










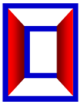


#### **Hardware system function**

-  Remote maintenance function: can query the running status of all board cards and other information through remote;
  
-  Board card maintenance function: the equipment has external DC or AC power input (Note: 1U only has double 48V power supply), double power and double thermal backup;The power supply design has fuse overcurrent, which can be replaced;The board adopts modular design, and all the board cards can be replaced by electricity, easy installation and maintenance.
  
-  Equipment alarm function: the equipment has the function of sound and light alarm. When the equipment fails, the ALM light will be red and the buzzer will send out an alarm sound.

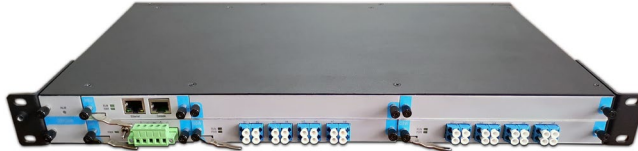
#### **Single configuration function**

-  The 1U offers four (0.5U height) service slots, a dual 48V power slot, a master control slot and a fan slot
  
-  The 2U offers eight (0.5U height) service slots, two power slots, one master control slot and one fan slot
  
-  The 4U offers 16 (0.5U height) service slots, two power slots, one master control slot and one fan slot
  
-  Single board card (0.5U) provides 8X8 matrix optical switching function
  
-  Provide embedded master network management function
  
-  Provide warning indication signal
  
-  Provide automatic cooling function of fan board card
  
-  Dual power backup + power input monitoring function



## Hardware Technical Indicators

The physical picture of 1U device is as follows (2 pieces of 8×8 cards, realizing double 8×8 synchronous switching) :



尺寸 : 483mm(L)×240mm(W)×44mm(H)

### (1) Operating environment of the equipment

- Ambient temperature:  $-5^{\circ}\text{C} \sim +55^{\circ}\text{C}$ ;
- Relative humidity: not more than 85%RH at  $25^{\circ}\text{C}$ ;
- Atmospheric pressure: 86 KPa  $\sim$  106 KPa;
- Power supply voltage:  $-48\text{V}/\text{DC} \pm 20\%$  (85-264)V/AC;

### (2) Power supply

Rated input voltage:  $-48\text{V} / \text{DC} 220\text{V}/\text{AC}$ .

Power consumption: overall power consumption  $\leq 10\text{W}$  (full).

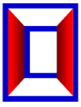
### (3) Grounding

Communication station: joint ground wire, grounding resistance  $\leq 1\Omega$ , intermediate station: grounding resistance  $\leq 4\Omega$ .

## 8x8 matrix optical switching board card

### Function overview:

The 8X8 optical switching matrix enables strict non-blocking bidirectional cross-connection of 8 (input) ×8 (output) core fiber routing. It plays an important role in optical communication applications.



**Specifications and parameters:**

Operating wavelength: 1310nm/1550nm;

Intervention loss of optical fiber connector:  $\leq 2.5\text{dB}$ ;

Return loss:  $\geq 45\text{dB}$ ;

Crosstalk:  $\geq 55\text{dB}$ ;

Switching time:  $\leq 50\text{ms}$ ;

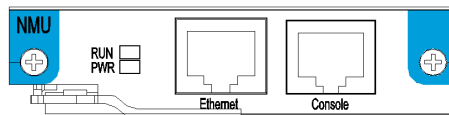
Operating temperature:  $-5^{\circ}\text{C}$  to  $+55^{\circ}\text{C}$ ;

Storage temperature:  $-40^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ ;

Humidity requirement:  $\leq 85\%$  RH;

Link number: optional MXN links, (0.5U height  $M+N\leq 16$ ; 1U height  $M+N\leq 32$ );

**Master Control Board Card (NMU)**



**Function overview:**

The control board card is used to manage all the board cards of the monitoring station and communicate with the server of the monitoring center. Report the status of the monitoring station to the monitoring center, or implement the configuration and operation instructions issued by the monitoring center. Using the embedded control system, the structure is refined, with the characteristics of flexible communication and convenient maintenance.

**Specifications and parameters:**

Ethernet interface: 10/100Mbps;

Operating temperature:  $-10^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ ;

Storage temperature:  $-40^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ ;

Humidity requirement:  $\leq 95\%$  RH;