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Solutions and Products

Fibermart

CWDM/DWDM Solutions Description
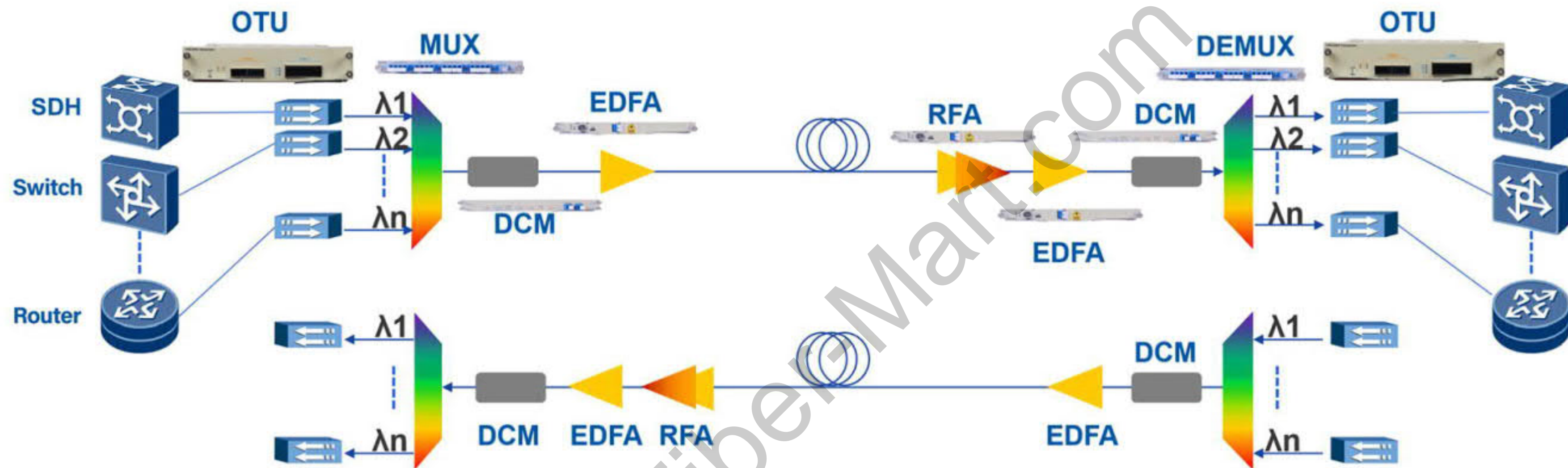
- Supporting 1U/2U/5U platforms
- Supporting 19.2T transmission capacity (200G x 96 waves) of single fiber
- Supporting multiple services such as GE, 10GE, 100GE, and STM-16/64
- Supporting 8/16/40/48/80/96 wavelength DWDM systems
- Supports 8/16 wavelength CWDM systems
- Supporting point-to-point networks, chain networks, and ring networks
- Supporting Optical Line Protection
- Centralized Network Management

CWDM/DWDM Products

Multiple Service Transmission Platforms

ISAP platform is a series of compact platforms developed according to the characteristics of communication subsystem products, which is the basis of WDM Transmission products integration. The platforms are compatible with different kinds of service cards, such as, EDFA, EYDFA, OEO, OLP, FEC, RAMAN, VPON REPEATER, VPON VMUX, passive module and so on. Those platforms are characterized by high compact structure, flexible configuration, low power consumption, and supporting network management of C/S architecture with simple maintenance. It is widely used in transmission and operation fields of operators, power, radio and television, etc. It builds a multi-service access platform and one-stop solutions for customers.

Device Height	Service Slots	Typical Consumption	Power Supply
1U	3	80W	Dual AC; Dual DC; AC/DC mixed

Device Height	Service Slots	Typical Consumption	Power Supply
2U	7	120W	Dual AC; Dual DC; AC/DC mixed

Device Height	Service Slots	Typical Consumption	Power Supply
5U	18	400W	Dual AC; Dual DC; AC/DC mixed

CWDM/DWDM Products

OTU100G/200G Card
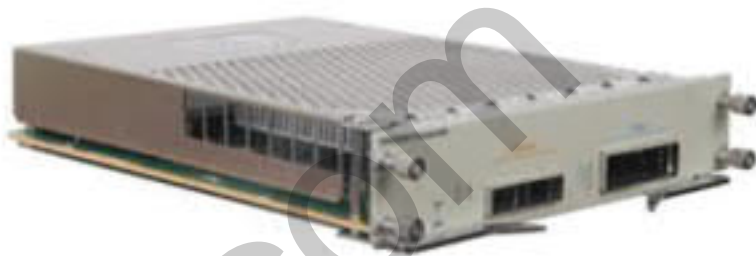
📄 Description

> At Client side, OTU200G Board supports 2x 100GE service, and at line side, 200G coherent CFP2 modules are supported. Same as OTU200G board, OTU100G board supports one 100GE service at client side, and supports 100G coherent CFP2 module at line side.

✂ Features

> Supporting 100GE service access;
> Supporting 100G DP-QPSK or 200G DP-8QAM/DP-16QAM;
> Full C band adjustable, 50GHz or 100GHz
> Supporting HDFEC and SDFEC
> The transmission distance up to 1200/2400km

Functions	OTU200G: Supporting the access of two 100G services and converts the two 100G signals into one 200G coherent optical signal.
	OTU100G: Supporting the access of one 100G service and converts one 100G signal into one 100G coherent optical signal
Wavelength	C band, 50GHz or 100GHz
Service rate	100GE, OTU4
Client side	QSFP28
Line side	CFP2
Slots	2 slots
Typical consumption	35W

OTU25G Card

📄 Description

> The OTU25G board supports four channels at a rate of 24 Gbit/s to 28.1Gbit/s, performs 3R regeneration and wavelength conversion, and outputs standard DWDM or CWDM optical

✂ Features

> Supporting service access at a rate of 24Gbit/s to 28.1Gbit/s;
> Supporting CWDM/DWDM wavelengths;
> Supporting the 3R function;
> Transparent service transmission and ultra-low latency

Functions	Supporting four bidirectional channels of 24 Gbit/s to 28.1 Gbit/s service access and transmission;
	Supporting Eight single channels of 24 Gbit/s to 28.1 Gbit/s service access and transmission.
Wavelength	CWDM or DWDM
Service rate	24 Gbit/s~28.1 Gbit/s
Client side	SFP28
Line side	SFP28
Slots	1 slot
Typical consumption	20W

Multiple Service Transmission Platforms

OTU10G Card

📖 Description

➤ The OTU 10G board supports four channels at a rate of 1.25Gbit/s to 11.3Gbit/s, performs 3R regeneration and wavelength conversion, and outputs standard DWDM or CWDM optical signals.

