

**8×DVB-S/S2 to 4×QAM
Trans-modulator with Mux-Scrambler
>>User Manual**

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Introduction

Thanks for choosing our products.

This Manual introduces product performance, installation and operation in details.

Please read this manual before starting to use the product no matter it's the first time for you to use or you have known similar ones before.

Inspection

Make sure package is in perfect condition and all accessories are there as packing list or below shows:

- ✚ 8×DVB-S/S2 to 4×QAM
Trans-modulator with MUX-Scrambler 1 set

- ✚ Power line 1 piece

- ✚ ASI cable 2piece

- ✚ RF Cable 8 pieces

If you find items are not same as above, please kindly inform us immediately.

Read the User Manual

Please read it carefully and do as it asks.

SAFETY INSTRUCTION

- Read manual carefully before use
- Do not open the case and touch internal components for safety and warranty
- Pull out power plug in case of long time standby. Do not use faulty power plug or power supply to avoid fire or electric shock
- Do not touch power supply with wet hands
- Handle with care when pulling out power plug, no touch with the wire
- No flammable or liquid allowed into device
- Do not install device in hot area or strong sunshine or dusty place
- Shock-proof is a must
- Room with good ventilation is required
- Keep original packing material for future possible transportation

Overview



1.1 Function and Application

8×DVB-S2 to 4×QAM Trans-modulator support 8×DVB-S/S2 (QPSK/8PSK) transponders and 4×ASI input, then multiplex and scramble the input signal to output selected programs through 4×QAM RF channels. It provides a cost-effective and stable solution for TV operators to re-distribute programs via HFC network. It suits 1U rack and can be configured by front panel LCD and NMS (network management software). Its high-integrated and cost-effective design makes it widely used in varieties of digital broadcasting distribution systems.

1.2 Size (1U Rack)

Length: 482mm
Width: 410mm
Height: 44mm
Net Weight: 4.5 KG

Main Feature

- 8×DVB-S/S2 RF and 4×ASI input
- Input frequency: 950~2150 MHz
- Input symbol rate: 1~45 Msps
- 4×QAM RF output
- Output frequency: 47~870 MHz
- Output symbol rate: 5~9 Msps
- Support 4×CAS/SMS
- LCD/Keyboard control by front panel and network management by Ethernet

Technical Specification

Input	RF	8×tuner (DVB-S/S2)
	ASI	4×ASI (BNC)
	Frequency Range	950~2150 MHz
	Symbol Rate	1~45 Msps
Output	Interface	F-head
	Impedance	75Ω
	Frequency Range	47~870Mhz, 1Khz step
	Constellation	16, 32, 64, 128, 256 QAM
	Standard	EN300429/ITU-T J.83A
	Symbol Rate	5.0~9.0Msps, 1ksps step
	Error-Correcting Codes	RS code188/204
	MER	≥40dB
	BER	0
	Output Level	85~105dBV
	Level Attenuation Range	-20dBm~0dBm (per carrier), 0.5dB step
	Scrambler	support 4×CAS/SMS; head-end implementation of DVB simulcrypt (ETSI TS 103 197 V1.4.1)
Control		LCD/Keyboard, network management Ethernet software upgrade
General	Size	482mm×410mm×44mm
Features	Temperature Range	0~45°C (Operation); -20~80°C (Storage)
	Power	100-240VAC, 50Hz, 25W

1.3 Data Port

1.3.1 DVB-S/S2 RF Input

Connector: F-head

Impedance: 75Ω

1.3.2 ASI Input

Input: ASI, DVB standard

Connector: BNC

Impedance: 75Ω

Input BitRate: max 214Mbps (per channel)

TS package format: 188/204bytes (automatic identification)

TS input mode: even/package burst/irregularity

1.3.3 DVB-C RF Output

Connector: F-head

Impedance: 75Ω

1.3.4 RF Test Out

Connector: F-head

Impedance: 75Ω

Output level: $65\text{dBuV} \sim 85\text{dBuV}$ (adjustable)

1.4 Signal Encoding

Modulation Mode: 16QAM, 32QAM, 64QAM, 128QAM, 256QAM

Channel Coding: DVB Standard, RS Coding

MER: $\geq 40\text{dB}$

SNR (Out of Band): $\geq 50\text{dB}$

1.5 Network Interface

Ethernet Port: IEEE802.3 Ethernet, RJ45

Software Protocol: IP/UDP

1.6 Radiation and Safety Requirements

Conforms to GB13837-92 & GB8898-88

System Composition and Operating Principle

1.7 System Composition

Structure Diagram (1U Rack)

