



<u>8 Program TS Matrix</u> <u>Hardware Transcoder</u>

Revision 2019

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A Note from Thor Broadcast about this Manual

Intended Audience

This user manual has been written to help people who have to use, integrate and to install the product. Some chapters require some prerequisite knowledge in electronics and especially in broadcast technologies and standards.

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Chapter 1 - Introduction

1.1 Product Overview

THOR

The Thor Broadcast 8 Program HD/SD Video Transcoder is a professional bidirectional transcoder to convert video between H.264 and MPEG-2 format and also to transcode between HD and SD programs simultaneously. It is equipped with 6 ASI inputs and 8 IP inputs to receive digital channels. After transcoding, it outputs 1 MPTS & 8 SPTS through the DATA port or ASI port. This transcoder supports advanced re-multiplexing and can effectively provide operators with realtime code rate switch and optimize the video with additional hardware features.

BISS function is now embedded to descramble ASI and IP input programs and CC function as well to transport your closed caption (or teletext).

It can be easily managed through web NMS system, and has become an ideal solution for clients to provide high quality video trans-coding in a single 1RU chassis with easy to use features.

1.2 Key features

- >8 IP (SPTS/MPTS) inputs plus 6*ASI input
- >8 SPTS & 1 MPTS (UDP/RTP/RTSP) output; 1 ASI (MPTS) output
- > Video Trans-coding: MPEG-2 SD/HD and H.264 SD/HD any-to-any
- > Audio Trans-coding: LC-AAC, MP2 and AC3 any-to-any or pass-through.
- > Maximum 8 SD or 4 HD programs trans-coding
- > Maximum 8 channels of audio trans-coding
- > HD and SD resolutions
- **CBR and VBR rate control**
- ➤ CC (closed caption)
- ► BISS descrambling
- > IP out with null packet filtered
- >Advanced re-multiplexing
- > LCD & Key board local control; web NMS management



H-8TS-HWTC

1.3 Specifications

Stream In	MPTS/SPTS over UDP/RTP/RTSP, 1000M Base-T Ethernet Interface/ SFP interface				
	6 * ASI (BNC Type	e)			
BISS Descramble	Maximum 8 progra	ms			
	Resolution	1920x1080I 480x576, 54	,1280x720P, 720x576i, 720x480i 4x576, 640x576, 704x576		
Video	Trans ording	4*MPEG2 H 4*MPEG2 H 8 *MPEG2 S	MPEG2 HD \rightarrow 4*MPEG2/H.264 HD ; MPEG2 HD \rightarrow 4*MPEG2/H.264 SD ; *MPEG2 SD \rightarrow 8 *MPEG2/H.264 SD		
	4* H.264 H 4* H.264 H 8* H.264 S		$D \rightarrow 4*MPEG2/H.264 HD ;$ $D \rightarrow 4*MPEG2/H.264 SD ;$ $D \rightarrow 8*MPEG2/H.264 SD$		
	Rate Control	CBR/VBR			
	Trans-coding	Audio Trans-coding: AAC, MP2 and AC3 any-to-any or pass-through.			
Audio	Sampling rate	48KHz			
	Bit Rate	32/48/64/96/128/192/224/256/320/384Kbps			
Stream Out	8*SPTS & 1*MPTS over UDP/RTP/RTSP, 1000M Base-T Ethernet Interface (UDP/RTP uni-cast / multicast) /SFP interface				
	1 ASI (as a copy of one of the 8 SPTS or the MPTS) output, BNC interface				
System	LCD & Key board control; web NMS management				
Function	Ethernet software upgrade				
General	Dimensions		430mm×405mm×45mm(WxDxH)		
	Temperature range		0~45°C(Operation), -20~80°C(Storage)		
	Power requirements		AC 110V±10%, 50/60Hz; AC 220V±10%,50/60Hz		



1.4 Principle Chart & Transcoding





H-8TS-HWTC

1.5 Appearance and Description







Chapter 2 - Installation Guide

2.1 General Precautions

- \checkmark Must be operated and maintained in an area free of dust and debris.
- ✓ The cover should be securely fastened, do not open the cover of the chassis when the power is on. This will also void Thor's manufacturer's warranty.
- \checkmark After installation, securely stow away all loose cables, external antenna, and others.

