深圳纤亿通科技有限公司

ShenZhen Sharetop Technology Co.,Ltd.

2023.08

XYT-D16HE-I

XYT-D16HE-Ⅱ

XYT-D16HE-Ⅱ

D16HE 可堆叠 DCI 波分传输平台

XYT-D16HE Stackable DCI wavelength division transmission platform

概述　Summarize

XYT-D16HE 是纤亿通针对数据中心互联应用而定制的可堆叠超 单波100G/200G/400G 波分传输平台。该产品传输容量超大、体积小且完全符合数据中心机房的要求, 功耗低，运维便捷，既适用于数据中心间短距离业务互联，又适用于数据中心间骨干网长距离业务传输。

XYT-D16HE is a stackable supermono 100G/200G/400G wave division transmission platform customized by SHARETOP for data center interconnection applications. The product has large transmission capacity, small size, meets the requirements of the data center room, low power consumption, and convenient operation and maintenance. It is suitable for both short-distance service interconnection between data centers and long-distance service transmission between data centers on the backbone network
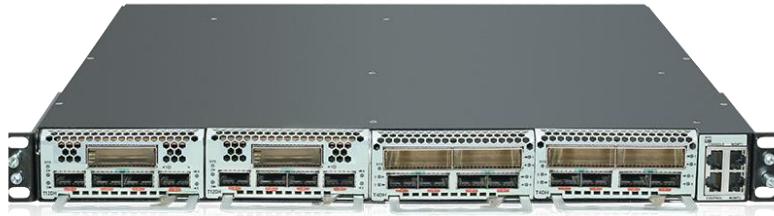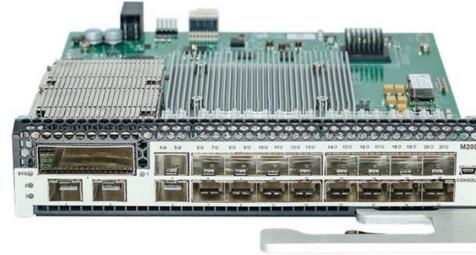
XYT-D16HE 电层支持200G/ 400G 业务卡，支持自研光模块开发；光层支持 FOADM、EDFA、Optical line protection、OTDR、OCM；以开放软件架构为基础，提供各种开放接口，DCI 用户可以进行二次开发，使其管理方式能便捷的和数据中心设备管理系统实现融合，减轻了设备日常维护的难度，为快速增长的数据中心业务提供了有力的保障。
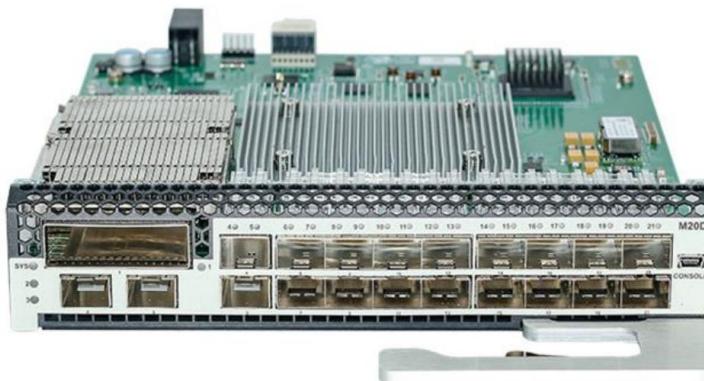
XYT-D16HE electrical layer supports 200G/ 400G service card and supports self-developed optical module development; Optical layer supports FOADM, EDFA, Optical line protection, OTDR, OCM; Based on the open software architecture and providing a variety of open interfaces, DCI users can carry out secondary development, so that its management mode can be easily integrated with the data center equipment management system, reducing the difficulty of daily maintenance of equipment, and providing a strong guarantee for the rapidly growing data center business.