Front Panel



1	LCD Display
2	ECMG, EMMG Indicator
3	Indicator
4	Keyboard
5	Enter
6	Exit

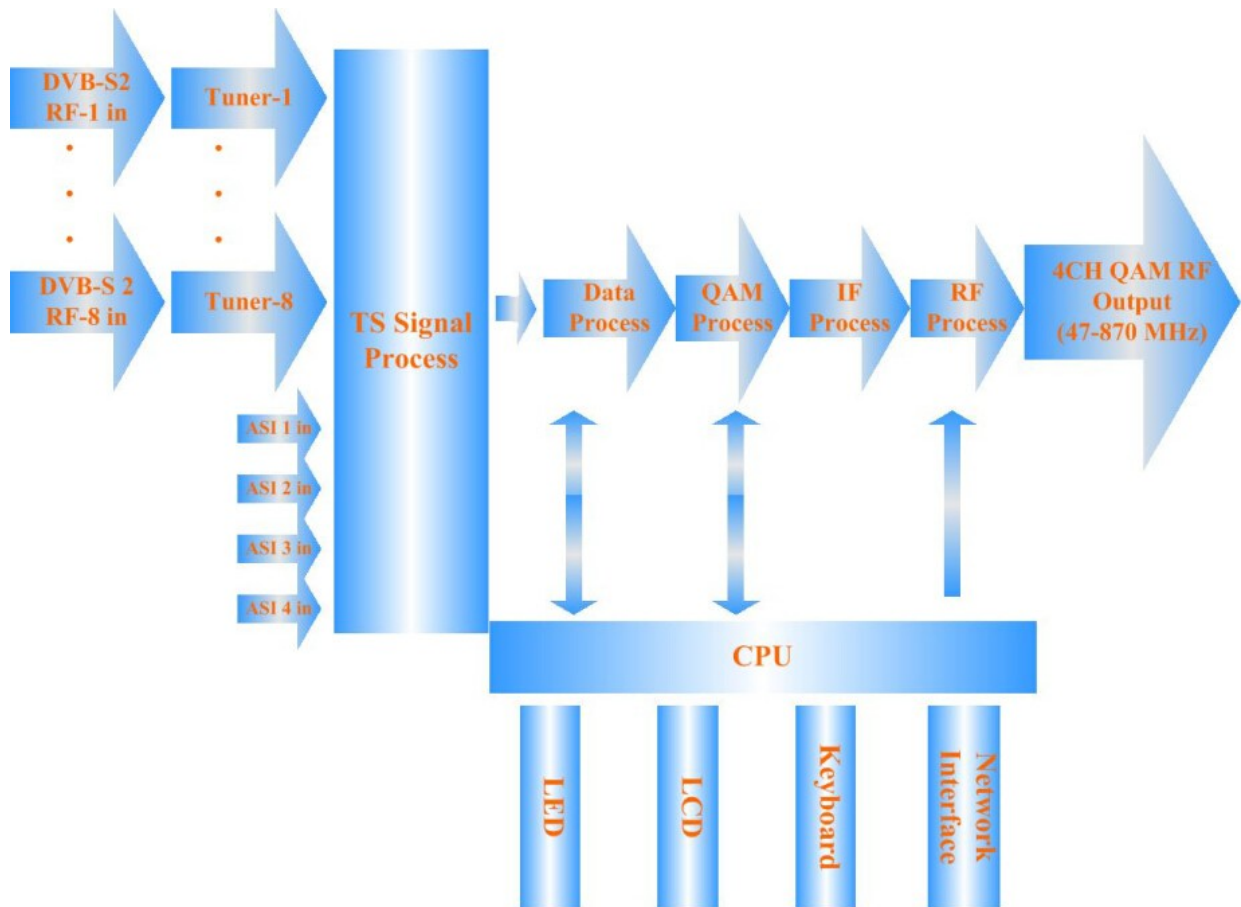
Rear Panel



1	RF Test Output
2	RF Output
3	RF 1-8 Input
4	ASI 1-4 Input
5	Ethernet Port
6	Power Switch

1

8 Operating Principle



Installation Guide

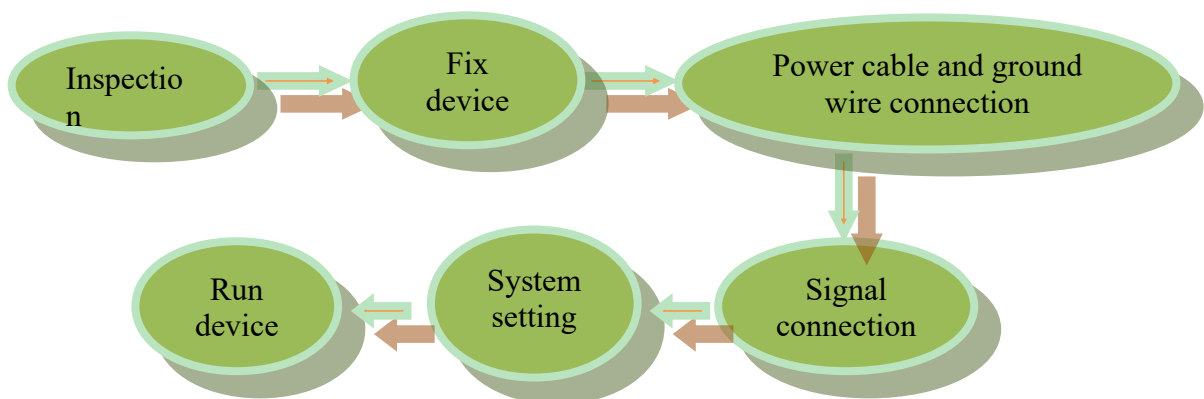
1.9 Installation Preparation

Please install as bellow steps:

- Check possible lose or damage of the device during transportation
- Prepare a suitable environment for installation
- Install the device
- Signal cable connection

Each tiny step will be mentioned in this chapter. Please refer to rear panel for specific location.

1.10 Installation Procedure



1.11 Environment Requirement

Project	Requirement
Room Space	When installing multi-row of racks, please make the distance 1.2~1.5M between front door and back door, and the distance 0.8M between rack and wall.
Room Floor	Non-conducting, dust-free Ground anti-static material volume resistivity: $1 \times 10^7 - 1 \times 10^{10} \Omega$, ground current-limiting resistance: $1M\Omega$, floor bearing weight: $>450Kg/m^2$

Temperature	Long-term operation: 5~40°C, short-term operation: 0~45°C, air-conditioner is a good option.
Relative Humidity	Long-term operation: 20%~80%, short-term operation: 10%-90%
Ambient Pressure	86-105KPa
Doors and Windows	Seal by dust-prevention rubber strip, double glass is a good option for window and seal it tightly.
Fire Requirement	Automatic fire alarm system and hand-held fixed fire extinguish system are required.
Power Requirement	3 stand alone power supply system for equipment, air-conditioner, and lighting. Alternating current power supply for equipment (220V, 50Hz, 24.2W). Please check before running the device.

1.12 Grounding Requirement

- Good ground wire design is the base of the whole system, and is essential to lightning protection and anti-interference. The system must follow above principles.
- Keep good electrical contact between both ends of outer conductor and shielding layer and the appearance of metal case of the connected device.
- Make sure that connections of both ends of the ground wire are with good electrical contact and prepare for corrosion prevention treatment.
- Do not use other device for ground wire electrical connection.
- The sectional area of ground wire from rack connecting to anti-thunder unit must be greater than or equal to 25mm²

1.12.1 Rack Grounding

Ground terminals of racks in one room should be separately connected to protective are copper bar provided by side board. And ground wire should be as far as possible short. If the wire is too long when installing, please cut off to avoid ground wire coiling. The sectional area of guide line of ground terminal row must be greater than or equal to 25mm².

1.12.2 Equipment Grounding

When grounding, use guide line to connect protective area binding post to the protective ground wire row of assembly rack.

1.13 Cable Connection

1.13.1 Power Cable Connection

- Power jack is on the left of rear panel, power switch is at the left side of power jack, and ground connecting screw is at the lower left side of power jack.
- Connecting power cable: put one end of the cable into the AC power jack and the other (power plug) to the AC power supply.
- Connecting ground wire: when connecting alone to protective area in the room, you can use independent ground or common ground with other equipments (like transmission equipment) with a resistance less than 1.

Note:

Before connecting power cable, please turn power switch to “O” position and it’s required to ground with power supply system.

1.13.2 Signal Line Connection

Before operating, user should connect all devices requiring cables.

Front Panel Operation Guide

1.14 Keyboard

Left & right keys: moving cursor

Up & down keys: menu scanning and modifies parameter

Enter: go in submenu and parameter confirm

Exit: return or cancel modification

Note:

When keyboard is locked, press any key to make LCD active, and then press “enter”, and then “exit” to unlock the keyboard to enter the main menu.

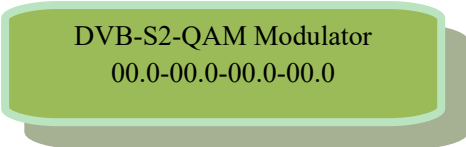
After 60 seconds without any operation, the keyboard automatically locks.

When keyboard it locked, press any key to make LCD active, and then press up key to check device version number, down key to check IP address, right key to check MAC address.

For numerical value modification, press “enter” key to active the cursor, then move cursor to the specific location, press “up or down” key to change the value, press enter key again to confirm parameter modification.

1.15 Menu

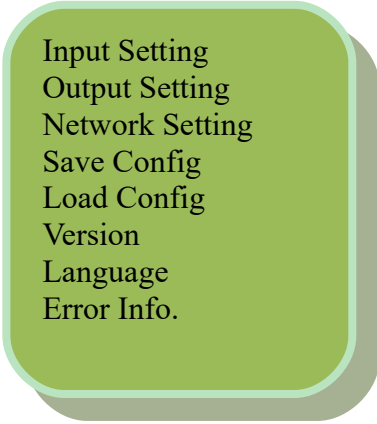
1.15.1 Lock Status Display



DVB-S2-QAM Modulator
00.0-00.0-00.0-00.0

1.15.2 Press “EXIT” to Enter Menu

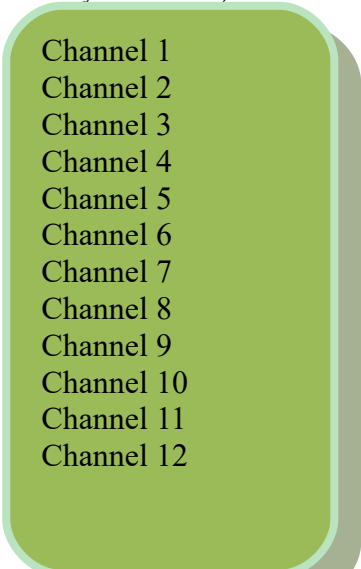
After initialization, the menu shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



- Input Setting
- Output Setting
- Network Setting
- Save Config
- Load Config
- Version
- Language
- Error Info.

1.15.3 Input Setting

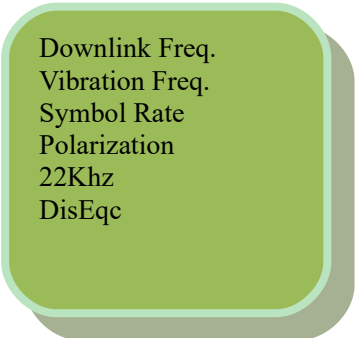
Move the cursor to “Input Setting” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



- Channel 1
- Channel 2
- Channel 3
- Channel 4
- Channel 5
- Channel 6
- Channel 7
- Channel 8
- Channel 9
- Channel 10
- Channel 11
- Channel 12

1.15.3.1 Channel 1

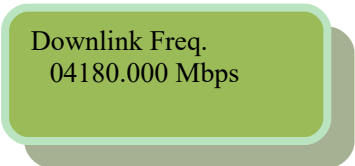
Move the cursor to “Channel 1” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



Downlink Freq.
Vibration Freq.
Symbol Rate
Polarization
22Khz
DisEqc

1.15.3.1.1 Downlink Freq.

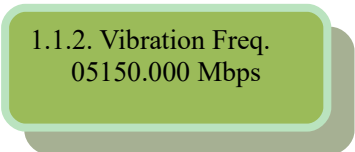
Move the cursor to “downlink freq.” and enter into it. Then it shows as below:



Downlink Freq.
04180.000 Mbps

1.15.3.1.2 Vibration Freq.

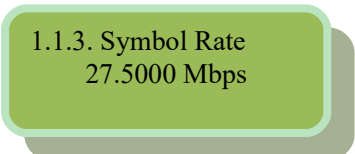
Move the cursor to “vibration freq.” and enter into it. Then it shows as below:



1.1.2. Vibration Freq.
05150.000 Mbps

1.15.3.1.3 Symbol Rate

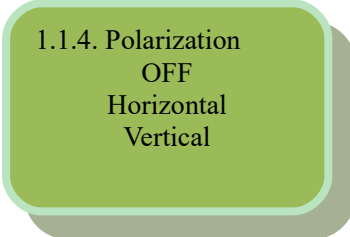
Move the cursor to “symbol rate” and enter into it. Then it shows as below:



1.1.3. Symbol Rate
27.5000 Mbps

1.15.3.1.4 Polarization

Move the cursor to “polarization” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



1.1.4. Polarization
OFF
Horizontal
Vertical

1.15.3.1.5 22KHz


Move the cursor to “22KHz” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



1.1.5. 22KHz
OFF
ON

1.15.3.1.6 DisEqc

Move the cursor to “DisEqc” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



1.1.6. DisEqc
OFF
LNB-A
LNB-B
LNB-C
LNB-D

- Channels 2-8 are same as channel 1.