2.2 Power precautions

- \checkmark Be careful when connecting a power source to the device.
- \checkmark Do not operate in wet or damp areas. Make sure the extension cable is in good condition
- \checkmark Make sure the power switch is off before you start to install the device

2.3 Device's Installation Flow Chart Illustrated (as following)





2.4 Environment Requirement

ltem	Requirement		
Machine Hall Space	When installing unit on rack, the distance between 2 rows of machine frames should be 1.2~1.5m and the distance against wall should be no less than 0.8m.		
Machine Hall Floor	Electric Isolation, Dust Free, HVAC anti-static material:1X10 ⁷ ~1X10 ¹⁰ Ω, Grounding curre limiting resistance: 1MΩ (Floor bearing should be greater the 450Kg/m ²)		
Environment Temperature	5~40°C(sustainable), 0~45°C(short time), installing air-conditioning is recommended		
Relative Humidity	20%~80% sustainable 10%~90% short time		
Pressure	86~105KPa		
Door & Window Installing rubber strip for sealing door-gaps and glasses for window			
Fire Protection	Fire alarm system and extinguisher		
Power Device power, HVAC and lighting should be indexed other. Device power requires AC 110V±10%, AC 220V±10%, 50/60Hz. Please carefully chrunning.			



2.5 Grounding the Unit

- ✓ It is important to keep this device grounded to ensure all of the modules function correctly. Correctly grounding the device will also help prevent any electrical interference, lightening. Etc. Also it helps reject minor interference that may disrupt the devices ability to function smoothly. General rule of them, make sure the device is grounded when installing anywhere.
- ✓ Always use copper wire. When applied correctly the ground must be wrapped well to ensure maximum conduction so it can reduce any high frequencies. The copper ground wire should also be as short and thick as possible
- ✓ Installer must make sure that the two ends of the ground are well conducted and have appropriate anti-rust properties.
- \checkmark It is prohibited to use any other device as part of the grounding electric circuit.
- ✓ The area of the conduction between the ground wire and device's frame should be no less than 25 m^2 .





Chapter 3 - Operation

Keyboard Function Description:

MENU: Cancel current entered value, resume previous setting; Return to previous menu.

ENTER: Activate the parameters which need modifications, or confirm the change after modification.

LEFT/RIGHT: Choose and set the parameters.

UP/DOWN: Modify activated parameter or paging up/down when parameter is inactivated.

LOCK: Lock the screen/cancel the lock state. After pressing the lock key, the LCD will display the current configuring state.



3.1.1 LCD Menu Structure

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3.1.2 Initial Status

After switching on the device, it will take a few seconds to initialize the system, and then the LCD will display the real-time output bit-rate of the 8 transcoding channels respectively.



3.1.3 General Settings for Main Menu

By pressing "LOCK" key again to enter the main menu, press UP/DOWN key to turn LCD page:



The option with " \blacktriangleright " is the selected selection, users can press the ENTER key to enter the specified submenu.



3.3.1 Input Setting

Press UP/DOWN/LEFT/RIGHT keys to turn page or specify the target item and press ENTER key to enter into the menu of *Input Setting* when this menu is marked with ►. It shows as bellow:



There are 4 pages displaying menus from 1.1 to 1.14 to represent the **6 ASI input channels (1.1-1.6)** and **8 IP channels (1.7-1.14)**. Enter each sub-menu to configure its parameters.

3.3.1.1 Port 1 (ASI 1 Input)

Here we take 1.1 *Port 1 (ASI)* signal input as an example to illustrate ASI inputs:

Enter 1.1 and users will find the page as shown:



P.S.: The descriptions of 1.2-1.6 Port X (ASI) are the same with 1.1 Port 1 (ASI).