物理特性 Physical characteristics

特性 Peculiarity	描述 Description	
	XYT-D16HE-I	**XYT-D16HE-Ⅱ**
机框尺寸 Frame size	1U：44.45mm (H) * 442mm (W) * 490mm (D)	2U：88.9mm (H) * 442mm (W) * 490mm (D)
板卡插槽 Board slot	最大支持4个业务短槽 Supports a maximum of four service short slots	最大支持8个业务短槽或4个业务长槽 Supports a maximum of eight service short slots or four service long slots
可插放机柜 Support cabinet	19英寸机柜 19-inch cabinet	
电源 Power source	1+1电源备份； 1+1 power backup；	
	AC输入（AC input）：100～240V，47～63Hz；	
	DC输入（DC input）：-40V～-72V；	
功耗 Power dissipation	450W	800W
散热 Heat dissipation	前进风，后出风； Forward wind, back wind；	
工作环境 Working environment	工作温度（Operating temperature）：0℃～45℃	
	存储温度（Storage temperature）：-40℃～70℃	
	相对湿度: 10%～90%, 无冷凝； Relative humidity: 10% ~ 90%, no condensation	
管理接口 Management interface	2xRJ45网口，1xRJ45B串口，1xRJ45控制口； 2xRJ45 network port, 1xRJ45B serial port, 1xRJ45 control port	前面板2个100/1000M SFP光口，后面板2xRJ45网口，2xRJ45控制口; Two 100/1000M SFP optical ports on the front panel, 2xRJ45 network ports, and 2xRJ45 control ports on the rear panel
管理 manage	支持 Open API/SNMP/NETCONF； Supports Open API/SNMP/NETCONF	
带内管理 In-band management	带内光层 OSC 通道，以及带内 GCC 通道； In-band optical layer OSC channel, and in-band GCC channel	

核心业务板卡 **Core business board**
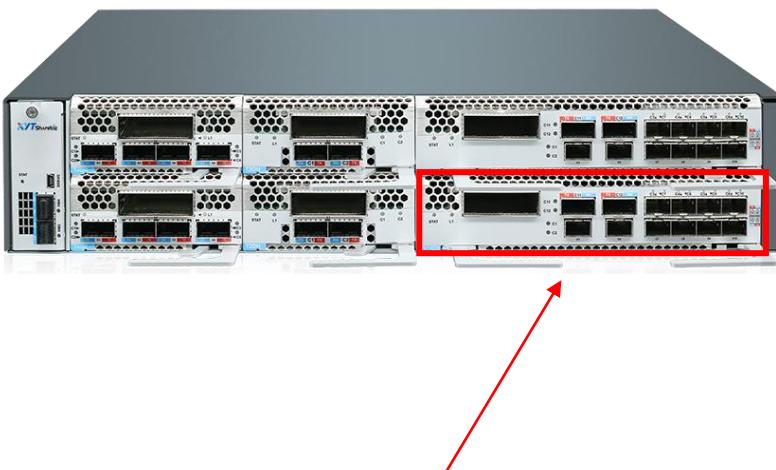
200G TMUX板卡，20*10G支线路合一板卡

200G TMUX board, 20*10G branch line in one board

XYT-D16HE-M20DH

技术指标 Technical index	描述 Description
板卡尺寸 Board size	占1个业务长槽； Occupies one service long slot;
客户侧接口 Customer side interface	单板可接入20个可插拔SFP+10G模块； The board can connect to 20 pluggable SFP+10G modules
系统侧接口 Line side interface	单板支持1个可插拔200G CFP2 DCO相干彩光模块； The board supports one pluggable 200G CFP2 DCO coherent color optical module
系统侧信号和复用结构 System side signal and multiplexing structure	200G : OCh <-> OTUC2 <-> ODUC2 <-> ODU4
客户侧信号和映射方式 Customer side signal and mapping mode	10G<->ODU2<-> ODU4
线路侧调制格式 Line side modulation format	200G：16QAM
	200G：QPSK
FEC模式 FEC mode	200G: SD-FEC