1.15.3.2 Channel 9

Move the cursor to “channel 9” and enter into it. Then it shows as below:

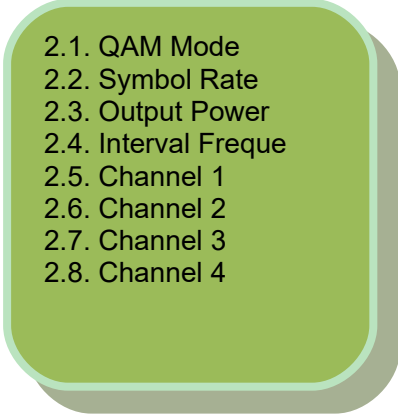


Program Total 00
List Empty

- Channels 9-12 are same as channel 1

1.15.4 Output Setting

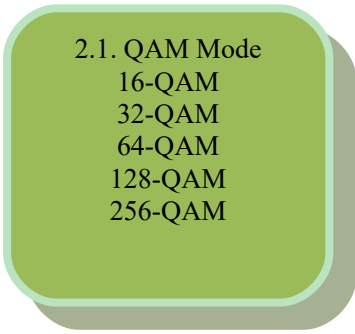
Move the cursor to “Output Setting” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):

A screenshot of a menu titled "Output Setting" displayed in a green rounded rectangle. The menu items are listed as follows:

- 2.1. QAM Mode
- 2.2. Symbol Rate
- 2.3. Output Power
- 2.4. Interval Freque
- 2.5. Channel 1
- 2.6. Channel 2
- 2.7. Channel 3
- 2.8. Channel 4

1.15.4.1 QAM Mode

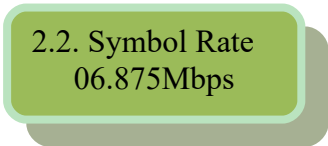
Move the cursor to “QAM Mode” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):

A screenshot of a menu titled "QAM Mode" displayed in a green rounded rectangle. The menu items are listed as follows:

- 2.1. QAM Mode
- 16-QAM
- 32-QAM
- 64-QAM
- 128-QAM
- 256-QAM

1.15.4.2 Symbol Rate

Move the cursor to “Symbol Rate” and enter into it. Then it shows as below:

A screenshot of a menu titled "Symbol Rate" displayed in a green rounded rectangle. The menu items are listed as follows:

- 2.2. Symbol Rate
- 06.875Mbps

1.15.4.3 Output Power

Move the cursor to “Output Power” and enter into it. Then it shows as below:



2.3. Output Power
105 db

1.15.4.4 Interval Frequency

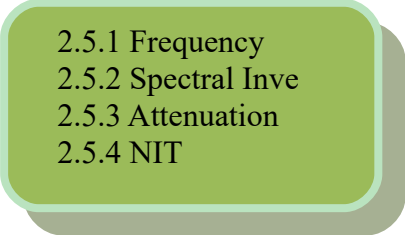
Move the cursor to “Interval Freque” and enter into it. Then it shows as below:



2.4. Interval Freque
8

1.15.4.5 Channel 1

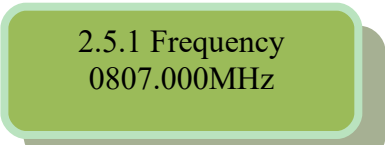
Move the cursor to “Channel 1” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



2.5.1 Frequency
2.5.2 Spectral Inve
2.5.3 Attenuation
2.5.4 NIT

1.15.4.5.1 Frequency

Move the cursor to “Frequency” and enter into it. Then it shows as below:



2.5.1 Frequency
0807.000MHz

1.15.4.5.2 Spectral Inve

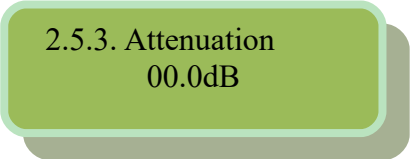
Move the cursor to “Spectral Inve” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



2.5.2 Spectral Inve
ON
OFF

1.15.4.5.3 Attenuation

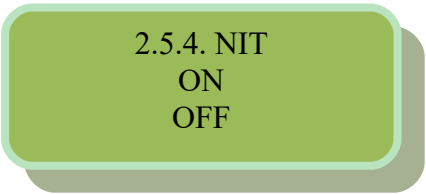
Move the cursor to “Attenuation” and enter into it. Then it shows as below:



2.5.3. Attenuation
00.0dB

1.15.4.5.4 NIT


Move the cursor to “NIT” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



2.5.4. NIT
ON
OFF

1.15.4.6 Channel 2

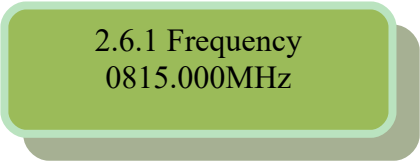
Move the cursor to “Channel 2” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



2.6.1 Frequency
2.6.2 Spectral Inve
2.6.3 Attenuation
2.6.4 NIT

1.15.4.6.1 Frequency

Move the cursor to “Frequency” and enter into it. Then it shows as below:



2.6.1 Frequency
0815.000MHz

1.15.4.6.2 Spectral Inve

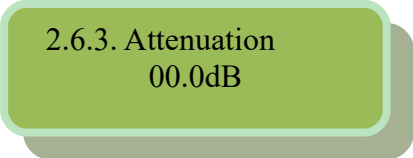
Move the cursor to “Spectral Inve” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



2.6.2 Spectral Inve
ON
OFF

1.15.4.6.3 Attenuation

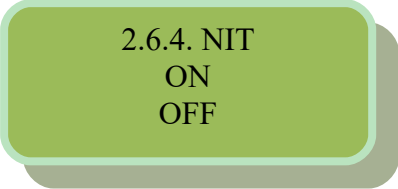
Move the cursor to “Attenuation” and enter into it. Then it shows as below:



2.6.3. Attenuation
00.0dB

1.15.4.6.4 NIT


Move the cursor to “NIT” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



2.6.4. NIT
ON
OFF

1.15.4.7 Channel 3

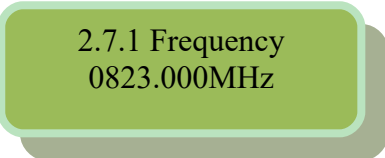
Move the cursor to “Channel 3” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



2.7.1 Frequency
2.7.2 Spectral Inve
2.7.3 Attenuation
2.7.4 NIT

1.15.4.7.1 Frequency

Move the cursor to “Frequency” and enter into it. Then it shows as below:



2.7.1 Frequency
0823.000MHz

1.15.4.7.2 Spectral Inve

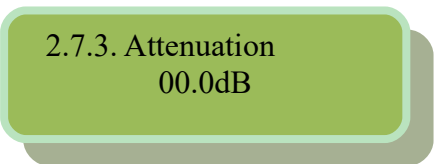
Move the cursor to “Spectral Inve” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



2.7.2 Spectral Inve
ON
OFF

1.15.4.7.3 Attenuation]

Move the cursor to “Attenuation” and enter into it. Then it shows as below:



2.7.3. Attenuation
00.0dB

1.15.4.7.4 NIT

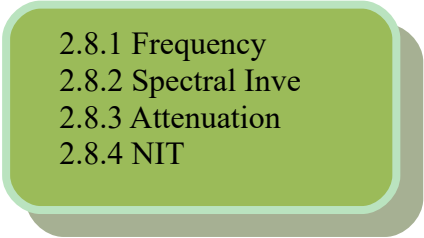
Move the cursor to “NIT” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



2.7.4. NIT
ON
OFF

1.15.4.8 Channel 4

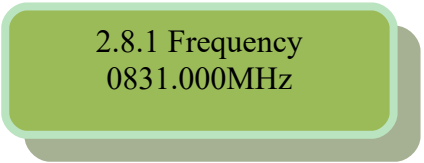
Move the cursor to “Channel 4” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



