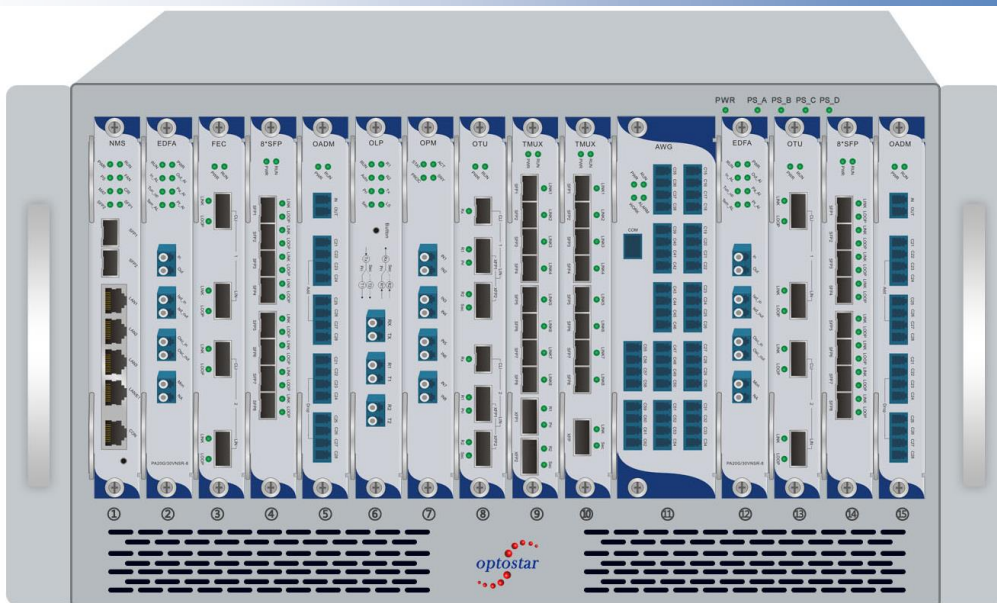




DWDM Rack mounted EDFA

OP-8000-EDFA-6U/OP-8000-EDFA-2.5U/OP-8000-EDFA-1U Series EDFA



OP-8000-EDFA-6U



OP-8000-EDFA-2.5U



OP-8000-EDFA-1U

Shenzhen Optostar Optoelectronics Co., Ltd
2016. 9 (Version 1)

Notes

1. Pay attention to the Interface of Fiber Cable, if not, it will affect product performance.
2. When using -48V DC power supply, do not reverse polarity power supply (products supporting the power line: black line 0V / ground, blue line -48V power supply).
3. When the device is working, do not stare into the optical ports, to avoid damage to the eyes.
4. Device input optical power level should be within the reception range of the device (see product specific indicators index book or installation manual).
5. Please keep the optical interface device clean, and Install the protective cover when you don't use it, in order to avoid falling into the dust.
6. Do not let any object get into the device, and liquid penetrate either, so as to avoid damage to the equipment, and as far as possible to avoid the use in the following environments:
 direct sunlight or high temperature baking where source
 drastic changes in temperature environment
 dusty or humid place
 Strong electric or magnetic fields
 corrosive gases, flammable gas or chemical fumes filled the place
7. When the device is working properly, please do not open the case; if faulty, please refer to Chapter 4 :Common Troubles for processing. If still not resolved, please contact us.
8. If you encounter the following circumstances, please disconnect the device power immediately, and contact us to solve it:
 equipment drenched by rain or liquid enters
 equipment dropped or the casing is damaged
 device emitting a scorched flavor
 device is not working
9. When the device is ready to deliver, all parameters have been adjusted, Do not attempt to change the settings or components mobilize board.



EDFA output power is an invisible laser radiation, do not look directly at the amplifier operates its connector end faces, avoiding eye and skin burns.

