How to provide Multi-Service network in different enterprise application scenarios ?

02.How to lower the operation and maintenance cost?

03.How to improve reliability of network and realize unified, stably and efficient transmission network?

With response to these challenges access transmission network faced, with various service types in metro area OSN1800 series adopt multi innovative technologies to transport full rate from 2Mbit/s to 10Gbit/s. Thus the fixed broadband, the mobile and the leased line networks converge into a situation. OSN1800 series are designed by "green architecture" to realize low power consumption which help customers reduce Opex greatly. OSN 1800 series provide full protection solution in term of line service, client service and power boards to meet the requirement of high reliable network. Huawei propose enterprise solution to help our customers to build an access transport networks with flexible service access, easy operation with lowest Opex and high reliability.

OSN 1800: Mini-Size, Full-Service Access

- **No limitation for service.** All type of service access from 2M~10G.
- **No limitation for installation.** Only 1/2U size which could be installed by Rack-, outside cabinet-, wall-, pole-mount.
- **No limitation for power supply.** 220V AC/-48V DC supported by 1+1 power protection.
- **No limitation for capacity.** System capacity expansion from 8*wave CWDM to 40*wave DWDM. 48*GE or 8*10G by one pair fiber per 2U Chassis. 32*GE or 4*10G by single fiber.
- **No limitation for transport distance.** Transport distance over 120km maximum.
- **No limitation for Protection.** All board with the rate of 10G and below embedded 1+1 optical line protection.
- **No limitation for Maintenance.** Unattended Monitor after installation, Remote in-band management by G.709.

OSN 1800 I (1U)



DC	FAN	3	OTU/OADM	4	OTU/OADM
		5	OTU/OADM	2	SCC

OSN 1800 II (2U)








DC	FAN	7	OADM	8	SCC
		5	OTU/OADM	6	OTU/OADM
DC	FAN	3	OTU/OADM	4	OTU/OADM
		1	OTU/OADM	2	OTU/OADM

4 OTU/OADM

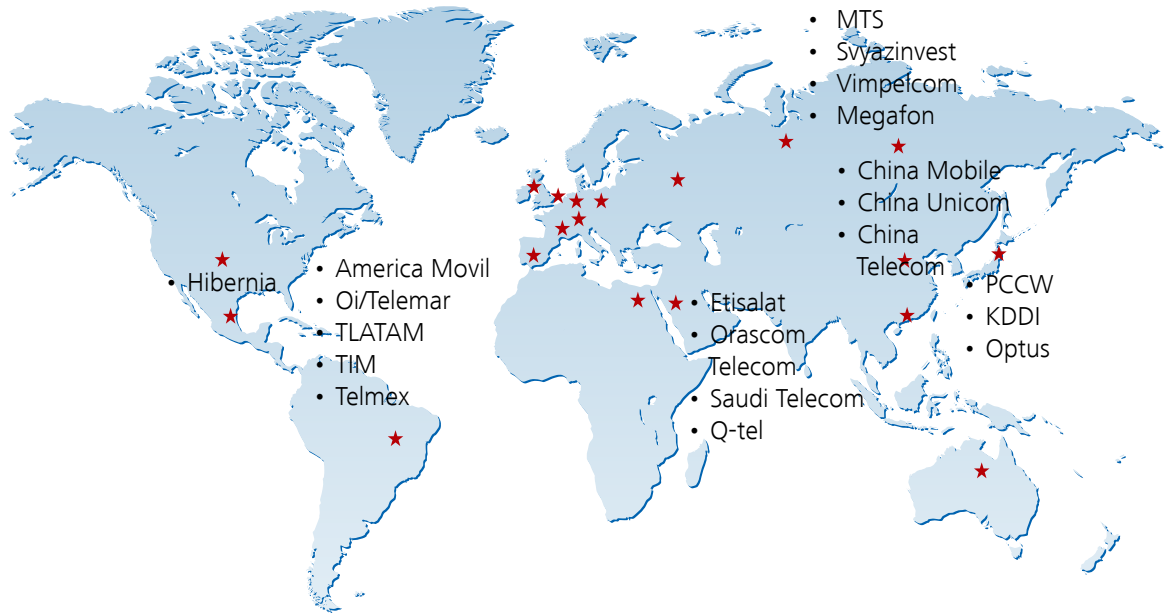
OTU=Optical Transponder Unit
 OADM=Optical Add or Drop Multiplexing
 SCC= System Control & Communication