⚡ Features

➤ Supporting service access at a rate of 1.25Gbit/s to 11.3Gbit/s;
➤ Supporting CWDM/DWDM wavelengths;
➤ Supporting the 3R function;
➤ Transparent service transmission and ultra-low latency

Functions	Supporting 4 bidirectional channels of 1.25 Gbit/s to 11.3 Gbit/s service access and transmission; Supporting 8 single channels of 1.25 Gbit/s to 11.3 Gbit/s service access and transmission.
Wavelength	CWDM or DWDM
Service rate	1.25Gbit/s~11.3 Gbit/s
Client side	SFP/SFP+
Line side	SFP/SFP+
Slots	1 slot
Typical consumption	20W

10G FEC Card

📖 Description

➤ The 10G FEC board integrates Forward Error Correction (FEC), a bidirectional forwarding device with FEC codec function, which is specially used in SDH STM-64/SONET OC192/10GELAN transmission system. 10G FEC can reduce the OSNR requirement for the system, thus extending the transmission distance.

⚡ Features

➤ Supporting standard SDH or 10GELAN protocol;
➤ High coding gain, net coding gain 8dB;
➤ Supporting the 3R function;
➤ High reliability.

Functions	Supporting 1 bidirectional STM-64(OC192) or 10GELAN service
Wavelength	DWDM
Service rate	10G SDH,10GELAN
Client side	LC/PC
Line side	LC/PC
Slots	2 slots
Typical consumption	20W

WDM Product

EDFA Card

📖 Description

➤ EDFA is an Erbium-doped fiber amplifier (EDFA) board. Optical signals become weak during fiber transmission. But the signals are amplified through EDFA to realize multi-segment and long-distance transmission.

⚡ Features

➤ Supporting the BA/PA/LA;
➤ Supporting 48 wavelength /96 wavelength DWDM signal amplification;
➤ Gain adjustable range of 10dB;
➤ Low noise figure.

Spec	B A	L A	P A	unit
Wavelength		1528~1568		nm
Input power	-22~+8	-32~0	-32~0	dBm
Saturated output power	20/22	20/22	16/20	dBm
Gain	10~20	20~30	20~30	dB
Noise figure	<6	<6	<6	dB
Flatness	<1.5	<1.5	<1.5	dB
Typical consumption	15			W
Slots	1 slot			

SOA-4 Card

📖 Description

➤ The SOA-4 board is an O-band semiconductor amplifier board, which mainly realizes the optical signal amplification in the band of 1260~1330nm. One board supports the access and amplification of 1~4 independent channel signals.

⚡ Features

➤ Supporting LR4 or CWDM4 signal amplification;
➤ Stable output power;
➤ Low noise factor;
➤ High level of integration.

Spec	Min.	Typ.	Max.	unit
Wavelength		1260~1330		nm
Input power	-18	------	-6	dBm
Saturated output power	------	8	------	dBm
Gain	------	14	------	dB
Noise figure	------	7.5	------	dB
Flatness	15			W
Typical consumption	1 slot			

WDM Product

RFA Card

📖 Description

➤ The RFA(Reverse Raman Amplifier)uses the Raman effect in the fiber to realize the transmission signal amplification. The product can be widely used in SDH, DWDM and other long-distance transmission links. The RFA can amplify the optical signal, improve the system's optical signal-to-noise ratio (OSNR), greatly extend the transmission distance.

🎖 Features

➤ Low Noise Figure
➤ High Gain, Low Power Consumption
➤ Intelligent Automatic Shutdown Function, High Security
➤ High Reliability

Spec	Parameter
Operating Wavelength	1525~1565nm
Pump Wavelength	1425~1505nm
Gain	6~14dB
Noise Figure	-3dB
Slot	1 slot
Power Consumption	< 30W

OLP Card

📖 Description

➤ The OLP(Optical Line Protection) is an optical line protection card. Its main function is to monitor the optical signal status of the active and standby lines in real time. When a line fault or deterioration occurs, the OLP card can automatically switch between the active and standby lines to ensure that the system services can be restored within 50ms.

🎖 Features

➤ Fast Switch Time
➤ Real-time Monitor
➤ Low Insertion Loss
➤ Support 1+1,1:1 Optical Protection System
➤ High Reliability

Spec	Parameter		Unit
	1+1	1:1	
Operating Wavelength	1260nm~1650nm		nm
Switch Time	< 20	< 40	ms
Active Line IL	< 5	< 3	dB
Standby Line IL	< 5	< 3	dB
Power Consumption	< 3	< 3	W
Slot	1 slot		

WDM Product

CWDM-1*16

DWDM-1*16

DWDM-1*40

📖 Description

➤ Mux Card multiplexes multiple standard DWDM or CWDM wavelength on the same optical fiber, and DeMux Card is used to solve multiple standard DWDM or CWDM wavelengths transmitted on a single optical fiber. The Mux/DeMux card can transmit optical signals of different wavelengths on the same optical fiber at the same time, which greatly saves fiber resources for customers. It is flexible to configurate according to customer requirements, as well as to support up to 40 DWDM wavelength multiplexing/demultiplexing.

🎖 Features

➤ Supporting CWDM and DWDM wavelength
➤ Flexible configuration according to customer requirements
➤ supporting up to 40 DWDM wavelength multiplexing/demultiplexing.

Channel	2x4	2x8	1x16	1x40
Slot	1	1	1	2
Solution	DWDM& CWDM	DWDM&CWDM	DWDM&CWDM	DWDM
Channel IL	< 1.5dB	< 2.5dB	< 3.5dB	< 5.5dB
Adjacent Channel Isolation	> 30dB	> 30dB	> 30dB	> 25dB
Non-adjacent Channel Isolation	> 40dB	> 40dB	> 40dB	> 30dB
Return Loss	< -45dB	< -45dB	< -45dB	< -40dB
Connector Type	LC/PC			

WDM Product

WSS Card
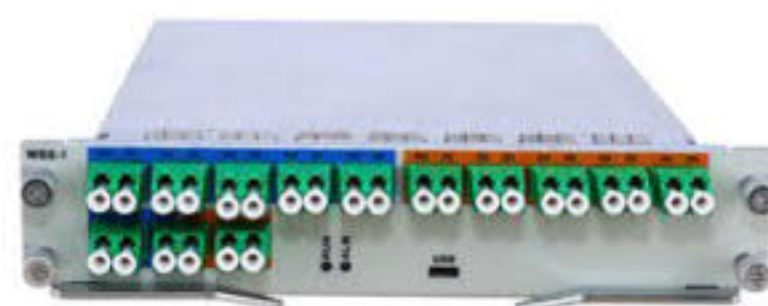
📖 Description

➤ WSS(Wavelength Select Switch) is a reconfigurable optical division multiplexing card. It is a device used in dense wavelength division multiplexing (DWDM) systems. Its function is to dynamically switch the wavelength of up or down stream through remote reconfiguration.

⚡ Features

➤ Support Twin 1 x 9 Configuration
➤ Support Remote Network Configuration

Spec	Min.	Typ.	Max.	unit
Wavelength		1528.77~1567.54		nm
Ports		Twin1*9		
Input Power	------	------	24	dBm
IL	------	2.5	8	dB
Response Time	------	------	3000	ms
Power Consumption	30	35	55	W
Slot	2 slot			

OCM Card

📖 Description

➤ OCM(Optical Channel Monitor) can monitor the central wavelength, optical power, SNR and wave number of the optical signal.