2.8.1 Frequency
2.8.2 Spectral Inve
2.8.3 Attenuation
2.8.4 NIT

1.15.4.8.1 Frequency

Move the cursor to “Frequency” and enter into it. Then it shows as below:



2.8.1 Frequency
0831.000MHz

1.15.4.8.2 Spectral Inve

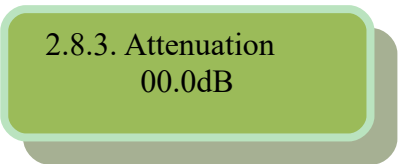
Move the cursor to “Spectral Inve” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



2.8.2 Spectral Inve
ON
OFF

1.15.4.8.3 Attenuation

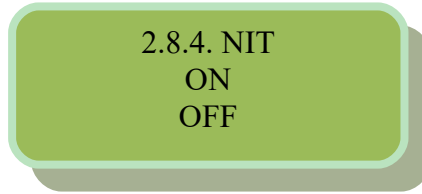
Move the cursor to “Attenuation” and enter into it. Then it shows as below:



2.8.3. Attenuation
00.0dB

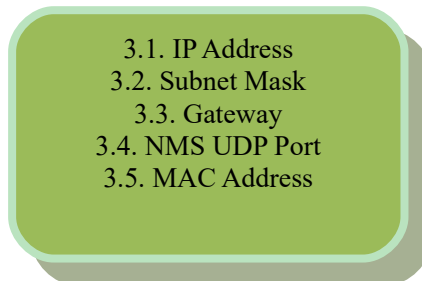
1.15.4.8.4 NIT

Move the cursor to “NIT” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



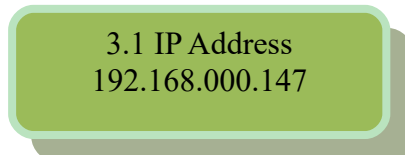
1.15.5 Network Setting

Move the cursor to “network setting” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):



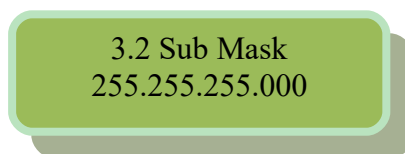
1.15.5.1 IP Address

Move the cursor to “IP address” and enter into it. Then it shows as below:



1.15.5.2 Subnet Mask

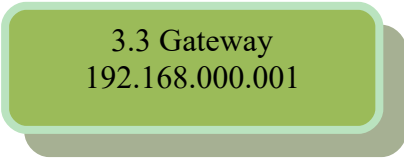
Move the cursor to “subnet mask” and enter into it. Then it shows as below:



1.15.5.3 Gateway

Move the cursor to “gateway” and enter into it. Then it shows as below:

1.15.5.4 NMS UDP Port



3.3 Gateway
192.168.000.001

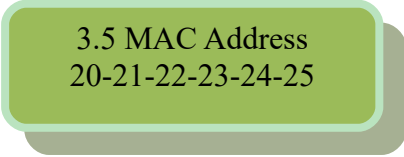
Move the cursor to “NMS UDP port” and enter into it. Then it shows as below:



3.4 NMS UDP Port
2009

1.15.5.5 MAC Address

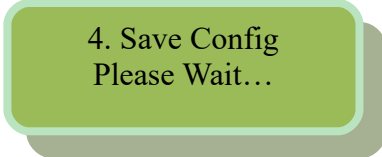
Move the cursor to “MAC address” and enter into it. Then it shows as below:



3.5 MAC Address
20-21-22-23-24-25

1.15.6 Save Config

Move the cursor to “save config” and enter into it. Then it shows as below:



4. Save Config
Please Wait...

Power Failure Saving:

When power failure, it can automatically save last status and start again when power on.

1.15.7 Load Config

Move the cursor to “load config” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):

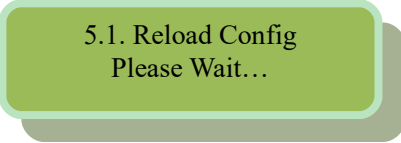
1.15.7.1 Reload Config



```
5.1. Reload Config
5.2. Restore Config
```

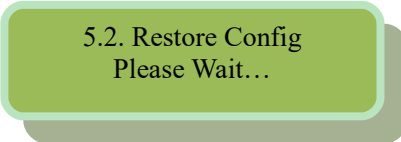
Move the cursor to “reload config” and enter into it. Then it shows as below:

1.15.7.2 Restore Config



```
5.1. Reload Config
Please Wait...
```

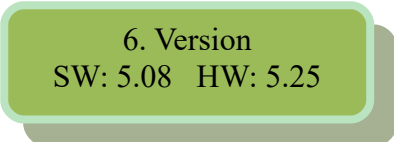
Move the cursor to “restore config” and enter into it. Then it shows as below:



```
5.2. Restore Config
Please Wait...
```

1.15.8 Version

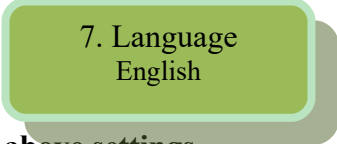
Move the cursor to “version” and enter into it. Then it shows as below:



```
6. Version
SW: 5.08 HW: 5.25
```

1.15.9 Language

Move the cursor to “language” and enter into it. Then it shows as below (Press ‘up or down’ key to choose menu, then press the ‘enter’ key to confirm):

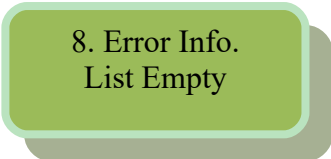


7. Language
English

The system works normally after all above settings.

1.15.10 Error Info

Move the cursor to “error info.” and enter into it. It shows as below:



8. Error Info.
List Empty

1.16 Error Info and Shooting

1.16.1 Indicator Status

There are 2 LED indicators on the panel:

1. “POWER” is power indicator. When switch on, it’s green, which indicates device works well.
2. “ERROR” indicates error status when it’s red.
3. “LOCK1, 2, 3, 4” means each input channels status

1.16.2 Error Shooting

1.16.2.1 “POWER” is off


Please check power supply, power cable and power plug.

1.16.2.2 “ALARM” Indicator Turns Red

Device works abnormally. Please check error info and process accordingly.

2 NMS Operation Guide

Network Management System (NMS) can remotely set config and monitor the device. It can be used only after being authorized.

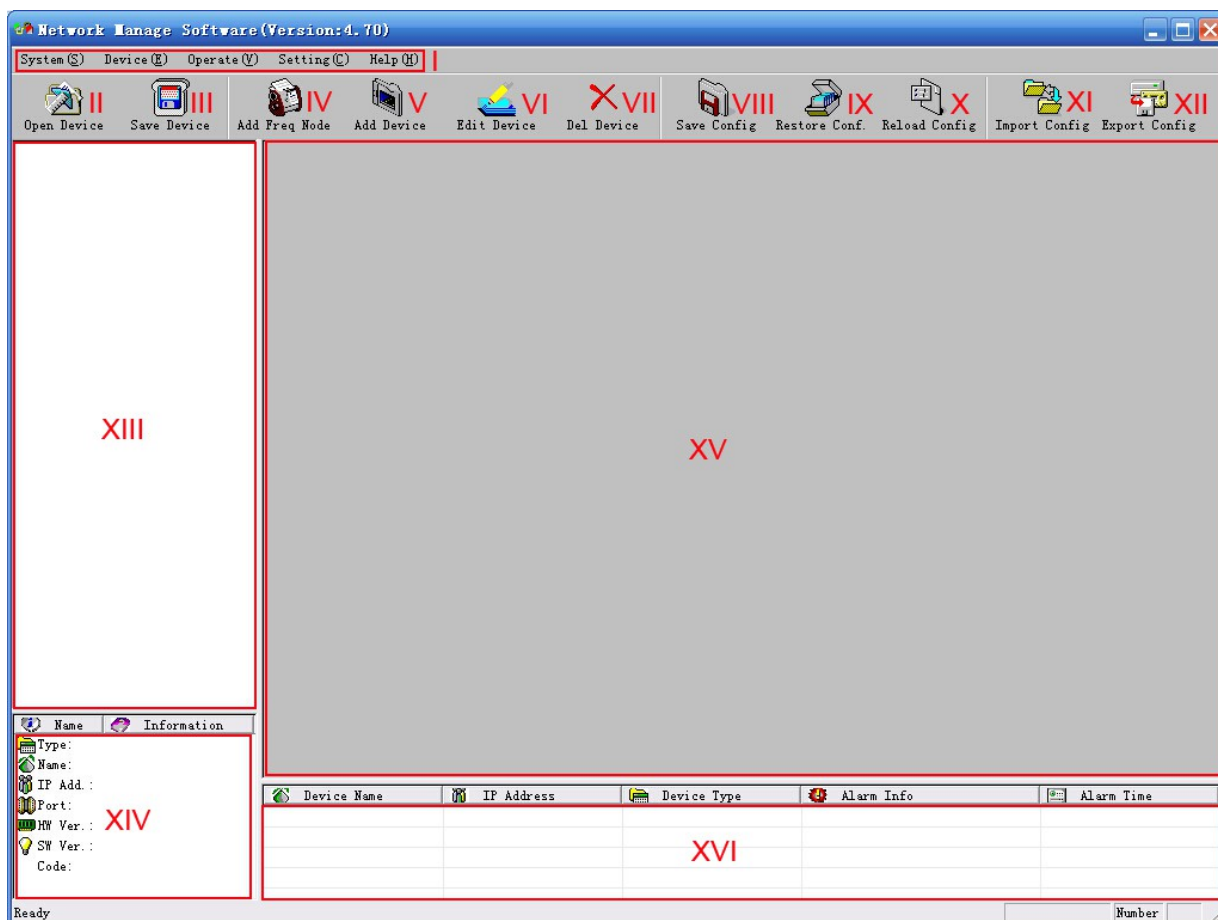
Except setting config by front panel, you can also use NMS  `DvbManager_CN.exe` on a PC to set and monitor device. Most of all head-end equipments (satellite receiver, encoder, multiplexer, scrambler, modulator, and adapter, etc.) can be set by NMS which is with UDP protocol and supports windows operation system.