1. Equipment Structure and Function Description

1.1 Equipment components

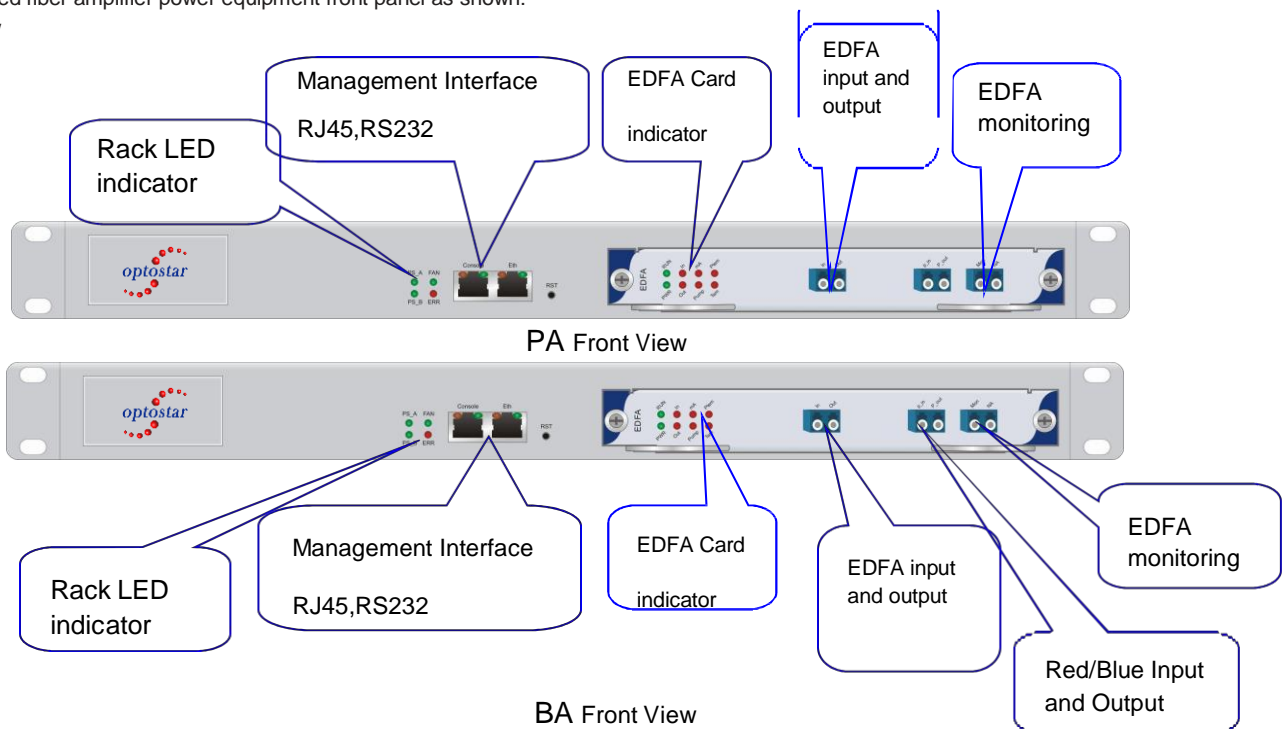
Equipment Overview

This manual is for a 19-inch rack-type erbium-doped fiber amplifier (EDFA-BA) equipment use. The equipment is mainly used in the case of some long-distance high speed communications, and improve the line into the fiber optical power.

Equipment components

Erbium-doped fiber amplifier power equipment front panel as shown:

. Front View



1.2 Panel description

1. Device Interface Definition

Interface Printing	Name	Function
RJ45	Ethernet Port	Remote Management Interface
Consok	Serial port	Serial Management Interace
In	Inout	EDFA Input Interface
Out	Output	EDFA Output Interface
P_In	PA Input Interface	
P_Out	PA Onput Interface	
MON	Monitoring Port	

2. Power Interface Definition



Power Interface illustration Table

Item	Description
-48RTN	Power input positive
-48	Power input negative

3. LED indicator Definition



Panel LED Indicators illustration

Item	Description
PS_A	Powe Supply A normal, green is on.
PS_B	Powe Supply B normal, green is on
FAN	Fan LED, ON is normal
ERR	While error, red is on
RUN	System operating normally, green is on
IN	When the input optical power is below the set threshold input power ,red is on.
OUT	When the output optical power output power lower than the set threshold, red is on
PUMP	Pump laser is abnormal, red is on
mA	Pump current warning LED Indicators , when pump current is abnormal, red is on.
Ptem	Pump temperature warning LED Indicators, when the pump temperature is too high, red is on
Tem	Equipment temperature warning LED Indicators, when the device temperature is too high, red is on

4. RS232 Communication Interface

RS232 interface using RJ45, the pin is defined as follows:

Pin	Description	P	Description
1	Undefined	6	RS232 Data Input
2		7	Undefined
3	RS232 Data Output	8	Undefined
4	Undefined	9	Undefined
5	Ground	-	--

Baud rate 115200 bps, 8 bits transmitted

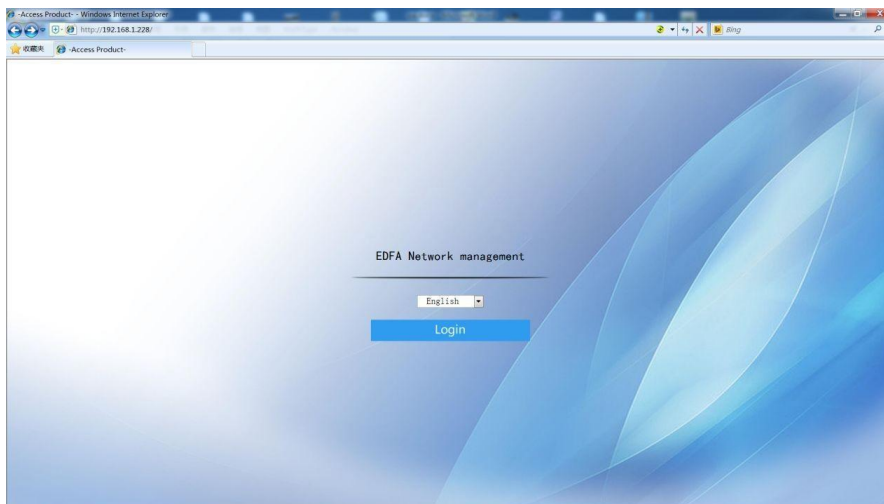
2.Key performance and specifications

Part No.	OP-EDFA-316-12				
Parameters	Min	Typ	Max	Units	Remark
Operating wavelength	1528		1561	nm	
Input optical power range	-15		4	dBm	
Gain		12		dB	+/-1 adjustable
Output power	-3		16	dBm	
Input optical power threshold	-20			dBm	adjustable
Gain flatness		1.5		dB	
Noise factor		5.5		dB	
Operating Voltage	AC220V & DC-48V			V	Dual
Interface	LC/UPC				
Size	(WxLxH) 430x320x43.6			mm	
Interface	LC/UPC				
Size	(WxLxH) 430x320x43.6			mm	

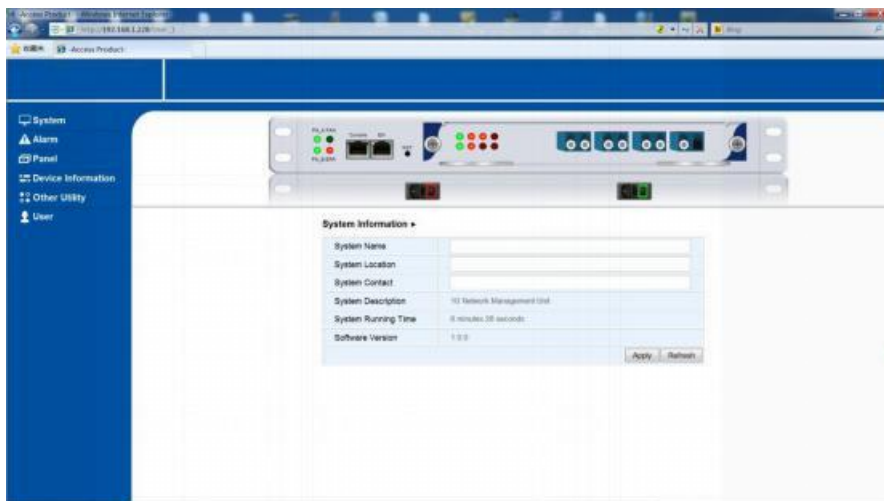
2.1 Management Interface:

Part No.	OP-EDFA-116-20-NS				
Parameters	Min	Typ	Max	Units	Remark
Operating wavelength	1528		1561	nm	
Input optical power range	-30		-4	dBm	
Gain		20		dB	+/-1 adjustable
Output power	-3		16	dBm	
Input optical power threshold	-29			dBm	adjustable
Gain flatness		1.5		dB	
Noise factor		5.5		dB	
Operating Voltage	AC220V & DC-48V			V	Dual
Interface	LC/UPC				
Size	(WxDxH) 430x320x43.6			mm	