⚡ Features

➤ Support 6 Channels Monitor
➤ Support 80/96 Wave Numbers Monitor

Spec	Min.	Typ.	Max.	unit
Wavelength		1528.77~1566.72		nm
Ports	------	------	6	
Input Power	-55	------	0	dBm
Scanning Time	------	------	500	ms
Dynamic Range	------	------	20	dB
Power Consumption	------	5	10	W
Slot	1 slot			

WDM Product

DCM Card

📖 Description

➤ DCM(Dispersion Compensation Module) has negative dispersion, which can solve the problem of signal broadening caused by dispersion in the process of optical transmission, so as to ensure that the total dispersion of the whole optical fiber line is approximately zero, so as to realize high speed, large capacity and long distance communication.

⚡ Features

➤ G.652 Fiber for C-band 100% Slope Compensation
➤ Low Insertion Loss
➤ Low Polarization Dispersion
➤ DWDM Band Dispersion Compensation
➤ Support 40km or shorter Distance Dispersion Compensation

Distance (km)	Dispersion (ps/nm)	IL(dB)	PMD (ps)	PDL(dB)
20	-340±3%	≤2.9	≤0.6	≤0.1
40	-680±3%	≤4.8	≤0.8	≤0.1
60	-1020±3%	≤6.8	≤1.0	≤0.1
80	-1360±3%	≤8.0	≤1.2	≤0.1
100	-1700±3%	≤9.0	≤1.3	≤0.1
120	-2040±3%	≤10.5	≤1.4	≤0.1

TDCM Card

📖 Description

➤ TDCM(Tunable Dispersion Compensation Module) is a dispersion compensation module with tunable function, which is a kind of dispersion compensation module for the existing large capacity transmission system.

⚡ Features

➤ G.652 Fiber for C-band 100% Slope Compensation
➤ Low Insertion Loss
➤ Tunable Dispersion Range±800ps/nm
➤ DWDM Band Dispersion Compensation

Spec	Min.	Typ.	Max.	unit
Wavelength	1528	------	1568	nm
Tunable Range	------	±800	±1200	ps/nm
Setting Resolution	------		10	ps/nm
Tunable Stability	-5	------	+5	ps/nm
Tunable Time	------	------	25	s
Power Consumption	------	------	15	W
Slot	1 slot			

WDM Product

Rackmount EDFA
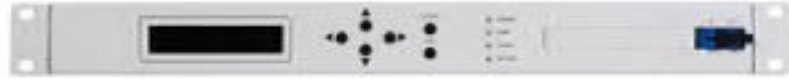
📖 Description

➤ The product is a 1U rack series erbium-doped fiber amplifier, which uses a highly stable microprocessor inside. The EDFA can amplify the c-band optical signals, with a maximum output power of 24dBm and low noise figure.

🎯 Features

➤ Low Noise Figure
➤ Support L-band EDFA
➤ Support WEB and SNMP
➤ Support Fixed and Variable Gain Control
➤ Easy Maintenance
➤ Apply to DWDM System
➤ Maximum Output Power Up to 24dBm

Spec		Min.	Typ.	Max.	unit
Wavelength	C-band	1528	------	1568	nm
	L-band	1572	------	1603	nm
Output Power		------	------	24	dBm
Input Power		-35	------	+10	dBm
Variable Gain Range		------	10	15	dB
Noise Figure		------	------	6	dB
Output Power Stability		------	±0.05	±0.1	dB
Gain Flatness		------	1.0	------	dB
Power Consumption		------	-------	20	W

Mid-stage EDFA

📖 Description

➤ The product is a 1U rack series erbium-doped fiber amplifier, which can be connected to DCM in the middle stage. The maximum output power can be up to 23dBm with low noise figure.

🎯 Features

➤ Low Noise Figure
➤ Apply to DWDM System
➤ Mid-stage Loss Up to 15dB
➤ Maximum Output Power Up to 23dBm
➤ Easy Maintenance
➤ Support WEB and SNMP

Spec	Min.	Typ.	Max.	unit
Wavelength	1528	------	1568	nm
Output Power	------	------	23	dBm
Input Power	-35	------	+6	dBm
Mid-stage Loss	------	------	15	dB
Noise Figure	------	------	6	dB
Output Power Stability	------	±0.05	±0.1	dB
Gain Flatness	------	1.0	------	dB
Power Consumption	------	------	20	W

WDM Product

Raman Amplifier

📖 Description

➤ The RFA(Reverse Raman Amplifier)uses the Raman effect in the fiber to realize the transmission signal amplification. The product can be widely used in SDH, DWDM and other long-distance transmission links. The RFA can amplify the optical signal, improve the system's optical signal-to-noise ratio (OSNR), greatly extend the transmission distance.

🎯 Features

➤ Low Noise Figure
➤ High Gain, Low Power Consumption
➤ Intelligent Automatic Shutdown Function, High Security
➤ High Reliability

Spec	Parameter
Operating Wavelength	1525~1565nm
Pump Wavelength	1425~1505nm
Gain	6~14dB
Noise Figure	-3dB
Power Consumption	< 30W

SOA

📖 Description

➤ SOA(Semiconductor Optical Amplifier) is an O-band semiconductor amplifier card, which mainly realizes the optical signal amplification in the band of 1260~1330nm, and can support the access and amplification of 1~4 independent optical signals.

🎯 Features

➤ Support LR4 or CWDM4 Signal Amplification
➤ Stable Output Power
➤ Low Noise Figure
➤ High Integration

Spec	Min.	Typ.	Max.	unit
Wavelength		1260~1330		nm
Input Power	-18	------	-6	dBm
Saturated Output Power	------	8	------	dBm
Gain Range	------	14	------	dB
Noise Figure	------	7.5	------	dB
Power Consumption	15			W

