1+1 8PCM+4FE+Console

Voice Fiber Optical Multiplexer

User's Manual

Overview

This device is a kind of developed point to point transmission equipment based on our company PDH fiber transmission the special-use VLSI. This device provides 16 Channel EM2/4 1-4Channel E1 interface, 4Channel 10/100M Ethernet interface (Line Speed 100M) and 2 expansion interface. 4Channel Ethernet interface is switch interface, can support VLAN. 2 expansion interface can be used as the transmission channel of RS232/RS485/RS422 asynchronous data, Ethernet signal (Bandwidth 2M). It has alarm function. The working is reliable, stable, and low power consumption, high integration, small size, ease of installation and maintenance.

Features

- Based on self -copyright IC
- Support Console interface
- 1-16 Channel voice access, supports caller ID feature and reverse polarity billing functions
- Support various sites mutual number allocation function
- Voice port supports FXO and FXS port, EM2/4 audio interface, FXO port docking with program-controlled switchboard, FXS port connected to the user's telephone
- E1 interface comply with G.703, adopts digital clock recovery and smooth phase-lock technology
- 4Channel Ethernet interface is switch interface, support VLAN
- Ethernet interface rate is 10/100M, half/full duplex auto-adaptable
- 1Channel PCM digital business phone(optional)

- Provide 1 expansion interface, you can extend 1-2Channel asynchronous data, such as RS232/RS485/RS422/Manchester code; or Ethernet signal (Bandwidth 2M)
- Have indicator light when the device is power-off or E1 line is broken or lose signal
- Can monitor the remote device work condition
- Can command the remote interface loopback to maintain the circuit
- Provide Console management interface to install easily
- The transmission distance is up to 2-120Km without interruption
- AC 220V, DC-48V can be optional
- DC-48V power has polarity automatic detection function, you can install the device without differentiation between positive and negative polarity.

Parameters

◆ Fiber

Multi-mode Fiber

50/125um, 62.5/125um,
Maximum transmission distance: 5KM@62.5/125um single mode fiber, attenuation (3dbm/km)
Wave Length: 820nm
Transmitting power: -12dBm (Min) ~-9dBm (Max)
Receiver sensitivity: -28dBm (Min)
Link budget: 16dBm

Single-mode Fiber

8/125um, 9/125um
Maximum transmission distance: 40Km
Transmission distance: 40KM@9/125um single mode fiber, attenuation (0.35dbm/km)
Wave Length: 1310nm
Transmitting power: -9dBm (Min) ~-8dBm (Max)

Receiver sensitivity: -27dBm (Min)
Link budget: 18dBm

- **E1 Interface**
  Interface Standard: comply with protocol G.703;
  Interface Rate: 2048Kbps±50ppm;
  Interface Code: HDB3;
  E1 Impedance: 75Ω (unbalance), 120Ω (balance);
  Jitter tolerance: In accord with protocol G.742 and G.823
  Allowed Attenuation: 0~6dBm
- **Ethernet interface (10/100M)**
  Interface rate: 10/100Mbps, half/full duplex auto-negotiation
  Interface Standard: Compatible with IEEE 802.3, IEEE 802.1Q (VLAN)
  MAC Address Capability: 4096
  Connector: RJ45, support Auto-MDIX
- **FXS Phone Interface**
  Ring voltage: 75V
  Ring frequency: 25HZ
  Two-line Impedance: 600 Ohm (pick up)
  Return loss: 40 dB
- **FXO Switch Interface**
  Ring detect voltage: 35V
  Ring detection frequency: 17HZ-60HZ
  Two-line Impedance: 600 Ohm (pick up)
  Return loss: 40 dB
- **Power**
  Power supply: AC100V ~ 260V；DC –48V；
  Power consumption: ≤7W
- **Working Environment**
  Working temperature: -10°C ~ 60°C
  Working Humidity: 5%~95 % (no condensation)
  Storage temperature: -40°C ~ 80°C
  Storage Humidity: 5%~95 % (no condensation)

Panel

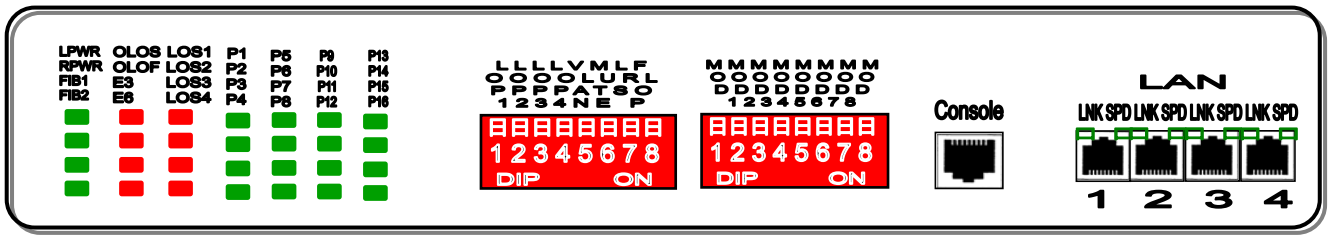


Figure 1. Frontpanel

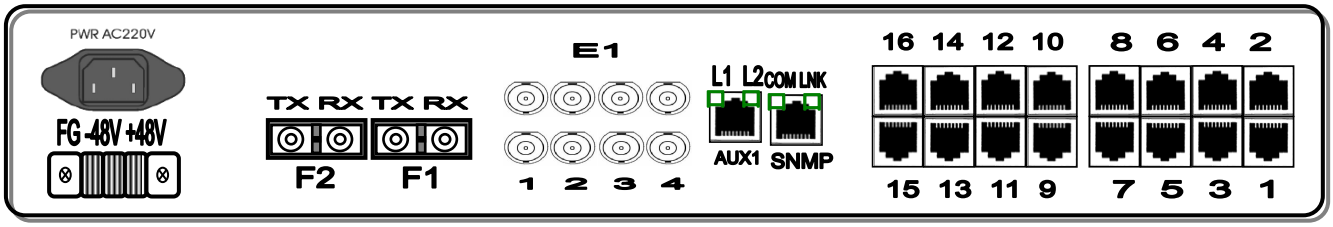


Figure 2. 75Ohm E1 Back panel

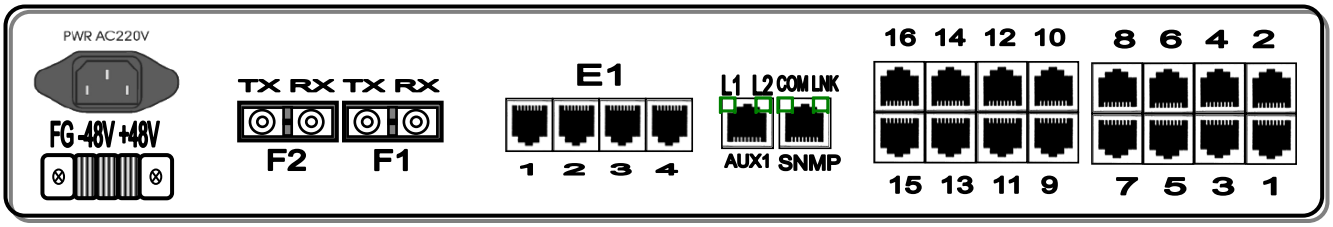


Figure 3.120 Ohm E1 Back panel

Indicator LED

Name	Color	Condition	Description
LPWR	Green	ON	Device power is ON
		OFF	Device power is OFF
RPWR	Green	ON	The remote device power is ON
		OFF	The remote device power is OFF
FIB1	Green	ON	Fiber line 1 is connected ok
FIB2	Green	ON	Fiber line 2 is connected ok
OLOS	Red	ON	E1 signal lost, not receive optical signals
		OFF	E1 signal receive normally
OLOF	Red	ON	E1 signal lost
		OFF	E1 synchronous signal receive normally
E3	Red	ON	Fiber BER≥10-3
E6	Red	ON	Fiber BER≥10-6
LOS1-4	Red	ON	The corresponding 1-4 ChannelE1signallost
		OFF	The corresponding 1 -4ChannelE1signal received
P1-16	Green	ON	Corresponding 1-16Channel voice is busy or picking up
		ON/Flash	Caller ID display
		OFF	Corresponding 1-16Channel voice is not busy or no caller

