48pcs 2x4 (D1x2) Optical Switch Rackmount

This Optical switch is a kind of light path control device. plays a control light path and convert the light path. 48-D1X2-U consists of 48 pieces of 2x4 synchronous switch light path combinations of mechanical optical switch, optical switch light path control switch can be 48 button on the panel control, also can through the short-range RS - 232 serial port communication mode or remote RJ45 Ethernet communication by sending a program-controlled command control switch light path, equipment state of light path by the green light and red light shows light path.

Features	Applications
● SerialNet, High Reliability, High Stability ● LED display panel. Visual display, Convenient operation ● Transparent transmission signal. High stability and reliability ● Channel and time interval of automatic scanning can be set up ● RS232 Control and RJ45 Ethernet Remote Management	● FITL ● Automatic Measurement ● Optical Network Remote Monitoring Cable Monitoring and Maintaining system

Technical Index

Parameter	Unit	48*2x4
Wavelength Range	nm	1260~1650 or customized
Testing Wavelength	nm	1310/1550 or customized
Insertion Loss (Max)	dB	≤1.5
Return Loss	dB	SM ≥ 50
Crosstalk	dB	≤-55
PDL	dB	≤0.05
WDL	dB	≤0.25
TDL	dB	≤0.20
Repeatability	dB	≤0.02
Switching Time	ms	≤10 (Adjacent Channel)
Optical Power	mW	≤500
Fiber Type	um	9/125
Connector	/	FC, SC, LC, ST, SMA or customized
Monitor Port	/	RJ45 & RS232 or customized
Working Power Supply (Plug Tyep)	V	AC：220V (50/60Hz) or DC：36V~72V
Operating Temperature	℃	-10~+60
Storage Temperature	℃	-40~+85
Rack mount Dimensions	mm	6U: 483x500x267mm

Ordering Information OSW-XxX-X-XX-X-XX-XX-XX-XX

OSW	Mode	Wavelength	Package	Fiber Type	Power Supply	Connector
48*2x4 S=Specity	S=SM M=MM	85=850nm 13=1310nm 15=1550nm 85/13=850/1300 13/15=1310/1550nm S=Specify	1U=1U Rackmount 2U=2U Rackmount 3U=3U Rackmount 4U=4U Rackmount S=Specify	M5=50/125 M6=62.5/125 S9=9/125 S105/125 S200/240 S365/400 S550/600 S=Specify	AC=Single 85~265V DC=Single 36~72V AA=Dual 85~265V DD=Dual 36~72V AD=AC85~265V+DC36~75V	00=None FP=FC/UPC FA=FC/APC SP=SC/UPC SA=SC/APC LP=LC/UPC LA=LC/APC S=Specify

Panel to Explain

- Power: Master switch of power supply
- RJ45:Communications network management interface ;
- RS-232: Rs- serial interface ; RS232 serial communication interface;
- LCD:Devices that display information directly;
- ▲: Key to move up; ▼: Key to move down; Enter: Key to determine;
- Esc: Key to cancel;

- AC:85~265V: Power cord interface;
- ON/OFF: Master switch of power supply ;

Default Setting

- address：01
- RS-232：Baud rate:9600; Data bits:8 bit; Stop bit: 1 bit; Parity bit:NONE;
- RJ45: IP：192.168.1.100 ; PORT：5000; TCP/IP:TCP Server and UDP
  （Fixed port：18888）

LCD function display description

Manual Control：This function is used to manually control the optical switch channel.

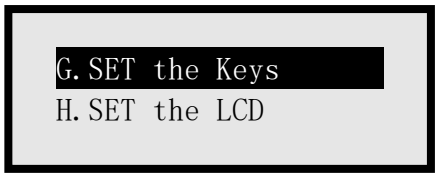
Automatic Control：This function is used to set up start and end channels under automatic control

Switching Interval:This function is used for how long the dwell time after channel switching under automatic control is between the time of switching to the next channel and setting the dwell time for re cycling

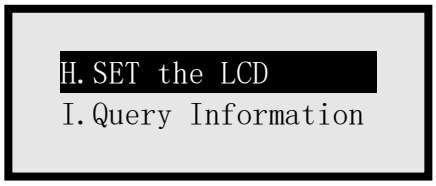
Special Setup:This function is used to quickly set the switching channel. You can directly switch the channel by pressing the up and down keys in the main interface

Device Address:This function is used to set the device address

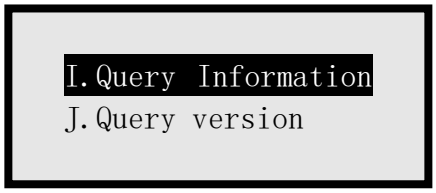
SET Communication :This function is used to set RJ45 communication and RS-232 communication parameters