200G TMUX板卡，1*100G+10*10G支线路合一板卡

**200G TMUX board, 1*100G+10*10G branch line integrated board**
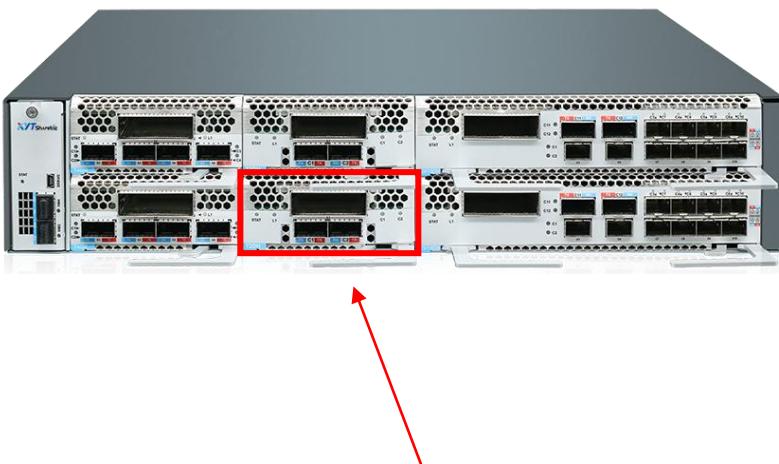
XYT-D16HE-M10T2DH

技术指标 Technical index	描述 Description	
板卡尺寸 Board size	占1个业务长槽； Occupies one service long slot；	
客户侧接口 Customer side interface	支持2*100G QSFP28或1*100G QSFP28+10*10G SFP+； Supports 2 x 100G QSFP28 or 1 x 100G QSFP28+10 x 10G SFP+	
系统侧接口 Line side interface	单板支持1个可插拔200G CFP2 DCO相干彩光模块； The board supports one pluggable 200G CFP2 DCO coherent color optical module	
系统侧信号和复用结构 System side signal and multiplexing structure	200G : OCh <-> OTUC2 <-> ODUC2 <-> ODU4	
客户侧信号和映射方式 Customer side signal and mapping mode	100G <-> ODU4	
	10G<->ODU2<-> ODU4	
线路侧调制格式 Line side modulation format	200G：16QAM	
	200G：QPSK	
FEC模式 FEC mode	200G: SD-FEC	

200G TMUX板卡，2*100G支线路合一板卡

200G TMUX board, 2*100G branch line in one board
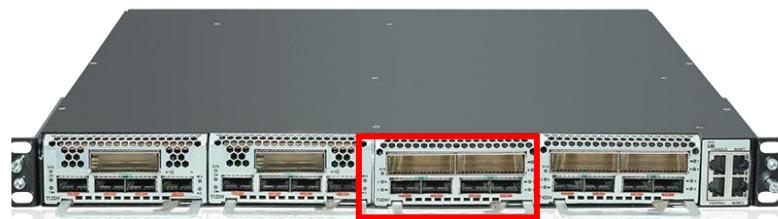
XYT-D16HE-T2DH

技术指标 Technical index	描述 Description
板卡尺寸 Board size	占1个业务短槽； Occupies one service short slot；
客户侧接口 Customer side interface	支持2*100G QSFP28; Supports 2 x 100G QSFP28;
系统侧接口 Line side interface	单板支持1个可插拔200G CFP2 DCO相干彩光模块； The board supports one pluggable 200G CFP2 DCO coherent color optical module
系统侧信号和复用结构 System side signal and multiplexing structure	200G : OCh <-> OTUC2 <-> ODUC2 <->ODU4
客户侧信号和映射方式 Customer side signal and mapping mode	100G <-> ODU4
线路侧调制格式 Line side modulation format	200G：16QAM
	200G：QPSK
FEC模式 FEC mode	200G: SD-FEC