3.3.1.2 Port 7 (IP Input)

Here we take 1.7 Port 7 (IP) as an example to illustrate IP inputs:



In submenus 1.7.1-1.7.5, you can configure the IP input parameters to receive the IP programs.

	Current Status	_
(1.7.1 In Protocol [UDP]	UDP RTP/RTSP	
1.7.2 In Address <u>2</u> 34.001.001	001	
1.7.3 IP Port <u>0</u> 1911		
1.7.4 IGMP Snoop V2	 Internet Group Management Protocol Snooping V3 [OFF] 	
1.7.5 Multicast [OFF]	ON	

P.S.: The descriptions of 1.8 – 1.14 Port X (IP) are the same.

3.3.2 Output Settings

This transcoder supports IP output in the form of both MPTS (Multiple Programs Transport Stream) and SPTS (Single Program Transport Stream). *Output Settings* containing 2.1-2.9 is to configure the

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MPTS and SPTS parameters and 2.10 is to configure BISS Config.

Submenus are displayed as shown below:

 2.1 MPTS Output 2.3 SPTS Output 2 	2.2 SPTS Output 1 2.4 SPTS Output 3	
 2.5 SPTS Output 4 2.7 SPTS Output 6 	2.6 SPTS Output 5 2.8 SPTS Output 7	
► 2.9 SPTS Output 8	2.10 BISS Config	

3.3.2.1 MPTS Output

The processed programs can be output through one channel of MPTS (Multiple Programs Transport

Stream). User can set the parameters of the MPTS under submenu 2.1.

2.1.1 MPTS Protocol 2.1.3 MPTS Port 2.1.2 MPTS IP 2.1.4 MPTS Enable

▶ 2.1.5 MPTS Filter

2.1.6 MPTS PCR Rec

Under these menus, you can set the IP protocol mode, IP address and port number for the MPTS output,

and also choose enable the MPTS output or not.

2.1.1 MPTS Protocol [UDP]	UDP TRP/RTSP	
2.1.2 MPTS IP <u>2</u> 24.002.002.002		
2.1.3 MPTS Port <u>0</u> 1001		



3.3.2.2 SPTS Output (2.2-2.9, taking 2.2 as an example)

The processed programs can also be output in the form of SPTS (Single Program Transport Stream). User can set the parameters of the SPTS under submenu 2.2-2.9. There are all together 8 channels of SPTS as this device can maximally transcode 8 programs simultaneously.

 2.2.1SPTS Protocol 2.2.3 SPTS Port 	2.2.2 SPTS IP 2.2.4 SPTS Enable	
 2.2.5SPTS Filter 2.2.7 SPTS PCR SEP 	2.2.6 SPTS PCR REC	

Under these menus, you can set the IP protocol mode, IP address and port number for the SPTS output, and also choose enable the corresponding SPTS output or not.

	2.2.1 SPTS Protocol [UDP]	UDP TRP/RTSP	
	2.2.1 SPTS IP <u>2</u> 24.002.002.002		
Thor Fiber :	2.2.2 SPTS Port <u>0</u> 1001		 horbroadcast.com





P.S.: The descriptions of 2.3-2.8 are the same with 2.2.

3.3.2.3 BISS Configuration

BISS: Basic Interoperable Scrambling System

This Transcoder also supports BISS to descramble encrypted programs from ASI or IP. Users can set

the parameters of BISS under submenu 2.10.

 2.10.1 Channel 2.10.3 Select ID 	2.10.2 BISS Mode 2.10.4 SW Data	
▶ 2.10.5 Input ID	2.10.6 ESW Data	

> BISS Channel

Select the Channel which needs to be descrambled under this submenu.

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BISS Channel [CH1]	CH1 CH2	СНЗ	CH4	
BISS Channel [CH5]	CH5 CH6	CH7	CH8	

> BISS Mode/Select ID/SW Data/Input ID/ESW Data

You need to input keys to descramble programs as per the BISS scrambling side which usually is DVB-

S/S2 modulator.

