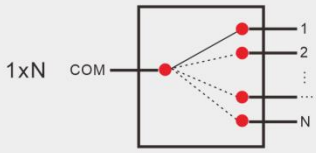
1xN Large core Multi Channel Optical Switch

1xN Multi Channel optical switch is a kind of light path control equipment,can realize multi-channel fiber optic light path switching,In 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 its component test, outdoor cable test and multi-port optical sensors monitoring system.

Module

Rackmount

Optical Path



Technical Index

Parameter	Unit	1x4	1x8	1x12	1x16	1x24	1x32	1x64	1x128
Wavelength Range	nm	280nm, 375nm, 405nm, 488nm, 525nm or 532~1064 nm and Customized							
Testing Wavelength	nm	280nm, 375nm, 405nm, 488nm, 525nm or 532/650/780/850/980nm							
Insertion Loss (Max)	dB	≤0.8	≤0.8	≤1.0	≤1.5	≤1.5	≤1.5	≤1.8	≤2.0
Return Loss	dB	SM ≥ 50							
Crosstalk	dB	≤-70							
PDL	dB	≤0.05							
WDL	dB	≤0.20							
TDL	dB	≤0.20							
Repeatability	dB	≤0.02							
Lifetime	times	$>10^7$							
Switching Time	ms	≤10 (Adjacent Channel)							
Optical Power	mW	≤500							
Control Mode	/	TTL or Customized							
Operating Temperature	℃	-10~+55							
Storage Temperature	℃	-40~+85							

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

OSW	Mode	Wavelength	Package	Fiber Type	Fiber Diameter	Fiber Length	Connector
1x4	S=SM	280=280nm	B=Metal Box	S105/125	09=900um	05=0.5m	00=None
1x8	M=MM	375=375nm	R=Rackmount	S200/240	20=2.0mm cable	10=1.0m	FP=FC/UPC
1x16		405=405nm	S=Specify	S272/300	30=3.0mm cable	S=Specify	FA=FC/APC
1x32		488=488nm		S365/400	S=Specify		SP=SC/UPC
1x64		532=532nm		S550/600			SA=SC/APC
1x128		650=650nm		S=Specify			LP=LC/UPC
S=Specity		780=780nm					LA=LC/APC
		850=850nm					S=Specify
		S=Specify					

PIN Configurations

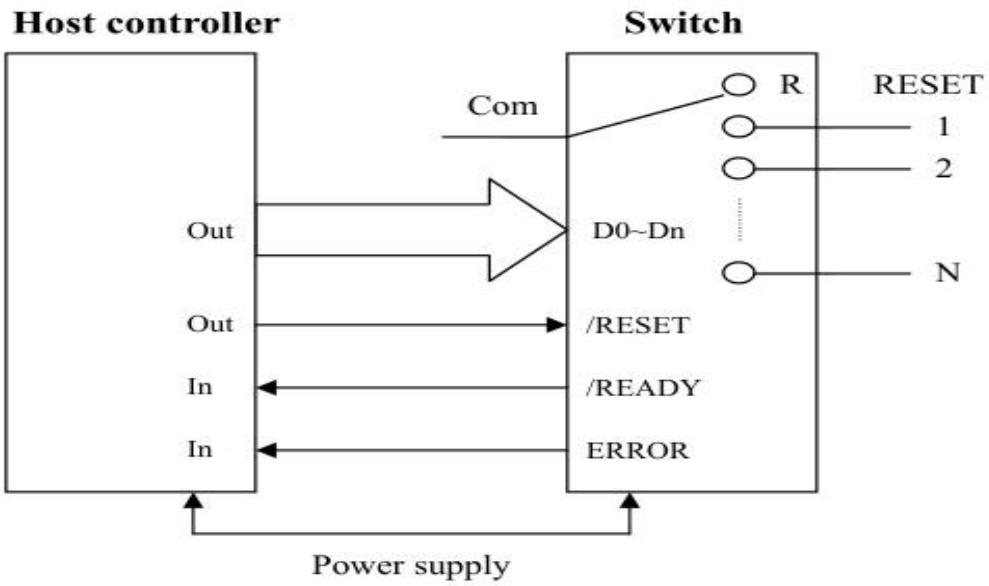
DB-9 male connector (1xN≤16)