Data Center-Integrated WDM Solution

IDC A

N*8G   N*10G

Fiber Channel   R&S

IDC B

N*8G   N*10G

Fiber Channel   R&S
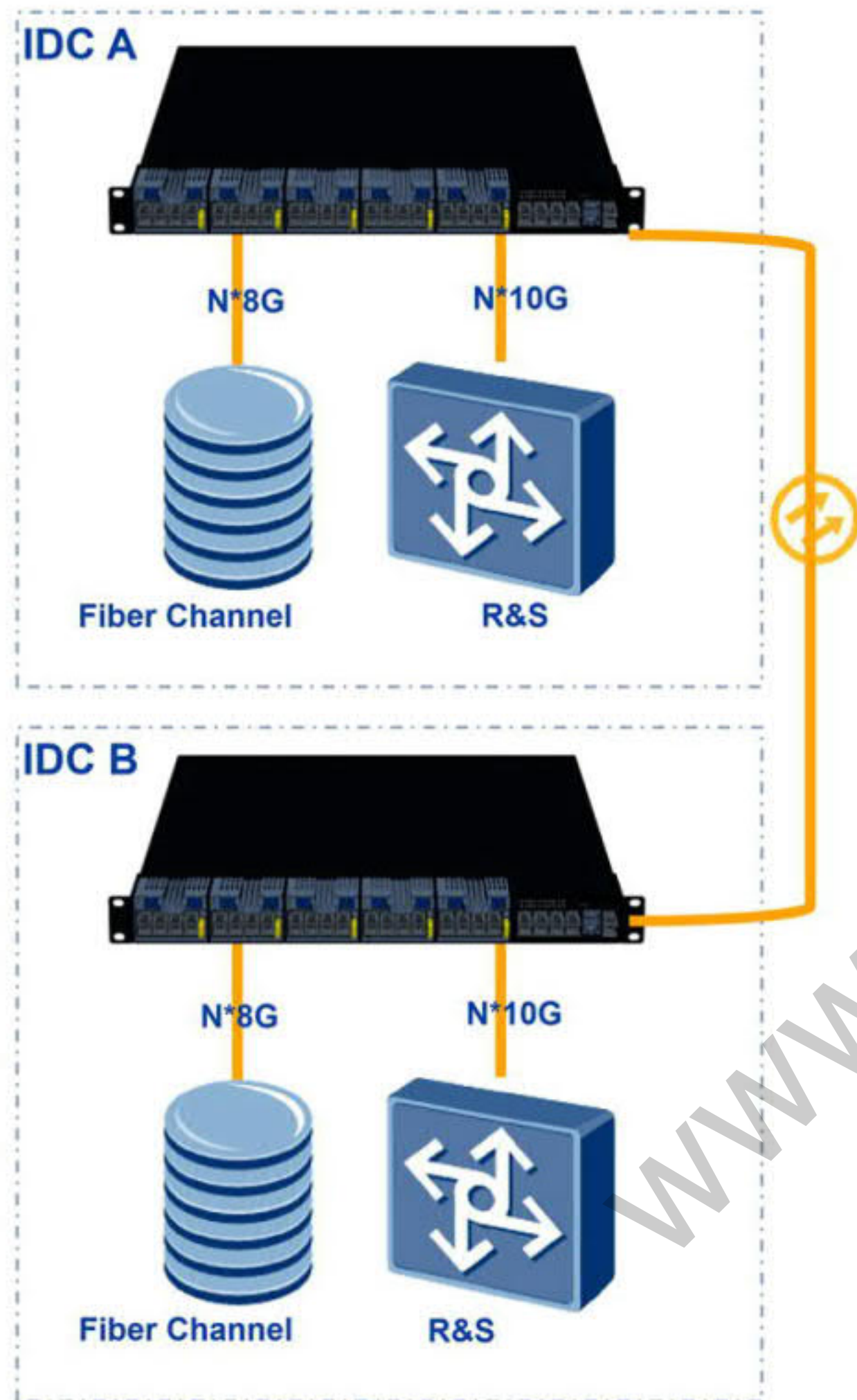
- Support Plug and Play
- Integrate with OTU, Mux/DeMux, EDFA, OLP, OCM
- Support 80G,160G,240G,320G,400G Transmission Capacity
- Support GE/10GE LAN, 10GE WAN, STM-1~64 at Customer Side
- Pluggable for Each 8 Ports
- Support for Maximum 120km Transmission Distance
- Support 1+1 OLP
- Support Redundancy Power Supply Design

OPEN ROADM Solution

LC/APC   Coupler

Output Tap Out1
Output Tap In1
Output Tap Mon1
Amp out1

Amp In1

EDFA1

Input Tap Out1
Input Tap In1
Input Tap Mon1

Output Tap1
Input Tap1

OCM1
OCM2
OCM3
OCM4
OCM5
OCM6

OCM

Output Tap Out2
Output Tap In2
Output Tap Mon2
Amp out2

Amp In2

EDFA2

Input Tap Out2
Input Tap In2
Input Tap Mon2

Output Tap2
Input Tap2

Twin 1×9 WSS-1
Twin 1×9 WSS-2

Out1-9
Out1-8
Out1-7
Out1-6
Out1-5
Out1-4
Out1-3
Out1-2
Out1-1
In1

WSS1 Tap
WSS1 Tap Out
WSS1 Tap In
WSS1 Tap Mon

WSS2 Tap
WSS2 Tap Out
WSS2 Tap In
WSS2 Tap Mon
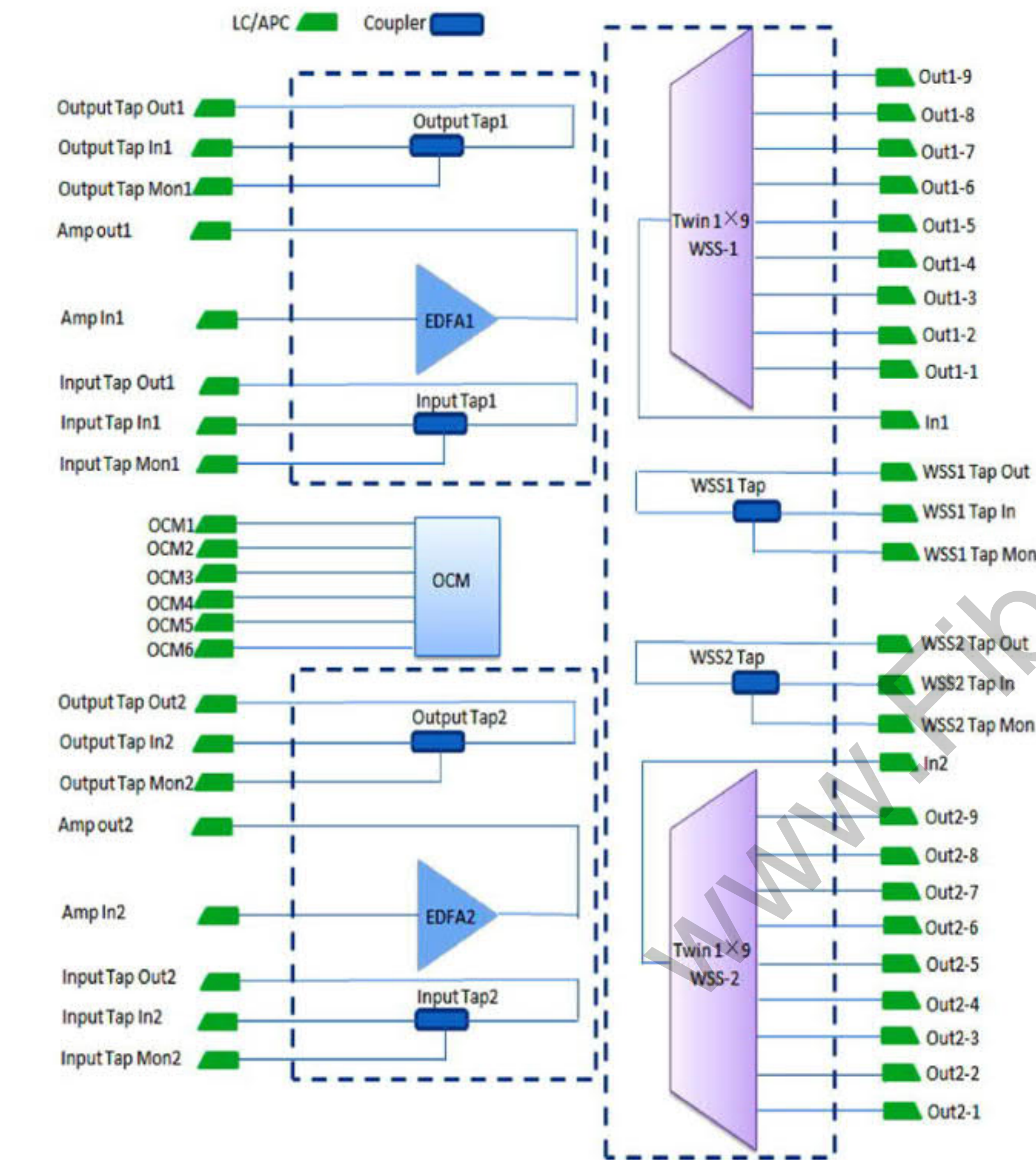In2
Out2-9
Out2-8
Out2-7
Out2-6
Out2-5
Out2-4
Out2-3
Out2-2
Out2-1