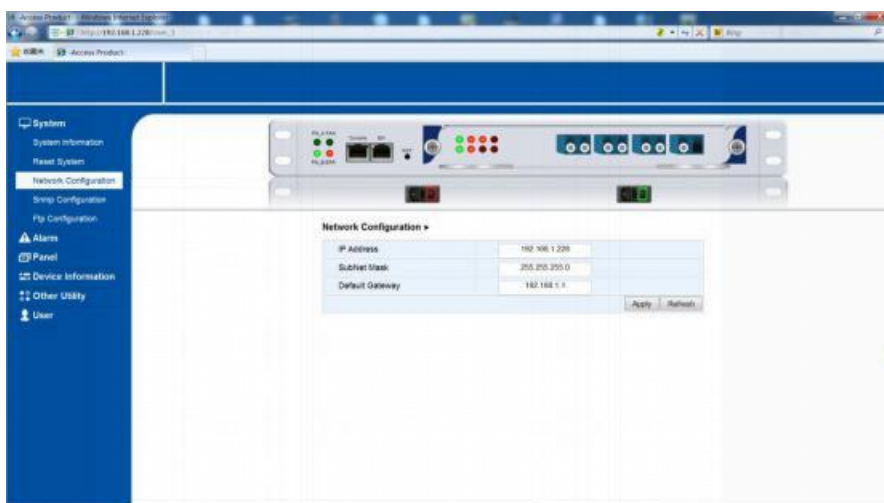
Default IP: 192.168.1.228
User Name: admin
Password: 1234



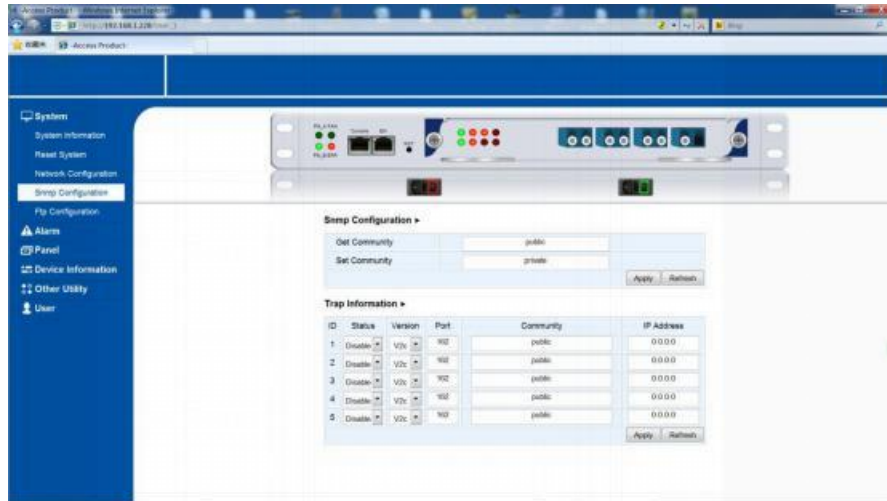
System Interface



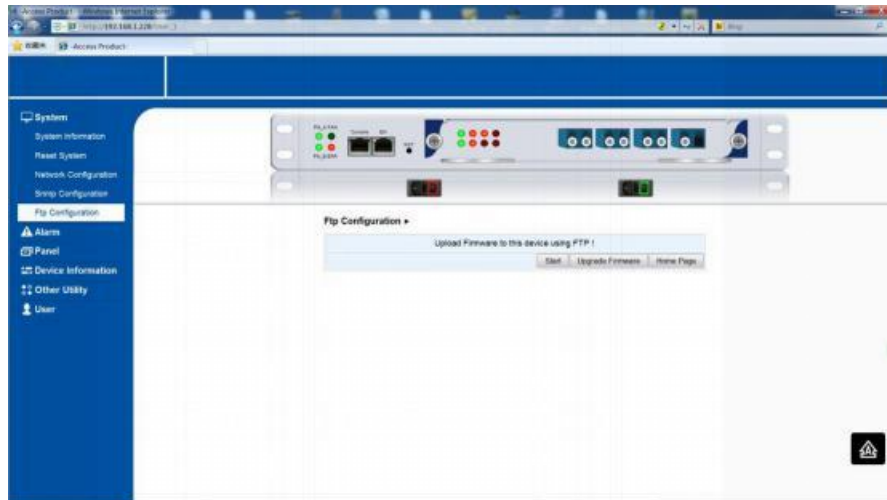
Revise the IP address:



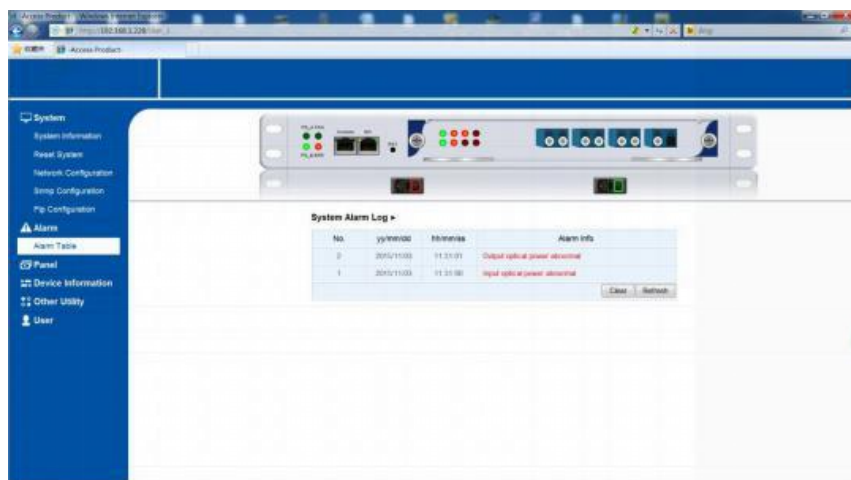
Snmp Configuration page



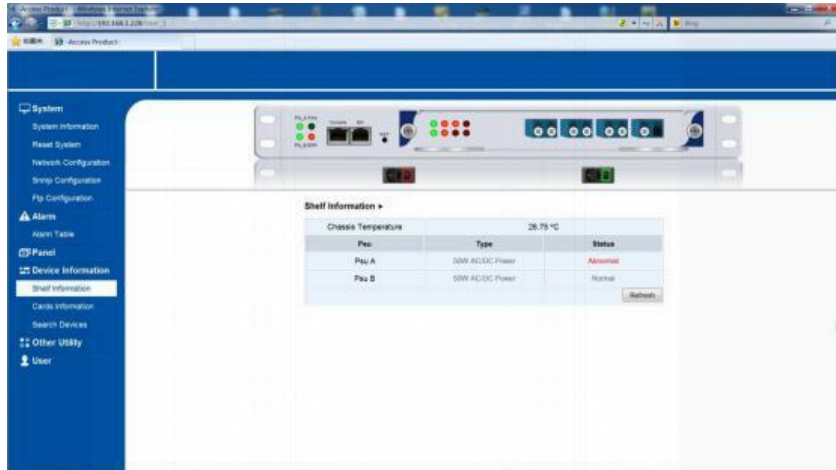
FTP Upgrade page



Alarm page



Rack status page



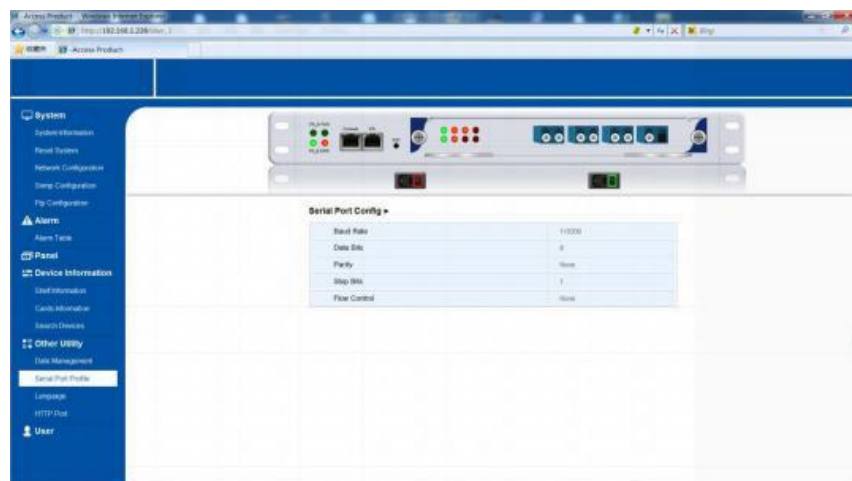
Business card status information page



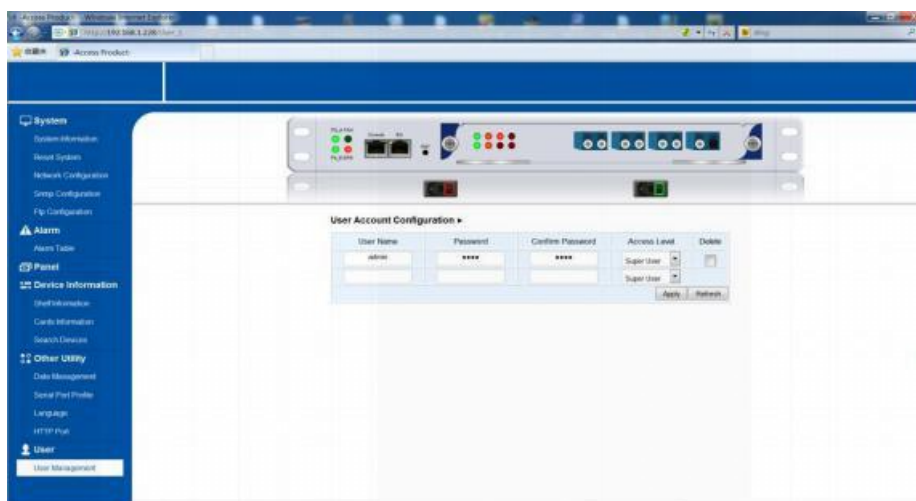
CONSOLE connection

Connect PC with the matched RJ45 TO DB9, open the super terminal of Windows and set as follows:

- Baud Rate 115200 bps
- Data Bite 8
- Parity None
- Stop Bits 1
- Flow Control None



User Mangement Interface



3. Equipment installation and opening

3.1 Unpacking

Open the received cartons of the MODEL and carefully unpack its contents. The cartons should Included following items:

Name	Quantity
EDFA	1 Set
Power Supply Cable	2pcs(DC No)
Network Cable	1pc
Serial Cable	1pc
User Manual	1pc

3.2 Installation steps

- 3.2.1 After the device removed, placed in a smooth horizontal table or fixed on the frame;
- 3.2.2 The two sets of screw nut fastening the device to the frame on both sides of the buckle ears, then bolt through the ears and ears equipment rack, and the final rivet nut tight together;
- 3.2.3 Respectively the power cord connected to the Blue Line -48V (negative), the black wire to the 0V (positive), the yellow-green cable wire to protect the ground connection.
- 3.2.4 The power switch to "ON" state, the indicator on the viewing panel is correct, then the Power (green) and Input Alarm (red) should be in a light emitting state;
- 3.2.5 The optical port on the protective cap is removed, the input optical signal, the signal on the line if the connection is correct and, this time, the panel only the power indicator (green) lights, other are in the off state.