RPWR Description:
If signal indicator light OLOS is ON, there are two cases. One case is that the transmission line is broken; the other case is that the remote PDH device is power off. As follows:
OLOS ON, RPWR OFF: The remote PDH device is power off;
OLOS ON, RPWR ON: Fiber is broken;
OLOS OFF, RPWR ON: Normal Work

DIP Switch

DIP1(1-8)

DIP1	Condition	Function
1(LOP1)	OFF	Not command 1Channel E1 loopback(Default)
	ON	Command 1Channel E1 loopback
5(VLAN)	OFF	Not open VLAN isolation function(Default)
	ON	Open VLAN isolated function(valid only when choose 4 Ethernet interfaces)
6(MUTE)	OFF	Alarm sound is on(Default)
	ON	Alarm sound is off
7(L/RS)	OFF	Indicator light indicates this device work condition(Default)
	ON	Indicator light indicates the remote device work condition
8(FLOP)	OFF	Not open fiber loopback(Default)
	ON	Open fiber loopback

DIP2(1-8):Reserved

Fiber Interface

Physical Interface: FC/SC (Optional), single-fiber and dual-fiber (Optional).

Dual-Fiber: TX-Transmit RX-Receive

Single-Fiber: Transmit and Receive (Note: 1310nm and 1550nm device used in pair)

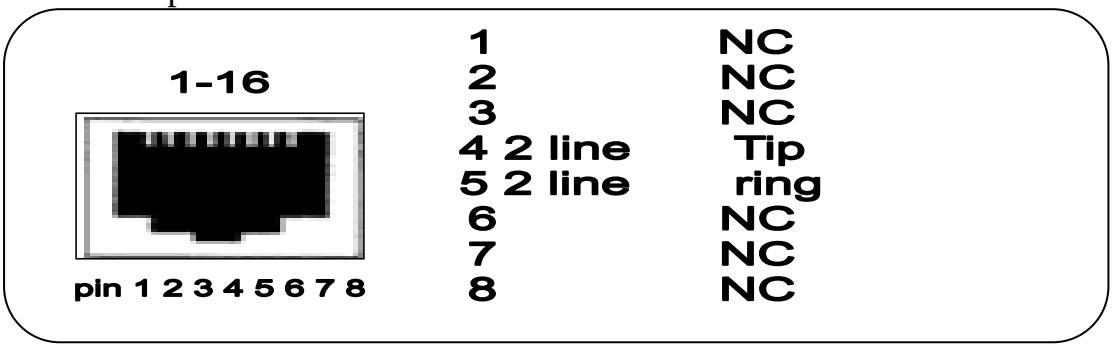
Caution：if select 1+1 interface，F1 is main fiber interface，F2 is back-up fiber interface，1+1 function is available

Phone Interface

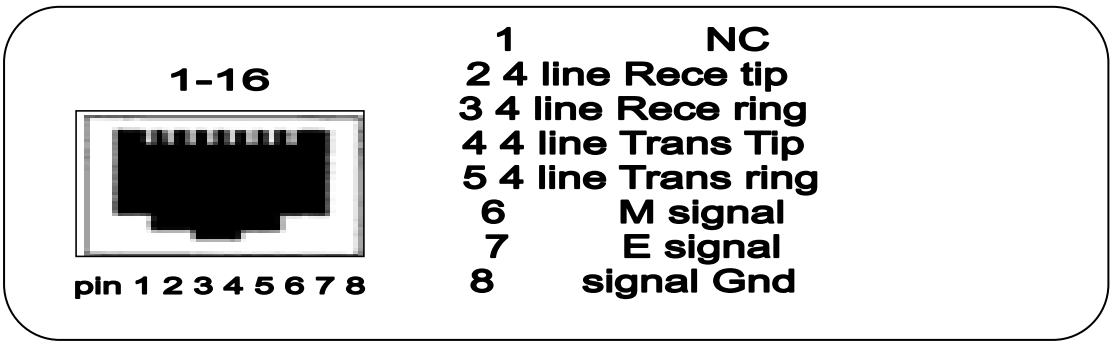
There are 16 RJ45 connectors on back panel, support 1-16 analog line telephones access. The device supports two interfaces: FXO and FXS. If this device is built-in FXO module, the interface is FXO interface, you can insert the phone line that that through switch into FXO interface. If this device is built-in FXS module, the interface is FXS interface, you can insert it into telephone directly.

PIN defined as follows:

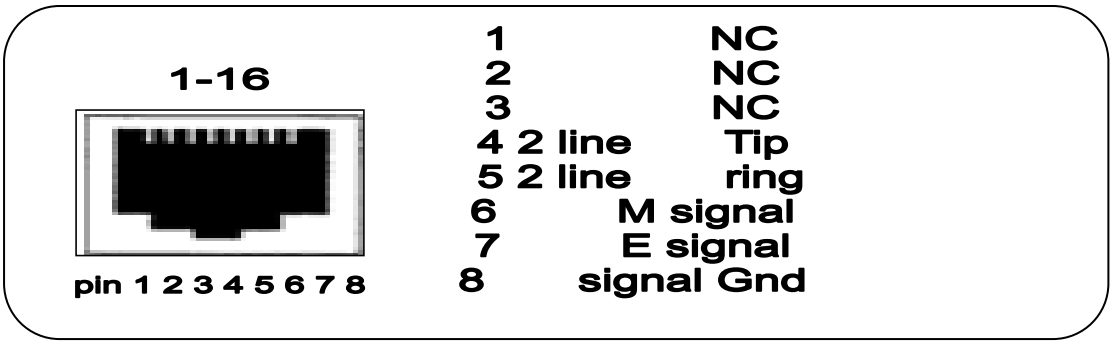
FXO/FXS pin define:



EM 4 Pin define:



EM 2 Pin define:



Ethernet Interface

1Channel Ethernet and 4Channel Ethernet can be optional. Support 10/100M, half/full duplex auto- negotiation and AUTO-MDIX (crossed line and straightly connected line self-adaptable)

LNK	Green	ON	Ethernet is connected
		OFF	Ethernet is not connected
SPD	Green	ON	Ethernet rate is 100M
		OFF	Ethernet rate is 10M

RJ45 Connector and Crystal head PIN order as follows:

10/100M Ethernet Interface

Crystal head PIN order

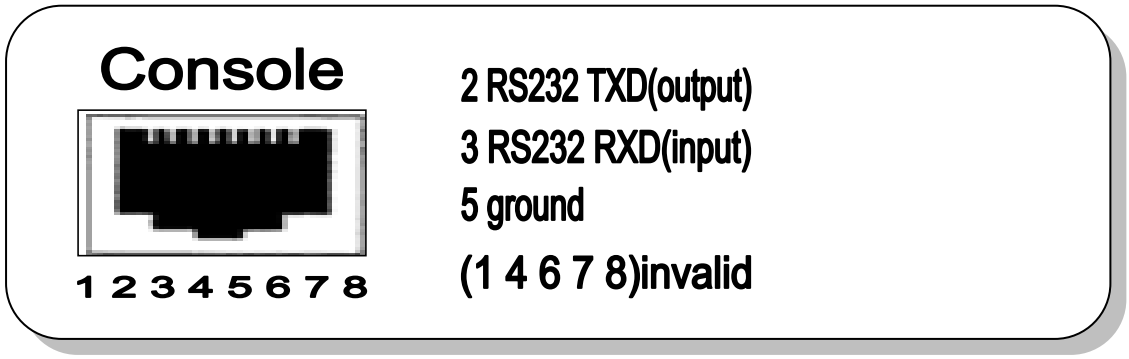
Straightly connected line order

A end Crystal head PIN		B end crystal head PIN	
Twisted Pair Color	PIN order	PIN order	Twisted Pair Color
White and Orange	1	1	White and Orange
Orange	2	2	Orange
White and Green	3	3	White and Green
Blue	4	4	Blue
White and Blue	5	5	White and Blue
Green	6	6	Green
White and Brown	7	7	White and Brown
Brown	8	8	Brown

Crossed line order

A end Crystal head PIN		B end crystal head PIN	
Twisted Pair Color	PIN order	PIN order	Twisted Pair Color
White and Orange	1	1	White and Green
Orange	2	2	Green
White and Green	3	3	White and Orange
Blue	4	4	White and Brown
White and Blue	5	5	Brown
Green	6	6	Orange
White and Brown	7	7	Blue
Brown	8	8	White and Blue

Console Interface



This is for PC hyper-terminal control.

Use DB9 cable to connect the PC's COM port with CONSOLE port;

Run the "hyper terminal" program under WINDOWS system, or run other third-party serial port connection software, set the default parameters as following:

Baud rate: 9600;

Data byte: 8;

parity check: none;

Stop bit: 1;

Flow control: none;

Press "ENTER" continuously for several times, enter system's CLI interface and begin management work.

```
== Multi-Service PDH Control System V2.5 ==

Equipment Start-up.....

========================== Main Menu ========================

== 1.current Ethernet information, Please input '1'            ===

== 2.current PDH & E1 information, Please input '2'            ===

== 3.Enter config menu, Please input '3'                       ===

== 5.Factory Reset!Please input '5'                            ===

=============================================================

\[PCM /]:
```

Submenu introduction

1. Check etherent setting information, input "1"

```
[PDH /]:1
Local/Remote Ethernet Interface Status:
L1:Down ---- --- L2:Down ---- --- L3:Down ---- --- L4:Down ---- ---
R1:Link 100M Ful R2:Down ---- --- R3:Down ---- --- R4:Down ---- ---
```

```
==========Local    VLAN========
separate mode:special channel separate
Information of separate set:Mode 1(x=1):Special Separated,and untagged
Port 1-4:(CH1:PORT1,CH2:PORT2,CH3:PORT3,CH4:PORT4)
==========Remote VLAN========
separate mode:special channel separate
Information of separate set:Mode 1(x=1):Special Separated,and untagged
Port 1-4:(CH1:PORT1,CH2:PORT2,CH3:PORT3,CH4:PORT4)
==========Local    BandWidth========
Information of bandwidth:
1:100M+00*32K---2:100M+00*32K---3:100M+00*32K---4:100M+00*32K
==========Remote BandWidth========
Information of bandwidth:
1:100M+00*32K---2:100M+00*32K---3:100M+00*32K---4:100M+00*32K
Press Any Key to Continue.......
The device support packet sizes up to 1916!
==========Local    PHY Mode========
PORT1:Auto PORT2:Auto PORT3:Auto PORT4:Auto
==========Remote PHY Mode========
PORT1:Auto PORT2:Auto PORT3:Auto PORT4:Auto
==========Local    Flow Control========
PORT1:OFF PORT2:OFF PORT3:OFF PORT4:OFF
==========Remote Flow Control========
PORT1:OFF PORT2:OFF PORT3:OFF PORT4:OFF
==========Local    Priority========
802.1P Configration:Disable 802.1P!
Pri-value: PORT1:0 PORT2:0 PORT3:0 PORT4:0
==========Remote Priority========
802.1P Configration:Disable 802.1P!
Pri-value: PORT1:0 PORT2:0 PORT3:0 PORT4:0
Press Any Key to Continue.....

========================== Main Menu ======================
== 1.current Ethernet information, Please input '1'            ===
== 2.current PDH & E1 information, Please input '2'            ===
== 3.Enter config menu, Please input '3'                       ===
== 5.Factory Reset!Please input '5'                            ===
[PCM /]:
```

2. Check PDH&E1 information,please input"2"

```
[PCM /]:2
Main and Back-Up fiber signal lost.
LOCAL/REMOTE Fiber alarm Status:
OLOS OLOF E3   E6
```

```
Alar OK   OK   OK
---- ---- ---- ----
LOCAL/REMOTE E1 LOS alarm Status(L:LOS,-:Insert):
1  2  3  4
L  L  L  L
-  -  -  -
LOCAL/REMOTE E1 AIS alarm Status(L:LOS,-:No AIS):
1  2  3  4
-  -  -  -
-  -  -  -
Command the Remote No.00 E1 Loop-Back
Mask all E1 Alarm.
Sound Alarm OFF.
LED indication local device status.
Local fiber loop off.
local:1-16 Phone Type(S:FXS,O:FXO):
1  2  3  4  5  6  7  8  9  10 11 12 13 14 15 16
S  S  S  S  S  S  S  S  S  S  S  S  S  S  S  S
Remote:1-16 Phone Type(S:FXS,O:FXO):
1  2  3  4  5  6  7  8  9  10 11 12 13 14 15 16
S  S  S  S  S  S  S  S  S  S  S  S  S  S  S  S
1-16 Phone Status(C:Calling,H:On-Hook):
1  2  3  4  5  6  7  8  9  10 11 12 13 14 15 16
C  C  C  C  C  C  C  C  C  C  C  C  C  C  C  C
1-4 AUX Port Type:
No Module insert
No Module insert
No Module insert
No Module insert
Press Any Key to Continue...

========================== Main Menu ========================
== 1.current Ethernet information, Please input '1'            ===
== 2.current PDH & E1 information, Please input '2'            ===
== 3.Enter config menu, Please input '3'                         ===
== 5.Factory Reset!Please input '5'                                ===
```

3. Enter setting menu, please input "3"

```
[PCM /]:3

======================== Config Menu ==================
== 1.Set 1-4 Port bandwith,Please input '1'               ===
== 2.Set 1-4 Port Ethernet PHY Mode,Please input '2'===
== 3.Set 1-4 Port Flow Control,Please input '3'         ===
```

```
== 4.Set 1-4 Port 802.1P priority,Please input '4'    ===
== 5.Config 802.1Q-Switcher,Please input '5'              ===
== 6.Config Channel Separate,Please input '6'            ===
== 7.Maximum Packet Length(1916 or 1936), input '7' ===
== 8.PDH E1&fiber config,Please input '8'                  ===
== Exit, Please input '0'                                    ===
=========================================================
[PCM /Config]:
```

3.1 Ethernet bandwidth setting, input "1"

```
[PCM /Config]:1

============================ Bandwidth Config ========================
== Set Local bandwidth : setl m xyz ab (m: Port1-4, xyz,ab: Value    ===
== Set Remote bandwidth: setr m xyz ab (m: Port1-4, xyz,ab: Value    ===
== bandwidth =(x*100+y*10+z)M+32*(a*10+b)K    (m<5,xyz<100,ab<32)       ===
== Exit, Please input '0'                                                  ===
=====================================================================
[PCM /Bandwidth config]:
```

"setl" for setting local equipment,and "setr" for setting remote side.

x,y,z respectively denote hundred's place, decade and unit for a hundred number; a,b denote decade and unit for a ten number; m means port number, when m=0 denote optical connector, m=1/2/3/4 denote the 1st/2nd/3rd/4th ethernet port.