OPEN ROADM Product

WSS Card

> Support Twin 1 x 9
> Support Remote Web Configuration

Spec	Min.	Typ.	Max.	unit
Wavelength		1528.77~1567.54		nm
Configuration		Twin1*9		
Input Power	------	------	24	dBm
IL	------	2.5	8	dBm
Response Time	------	------	3000	ms
Power Consumption	30	35	55	W
Slot	2 slot			

OCM Card

> Support 6 Channels
> Support 80/96 Wavelength Power Monitor

Spec	Min.	Typ.	Max.	unit
Wavelength		1528.77~1566.72		nm
Port		6		
Input Power	-55	------	0	dBm
Scanning Time	------	------	500	ms
Dynamic Range	------	------	20	dB
Power Consumption	------	5	10	W
Slot	1 slot			

PA Card

> PA Amplifier, Customized Gain Range
> PA NF＜3.7dB

Spec	Min.	Typ.	Max.	unit
Wavelength		1528~1565		nm
Configuration	-35	-23	10	dBm
Input Power	0	------	14	dBm
IL	------	------	37	dB
Response Time	------	------	3.7	dB
Power Consumption	------	5	10	W
Slot	1 slot			

Long Haul Transmission Solution
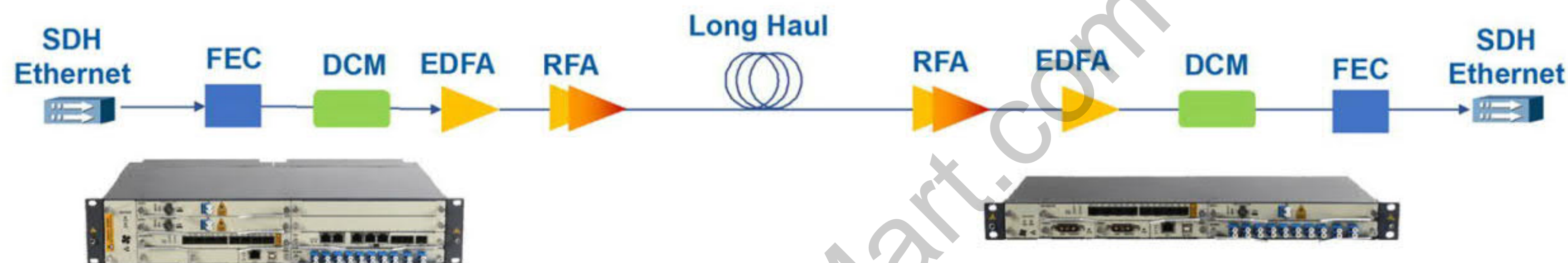
The transmission system can provide a complete transmission solution in some ultra-long haul transmission scenarios where no repeaters can be deployed.

● Integrate EDFA BA/PA, RAMAN, FEC, DCM, ROPA.
● Uniform Network Management System
● Standard SDH2.5G,SDH10G and 10G Ethernet Compatibility
● Widely Deployed in Telecom, Electric Power Industry

Product Solution	Single Wavelength Speed Rate	Test Result
BA +PA	2.5G	260km
	10G	205km
FEC+BA +PA	2.5G	316km
	10G	266km
FEC+BA + Raman + PA	2.5G	390km
	10G	355km
FEC + BA + Raman + Remote Pump + PA	2.5G	432km
	10G	395km

Long Haul Transmission Product

FEC

Description

> FEC equipment has the bidirectional forwarding capability of FEC encoding and decoding function, which is specially used in SDH optical transmission system to improve the line power budget and achieve the purpose of improving the transmission distance of the line. At the same time, according to the actual line needs, internal SBS suppression technology can be applied.

Features

> Standard SDH Protocol
> Support 2.5G/10G SDH Transmission Speed Rate
> build-in SBS, Provide Input Power
> High Coding Gain, Net Coding Gain 8dB
> Support 1U Rackmount or Pluggable Cassette

STM-16 FEC

Spec		Parameter	
		FEC	FEC(Build-in SBS)
Client Side	Speed Rate	2.4883 Gb/s	
	Wavelength	1310nm	
	Output Power	-10~-3dBm	
	Receiving Wavelength	1260~1650nm	
	Receiving Power	-17~-3dBm	
Line Side	Speed Rate	2.6773Gb/s	
	Wavelength	1550.12±0.4nm	
	Output Power	-2~+2dBm	
	Receiving Wavelength	1260~1564nm	
	Receiving Power	-9~-28dBm	
	Dispersion Tolerance	3200 ps/nm	1600 ps/nm
Coding Gain		8dB@BER=E-15	
Power Consumption		20W	

STM-64 FEC

Spec		Parameter	
		FEC	FEC(Build-in SBS)
Client Side	Speed Rate	9.953 Gb/s	
	Wavelength	1310nm	
	Output Power	-6~-0dBm	
	Receiving Wavelength	1260~1650nm	
	Receiving Power	-14~-3dBm	
Line Side	Speed Rate	10.709Gb/s	
	Wavelength	1550.12±0.4nm	
	Output Power	-2~+2dBm	
	Receiving Wavelength	1260~1564nm	
	Receiving Power	-8~-22dBm	
	Dispersion Tolerance	1600 ps/nm	800ps/nm
Coding Gain		8dB@BER=E-15	
Power Consumption		20W	

Long Haul Transmission Product

Fiber Amplifier
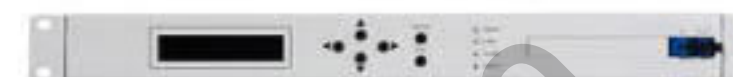
Description

> The single channel fiber amplifier uses a microprocessor with high stability and unique APC and ATC technology, which makes the output power stable and reliable. The maximum output power can reach 23dBm with low noise figure.

Features

> Low Noise Figure
> Apply to SDH System
> Maximum Output Power Up to 23dBm
> Support L-band EDFA
> Support WEB and SNMP
> Support 1U Rackmount or Pluggable Cassette

Single Channel Amplifier

Spec		Min.	Typ.	Max.	unit
Wavelength	C-band	1530	1550	1565	nm
	L-band	1570	------	1605	nm
Output Power		------	------	23	dBm
Input Power	BA	-14	------	+6	dBm
	PA	-35	------	-10	dBm
Gain		------	20	35	dB
Noise Figure		------	4.5	------	dB
Output Power Stability		------	±0.05	+0.1	dB
Power Consumption		------	------	20	W

Transponder Fiber Amplifier

Spec	Parameter	
Speed Rate	2.5G RTBA	10G RTBA
Input Wavelength	1260~1650nm	
Input Power	-14~0dBm	-12~0dBm
Output Wavelength	1550.12±0.4nm	
Output Power	13/17/19dBm	12/13dBm
Dispersion Tolerance	3200ps/nm	1600ps/nm
Noise Figure	5dB	
Power Consumption	<20W	

Description

> The transponder fiber amplifier is installed at the transmitter terminal of the system, which can convert the wavelength of the transmission equipment to 1550.12nm (only 2.5g or 10G rate), and can be used with the back-end PA to extend the transmission distance.