DB-9 male connector			
Pin No.	**I / O**	**Signal**	**Description**
1	Input	D0	D0~ D3 is channel selection Bit0~Bit3,D0 is low, D3 is high
2	Input	D1	
3	Input	D2	
4	Input	D3	
5	Input	RESET	TTL, Low level reset to channel 0. High level means channel selection bits are effective.
6	Out	READY	TTL, Ready (High=Not ready, Low=Ready)
7	Out	ERROR	TTL, Error OR Failure , (High=Error, Low=No error)
8	Power	GND	Ground
9	Power	VCC	5.0±5% VDC Power Supply (max 500mA)

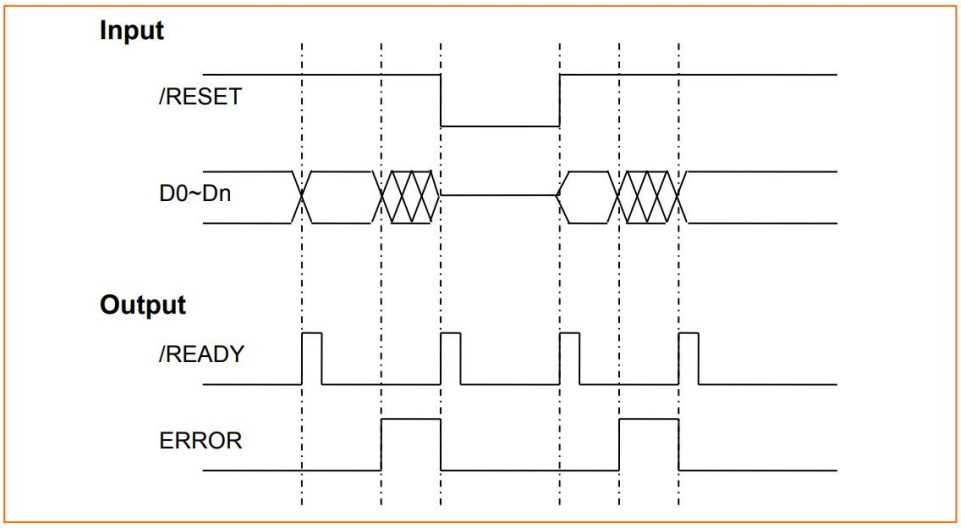
DB-15 male connector (1xN≤128)

DB-15 male connector			
Pin No.	**I / O**	**Signal**	**Description**
2	Input	D0	D0~ D5is channel selection Bit0~Bit4,D0 is low, D4 is high
3	Input	D1	
4	Input	D2	
5	Input	D3	
6	Input	D4	
10	Input	D5	
11	Input	RESET	TTL, Low level reset to channel 0. High level means channel selection bits are effective.
7	Out	READY	TTL, Ready (High=Not ready, Low=Ready)
8	Out	ERROR	TTL, Error OR Failure , (High=Error, Low=No error)
1,9	Power	GND	Ground
12	Power	VCC1	5.0V±5% VDC motor power (max 950mA)
15	Power	VCC2	5.0V±5% VDC Drive circuit power(50mA)
13,14		NC	NC

Control Chart



Timing Diagram:



Channel Selection Table:

Channel	D0	D1	D2	D3	D4	D5	RESET
COM-0	x	x	x	x	x	x	0
COM-1	0	0	0	0	0	0	1
COM-2	1	0	0	0	0	0	1
COM-3	0	1	0	0	0	0	1
...							1
COM-126	1	0	1	1	1	1	1
COM-127	0	1	1	1	1	1	1
COM-128	1	1	1	1	1	1	1