If you want to set the 3rd ethernet bandwidth is 55M+32*16K, then input setl 3 055 16

3.2 Ethernet 10/100M setting, input "2"

```
[PCM /Config]:2
====================== Port Status Config ======================
== Set Local command : setl x y                                    ===
== Set Remote command: setr x y                                     ===
== Note: x:Port numble(x=1-4) y:0 auto negotiation                ===
==                                    1 fored half duplex and 10BT ===
==                                    2 fored full duplex and 10BT ===
==                                    3 fored half duplex and 100BT===
==                                    4 fored full duplex and 100BT===
==                                                                  ===
== Exit, Please input '0'                                         ===
=================================================================
[PCM /Port Status Config]:
```

"setl" for setting local equipment ,and "setr" for setting remote side.

3.3 flow control setting, input"3"

```
[PDH /Config]:3
==================== Flow Control Config =====================
== Set Local command : setl x y                                  ===
== Set Remote command: setr x y                                   ===
== Note: x:Port numble(x=1-4) y=0/1;Flowcontrol 0:OFF,1:ON ===
== Exit, Please input '0'                                        ===
============================================================
[PCM    /Port Flow Config]:
```

“setl” for setting local equipment,and “setr” for setting remote side.

Mark: x means 1-4ch etherent port.

3.4 802.1P setting, input"4"

```
[PCM /Config]:4
==================== 802.1P Config =====================
== Enable local    802.1P : enl x,x=0:disable,x=1:enable===
== Enable Remote 802.1P : enr x,x=0:disable,x=1:enable===
== Local    802.1P user-priority command: setl x y          ===
== Remote 802.1P user-priority command: setr x y          ===
==                                                                  ===
== Note:x:port number(x=1-4) y:value(y=0-7)                  ===
== (using this value when receive-packets havn't tag) ===
==                                                                  ===
== Exit, Please input '0'                                        ===
============================================================
[PCM /802.1P Config]:
```

“enl” enable the local 802.1P priority
“enr” enable the local 802.1P priority
“setl” for setting local equipment,and “setr” for setting remote side.
Mark: x means 1-4ch etherent port.
y means priority grade,including:

- The highest grade is 7,applied in critical network traffic, such as routing choose information protocol(RIP) and open shortest path(OSPF) protocol's routing table update;
- Priority 6 and 5 mainly apply in delay-sensitive program, such as interactive video and audio;
- Priority 4 to 1 mainly apply in controlled-load program, such as streaming multimedia and business-critical traffic;
- Priority 0 is default value, and start automatically without setting other priority grade.

Attention: when ethernet packet is with tag, the device will dedicate priority grade automaticly by tag; otherwise, use setting x y to set priority grade by real situation.

3.5 802.1Q switch setting, input "5"

```
[PCM /Config]:5

====================== 802.1Q Config ================================

== Note:You can choice one of 3,4,5,and 3,4 used for back-to-back    ===

==                                                                    ===

== 1.Enable or disable 802.1Q,Please input '1'                       ===

==      Explanation: p:ports number(0<p<=5,5:optic port)              ===

==                          xxxx:VID(0=<x<4096); yy:VLAN number(0=<yy<16)      ===

== 2.PVID config: pvid xxxx p p p p p                                 ===

==      Disable tag insertion when xxxx = 0000                        ===

== 3.802.1Q membership config command: set/clr yy xxxx p p p p p     ===

==      e.g:vlan1:port1-3,vid=2; vlan2:port4-5,vid=3;                 ===

==            vlan 00 1 2 3; vlan 01 4 5                              ===

== 4.VLAN Tag set: tag z p p p p                                      ===

==      Explanation: z: 1:Egress Tagged; 0:Egress Untagged            ===

==      Note            : port5 can't set                             ===

== 5.Clear vid and memberships,Please input '5'                      ===

== 9.Loop up current switcher information,Please input '9'           ===

==                                                                    ===

== Exit,Please input '0'                                              ===

=======================================================================

[PCM /802.1Q Config]:
```

3.6 channel separating setting, input"6"

```
[PCM /Config]:6

==================== Channel Separate Config ==================

== Set Local    Channel Separate : setl x                          ===

== Set Remote Channel Separate : setr x                            ===

== Note: x:Channel Separate mode ( x=0-4 )                         ===

== Explanation of Channel Separate mode :                          ===
```

```
== Mode 0( x=0 ) : Disable Channel Separate                    ===

== Mode 1( x=1 ) : Special Channel Separated,and untagged     ===

== Mode 2( x=2 ) : Special Channel Separated,and tagged       ===

== Mode 3( x=3 ) : 802.1Q Channel Separated,and untagged      ===

== Note : 1-4 Ethernet (P1-P2-P3-P4) Separate Each Other      ===

==                                                                ===

== Exit, Please input '0'                                      ===

================================================================

[PDH /Channel separate config]:
```

"setl" for setting local equipment ,and "setr" for setting remote side.

Channel types instruction:

mode 0, when x=0, means cancel channel isolation;

mode 1, when x=1, means corresponding channel isolated, but the data has no label;

mode 2, when x=2, means corresponding channel isolated, but the data has label;

mode 3, when x=3,means the local device's ethernet channels all isolated to each other.

Attention: in ethernet transmission, the data packet is no need to add label. But in some special network, need to add label to enhance network transmission safety.

Channel isolation instruction:

each channel isolates to each other;

3.7 Ethernet packet switch between 1536 and 1916, input "7

```
[PDH /Config]:7

Accept packet sizes form 1916 bytes to 1536 bytes!
```

The device has two types of packet:1916 and 1538, each ethernet port should be setted unified.

3.8 PDH E1 and fiber setting

```
[PDH /Config]:8

================== PDH E1&Fiber Config ==================

== Command: setl x y    or setr x y                    ===

==setl:set local PDH,setr:set remote PDH               ===
```

```
==Note:x=1,Let the Local E1 Loop-back,y=0-16,31              ===

==          y=0 :all E1,y=1-16,Corresponding E1,y=31 None       ===

==Note:x=2,Let the Remote E1 Loop-back,y=0-16,31              ===

==          y=0 :all E1,y=1-16,Corresponding E1,y=31 None       ===

==Note:x=3,Mask E1 Alarm ,y=0-15                                  ===

==          y=0:Mask all E1,y=1-14 Mask (y+1)-16E1,y=15 None ===

==Note:x=4,Sound Alarm MUTE, y=0:OFF,y=1:ON                       ===

==Note:x=5,LED display local/remote,y=0:local,y=1:Remote===

==Note:x=6,Fiber Local Loop-BACK, y=0:OFF,y=1:ON              ===

==Note:x=7,No.1 Fiber ALS    ,      y=0:OFF,y=1:ON                ===

==Note:x=8,No.2 Fiber ALS    ,      y=0:OFF,y=1:ON                ===

==Note:x=9,Set Back-Light Auto-OFF Time,y=30-300 Second ===

==Note:x=10,Set LoopBack Time,    y=1-7                           ===

            y=1:1 minute; y=2:10 minutes;y=3:30 minutes;         ===

            y=4:1 hours;y=5 5 hours;y=6:24 hours;y=7 Forever ===

==Note:x=11,Equipment reset,                                      ===

==Note:x=12,Equipment Re-Boot,                                    ===

==Note:x=13,Restore to factory settings                          ===

============================================================

[PDH /PDH Config]:
```

“setl” for setting local equipment,and “setr” for setting remote side.