The descrambling principle is as following chart:

Modulating Side (BISS SCR)	Receiving Side (BISS DESCR)	Digit (0x)
Mode 1+SW Data	Mode 1+ SW Data	12
Mode E+ESW Data + Device	Mode E + ESW Data + Device	16
Mode E+ESW Data + Input ID	Mode E + ESW Data + Input ID	16+14

3.3.3 Network Setting

You can enter *Network Setting* and modify the parameters under its corresponding submenus in the same way explained above.





3.2 Subnet Mask <u>2</u>55.255.255.000

3.3 Gateway <u>1</u>92.168.000.001

NOTE: The MAC address is defaulted by the factory setting, and it's unique.

► Yes

3.5 Reset Password No

3.6 Web Manage Port 00080

3.3.4 Saving Configuration.

Choose to save the current configuration parameters to the device.

4.1 Saving Configuration Yes * No

Saving, please wait:

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3.3.5 Loading Configuration

5.1 Saved Config

5.2 Default Config

Loading, please wait:

You can restore the device into the last saved configuration by choosing the menu 5.1 "Saved Config", or restore the device into factory configuration by choosing the menu 5.2 "Default Config".

3.3.6 Version

Check the device's hardware version and software version under this menu:

Transcoder HW X.XX SW X.XX

3.3.7 Language

View system language at this submenu:

Language

English





Chapter 4 - WEB NMS Operation

For setting configurations you can use the front panel; also you are able to control and set the configurations on any computer by connecting the device to the web NMS Port. You should ensure that the computer's IP address is different from the Thor Transcoder.

<u>4.1 Login</u>

The default IP of this device is 192.168.2.136. We can modify the IP through the front panel.

Connect the pc and the device with net cable, and use ping command to confirm they are on the same network segment.

E.G. the PC IP address is 192.168.99.252, we then change the device IP to 192.168.99.xxx (xxx can be 0 to 255 except 252 to avoid IP conflict).

Use any web browser to connect the device with the PC by inputting the Encoder & Modulator's IP address in the browser's address bar and press Enter.

It will display the Login interface as Figure-1. Input the Username and Password (Both the default Username and Password are "admin".) and then click "LOGIN" to start the device setting.

Web Management	+		÷
€ ⇒ [] 192.168.0.136		☆ ▼ C 🚼	- Google 👂 🏫 🔝
	COMPANY Username: Password: De De	admin e e e e e e e e e e e e e e e e e e e	
		Figure-1	
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4.2 Operation

When we confirm the login, it displays the WELCOME interface as Figure-2.

Status Input Mux Transcoder Output Network INFORMATION Version Software 0.70 Build Jan 4 2016 Hardware 0.6.0.8 Pro100 1.22 1.22 1.22 1.22	Click any item here to enter the corresponding interface to check information or set the parameters.
Transcoder1 000.000 Mbps Transcoder3 000.000 Mbps Transcoder5 000.000 Mbps Transcoder 000.000 Mbps Tra	г7 <u>000.000</u> мьра г8 <u>000.000 мьр</u> а
Transcoding output channel list which indicate the 8 programs respectively	Real-time output bit rate of corresponding output channel

• Input

Click "Input" and it will display the interface as in Figure-3 where all the input programs can be modified.

	Status Input Mux	Transcoder	Output	Network	÷Sy	stem	
INPLIT							a
Interface		Status					Actions
1		ASI					Modify
4510							
~~0		0.61					
2		Aai					Modify
ASI							
з	l i i i i i i i i i i i i i i i i i i i	ASI					Modify
ASIO							
4		ASI					Modifier
							- weitry
ASIO							
5		ASI					Modify
ASI							
6		ASI					Modify
4510							
7		IP Addr:	224.2.2.3	IP Port	1001	Protocol:	UDP Modify
PO		IGWP:	UFF	wuuucast:	UN		
8		IP Addr.	224.2.2.3	IP Port	1002	Protocol:	UDP Modify
PO		IGMP:	OFF	MultiCast:	ON		
9		ID tota	004.0.0.0	ID Dort	1002	Destaac'	UDD Redd for



