

HPR3624D

Tuner to IP、ASI

User manual

V1.0



HPR3624D

Product Overview

HPR3624D is a professional high integration device which includes tuner demodulation, multiplexing, and modulation. It supports 4/8/12/16/20/24 tuner input(**support different types of tuner (DVB-S2、DVB-C、DVB-T、ATSC、DTMBT、ISDBT, etc.) input**), 1000M IP output, 4 MPTS output and 512 SPTS output. In conclusion, its high integrated and cost-effective design makes the device widely used in varieties of digital distribution systems such as cable TV digital head-end,

digital TV broadcasting etc.

Key Features

- 4/8/12/16/20/24 tuner input;
the tuner supports (**DVB-S2/DVB-C/DVB-T/ATSC/ISDBT/DTMBT**)
- 1000M IP output over UDP and RTP protocol (MPTS and SPTS)
- Support different types of tuner (DVB-S2、 DVB-C、 DVB-T、 ATSC、 DTMBT,、 ISDBT, etc.) input, or mixed use (e.g., 4 - way dvb - t and 4 - way ATSC input at the same time, making up 8 - way input)
- 2 ASI inputs
- 2 ASI **Independent output** (optional) as copy of 1MPTS
- Support “Null PKT Filter” function
- Support PID Remapping/ PCR accurate adjusting
- PID pass
- LCD、 key function
- Control via web management, and easy updates via web

Technical Specification

input	4/8/12/16/20/24 tuner; and the tuner supports (DVB-S2/DVB-C/DVB-T/ATSC/ISDBT/DMBT)	
	2 ASI inputs	
output	2 ASI output	
	IP output(512 SPTS and 4 MPTS)IP output over UDP and RTP protocol	
Multiplexing	Maximum PID Remapping	180 output PID per channel
	Function	PID remapping (automatically or manually)
		Accurate PCR adjusting
System function	Network management (WEB)	
	Chinese and English language	
	Ethernet software upgrade	
Miscellaneous	Dimension(W×L×H)	550mm×515mm×140mm
	weight	6kg
	Environment	0~45°C(work) ; -20~80°C(storage)

	Power requirement s	AC100~240V , 50/60Hz
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operating specification

The device is connected to the input signal, connected to the power supply, and the equipment is controlled through the browser after the equipment starts normally.



Front panel



- 1. LCD display
- 2. Indicator light

3. Button
4. ASI In
5. ASI OUT
6. NMS, DATA input/output

Rear panel:



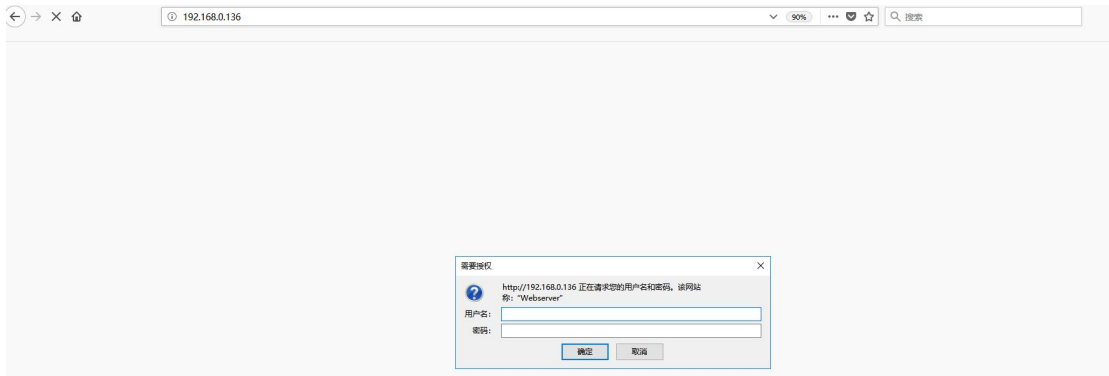
1. Tuner input
2. Power switch
3. Three-core power jack
4. Grounding point

Connect the computer's internet port to the device's NMS network port, modify the computer's IP address to a fixed IP: 192.168.0.100, open the Google browser, and enter 192.168.0.136 to log in to the device management interface.