Features

> Low Noise Figure
> Apply to SDH System
> Maximum Output Power Up to 19dBm
> Support WEB and SNMP
> Support 1U Rackmount or Pluggable Cassette

Long Haul Transmission Product

Raman Fiber Amplifier

📖 Description

➤ The forward Raman fiber amplifier is mainly used at the transmitter end of the system. The transmission fiber is used as the gain medium to effectively reduce the system noise. It is used in low noise,long span transmission system.

🌿 Features

➤ Low noise figure
➤ Long span system
➤ Web/SNMP management
➤ 1U rack type or card type

Spec	Parameter
Wavelength	1525~1565nm
Pump wavelength	1425~1505nm
ON/OFF Gain	6~10dB
NF	0dB
Consumption	< 30W

Reverse Raman Amplifier

📖 Description

➤ The reverse Raman fiber amplifier is mainly used at the receiving end of the system. The transmission fiber is used as the gain medium to effectively reduce the system noise.It is used in low noise,long span transmission system.

🌿 Features

➤ Low noise figure
➤ Long span system
➤ Web/SNMP management
➤ 1U rack type or card type

Spec	Parameter
Wavelength	1525~1565nm
Pump wavelength	1425~1505nm
ON/OFF Gain	6~14dB
NF	-3dB
Consumption	< 30W

Dispersion Compensation Module

📖 Description

➤ DCM(Dispersion Compensation Module) has negative dispersion, which can solve the problem of signal broadening caused by dispersion in the process of optical transmission, so as to ensure that the total dispersion of the whole optical fiber line is approximately zero, so as to realize high speed, large capacity and long distance communication.

🌿 Features

➤ G.652 optical fiber C-BAND 100% Slope compensation(Standard)
➤ Low insertions loss
➤ Low Polarization mode dispersion
➤ DWDM system broad-band dispersion compensation
➤ Support card DCM:20KM&40KM

DCM

Distance (km)	Dispersion (ps/nm)	IL (dB)	PMD(ps)	PDL(dB)
20	-340±3%	≤2.9	≤0.4	≤0.1
40	-680±3%	≤4.8	≤0.6	≤0.1
60	-1020±3%	≤5.8	≤0.7	≤0.1
80	-1360±3%	≤7.2	≤0.8	≤0.1
100	-1700±3%	≤8.7	≤0.9	≤0.1
120	-2040±3%	≤10.2	≤1.0	≤0.1

Fiber Bragg Grating DCM

📖 Description

➤ FBG-DCM based on grating can realize single wavelength dispersion compensation. FBG-DCM is based on mature and reliable optical fiber technology and has excellent optical transmission system performance.

🌿 Features

➤ The insertion loss is not related to the compensation distance.
➤ Low insertion loss
➤ Low Polarization mode dispersion
➤ 1U rack type or card type

Distance (km)	Dispersion (ps/nm)	IL(dB)	PMD(ps)
20	-340±3%	≤3.5	≤0.1
40	-680±3%	≤3.5	≤0.1
60	-1020±3%	≤3.5	≤0.1
80	-1360±3%	≤3.5	≤0.1
100	-1700±3%	≤3.5	≤0.1
120	-2040±3%	≤3.5	≤0.1

CATV Solution

Digital Signal   **Analog Signal**

OTE

EDFA

Splitter

Splitter

DCM

EDFA

Raman

OTD Card

Coupler

EYDFA

ONT   WiFi   **PC**

TV

CATV Receiver   **TV**

- End to End HFC Solution
- Fully compatible with GPON/EPON/XGPON/XGSPON OLT of mainstream providers
- Unified NMS
- Support 1+1 CATV signal input backup

DATA

OLT

CATV

OT1900TX

Amplifier   Splitter   WDM   WDM   WDM

Splitter

ONU

User

High Power Amplifer

www.Fiber-Mart.com

CATV Product

External Modulation Optical Transmitter

📖 Description

➤ OTE1900 is a high-performance 1550nm external modulation optical transmitter. OTE1900 provides cable TV with high-quality image, digital or compressed digital signal long-distance transmission.

⚡ Features

➤ Excellent transmission performance in point-to-multipoint networks with >100km reach
➤ Optimized for large scale HFC and FTTX networks up to 1GHz

Spec	Min.	Typ	Max.	Unit
Wavelength	1545	1550	1562	nm
Output Power	5*2	------	10*2	mW
SBS Suppresion		13~19		dBm
Output power stability	------	±0.05	±0.1	dB
CNR	52	------	------	dB
CSO	------	------	-65	dB
CTB	------	------	-65	dB
Frequency	47	------	1000	MHZ

Dispersion Compensation Module

📖 Description

➤ DCM has negative dispersion, which solves the problem of signal broadening caused by dispersion in the process of optical transmission. So we need to add dispersion compensation fiber with negative dispersion into the optical fiber to carry out the dispersion compensation and make sure that the total dispersion of the whole optical fiber line is near zero.

⚡ Features

➤ G.652 optical fiber C-BAND 100% Slope compensation(Standard)
➤ Low insertions loss
➤ Low Polarization mode dispersion
➤ DWDM system broad-band dispersion compensation

Disatance(km)	Disersion(ps/nm)	Insertion loss(dB)	PMD (ps)	PDL(dB)
20	-340±3%	≤2.9	≤0.4	≤0.1
40	-680±3%	≤4.8	≤0.6	≤0.1
60	-1020±3%	≤5.8	≤0.7	≤0.1
80	-1360±3%	≤7.2	≤0.8	≤0.1
100	-1700±3%	≤8.7	≤0.9	≤0.1
120	-2040±3%	≤10.2	≤1.0	≤0.1

CATV Product

1U CATV Fiber Amplifier

📖 Description

➤ This optical amplifier is high stability output EDFA. The key components of the product are high reliability PUMP laser.

⚡ Features

➤ Low noise figure
➤ High stability and reliability
➤ High precision AGC/APC circuit
➤ Support Web and SNMP

Spec	Min.	Typ	Max.	Unit
Wavelength	1530	1550	1562	nm
Output Power	13	------	24	dBm
Input power	-3	------	+10	dBm
Gain	------	20	------	dB
NF	------	4.5	------	dB
Output power stability	------	±0.05	±0.1	dB
Return loss	------	------	-45	dB
PDG	------	------	0.3	dB
PMD	------	------	0.5	ps

1U Multi-ports High Power Fiber Amplifier

📖 Description

➤ The 1RU' Rack High Power Amplifier is erbium-ytterbium Co-doped fiber amplifier(EYDFA).It's high reliable and high-performance product,and built-in WDM which can combine xPON/XGPON /XGSPON and CATV signal is provided.