SET the Keys:This function is used to set whether the key press makes sound and the lock key is not available



SET the LCD:This function is used to set the status of LCD backlight



Query Information:This function is used to query the optical switch information

Query Version :This function is used to query the device version

Communication Protocol

- "_" :A underline;
- Communication protocol all in uppercase characters;
- The device executes an instruction each time;
- "<" As the start instruction; ">" As an end instruction;

Instruction set

Name	Instructions	Describe
Set Optical Switch Channel	Send: <OSW_OUT_ON01>	Setup the 01 optical switch channel to ON , returned successfully.
	Return1: <OSW_OUT_OK>	
	Send: <OSW_OUT_OF01>	Setup the 01 optical switch channel to OFF

	Return1: <OSW_OUT_OK>	, returned successfully.
	Send: <OSW_OUT_ON48>	Setup the 48 optical switch channel to ON , returned successfully.
	Return1: <OSW_OUT_OK>	
	Send: <OSW_OUT_OF48>	Setup the 48 optical switch channel to OFF, returned successfully.
	Return1: <OSW_OUT_OK>	
	Send: <OSW_OUT_ON00>	Setup all optical switch channel to ON, returned successfully.
	Return1: <OSW_OUT_OK>	
	Send:<OSW_OUT_OF00>	Setup all optical switch channel to OFF, returned successfully.
	Return1: <OSW_OUT_OK>	
Query Optical Switch Channel	Send: <OSW_OUT_?>	Query the optical switch channel, returned successfully; 1111111111111111: Is the all optical switch state (0: ON, 1: OFF).
	Return: <OSW_OUT_1111111111111111>	
Set the IP Addresse	Send: <OSW_IP_192.168.1.100>	Setup the IP addresse to 192.168.1.100, returned successfully.
	Return: <OSW_IP_OK>	
Query IP Address	Send: <OSW_IP_?>	Query the IP address, returned successfully 192.168.1.100: IP address to 192.168.1.100
	Return: <OSW_IP_192.168.1.100>	
Set the Port Number	Send: <OSW_PORT_5000>	Setup the port number to 5000, returned success
	Return: <OSW_PORT_OK>	
Query Port Number	Send: <OSW_PORT_?>	Query the port number, returned successfully 5000: port number to 5000
	Return: <OSW_PORT_5000>	
Set the Subnet Mask	Send: <OSW_SM_255.255.255.0>	Setup the subnet mask to 255.255.255.0, returned successfully
	Return: <OSW_SM_OK>	
Query Subnet Mask	Send: <OSW_SM_?>	Query the subnet mask, returned successfully 255. 255. 255.0:subnet mask to 255. 255.255.0

	Return: <OSW_SM_255.255.255.0>	
Set the Default Gateway	Send: <OSW_GW_192.168.1.1>	Setup the default gateway to 192.168.1.1, returned successfully
	Return: <OSW_GW_OK>	
Query Default Gateway	Send: <OSW_GW_?>	Query the default gateway, returned successfully 192.168.1.1: default gateway to 192.168.1.1
	Return: <OSW_GW_192.168.1.1>	
Set the Baud Rate	Send: <OSW_BAUD_9600>	Set the baud rate to 9600, returned successfully
	Return: <OSW_BAUD_OK>	
Query Baud Rate	Send: <OSW_BAUD_?>	Query the baud rate , returned successfully 9600: baud rate to 9600
	Return: <OSW_BAUD_9600>	
Device Restarts	Send: <OSW_RESET>	Setup the device restarts , returned successfully
	Return: <OSW_RESET_OK>	
Query Device Information	Send:<OSW_TYPE_?>	Query the device information ,returned successfully; Model：48-2X4-U Wavelength Range：1260~1650nm Fiber Type：SM,9/125um Connector：LC/UPC Working Power Supply ：AC:85~265V
	Return: <OSW_TYPE_48-2X4-U_1260~1650 _SM,9/125 _ LC_U>	
Query Version	Send: <OSW_VERSION_?>	Query the version, returned successfully Hardware version： V1.0.1 SOFTWARE： V1.0.1
	Return: <OSW_VERSION_HARDWARE:V1.0.1SOFTWARE:V1.0.1>	

Matters need attention

- Return “<OSW01_ER>” is command syntax error occurred.
- Return “<OSW01_E2>” is not operating properly.
- Return “<OSW01_E1>”,The channel of setting up are outside the scope of this article

- “OSW01”，Indicate that the device address is 01
- Send arbitrary the Instructions in automatic mode, Stop to Automatic mode
- In RS-232 serial port communication, the system require that the baud rate of dispatcher and sink should keep consistent

Refer to software control chart