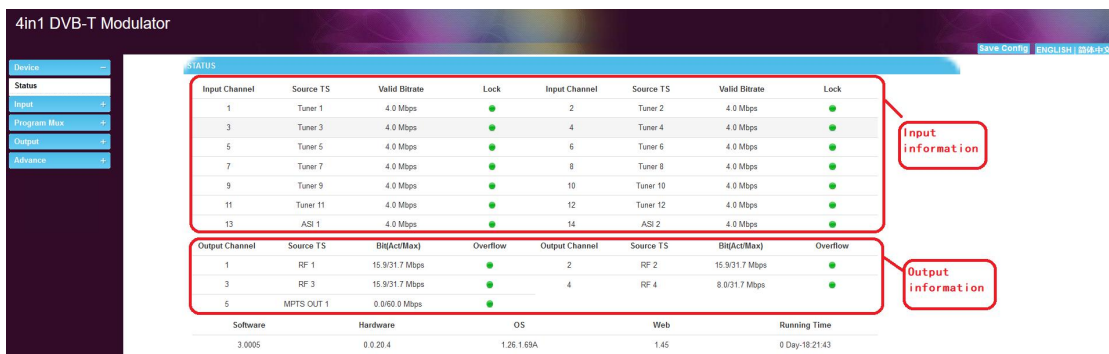
- 1、Enter the IP address of the device on the browse (default address: 192.168.0.136)



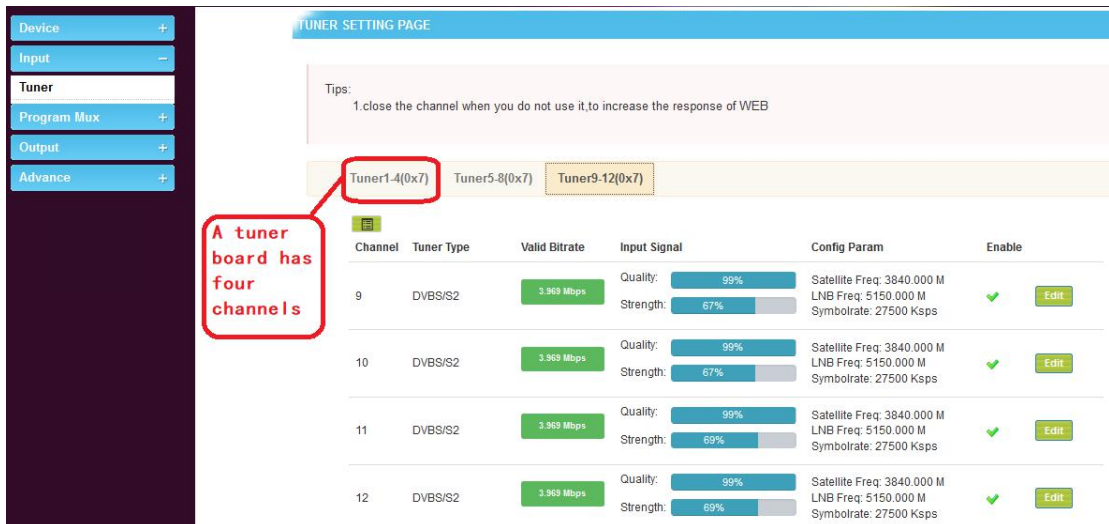
- 2、Username and password (default address: admin)



3、Enter the Device->Status bar to clearly detect the running status of the device