⚡ Features

➤ Max. output power:37dBm   ➤ Max 16 ports with FWDM
➤ Optical switch is optional
➤ Web/SNMP management
➤ Support xPON/XGPON/XGSPON/OTDR system

Spec	Min.	Typ	Max.	Unit
Wavelength	1540	1550	1565	nm
Input power	-10		+10	dBm
Output Power			32	/
Output power	------	------	37	dBm
NF	------	------	6	dB
Output power stability	------	±0.05	±0.1	dB

CATV Product

2U Multi-ports High Power Fiber Amplifier

📄 Description

➤ The 1RU' Rack High Power Amplifier is erbium-ytterbium Co-doped fiber amplifier(EYDFA).It's high reliable and high-performance product,and built-in WDM which can combine xPON/XGPON/XGSPON and CATV signal is provided.

⚡ Features

➤ Max. output power:40dBm
➤ Max 64 ports with FWDM
➤ Optical switch is optional
➤ Web/SNMP management
➤ Support xPON/XGPON/XGSPON/OTDR system

Spec	Min.	Typ	Max.	Unit
Wavelength	1540	1550	1562	nm
Input power	-10	------	+10	dBm
Output ports			128	/
Output power	------	------	40	dBm
NF	------	------	6	dB
Output power stability	------	±0.05	±0.1	dB

Multi-ports High Power Fiber Amplifier Card

📄 Description

➤ The high power amplifier card is erbium-ytterbium Co-doped fiber amplifier(EYDFA) card. It's high reliable and high-performance product,and built-in WDM which can combine xPON/XGPON/XGSPON and CATV signal is provided.
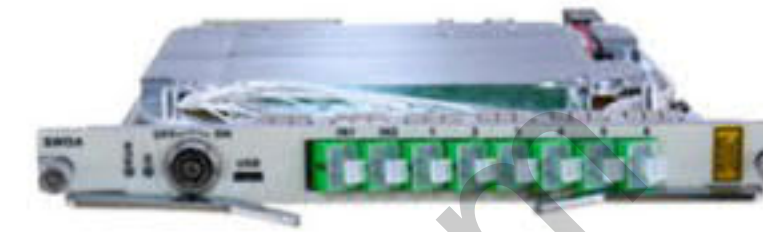
⚡ Features

➤ Support xPON/XGPON/XGSPON/OTDR system
➤ Per port output power:Max. 22dBm
➤ Max 8/16 ports with FWDM
➤ Web/SNMP management

Spec	Min.	Typ	Max.	Unit
Wavelength	1540	1550	1565	nm
Input power	-10	------	+10	dBm
Output ports			16	/
Per port output power	18	19	22	dBm
NF	------	------	6	dB
Output power stability	-0.5	------	±0.5	dB
Interface	CATV port: SC/APC; PON port: LC/UPC; COM port: LC/APC			

CATV Product

Pre-Amplifier Card

📄 Description

➤ SWOA card is a pre-amplifier with optical switch, with 2*input ports and N*output ports. The output port is connected to other HOA cards as the input of CATV signal.

⚡ Features

➤ Input optical switch is optional
➤ Input switching mode:Auto/Manual
➤ Output Ports: Max. 8
➤ Web/SNMP management

Spec	Min.	Typ	Max.	Unit
Wavelength	1540	1550	1565	nm
Input power	-10	------	+10	dBm
Output ports			6	/
Per port output power	------	10	------	dBm
NF	------	------	6	dB
Output power stability	-0.5	------	±0.5	dB
Interface	SC/APC			

Direct Modulation Optical Transmitter Card

📄 Description

➤ OTD card is a direct modulation 1550nm DFB transmitter for analog TV, digital TV and CMTS signals local fiber dense distribution and QAM TV Signal long-distance fiber transmission.
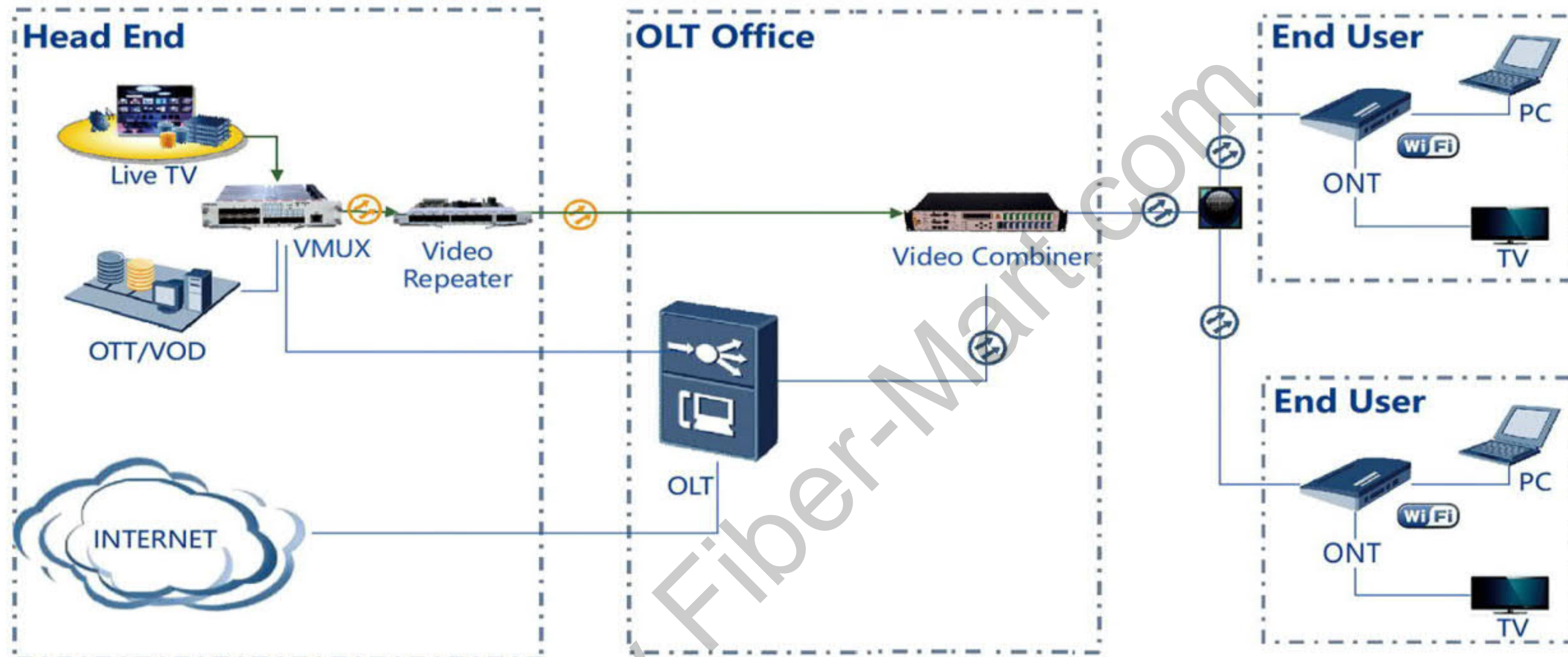
⚡ Features

➤ Output powe≥10dBm
➤ Flatness<1.5dB
➤ Web/SNMP management
➤ High quality transmission in point-to-multipoint links up to 20km