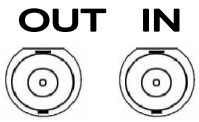
Mark: x means 1-12 command word,

Command x	**describe**	**y**	
1	Let the Local E1 Loop-back	0-16,31	y=0 :all E1,y=1-16,Corresponding E1,y=31 None
2	Let the Remote E1 Loop-back	0-16,31	y=0 :all E1,y=1-16,Corresponding E1,y=31 None
3	Mask E1 Alarm	0-15	y=0:Mask all E1,y=1-14 Mask (y+1)-16E1,y=15 None
4	Sound Alarm MUTE,	0-1	y=0:OFF,y=1:ON
5	LED display local/remote	0-1	y=0:local,y=1:Remote
6	Fiber Local Loop-BACK	0-1	y=0:OFF,y=1:ON
7	No.1 Fiber ALS	0-1	y=0:OFF,y=1:ON
8	No.2 Fiber ALS	0-1	y=0:OFF,y=1:ON
9	Set Back-Light Auto-OFF Time	0-300	y=30-300 Second

10	Set LoopBack Time	1-7	y=1:1 minute; y=2:10 minutes;y=3:30 minutes; y=4:1 hours;y=5 5 hours;y=6:24 hours;y=7 Forever
11	Equipment reset		
12	Equipment Re-Boot		
13	Restore to factory settings		

E1 Interface

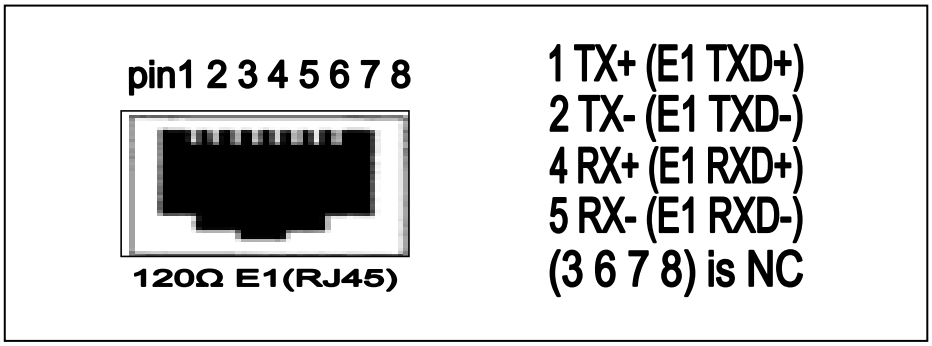
75Ω-BNC Socket



"IN" means 75Ω(BNC) unbalance E1 input
"OUT" means 75Ω(BNC)unbalance E1 output
IN: 1-4 is 1-4Channel E1 interface signals receive input
OUT: 1-4 is 1-4Channel E1 interface signals transmit output

120Ω-RJ45 Socket

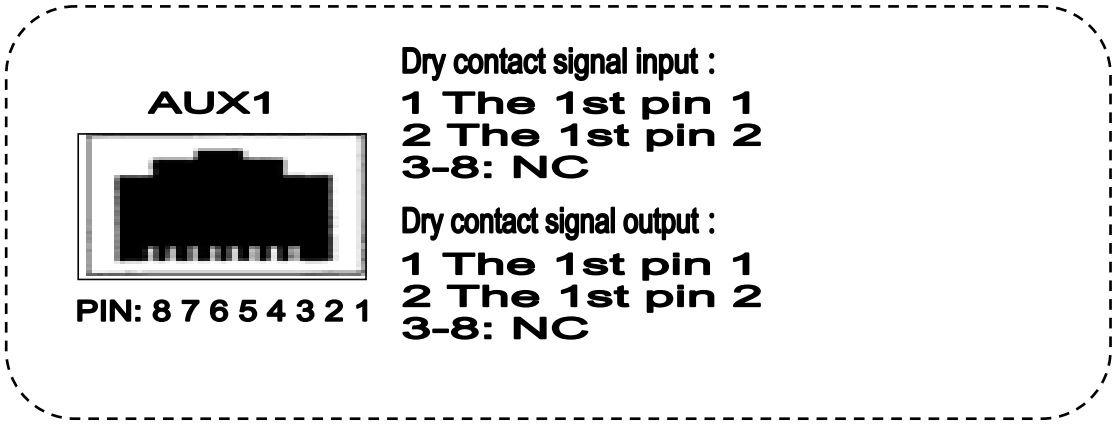
PIN defined as follows:



AUX Interface

Can extend all kinds of data (**according to your order**)

The RJ45 interface of AUX1 on the back panel is 1-4Channel dry contact. PIN1-2 is 1Channel. Defined as follows:



SNMP Interface

NMS interface is RS45 with two LED display:

LNK——green light，ON indicates it is connected with PC or HUB or SWITCH(of no effect on cascade card).

COM——bi-color light: red and green. When power on, green light always on; when device start, red light wink indicates SNMP card operates RS485 communication to communication card on chassis.

Default parameter

IP address：192.168.0.148

Subnet Mask：255.255.255.0

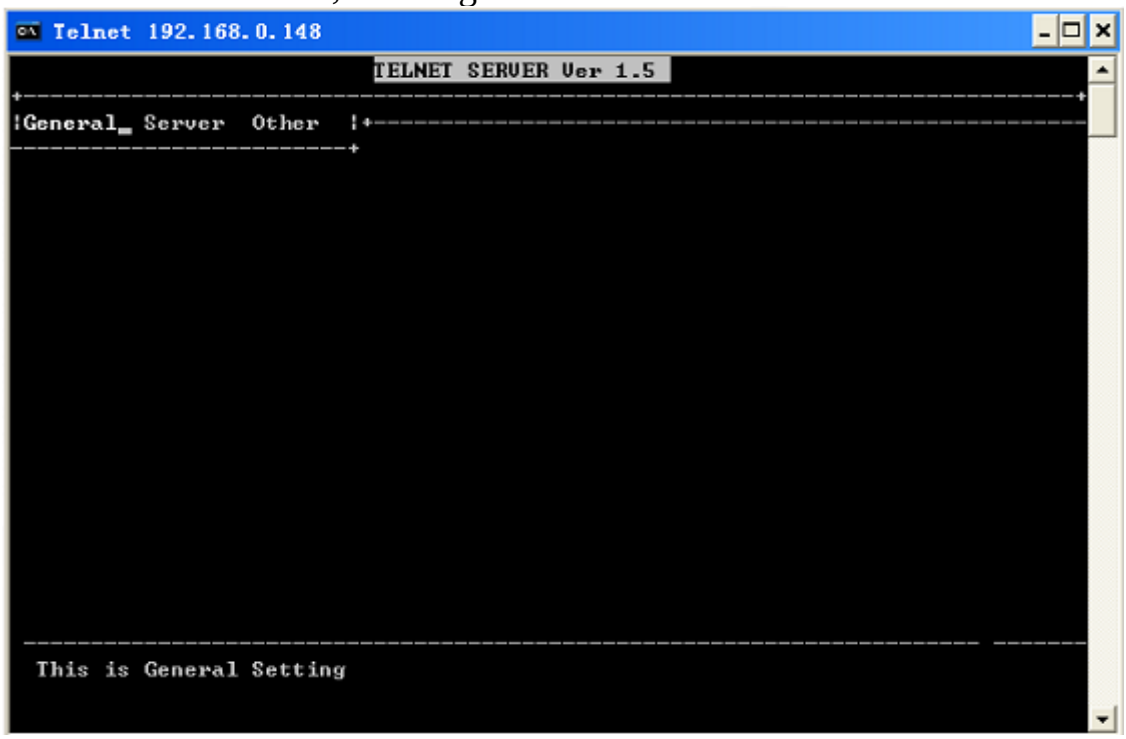
Gateway：192.168.0.1

WEB type login user's name: admin

WEB type password: admin

Telnet

Users can telnet from long-distance after collocating the IP address of the device. Connect the PC to LAN, run the command "telnet A.B.C.D(default is 192.168.0.148, input "c" or "e" when it come to the interface of Chinese/ English opt. input user name and password to for the system to check(default is admin, admin). Then user will enter into the main interface, showing as follows:



Telnet provide graph interface mode(like the above one) and command line mode(enter from the "command mode" in the "others" menu under the graph interface mode.)