Certifications

Authorities	Certified Items	Time & Address
	ServerNet: compatibility between the HP ServerNet protocol, the HP 6780 Cluster Switch and Huawei DWDM solutions	2009.8, HP cluster QA lab, HP headquarter, Cupertino
	SAN: FC100, FC200 SAN Service	2009.4, F3-2-A16, Huawei Base
	EMC: RE/RS、CE/CS、EFT、ESD、DC DIP、SURGE Security Test: Input test、Temp test	2008.11, EMC Verification Lab in Huawei Base
		2009.4, EMC Verification Lab in Huawei Base
	Environmental Test: Earthquake、air、corrosivity、flammability EMC GR1089 Sec 10	2009.4, National Technical Systems, Plano, TX Fullerton, CA, USA



Global Commercial Applications



Over **80%** market share in China, and mutually deployed in Restful Cites, Enterprises, Data Centers, Universities and so on.

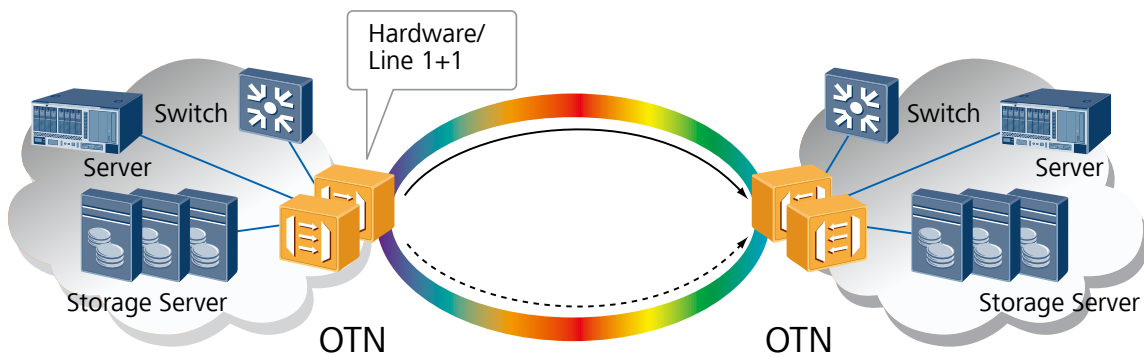
Over **15,000** sets commercially available in global market. Cooperate with Government, Finance, Education, Communication, Enterprise customers and Tier-1 operators including KDDI, PCCW, TA, FT, Vodafone, Telefonica and so on.



Reliable, Simplified, Timely Redundancy Solution for Data Centre

Challenges

When banks or enterprise build their own storage network, the demand of data redundancy also is growing, because data backup in different sites could improve data security and efficiency. Customers build their own WDM transport network to resolve the contention of bandwidth and fiber resource. that brings three key customer values. First, private networks improve the reliability of network. Second ,SAN FC service with high rate is transmitted effectively over WDM pipe. Third, it provides flexible system architecture on explosion in bandwidth.



Benefits

All type of services access: The Interfaces for all IP/SAN service are almost supported in industry;

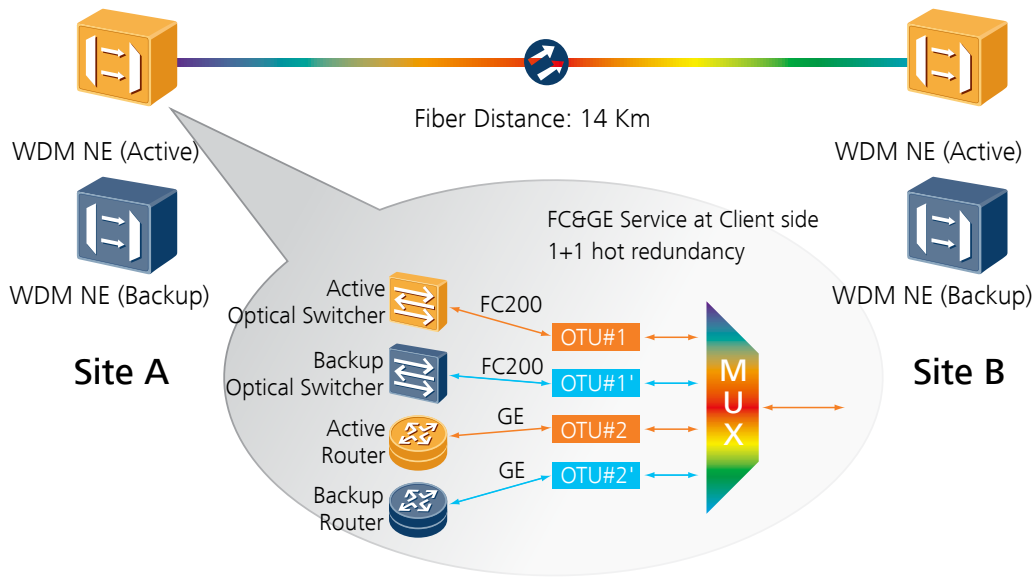
Large-scale Redundancy: The redundancy scale is extensive to 120km to satisfy the requirement of high capacity of physical redundancy sites;

