

# OSW-1X8-600UM

## 1×8 Mechanical Optical Switch, 900-1700um, 600um 0.5m fiber, SMA905 connectors

1x8 mechanical optical switch is designed and produced by FIBERWDM, it is a kind of light path control equipment, which is used 600um fiber, and work wave is 900~1700um. It can realize multi-channel fiber optic light path switching. In the optical fiber transmission system, it is used for multi-channel fiber monitoring, multi light source/detector selection, and optical fiber path protection etc. Besides, it is also used in optical fiber test system for optical fiber and related component test, outdoor cable test and multi-spot optical sensors monitoring system.

### Features

- ◆ Low Loss and High Reliability
- ◆ Serial Interface (RS-232)

- ◆ Modularized Design
- ◆ Epoxy-free on Optical Path

## Applications

- ◆ Ring Network
- ◆ Remote Monitoring in Optical Network
- ◆ Testing of Fiber Optical Component

## Specifications

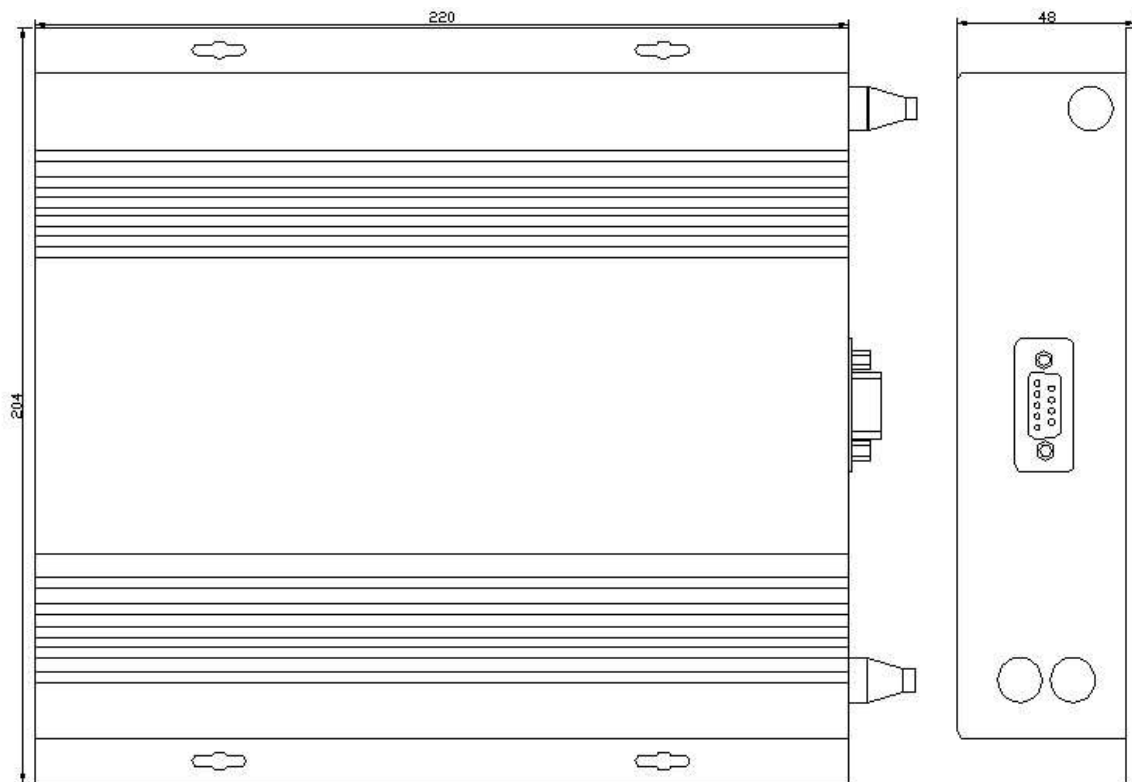
Parameter	Parameter Values
Model	OSW-1X8-600UM
Insertion Loss	≤1.5dB
Wavelength Range	900-1700nm
Fiber Type	600UM
Return Loss	≥30 dB
Crosstalk	≥ 50 dB
PDL	≤0.1 dB
WDL	≤0.25 dB
TDL	≤0.25 dB
Repeatability	≤0.1 dB
Lifetime	>10 <sup>7</sup>
Switching Time	≤20 ms (Adjacent channel)
Connector	SMA905
Control Mode	RS232

Working Power Supply	5V/1000 mA
Product Size	220 x 204 x 48
Operating Temperature	-20 °C to +70 °C
Operating Temperature	-40 °C to +85 °C