4. Common Problems and Solutions

4.1

1. If no electricity after power on: please check the power supply module type you are using are the same type of power supply, and check the power of positive and negative polarity. The power supply should comply with the specification Of the power indicators.
2. Input alarm indicator light: Turn off the power and check the light output optical power is at the entrance of the erbium-doped optical fiber amplifier input range. If you still can not resolve, make sure the input and output optical port device is reversed. Optical signal wavelength is within the operating wavelength range of the device.
3. Temperature warning: Make sure that the device ambient temperature is too high.
4. Output alarm, pump alarm: this alarm occurs, turn off the device, and contact us promptly.

4.2 Maintenance

- * Do not plug the fiber jumper cables for no reason!
- * Do not twist the small curvature of the fiber jumper cables!
- * Please regularly maintenance, use alcohol to clean the fiber optic union, attention must first turn off the amplifier power!
- * Please regularly check the grounding system is good!

- * Please do not open the cabinet!
- * Please press the laser safety requires the operator to prevent damage to the laser radiation on the human body!
- * Do not frequently turn on or turn off the power, the power to avoid the impact of LD pump source.

Contact OPTOSTAR

Shenzhen Optostar Optoelectronics Co., Ltd

Address:A-14,Haide Building,the Intersection of Nanxin Road and Haide Second Road Nanshan District
Shenzhen,China .

Tel: +86-755-26400198 +86-755-26400288 Fax: +86-755-26411001

Email: info@optostar.com.cn

Skype:ouyangroya

Web: www.optostar.com.cn