Professional Certificated: Fully Certificated by top authority including EMC、 HP、 IBM、 SUN、 McDATA、 Brocade, meanwhile deeply corporate with IBM to meet all SAN application scenarios.



Success Story: Redundancy Solution for ShengJing Bank

Diagram: 1+1 Cold Redundancy Benefit: Full Network Protection

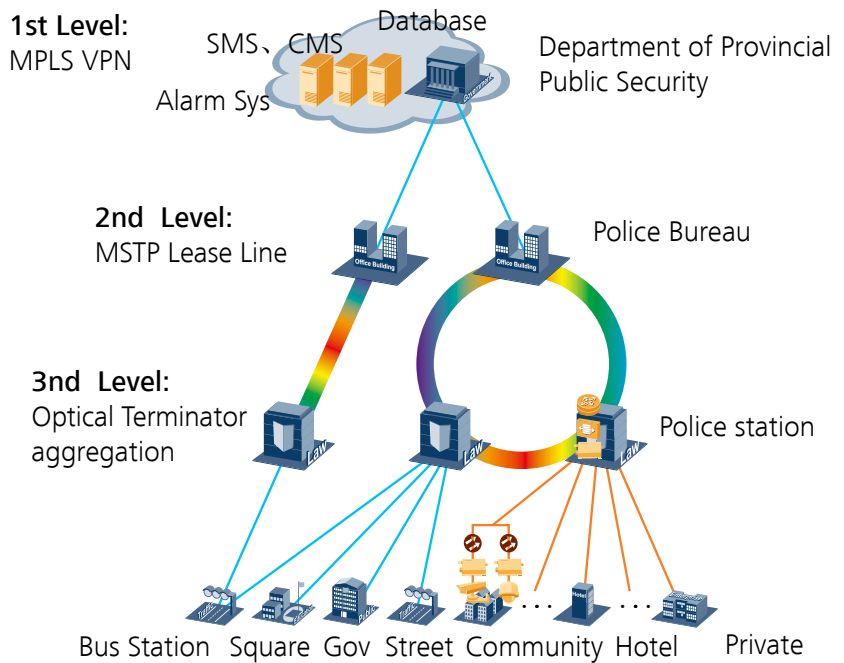


Efficient Video Transmission for Restful City

Challenges

to satisfy the high capacity requirement of monitoring video transmission and the increasing requirement of video shared by government. OSN1800 as a WDM solution applied in access layer which is a cost-efficient and high broadband solution for customers could resolve the tension of fiber recourse.