200G TMUX板卡，4*100G支线路合一板卡

200G TMUX board, 4*100G branch line in one board

XYT-D16HE-T4DH

技术指标 Technical index	描述 Description
板卡尺寸 Board size	占1个业务短槽; Occupies one service short slot;
客户侧接口 Customer side interface	支持4*100G QSFP28; Supports 4 x 100G QSFP28;
系统侧接口 Line side interface	单板支持2个可插拔200G CFP2 DCO相干彩光模块; The board supports two pluggable 200G CFP2 DCO coherent color optical module
系统侧信号和复用结构 System side signal and multiplexing structure	200G : OCh <-> OTUC2 <-> ODUC2 <-> ODU4
客户侧信号和映射方式 Customer side signal and mapping mode	100G <-> ODU4
线路侧调制格式 Line side modulation format	200G：16QAM
	200G：QPSK
FEC模式 FEC mode	200G: SD-FEC

400G TMUX板卡，4*100G支线路合一板卡

400G TMUX board, 4*100G branch line in one board

XYT-D16HE-T4QH

技术指标 Technical index	描述 Description
板卡尺寸 Board size	占1个业务短槽； Occupies one service short slot;
客户侧接口 Customer side interface	支持4*100G QSFP28; Supports 4 x 100G QSFP28;
系统侧接口 Line side interface	单板支持1个可插拔400G CFP2 DCO相干彩光模块； The board supports one pluggable 400G CFP2 DCO coherent color optical module
系统侧信号和复用结构 System side signal and multiplexing structure	400G : OCh <-> OTUC4 <-> ODUC4 <->ODU4
客户侧信号和映射方式 Customer side signal and mapping mode	100G <-> ODU4
线路侧调制格式 Line side modulation format	400G:16QAM
FEC模式 FEC mode	400G：SD-FEC

400G TMUX板卡，2*400G支线路合一板卡

400G TMUX board, 2*400G branch lines in one board

XYT-D16HE-T24DH

技术指标 Technical index	描述 Description
板卡尺寸 Board size	占1个业务短槽； Occupies one service short slot;
客户侧接口 Customer side interface	支持2*400G QSFP-DD； Supports 2 x 400G QSFP-DD;
系统侧接口 Line side interface	单板支持2个可插拔400G CFP2 DCO相干彩光模块； The board supports two pluggable 400G CFP2 DCO coherent color optical module
系统侧信号和复用结构 System side signal and multiplexing structure	400G : OCh <-> OTUC4 <-> ODUC4
	400G : OCh <-> OTUC4 <-> ODUC4 <->ODU4
客户侧信号和映射方式 Customer side signal and mapping mode	400G <-> ODUC4
	100G <-> ODU4
线路侧调制格式 Line side modulation format	400G: 16QAM
FEC模式 FEC mode	400G：SD-FEC

主要公共单元板卡　Main common unit board card

光放大板卡

EDFA board

XYT-D16HE-OA1

技术指标 Technical index	BA	PA	LA
板卡尺寸 Board size	占1个业务短槽；单板支持双通道放大； Occupies one service short slot；The board supports dual-channel amplification		
基本功能 Basic function	实现对光信号的全光放大，延长系统的无电中继距离； To realize the all-optical amplification of the optical signal and extend the non-electric relay distance of the system；		
工作波长 Operating wavelength	1529 ~ 1568nm		
接收光功率 Received optical power	-25～+7dBm	-32～-4dBm	-27～+5dBm
额定增益 Rated gain	16dB	25dB	20dB
饱和输出光功率 Saturated output optical power	20dBm	16dBm	20dBm
噪声指数 Noise index	5.5dB		
增益平坦度 Gain flatness	1.5dB		
最大功耗 Maximum power consumption	15W；双通道时为30W(It is 30W for dual channels)		
接口类型 Interface type	LC/UPC		