Spec	Min.	Typ	Max.	Unit
Wavelength	1540	1550	1560	nm
Output power	------	10	------	dBm
Frequency	47	------	1002	MHz
RF input level	15	20	25	dBmV
Flatness	------	±0.75	------	dB
C/CTB	65	------	------	dB
C/CSO	59	------	------	dB
C/N	51	------	------	dB

Video IP Broadcast Solution for PON

Head End
- Live TV
- OTT/VOD
- INTERNET
- VMUX
- Video Repeater

OLT Office
- Video Combiner
- OLT

End User
- ONT
- WiFi
- PC
- TV

End User
- ONT
- WiFi
- PC
- TV

- ➤ Input:Max.4*10GE&8*GE
- ➤ Support the protection and backup of downlink broadcast channel between cards
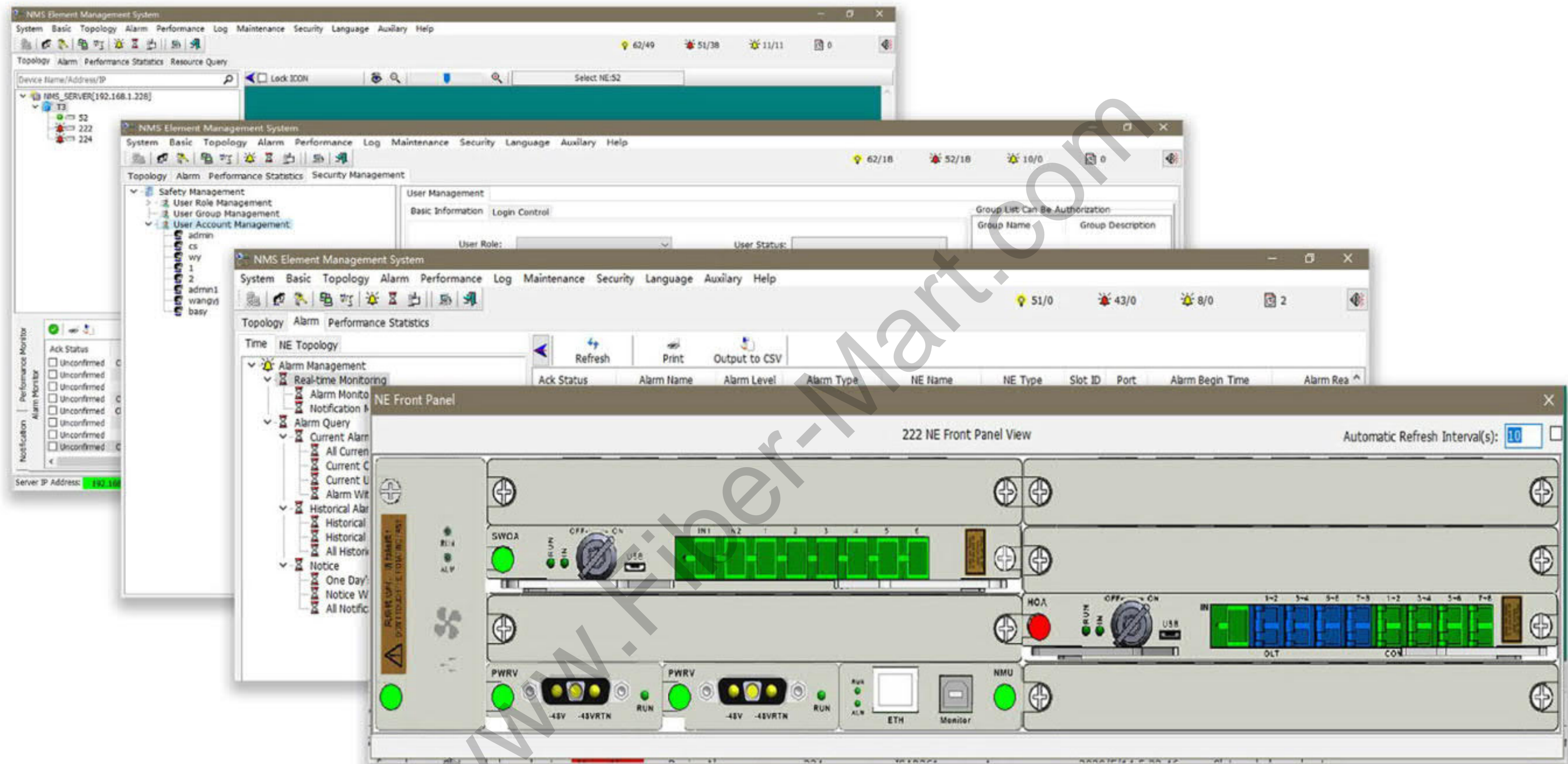
- ➤ 1*active&1*backup input
- ➤ 8 ports output
- ➤ Standard 10.3125G transmission rate
- ➤ Auto&Manual switch

- ● NO CHANGE for existing network
- ● Dedicated 10Gbps for TV traffic to decrease the video traffic load of PON
- ● Support 4k,8k,VR etc.
- ● Fully compatible with GPON/EPON/XGPON/XGSPON OLT of mainstream providers
- ● Support unified NMS

ISAP View-Network Management System

- Chinese/English Interface
- Simple and intuitive interface
- Unified alarm, performance and configuration management
- Hierarchical user security management
- Topology to NE visualization view

Module Produtcs (OEM)

MP31
- ➤ Support Fixed and Variable Gain Control
- ➤ Support C-band or L-band EDFA
- ➤ Up to 22dBm output power
- ➤ Dimension: MSA90x70x15mm

MP3B
- ➤ High output power erbium-ytterbium-doped fiber amplifier module
- ➤ Up to 30dBm output power
- ➤ Dimension: MSA90x70x15mm

XFP
- ➤ Single Channel EDFA
- ➤ Up to 17dBm output power
- ➤ Standard XFP package

Super Mini
- ➤ High output power erbium-ytterbium-doped fiber amplifier module
- ➤ Up to 30dBm output power
- ➤ Dimension: 35x20x5.5mm

MP1A
- ➤ Support Fixed and Variable Gain Control
- ➤ Up to 22dBm output power
- ➤ Dimension: MSA150x125x19mm

MP12
- ➤ High output power erbium-ytterbium-doped fiber amplifier module
- ➤ Up to 37dBm output power
- ➤ Dimension: 150x125x24mm

CFP2
- ➤ DWDM EDFA
- ➤ Up to 22dBm output power
- ➤ Standard CFP2 package

Super Mini
- ➤ Support Fixed and Variable Gain Control
- ➤ Up to 22dBm output power
- ➤ Dimension: 50x30x7.5mm

MP10
- ➤ Support EDFA and Raman Amplifier
- ➤ EDFA:Up to 22dBm output power
- ➤ Raman:Gain up to 14dB
- ➤ Dimension:MSA150x125x19mm

MP9934
- ➤ High output power erbium-ytterbium-doped fiber amplifier module
- ➤ Up to 43dBm output power
- ➤ Dimension: 228x150x45mm

CFP
- ➤ Support Fixed and Variable Gain Control
- ➤ Up to 22dBm output power
- ➤ Standard CFP package