Video Transmission Solution for Police Bureau



Benefits

01.8 GE DWDM (ELOM Card)

Service at each access site >4 GE

02.4 GE CWDM (LQG Card, 70km line SFP)

Service at each access site is 3~4 GE,

and the total distance < 70km

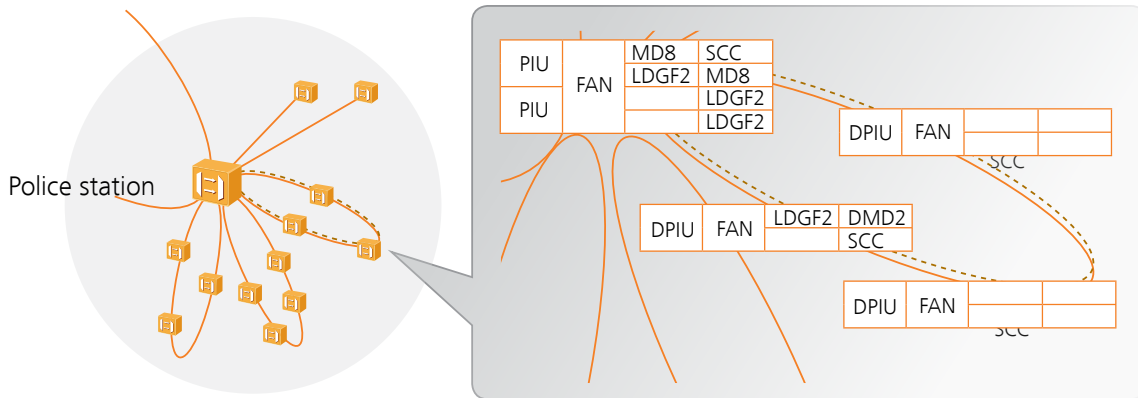
DWDM (ELOM Card)

03.2 GE CWDM (LDGF Card)

Service at each access site >4 GE

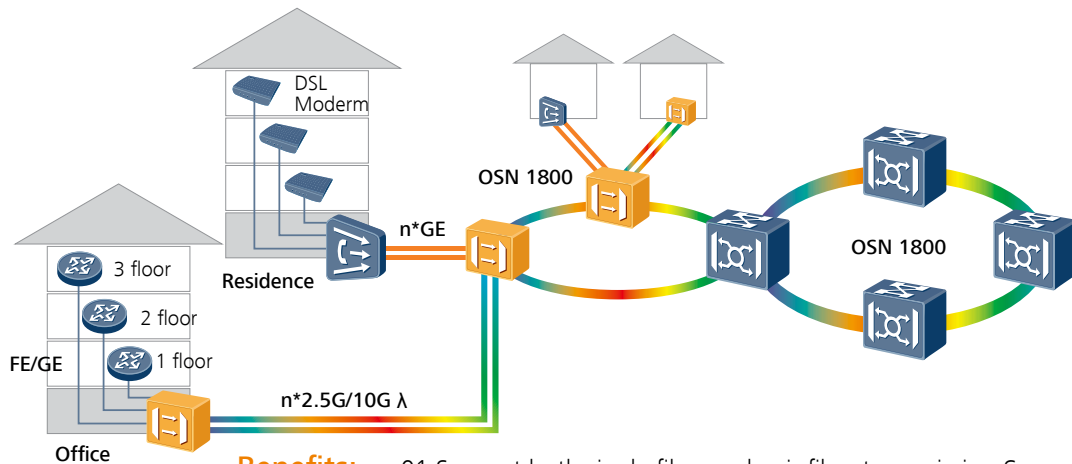
Success Story: Video Transmission(Police/Transportation) for Yinchuan Restful City

- 01. **Capacity enough.** 4GE could be provided from sub-bureau to each police-station to full satisfy the requirement of high-quality monitoring video transmission;
- 02. **Only 1U space** for each police-station;
- 03. **Board embedded with 1+1 Protection,** Switching time<50ms.



FE, GE, FC service over Leased Line

At present, enterprise IT park or branch campus of university connect directly without fiber, so leased line services are the mainstream. When the requirement of more larger bandwidth and leased fiber raise, Huawei recommend WDM Solution to realize large capacity by single-fiber bidirectional transmission. Accordingly it cut down the cost of constructing network greatly.