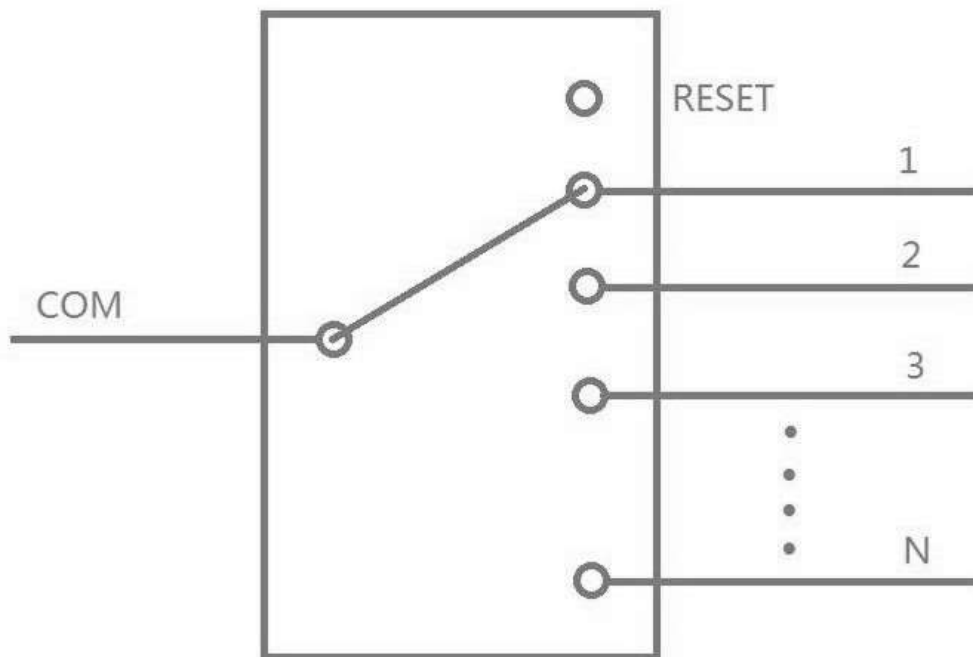
## Pin Specifications

DB-9 Male Connector			
Pin No.	I / O	Signal	Description
2	Input	RXD	Receive Data
3	Out	TXD	Send Data
5,8	Power	GND	Ground
9	Power	VCC	5.0±5% VDC Power Supply (max 1000mA)
1,4,6,7	NC	NC	NC

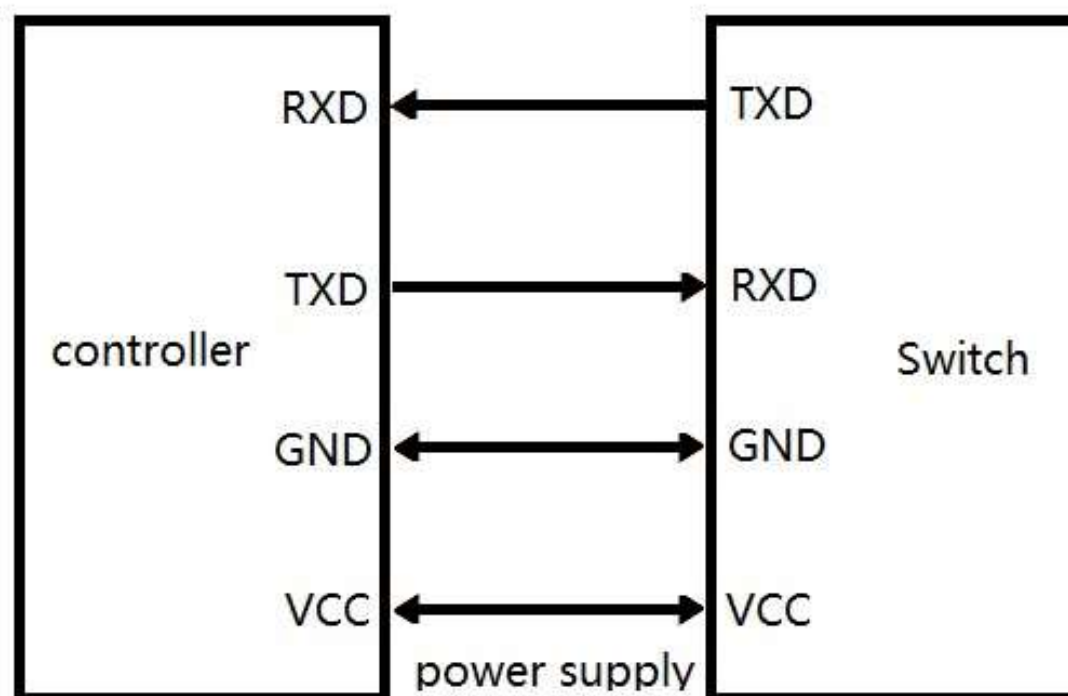
## Dimension



## Optical Route



## Control Chart



## Communication Protocol

- “\_” expression underline.
- Communication protocols are all capital letters.
- The communication protocol commands, “<” as the start, “>” as a terminator.

Us ag e	Instruction	Description
	Send: <OSW_OUT_ XX>	Set the "XX" value to select the fiber channel. When "XX" is 00, the switch will be reset. Set 01 to select channel 1. A successful setup will return 1. It returns 2 when

<p>Set o ptic al sw itch cha nn els</p>	<p>Return1: &lt;OSW_OUT_ OK&gt; Return2: &lt;OSW_OUT_ OVERFLOW &gt;</p>	<p>"XX" is larger than total channel amount.</p>
<p>Qu ery op tica l sw itch cha nn els</p>	<p>Send: &lt;OSW_OUT_ ?&gt; Return: &lt;OSW_OUT_ XX&gt;</p>	<p>Send the query command and it will return an "XX" value to indicate the current channel.</p>
	<p>Send: &lt;OSW_TYPE _?&gt;</p>	<p>Send the query command and it will return following</p>

Query	Return:	basic information of the switch.
optical switch type	<OSW_TYPE _OSW- 1X2_400~1000_3 0_1000UM_300_05_R_SM A>	Model: OSW-1X2 Wavelength Range: 400~1000nm Fiber Type: 1000um Protective Casing: 3mm Fiber Length: 0.5m Control Interface: RS-232 Connector: SMA905

**Note:** COM settings , Baud rate: 9600, Data bits: 8 bit, Stop bit: 1 bit , parity bit: None, Command error return “<OSW\_ERROR>” .

## Operation

(1) The optical switch transmits the command to control the optical switch through RS232 serial communication. The optical switch receives the command successfully and returns the response.

(2) To program the switch directly over USB (RS232 control), we would throw in a DB9 to USB adaptor (connector), and then the switch can be connected to the USB port on your device.

(3) The optical switch is bidirectional in operation.

# Software Control Chart (For Reference Only)