2.1 NMS Login



NMS Login Interface

Default user name and password are “admin”. You can change the user name and password by “Setting”->”User Setting” and then login again. If it’s the first time to use it, without any device info, the menu shows as below:



Current NMS is without any device, user can add per his device.

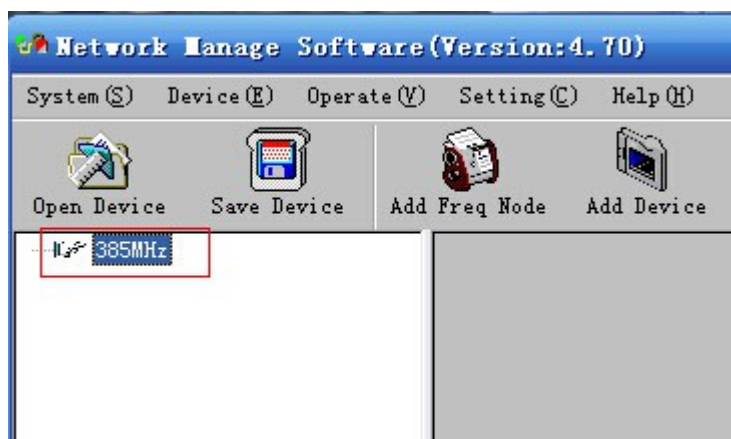
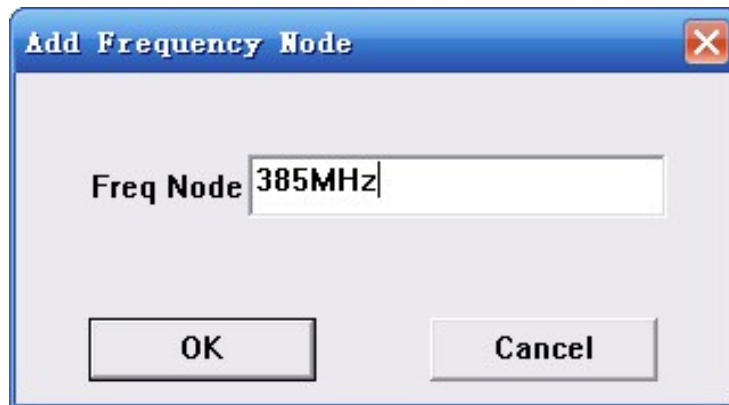
- | | |
|-------------------|-----------------------------|
| I: Menu Bar | IX: Restore Config |
| II: Open Device | X: Reload Config |
| III: Save Device | XI: Import Config |
| IV: Add Freq Node | XII: Export Config |
| V: Add Device | XIII: Device List |
| VI: Edit Device | XIV: Device Connection Info |
| VII: Del Device | XV: Device Config Operation |
| VIII: Save Config | XVI: Alarm List |

Below chapters will introduce above functions separately.

“Open Device” & “Save Device”: open saved config and save current config. If the config and the NMS are in the same file, they can automatically run when opening or closing the network management software.

2.2 Add Frequency

“Add Frequency”: all devices can be divided and managed by frequency. Click “Add Freq Node”, then a dialog for adding frequency shows up. Input a frequency, like 385MHZ”, and then click “OK” to confirm:



2.3 Add Device

Add device under the frequency. Choose frequency and then click “Add Device”, then below dialog shows up:

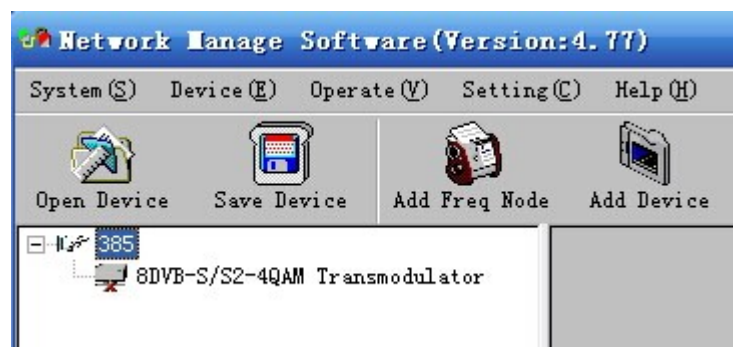


ADD “4in1 QAM Mod. (6/8*DVBS/S2+1/4/6*ASI)”

Choose device type “4in1 QAM Mod. (6/8*DVBS/S2+1/4/6*ASI)”, set device name (you can name as you like), and set IP address and Port of the device. You can check IP address by clicking down key on the panel or you can enter into “Network Setting” in the menu to check it. Default IP address and Port for 4in1 QAM Mod. (6/8*DVBS/S2+1/4/6*ASI) are 192.168.000.147 and 2009.

2.4 Edit Device

Click the device you need to edit and then you can edit any you like. If the device is not connected, then it shows as below:



Then check by below steps:

1. Check if the connection info is correct:

Name	Information
Type:	4in1 QAM Mod. (6/8*DVB...
Name:	8DVB-S/S2-4QAM Transm...
IP Add.:	192.168.0.147
Port:	2009
HW Ver.:	5.25
SW Ver.:	5.08
Code:	0

Ready

If config is wrong, please choose the device and then click “Edit Device”, then below dialog shows up. Modify it and then click “OK” to save.

Edit Device

Device Type: Device Name: Port:

2. Check if there is IP conflict. Turn off the device, and input “cmd.exe” at command column on your PC:

After entering into it:

```

C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [version 5.0.2600.5512]
(C) 1985-2001 Microsoft Corp.
C:\Documents and Settings\Administrator>