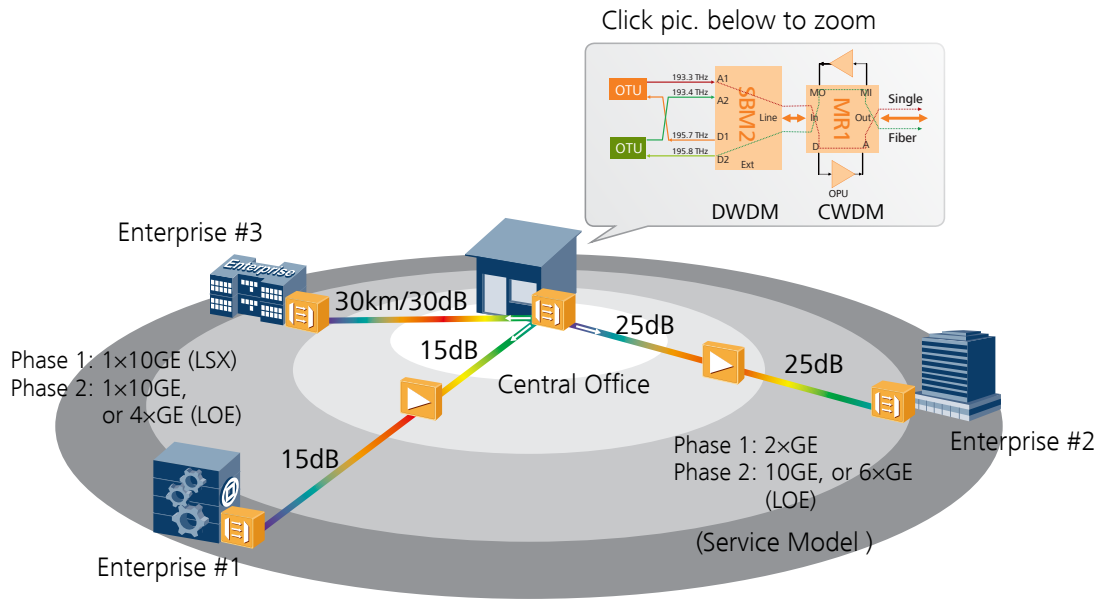


- Benefits:**
- 01. Support both single fiber and pair fiber transmission & support both CWDM and DWDM at single fiber Scenario;
 - 02. 2M~10G full service access such as GE;
 - 03. Smoothly expanses to 80G by plugging service card
 - 04. 1+1 protection supported by client side, OUT, line side and equipment level;

Success Story: GE, 10GE Leased Line in KDDI

Benefits



- 01. Support 10GE transmitted on single fiber
- 02. Lease line service such as FE, GE, STM-1 or even 10GE could be flexible scheduling and grooming.



GE, 10GE Leased Line Single fiber Work, DWDM G.652 & 653 fiber

OSN 1800 - Mini - Size, Full Service Access

Specification

		OSN 1800 I	OSN 1800 II
Appearance			
Dimensions (mm)		44 (H) × 435 (W) × 220 (D)	88 (H) × 435 (W) × 220 (D)
Number of card-slot		4	8
Access Capacity		60G	120G
Switch	ODUK	ODUk (k=0,1,2)/ODUflex	
	Packet	Layer 2 switch	



	OSN 1800 I	OSN 1800 II
System Capacity	CWDM: 8-ch(max), 1471nm ~ 1611nm (Band S+C+L, ITU-T G.694.2) DWDM: 40-ch(max) 192.1THz ~ 196.0THz (Band-C, ITU-T G.694.1)	
Fiber type	ITU-T G.652/G.653/G.655	
Reach	Single reach: Max. 150km(36dB)	
Service	2M~10G Full rates, including E1/T1, STM-1/4/16/64, OC-3/12/48/192, FE, GE, 10GE, FC100/200/400/800/1200, FICON, ESCON, DVB-ASI, HDTV, HD SDI, SD SDI, 3G SDI, EPON, GPON, CPRI etc	
WDM-side interface	OTU-1/OTU-2/OTU-2e/OTU5G	
Any Service Board	LQM2:8*Any->2.5G; ELOM:8*Any->10G; LSX:10G Any->10G; LDX:2*10G Any->10G;	
Plug	SFP/SFP+/XFP; Tunable XFP	
Topology	Point to point, chain, star, ring	
Synchronization	2Mbit/s or 2MHz. SSM support Synchronous Ethernet, 1588V2	
Protection	Build-in Line side 1+1 OCh SNCP; ODUk SNCP	
Installation	19" or 23" rack, ETSI 300mm/600mm rack, Mobile or FTTx outdoor cabinet, Wall- or Pole-mount	
Operating temperature	-5°C ~ 55°C	
Temperature-Hardened	-40°C ~ 65°C ^a	
Humidity	5 ~ 95%	
Power Input	AC: 110~220V or DC: -48 /-60 V Support 1+1 redundant power supply	
Power Consumption	50W (Typical)	150W (Typical)

a: Certain boards can work properly under extremely high or low temperature with Temperature-Hardened Feature.

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