User can set the IP address and other parameters of the device under the graph mode.

And the command line mode is the same with the Console controlling mode.

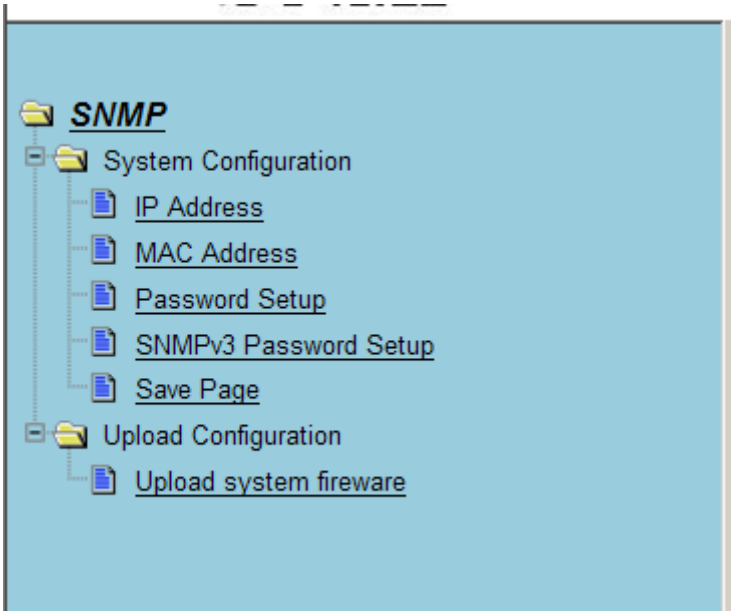
Http server

This system provides simple IE browse mode. Under this mode, user can realize configuration or update operation.

Input the IP address of the SNMP card at the browser (default is 192.168.0.148) to log on the IE server.

The interface of Logging on is as follows:

Select Chinese/ English at the welcome interface after logging on(default user name is admin, and password: admin). Then it entered into corresponding net page, showing as follows:



SNMP software

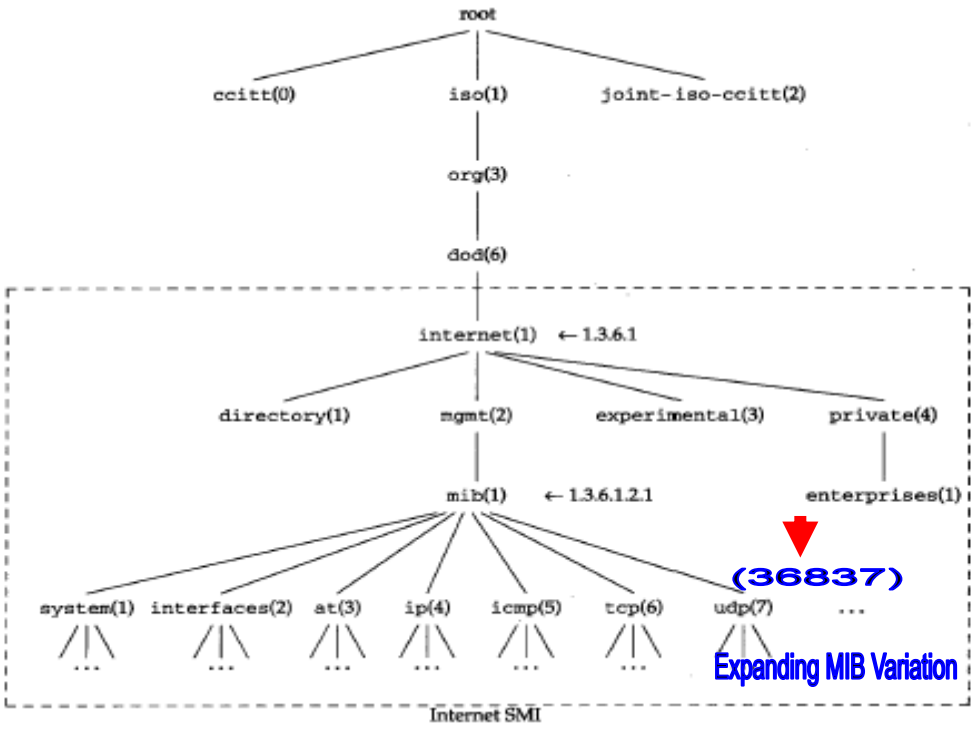
This system provides a set of SNMP Management Software *Snmp Manage* to

operate SNMP card and communication equipment. Please refer to the manual of *SNMP software.*

MIB Information

This system provides standard MIB variation.

MIB Tree Definition



In MIB tree, MIB variation behind 1.3.6.1.4.1.20353 is the one of communication equipment which is corresponding to this system.

This system can be read by general SNMP network management software.

SNMP card software upgrade

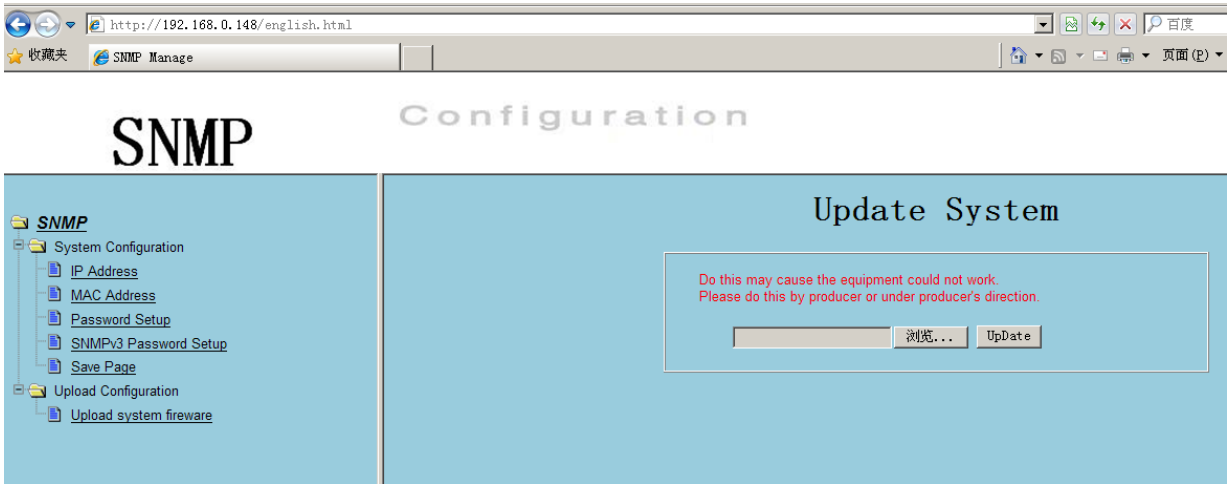
The SNMP card software is stored in the FLASH. Software upgrade means FLASH programming by SNMP card software upgrade function.