```

Input “arp -d” to clear old “arp” information:

```


C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [version 5.0.2600.5512]
(C) 1985-2001 Microsoft Corp.
C:\Documents and Settings\Administrator>arp -d

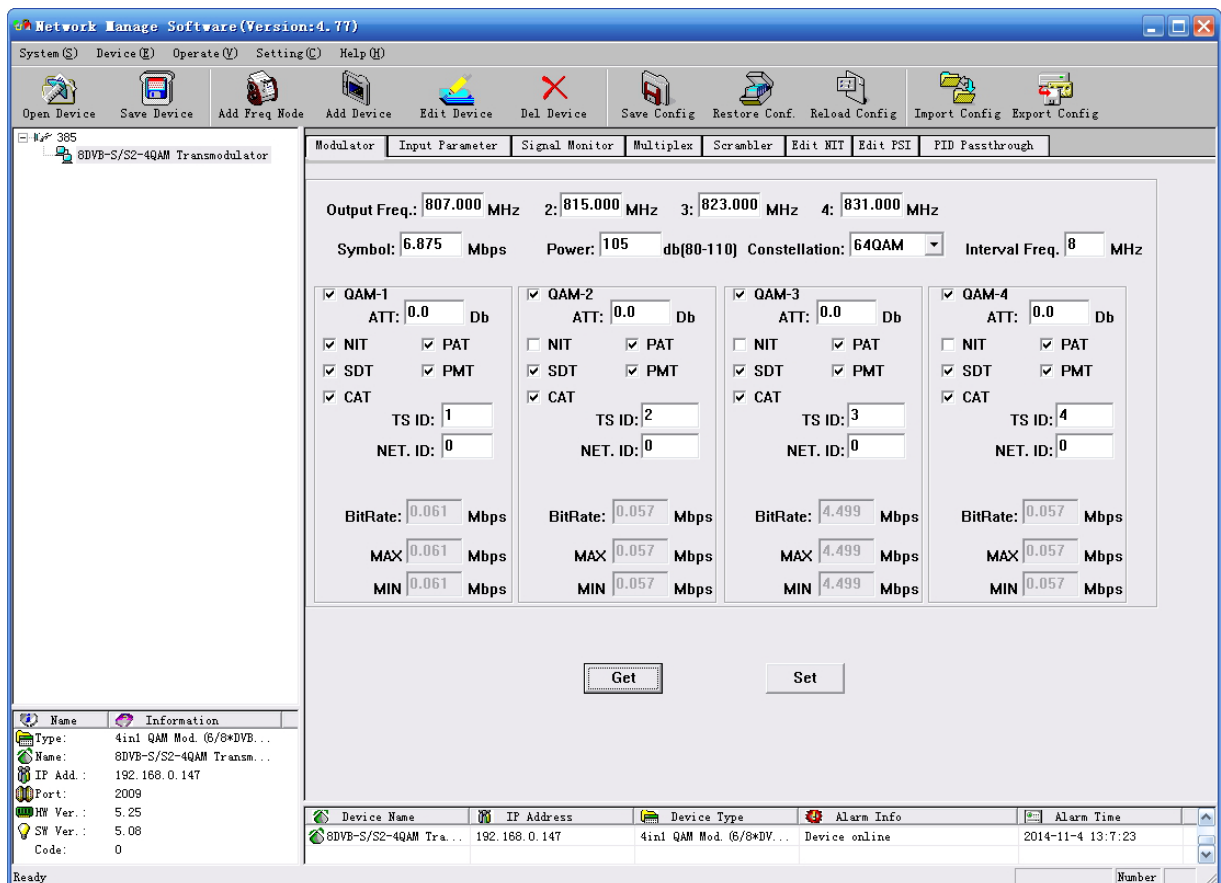
```

Input "PING":



Here the ping is 192.168.0.20 (you can put your device IP address when you do it). Here we found 192.168.0.20 passed, which means there is already a device with 192.168.0.20. Then we can find the device out and modify the IP address of the device or your device.

After shooting the problem, the icon turns 

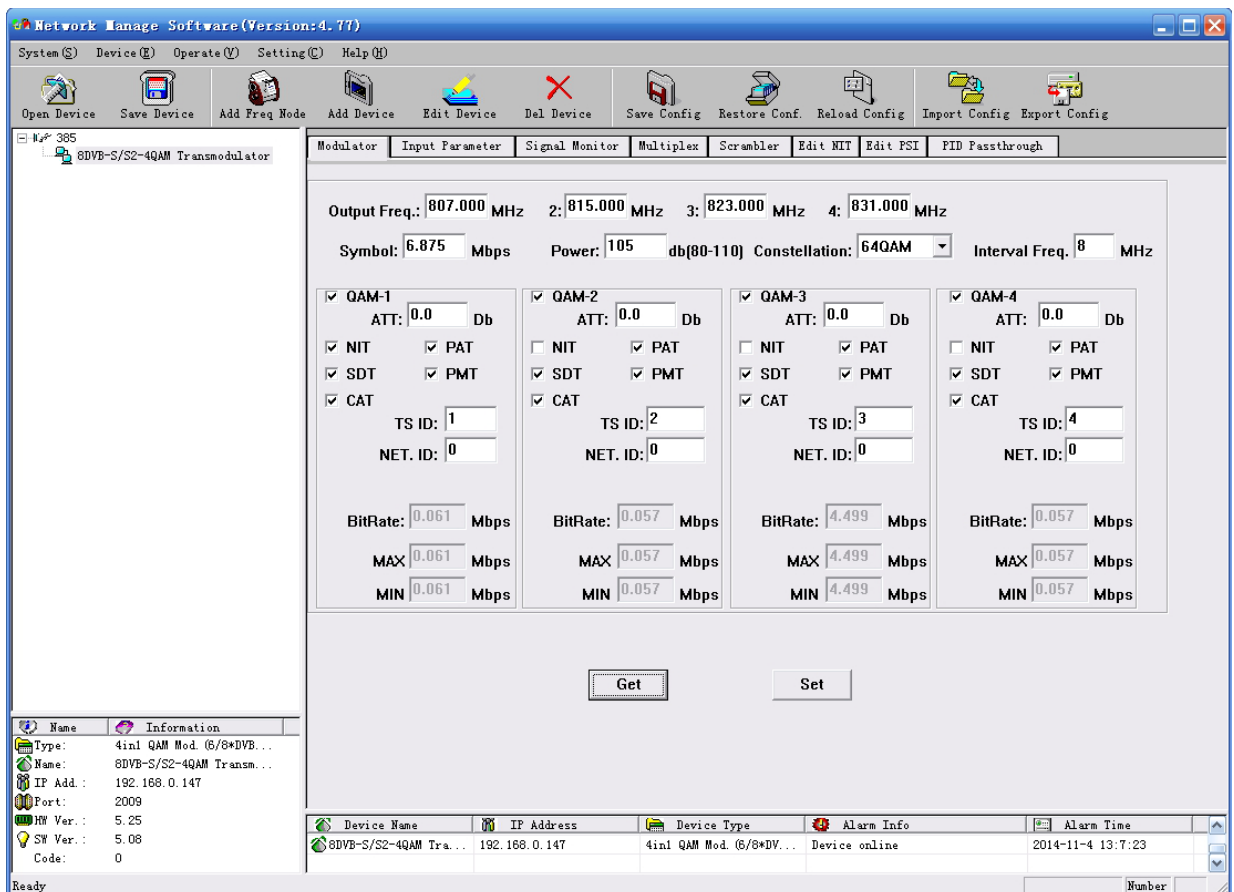


At the device list column, click device name to check it. Check the basic info (like firmware and software version) at the device connection column and edit it at the right device operation area.

“Del Device”: delete the device you don’t need from the device list.

2.5 Check and Set Config

2.5.1 Modulator



“Get”: Read current config from the device.

“Set”: Confirm config and enable it.

2.5.2 Input Parameter

The screenshot displays the 'Input Parameter' configuration window for an 8DVB-S/S2-4QAM Transmodulator. The main area contains 8 tuner configurations, each with the following parameters:

Tuner	Frequency	LNB Frequency	Symbol	Polarization
Tuner 1	4180.000	5150.000	27.500	Horizontal(18V)
Tuner 2	4180.000	5150.000	27.500	Horizontal(18V)
Tuner 3	4180.000	5150.000	27.500	Horizontal(18V)
Tuner 4	4180.000	5150.000	27.500	Horizontal(18V)
Tuner 5	4180.000	5150.000	27.500	Horizontal(18V)
Tuner 6	4180.000	5150.000	27.500	Horizontal(18V)
Tuner 7	4180.000	5150.000	27.500	Horizontal(18V)
Tuner 8	4180.000	5150.000	27.500	Horizontal(18V)

Additional interface elements include:

- Menu Bar:** System (S), Device (D), Operate (O), Setting (C), Help (H)
- Toolbar:** Open Device, Save Device, Add Freq Node, Add Device, Edit Device, Del Device, Save Config, Restore Conf., Reload Config, Import Config, Export Config
- Left Sidebar:** Tree view showing '8DVB-S/S2-4QAM Transmodulator' under '385'.
- Bottom Left Panel (Information):**
 - Name: 8DVB-S/S2-4QAM Transm...
 - Type: 4in1 QAM Mod. (6/8*DVB...)
 - IP Add.: 192.168.0.147
 - Port: 2009
 - HW Ver.: 5.25
 - SW Ver.: 5.08
 - Code: 0
- Bottom Right Panel (Table):**

Device Name	IP Address	Device Type	Alarm Info	Alarm Time
8DVB-S/S2-4QAM Tra...	192.168.0.147	4in1 QAM Mod. (6/8*DV...	Device online	2014-11-4 13:7:23