光线路保护板卡

OLP 1+1 board

XYT-D16HE-OLP1+1

| 技术指标 Technical index	描述 Description
板卡尺寸 Board size	占1个业务短槽； Occupies one service short slot;
基本功能 Basic function	实现光纤线路 1+1 保护，可应用于客户侧、线路侧、复用段保护； Realize 1+1 protection of optical fiber lines, and can be applied to customer side, line side, and multiplexing segment protection
保护倒换模式 Protect switchover mode	包括三种模式：手动倒换、强制倒换、自动倒换； There are three modes: manual switching, forced switching, and automatic switching. 可通过前面板按钮设置倒换模式为强制倒换或自动倒换； The switching mode can be set to forced switching or automatic switching through the buttons on the front panel; 自动倒换模式分为自动返回模式和自动不返回模式； The automatic switching mode is divided into automatic return mode and automatic non-return mode.
光功率阈值设置 Optical power threshold Settings	支持设置端口告警阈值(-60.00~25.00dBm)； Port alarm thresholds (-60.00 to 25.00dBm); 支持设置端口切换阈值(-60.00~25.00dBm)，且端口切换阈值不能高于端口告警阈值； You can set the port switchover threshold (-60.00 dBm to 25.00dBm), and the port switchover threshold cannot be higher than the port alarm threshold
光功率监测 Optical power monitoring	支持所有端口的光功率实时监测。 Supports real-time optical power monitoring of all ports.
掉/上电栓锁功能 Power off/on bolt lock function	支持 support
单板热插拔 The board is hot swapped	支持 support

光时域反射板卡
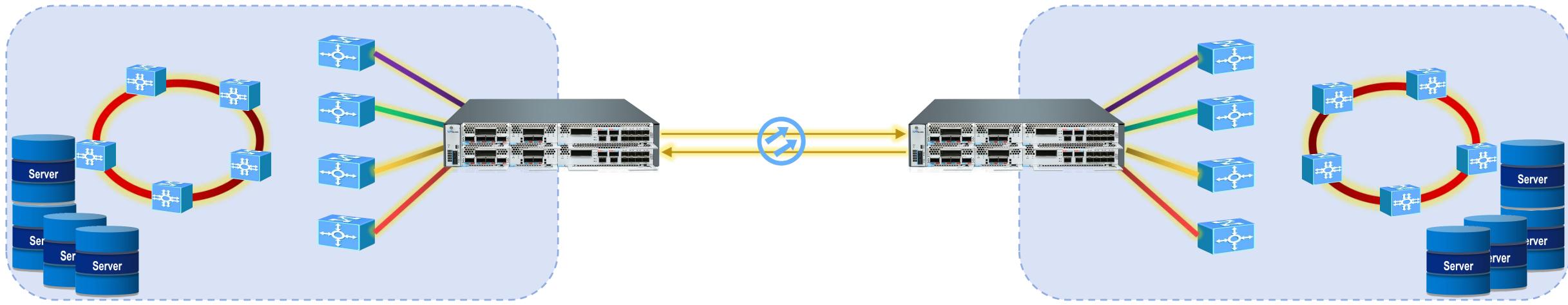
OTDR board

XYT-D16HE-OTDR

技术指标 Technical index	描述 Description
板卡尺寸 Board size	占1个业务短槽； Occupies one service short slot;
基本功能 Basic function	测量光纤衰减、接头损耗、光纤故障点定位以及了解光纤沿长度的损耗分布情况等。 Measure fiber attenuation, connector loss, fiber fault location, and understand the loss distribution along the length of the fiber.
OTDR 动态范围 OTDR dynamic range	≥30 dB
OTDR 脉宽范围 OTDR pulse width range	0.1～20 us
最大探测距离 Maximum detection range	≥80km
OTDR 距离测试精度 OTDR distance test accuracy	＜20m
最大输出光功率 Maximum optical power output	＜17dBm