It needs software upgrade based on the 2 following situation. One is software upgraded, which means replace the old software in terminal server by new; the other is when the FLASH code destroyed, it could write new with the same version.

The update is realized by IE browser and the operation is easy.

Open "system firmware update" in the "system update" menu of the IE page,

showing as follows:



Click "browse", select update document, then click "update". Wait for some minute when update(updating time is according to the size of the document). When presenting "complete", reboot the device to make it into effect.

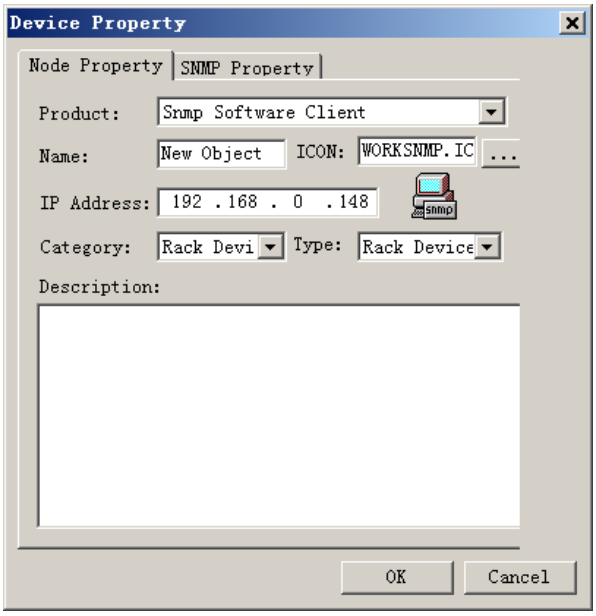
Note: 1. If the update failed, the device will be destroyed abidingly. Please do it by the factory or under the guidance of technician.

2. Do not browse through net page during updating. Furthermore, the system will not work normally during update.

0214 30*Pots Fiber MUX SNMP Operate

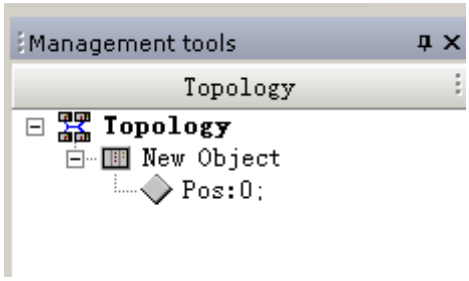
Node

- Select new node button  in Topology View management Toolbar, to get following dialog and enter the node information.



Category: includes rack device (type: rack device) and others (type: SDH device, MSAP device, TDMoIP device and PCM Fiber MUX.)

Since succeed to add rack, left Topology View management shows the homologous rack information. And can display/shield the position and quantity of business card in current running rack.



The following dialog in Topology View management shown if the device is online.

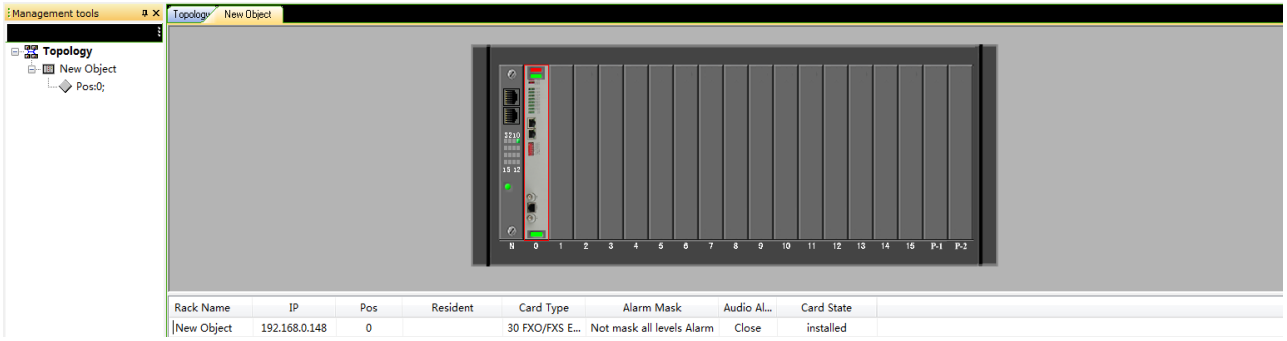
Click button  to select device .INF file to open, and install the card devices according to the clues. Otherwise, select the device management in Tool or the ico in Toolbar 1 to add .INF file of card devices.

Note:

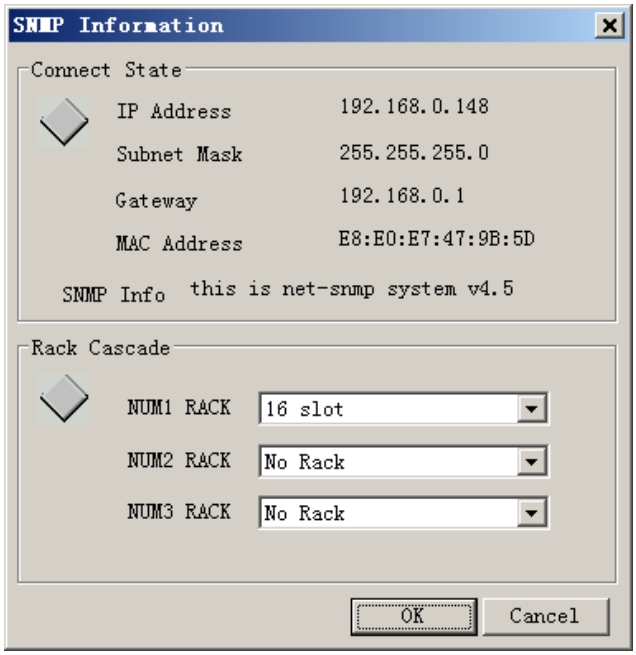
1. **Please enter the device information in detail for better management.**
2. **The IP address is that of NM card.**
3. **Make sure that .INF file of specific device is added. If you have not got it, please contact to device supplier.**