2.5.3 Signal Monitor

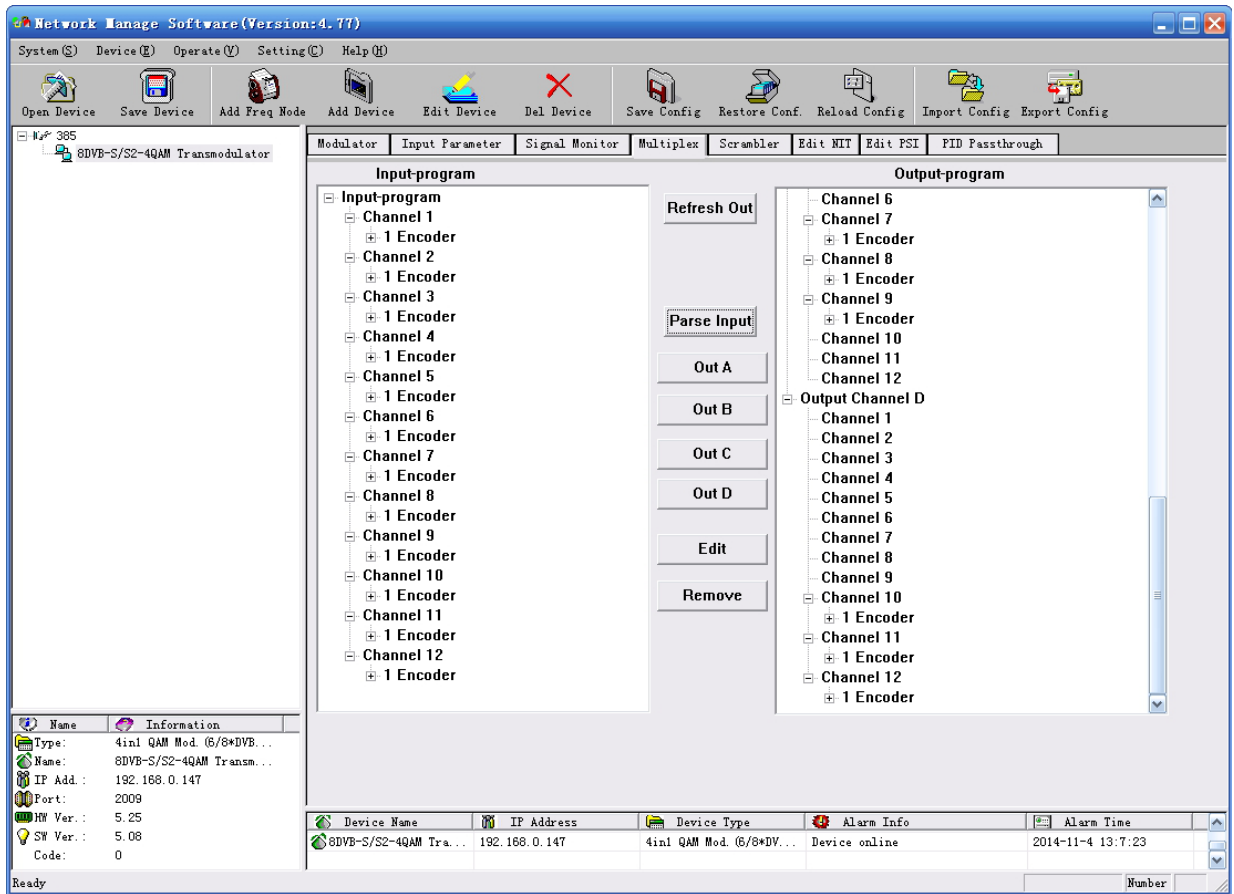
The screenshot displays the 'Signal Monitor' tab within the Network Manage Software. The interface is divided into several sections:

- Menu Bar:** System (S), Device (D), Operate (V), Setting (C), Help (H)
- Toolbar:** Open Device, Save Device, Add Freq Node, Add Device, Edit Device, Del Device, Save Config, Restore Conf., Reload Config, Import Config, Export Config
- Navigation Tabs:** Modulator, Input Parameter, **Signal Monitor**, Multiplex, Scrambler, Edit MIT, Edit FSI, PID Passthrough
- Lock Status Table:**

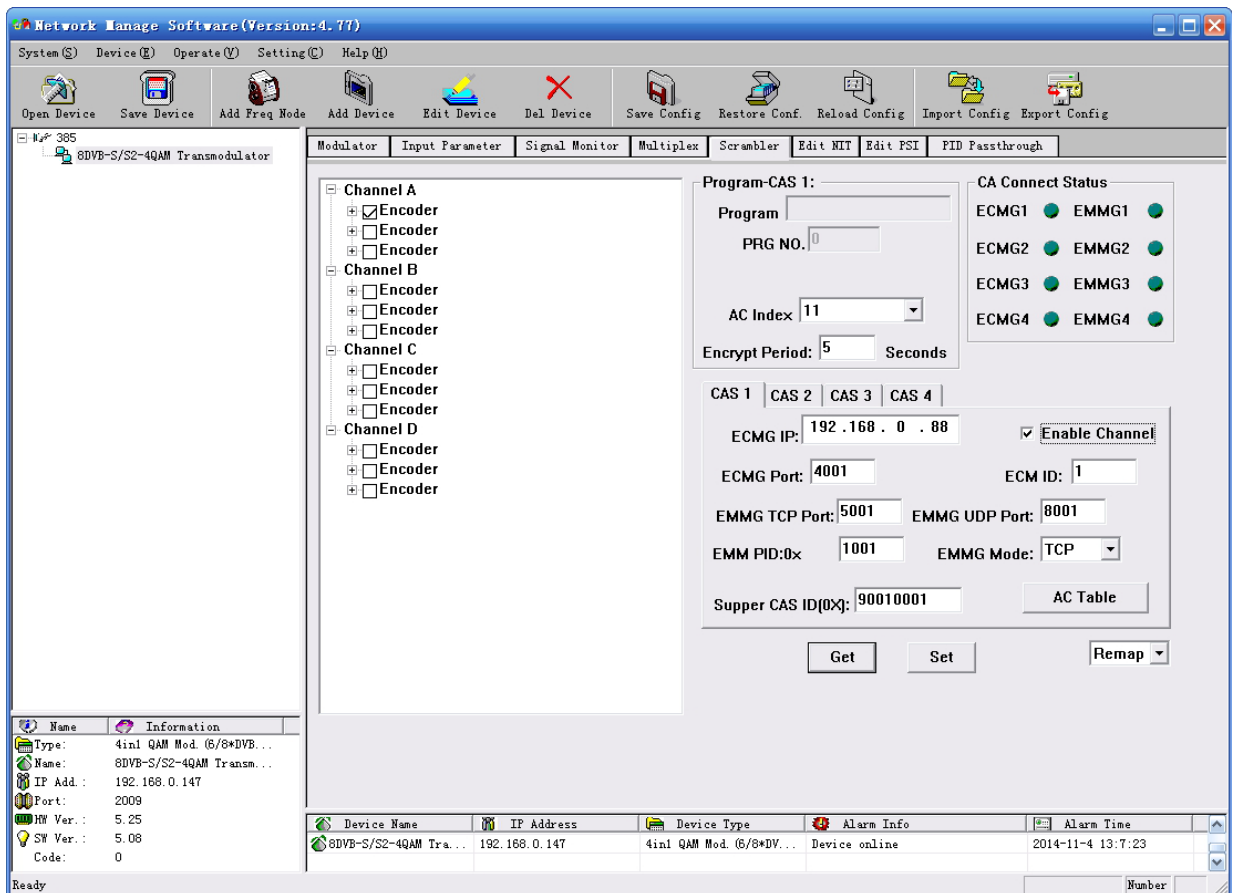
Channel	Lock Status	Signal	Signal Strength
Channel 1	Red dot		0.00db
Channel 2	Red dot		0.91db
Channel 3	Red dot		0.91db
Channel 4	Red dot		0.00db
Channel 5	Red dot		0.00db
Channel 6	Red dot		0.00db
Channel 7	Red dot		0.00db
Channel 8	Green dot	Progress bar	23.82db
Channel 9	Red dot		
Channel 10	Red dot		
Channel 11	Red dot		
Channel 12	Red dot		
- Device Information Panel (Bottom Left):**
 - Name: 8DVB-S/S2-4QAM Transmodulator
 - Type: 4in1 QAM Mod. (6/8*DVB...)
 - Name: 8DVB-S/S2-4QAM Transm...
 - IP Add.: 192.168.0.147
 - Port: 2009
 - HW Ver.: 5.25
 - SW Ver.: 5.08
 - Code: 0
- Table (Bottom Right):**

Device Name	IP Address	Device Type	Alarm Info	Alarm Time
8DVB-S/S2-4QAM Tra...	192.168.0.147	4in1 QAM Mod. (6/8*DV...	Device online	2014-11-4 13:7:23

2.5.4 Multiplexer



2.5.5 Scrambler



2.5.6 Edit NIT

Network Manage Software (Version: 4.77)

System (S) Device (D) Operate (V) Setting (C) Help (H)

Open Device Save Device Add Freq Node Add Device Edit Device Del Device Save Config Restore Conf. Reload Config Import Config Export Config

Modulator Input Parameter Signal Monitor Multiplex Scrambler Edit NIT Edit FSI FID Passthrough

Channel: Channel-1 Net. ID: 0X 0000 Name: Digital TV Version: 0

Network Descriptor:

Tag(0X)	Data(0X)

Buttons: Add, Delete, Edit, Clear

TS ID...	Orig. ...	Frequency:	Symbol:	Modulatio...	Polarization:	Delivery ...
0001	0000	0807.0000(MHz)	006.8750	64QAM		Cable
0002	0000	0815.0000(MHz)	006.8750	64QAM		Cable
0003	0000	0823.0000(MHz)	006.8750	64QAM		Cable
0004	0000	0831.0000(MHz)	006.8750	64QAM		Cable

Buttons: Read Local, Save Local, Add, Edit, Delete, Clear, Get, Set

Name	Information
Type:	4in1 QAM Mod. (6/8*DV...
Name:	8DVB-S/S2-4QAM Transm...
IP Add.:	192.168.0.147
Port:	2009
HW Ver.:	5.25
SW Ver.:	5.08
Code:	0

Device Name	IP Address	Device Type	Alarm Info	Alarm Time
8DVB-S/S2-4QAM Tra...	192.168.0.147	4in1 QAM Mod. (6/8*DV...	Device online	2014-11-4 13:7:23

Ready

2.5.7 Edit PSI

The screenshot shows the 'Edit PSI' configuration window in the Network Manage Software. The main area displays a tree view of PSI parameters:

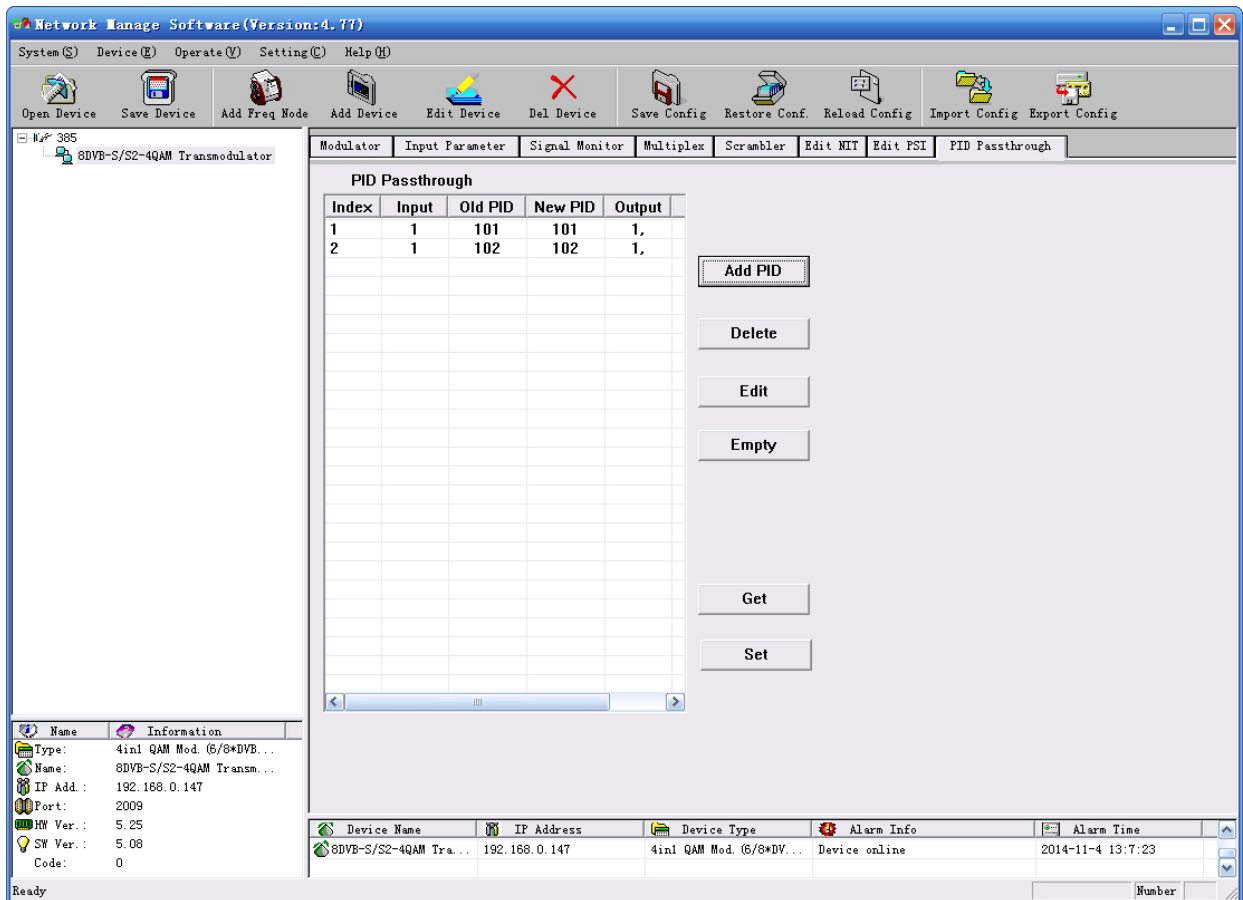
- section_number(8bits)0x:00
- last_section_number(8bits)0x:00
- reserved_further_use(4bits)0x:f
- network_descriptors_length(12bits)0x:00c
- network_descriptors
 - reserved_further_use(4bits)0x:f
 - transport_stream_loop_length(12bits)0x:04c
 - transport_streams
 - crc_32(4bytes)0x:3bf257a2
- SDT
 - table_id(8bits)0x:42
 - section_syntax_indicator(1bits)0x:1
 - reserved_future_use(1bits)0x:1
 - reserved(2bits)0x:3
 - section_length(12bits)0x:048
 - transport_stream_id(16bits)0x:0001
 - reserved(2bits)0x:3
 - version_number(5bits)0x:0f
 - current_next_indicator(1bits)0x:1
 - section_number(8bits)0x:00
 - last_section_number(8bits)0x:00
 - original_network_id(16bits)0x:0000
 - reserved_future_use(8bits)0x:ff
- services
 - crc_32(4bytes)0x:ef40404f

On the right side, the 'Channel' dropdown is set to 'Channel-1'. There are 'Get' and 'Set' buttons, and input fields for 'Name' and 'Value'.

The bottom status bar shows a table with the following data:

Device Name	IP Address	Device Type	Alarm Info	Alarm Time
8DVB-S/S2-4QAM Tra...	192.168.0.147	4in1 QAM Mod. (6/8*DVB...	Device online	2014-11-4 13:7:23

2.5.8 PID Passthrough



2.6 Public Function of NMS



Public function of NMS includes “Save Config”, “Restore Cong.”, “Reload Config”, “Import

Config”, and “Export Config”.



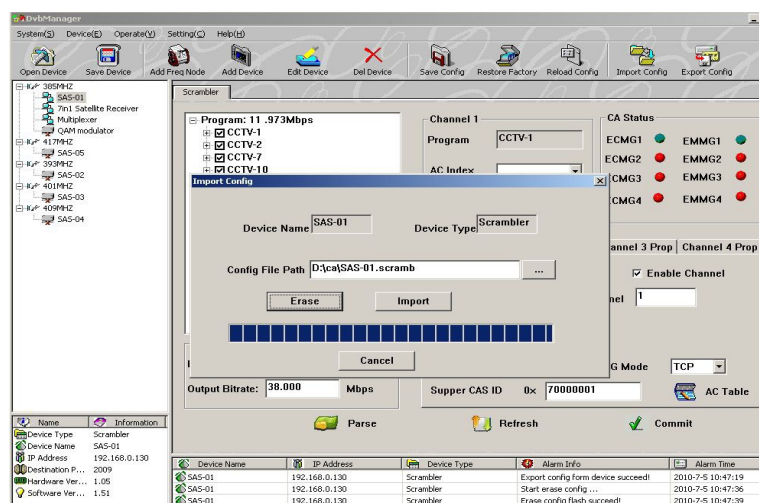
Choose a device at device list.

“Save Config”: After committing or confirming set configuration, click this button to save all configuration into “FLASH” (storage); you do this by front panel.

“Restore Cong.”: renew and start using the configuration. You can read the renewed configuration by clicking “refresh” or “parse” on operation interface. Please click “Save Config” if it needs to be saved.

“Reload Config”: reload and use the configuration saved in FLASH. This function is usually used after “import config”, and the new configuration is effective without restarting the device.

“Import Config”: import configuration of “export config” into FLASH; the imported config can be used after ‘reload config’ or restart the device.



First please choose the config you want to import, and click “Erase” to clear current config and then import config from FLASH. At this moment, the config cannot be used. You need restart the device or click “Reload Config” to start new config.

“Export Config”: fetch the device’s configuration to local disk (computer). You can import this configuration when it needs to renew the configuration or to use a back-up device in future.