4、TunerParameter setting



A、TunerParameter, click  Set parameters

CH 1 Config

Satellite Frequency: 3840.000 MHz

LNB Frequency: 5150.000 MHz

Symbolrate: 27500 Ksps

LNB Voltage: 0 V

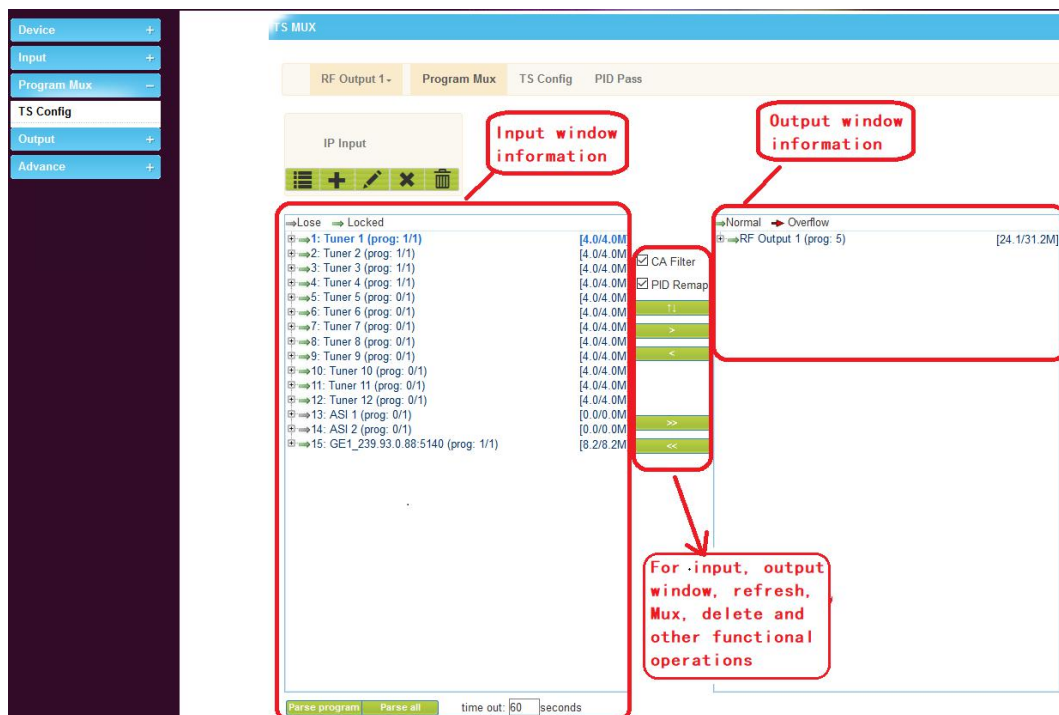
22K: Off

Satellite: 1

Apply Close

B、Click “Enable” undown “ ” to “ ” (meaning that the input channel is turned off and the unused input channel should be turned off)

5、Program Mux



A、Select the frequency setting port for Mux program

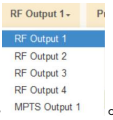
一、Multiplex program step:

- (1) select which frequency point to multiplex the program at
- (2) Click **Parse all** Analyzing program information of the input channel,
Or select any input port (Such as tuner / ASI / IP) ,click **Parse program** Analyzing program information of the channel

- (3) Select programs under any input port,  , Tick the box
- (4) Click “”, Multiplexing programs into the selected frequency point list

- (5) IP input, by adding IP information 

二、Delete program step:

- (1) Select which frequency point to multiplex the program at .
- (2) In the output window, Remove the box in front of the program name ,
- click “”, Cancel the reuse of programs

B、In the output window, at frequency point, click the program name **TV-11 [0:CH1_Encoder 1]** and pop up the following window to modify the parameters of the program

Program Information
[close]

Program From Input:	CH1_Tuner 1 [1]
Service Name:	Digital 1
Program Number:	1001
Logic Channel Number:	1
Service Type:	0x01
Service Provider:	
PMT Descriptor Tag:	☐ 0x00
PMT Descriptor Data:	(Hex)
PMT PID:	0x0020
PCR PID:	0x0021
MPEG-2 Video PID:	0x0022
MPEG-2 Audio PID:	0x0023

C、TS Config parameters

TS MUX

RF Output 1- Program Mux TS Config PID Pass

Stream

PAT Insert: ☒ SDT Insert: ☒
 BAT Insert: ☒ Share BAT: ☐
 CAT Insert: ☒ PMT Insert: ☒
 TDT Insert: ☒ TOT Insert: ☒
 TS ID: ON ID:
 PCR Correct ☒ PCR Correct BW:

NIT

NIT Insert:
 Private Data: ☒ 0x00000000 Network ID:
 Network Name: Version Mode:
 Version Number: (0-31)

Index	TS ID	ON ID	Frequency	
1	1	1	474.000 MHz	
2	1	1	450.000 MHz	

IP TV Sync(SPTS)

IP TV Sync: ☒ Sync Period: Sec

Apply

D、PID Pass parameters

TS MUX

RF Output 1- Program Mux TS Config PID Pass

Index Input Channel Input PID(0x) Output PID(0x) +

Set Del-All

6、Output->Network, Network communication parameters of equipment

Device +

Input +

Program Mux +

Output -

Modulator

IP Network

Mux IP Stream

ASI Output

Advance +

NETWORK

NMS

IP Address:
 Subnet Mask:
 Gateway:
 Web Manage Port:
 MAC Address:

Apply

DATA.1

IP Address:
 Subnet Mask:
 Gateway:
 MAC Address:

Apply

7、Output->Mux IP Stream

Device +

Input +

Program Mux +

Output -

Modulator

IP Network

Mux IP Stream

ASI Output

Advance +

MUX IP STREAM

General:

Protocol:
 Pkt Length:

Channel Info.(Alarm/Active/Total): 0/1/1

Channel	Address	Port	Enable	Null PKT Filter	Source TS	Bit(Act/Max)
1	224.2.2.2	2001	☒	☒	RF 1	16.2/31.2 M

Edit ALL

8、Output->ASI Output

ASI OUTPUT			
Channel Info.(Alarm/Active/Total): 0/2/2			
Channel	Source TS	Valid Bitrate	Total Bitrate
1	MPTS OUT 1	8.0 Mbps	60.0 Mbps
2	RF 1	22.0 Mbps	31.2 Mbps
	RF 2		
	RF 3		
	RF 4		
	MPTS OUT 1		

9、Equipment upgrade

Device

Band

Program Mux

Output

Advance

Modulator Switch

Upgrade

Save | Load

Date | Time

Log

FIRMWARE

Tips:

1. Please get firmware (Software.pkg /OS.pkg/Hardware.bin) from the manufacturer, do not make any changes, choose firmware to upgrade.

2. Do not turn off the power when the equipment is upgraded.Otherwise the equipment will be damaged.

3. When the upgrade is successful, you need to reboot the machine and the new firmware will work.

4. upgrade Software.pkg/Hardware bin will keep about 10 seconds.

5. upgrade OS pkg will keep about 1 minutes.

6. Upgrading requires a very stable network and advises against connecting to the Internet.

Software Version: 0.0019

Hardware Version: 1.2.0.0

OS: 1.28.1.69C

Modulator Type: DVB-T

Mod Select: Main Board

File: 浏览... 未选择文件.

Upgrade

10、Save Menu

Device

Band

Program Mux

Output

Advance

Modulator Switch

Upgrade

Save | Load

Date | Time

Log

CONFIGURATION

Save To Device

Load From Device

Load Default Config

Save To PC

Load From PC

When you change the parameter,you should save configuration ,otherwise the new configuration will lost after reboot.

Save

CLEAR CONFIG

Clear current configuration File,Reboot the device,device will enter factory mode.

Clear

A、Can be saved quickly from the top right of the page, click "Save Config"



11、Date/time, No operation, only test

Device

Band

Program Mux

Output

Advance

Modulator Switch

Upgrade

Save | Load

Date | Time

Log

DATE | TIME

1970-01-01 18:17:29

Timezone: (GMT) Greenwich Mean Time, Dublin, Edinburgh

NTP Server 1:

NTP Server 2:

NTP Server 3:

NTP Server 4:

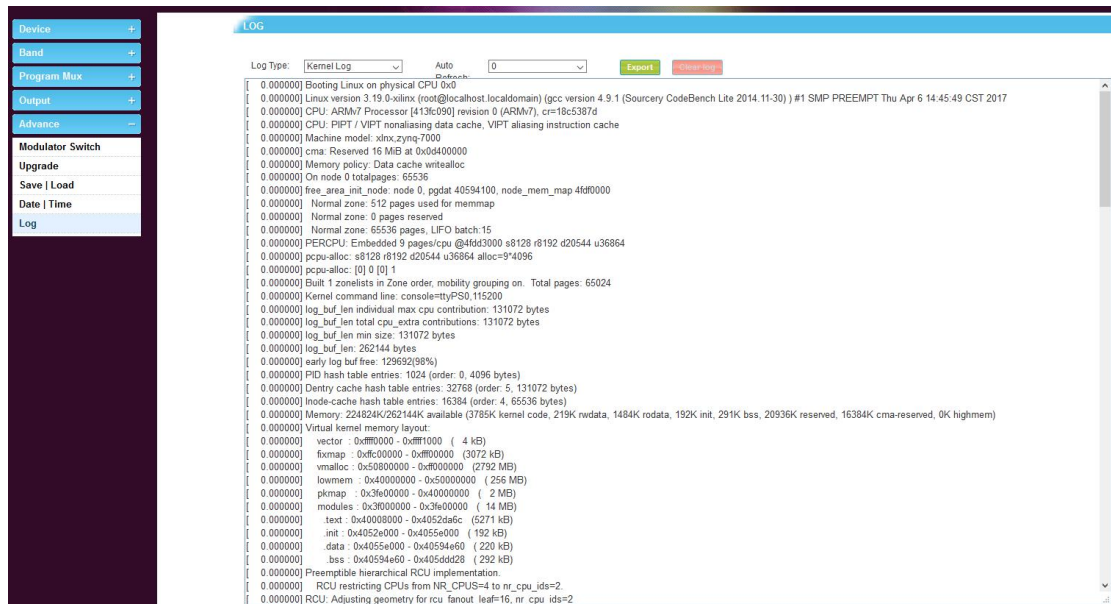
NTP Server 5:

Set Timezone

Set NTP

Update from browser

12. State information monitoring, No operation, only test



The screenshot shows a software interface for monitoring system logs. On the left, a sidebar contains a tree view with the following items: Device, Band, Program Mux, Output, Advance, Modulator Switch, Upgrade, Save | Load, Date | Time, and Log. The 'Log' item is selected. The main window, titled 'LOG', displays a log of system boot messages. The log type is set to 'Kernel Log' and the auto refresh is set to '0'. The log content includes the following information:

```
[ 0.000000] Booting Linux on physical CPU 0x0
[ 0.000000] Linux version 3.19.0-silicon (root@localhost.localdomain) (gcc version 4.9.1 (Sourcery CodeBench Lite 2014.11-30)) #1 SMP PREEMPT Thu Apr 6 14:45:49 CST 2017
[ 0.000000] CPU: ARMv7 Processor [413fc090] revision 0 (ARMv7), cr=18c5387d
[ 0.000000] CPU: PIPT / VIPT nonaliasing data cache, VIPT aliasing instruction cache
[ 0.000000] Machine model: xlnx.zynq-7000
[ 0.000000] cma: Reserved 16 MB at 0x0d400000
[ 0.000000] Memory policy: Data cache writealloc
[ 0.000000] On node 0 totalpages: 65536
[ 0.000000] free_area_init_node: node 0, pgdat 40594100, node_mem_map 4680000
[ 0.000000] Normal zone: 512 pages used for memmap
[ 0.000000] Normal zone: 0 pages reserved
[ 0.000000] Normal zone: 65536 pages, LIFO batch:15
[ 0.000000] PERCPU: Embedded 9 pages/cpu @404c3000 s8128 r8192 d20544 u36864
[ 0.000000] pcpu-alloc: s8128 r8192 d20544 u36864 alloc=9*4096
[ 0.000000] pcpu-alloc: [0] 0 [0] 1
[ 0.000000] Built 1 zonelists in Zone order, mobility grouping on. Total pages: 65024
[ 0.000000] Kernel command line: console=ttyPS0,115200
[ 0.000000] log_buf_len individual max.cpu contribution: 131072 bytes
[ 0.000000] log_buf_len total.cpu extra contributions: 131072 bytes
[ 0.000000] log_buf_len min size: 131072 bytes
[ 0.000000] log_buf_len: 262144 bytes
[ 0.000000] early log buf free: 129692(98%)
[ 0.000000] PID hash table entries: 1024 (order: 0, 4096 bytes)
[ 0.000000] Dentry cache hash table entries: 32768 (order: 5, 131072 bytes)
[ 0.000000] Inode-cache hash table entries: 16384 (order: 4, 65536 bytes)
[ 0.000000] Memory: 224824K/262144K available (3785K kernel code, 219K rdata, 1484K rodata, 192K init, 291K bss, 20936K reserved, 16384K cma-reserved, 0K highmem)
[ 0.000000] Virtual kernel memory layout:
[ 0.000000] vector : 0xffff0000 - 0xffff1000 ( 4 kB)
[ 0.000000] fixmap : 0xffc00000 - 0xff000000 (3072 kB)
[ 0.000000] vmalloc : 0xc5000000 - 0xf0000000 (2792 MB)
[ 0.000000] lowmem : 0x40000000 - 0x50000000 ( 256 MB)
[ 0.000000] pkmap : 0x3fe00000 - 0x40000000 ( 2 MB)
[ 0.000000] modules : 0x3f000000 - 0x3fe00000 ( 14 MB)
[ 0.000000] .text : 0x40008000 - 0x4052da6c (5271 kB)
[ 0.000000] .init : 0x4052e000 - 0x4055e400 ( 192 kB)
[ 0.000000] .data : 0x4055e000 - 0x40594e00 ( 228 kB)
[ 0.000000] .bss : 0x40594e00 - 0x405ddd28 ( 292 kB)
[ 0.000000] Preemptible hierarchical RCU implementation.
[ 0.000000] RCU restricting CPUs from NR_CPUS=4 to nr_cpu_ids=2.
[ 0.000000] RCU: Adjusting geometry for rcu fanout: leaf=16, nr_cpu_ids=2
```

13. After the device parameter is modified, it must be saved so as not to set the device parameter again after the power is off.