Device Current Running Info. Checking

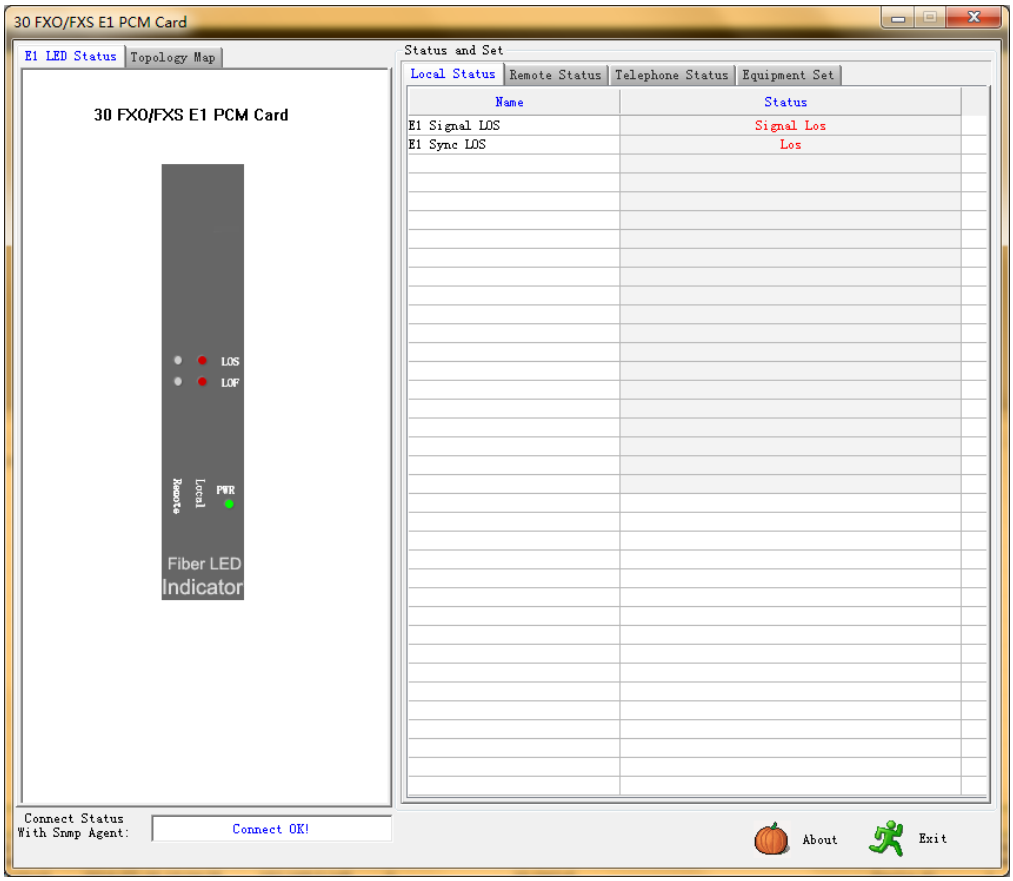
Double click the running device or the business card in Topology to show rack info.. As follows:

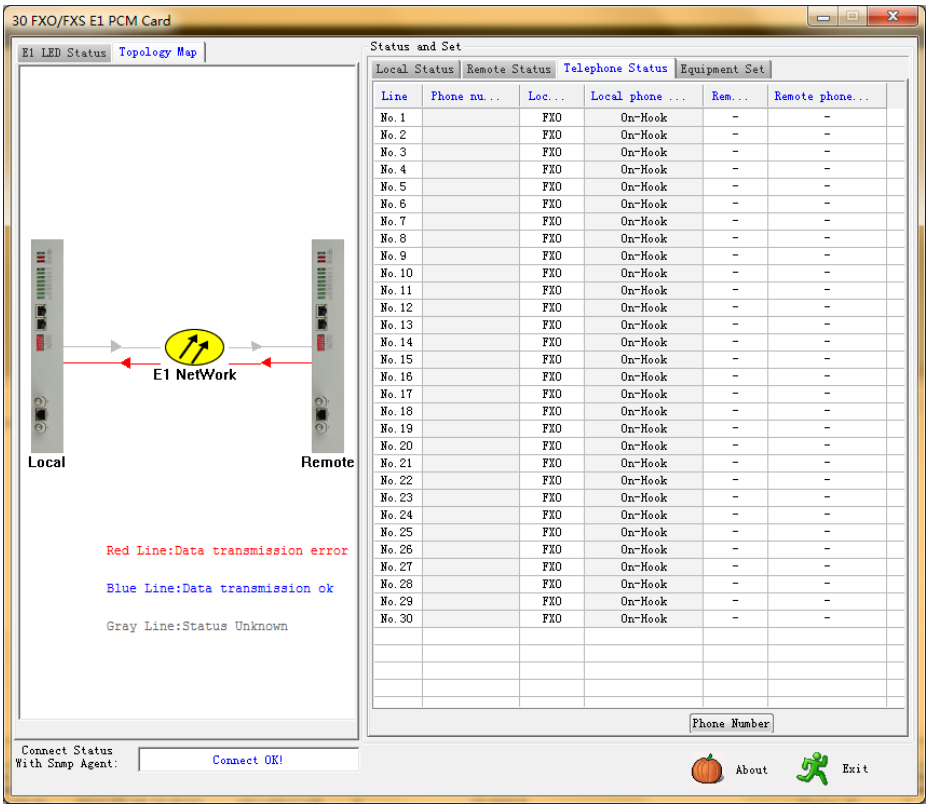


- Check rack info.: select NM card, select NM card info. in right-click menu, and get following dialog.



- Check business card info.: double click business card or select "State Set" in right-click menu to enter the dialog. If the homologous .INF file is fixed, the state dialog should show out. Following is one of 0202 30 Phone PCM MUX card:


30 FXO/FXS E1 PCM Card
E1 LED Status
Topology Map
30 FXO/FXS E1 PCM Card
LOS
LOF
Remote
Local
PWR
Fiber LED Indicator
Status and Set
Local Status
Remote Status
Telephone Status
Equipment Set
Name
Status
E1 Signal LOS
Signal Los
E1 Sync LOS
Los
Connect Status With Snmp Agent:
Connect OK!
About
Exit


30 FXO/FXS E1 PCM Card
E1 LED Status
Topology Map
E1 NetWork
Local
Remote
Red Line:Data transmission error
Blue Line:Data transmission ok
Gray Line:Status Unknown
Status and Set
Local Status
Remote Status
Telephone Status
Equipment Set
Line
Phone nu...
Loc...
Local phone ...
Rem...
Remote phone...
No.1 FXO On-Hook - -
No.2 FXO On-Hook - -
No.3 FXO On-Hook - -
No.4 FXO On-Hook - -
No.5 FXO On-Hook - -
No.6 FXO On-Hook - -
No.7 FXO On-Hook - -
No.8 FXO On-Hook - -
No.9 FXO On-Hook - -
No.10 FXO On-Hook - -
No.11 FXO On-Hook - -
No.12 FXO On-Hook - -
No.13 FXO On-Hook - -
No.14 FXO On-Hook - -
No.15 FXO On-Hook - -
No.16 FXO On-Hook - -
No.17 FXO On-Hook - -
No.18 FXO On-Hook - -
No.19 FXO On-Hook - -
No.20 FXO On-Hook - -
No.21 FXO On-Hook - -
No.22 FXO On-Hook - -
No.23 FXO On-Hook - -
No.24 FXO On-Hook - -
No.25 FXO On-Hook - -
No.26 FXO On-Hook - -
No.27 FXO On-Hook - -
No.28 FXO On-Hook - -
No.29 FXO On-Hook - -
No.30 FXO On-Hook - -
Phone Number
Connect Status With Snmp Agent:
Connect OK!
About
Exit

Power

Device supports AC220V, DC -48V and DC24V (Optional)

If you use AC220V power, you should connect device power input port with power socket by using random power line to provide AC220V power device.

If you use DC to supply power, DC-48V as an example, please connect as follows:

General Connection

"FG" polarity Connect ground

"-48V" polarity Connect power negative polarity

"+48V" polarity Connect power positive polarity

Note: Device has polarity protection measures. If positive and negative polarity is connected reversely, device will not damage, function well and ease of installation and maintenance. (The power contains DC48V, DC -48V, DC24V, DC -24V, and so on).

After-sales Service

The series of our Voice multiplexer products, our company promises three-years warranty. During product warranty time, our company provides free repair service, but if the following cases, we will charge the cost of materials.

1. Damage due to not complying with the manual.

2. Tear down the device without authorization, which leads to bad situations.

3. Lightning, fire and inevitable natural disasters.

4. Our products don't match with other company products because of bad design to cause damage.

Company Statement

1. As we are adopting new technology, if our product technical parameters are changed, we won't notice you.

2. The final interpretation right of this manual belongs to **my company.**