**典型应用场景** **Typical application scenario**
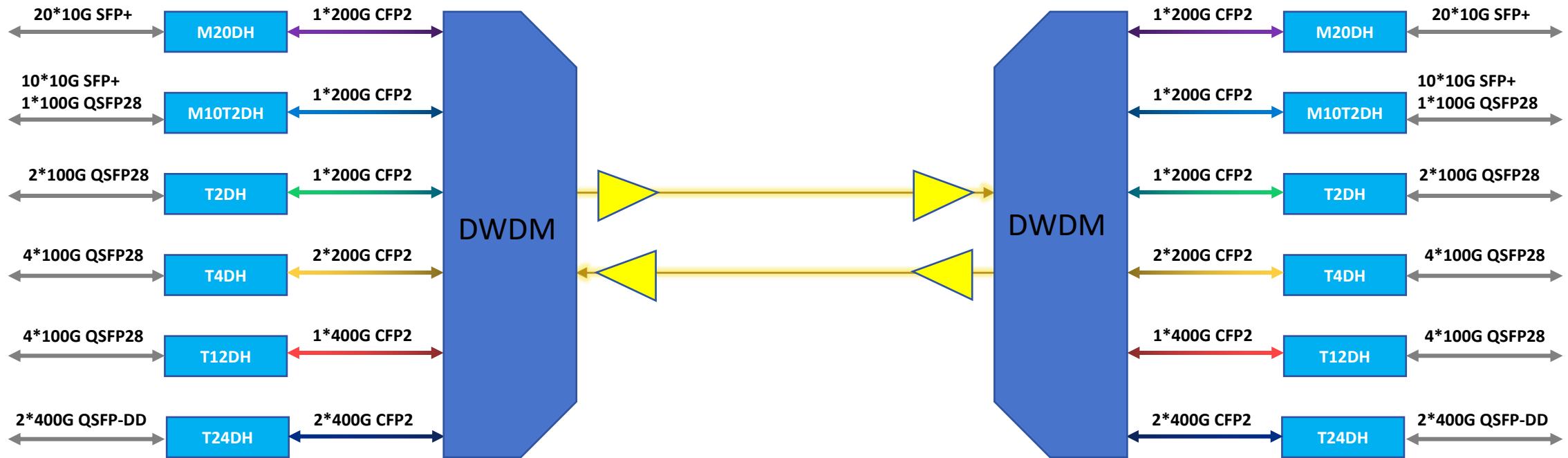
汇聚机房、核心机房

Aggregation equipment room and core equipment room

汇聚机房、核心机房

Aggregation equipment room and core equipment room

典型组网方案 Typical networking scheme
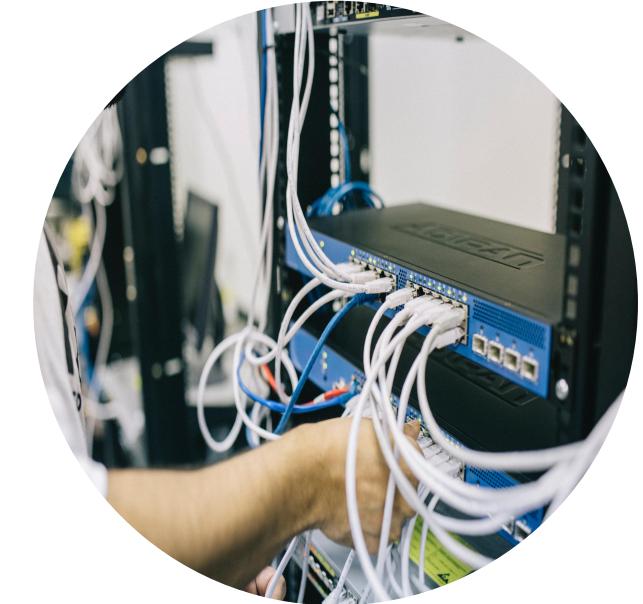
纤亿通服务　SHARETOP service

方案设计
Scheme design

产品供应
Product supply

安装调试
Installation and
debugging