Select one channel to view and setup the parameters of corresponding channel. For example, when we

select one channel and click Modify

, it launches an interface as shown below:

THOR		H-8TS-
HWTC		
	Input Set	
	Channel 1	
	ASI	
	Close Set	

Input Set				
Channel 8				
IP Addr				
224.2.2.3				
IP Port				
1002				
IGMP				.
OFF				OFF
Protocol				
UDP			•	
MultiCast				
ON			•	Choose
				choose
				different mode
	21	0		
	CIOSE	set		

CH07-CH14 IP Channels

: To make the current parameters shown in the web interface activate. In this way, the configuration can only be saved temporarily and system will restore the last saved configuration if the device reboots.

• Mux (Multiplex)

Click "Mux" and it will display the interface as Figure-4 where all the input programs can be listed, setup, and chosen to output.



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Figure-4

^{IV}PD MAP</sup> : To enable/disable the PID remapping

Refresh Click "Refresh" to refresh the input channels especially when new signal source is connected.

Parse Click "Parse" to refresh the program list of the selected channel (ASI/IP). For example:



Parse timeout 200 seconds Time limitation to parse the input programs

Choose one target program from any input channel and click this button to transfer it to the right box to output. You can transfer maximum 8 programs to output. Click this button to trigger a script which prompts to specify an output channel among 1-8.



Each output channel can only carry one program.

Similarly, you can cancel the multiplexed programs from the right box. Click this button to trigger a dialog box as below, where to add the PIDs which need pass through.

In some occasions, there are some PIDs which won't belong to any program, such as EPG, NIT tables and so on which user just wants to pass them through the multiplexing module without changing anything. This is the main purpose of this function.



PID Pass	Hote on Co		×
Number	Input PID	Output PID	Add
			Close Del-All Save changes

Click "Add" to add more boxes for filling the Input & Output PIDs, then click "Save changes" to confirm.

> Program Modify/Transcoding Settings/BISS Descrambling:

Edit Proj : The information of multiplexed programs can be modified with this button. Click the program to be modified in the output section to trigger a dialog box as below where also to complete the audio/video out mode settings and BISS descrambling settings.

		Modify Program Inform	ation	
Target video format and PID can be set here: mpeg2 video: 0x02 h.264 video: 0x1b	*	Program Number Program Name PMT PID PCR PID 13818-2 Video	200 SBN Oxc9 Oxca Oxca	
		[1]11172 Audio [2]11172 Audio	0xcc Transcode	Transcoder Passthrough
Source audio format and PID display: mpeg1 audio: 0x04 mpeg2 AAC audio: 0xf		[3]11172 Audio ESW Data SW Data	Oxce Filter	Filter
mpeg4 AAC audio: 0x11 AC3 audio: 0x06 Each output channel can carry max 8 audios out with only 1 audio can be		Input ID Select ID BISS Mode Transcode Mode	Device Mode O Program	You need to input keys to descramble program according to the BISS scrambling side.
transcoded and the other audio pass-through, or Filter		Clos	se Get Set	

Transcoder

Click "Transcoder" from the menu to trigger the screen as Figure-5. This interface is for setting up the format, bit rate, and PIDs of each program to be transcoded and output. Users can enter each channel (Out 01 - Out 08) to setup for each program.

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TH ® R Iwtc					H-8TS-
Status	Input Mux Transcoder Output Networ	* Output selection an	channel rea		System automatically
Input Parameters	Audio Format MFEG1122 V Resolution 720'5769501 V	Audio Bitrate(Kb) 128	Video Format	H.264	as per signal source.
Transcoder Parameters	Audio Format MPEGI-L2 W Video Pormat MPEG2 CBR W Total Bitrate Set Auto W	Audio Bitrate (Kb) 128 Video Bitrate (Kb) 2000 Total Bitrate (Kb) 7000	V Aspect Ratio Resolution Se Resolution	Default et Select 720*5760501	The 2 items need to set manually. Make sure that the selected bit-rate/resolution complies with or lower than the
	Active Bitrate Set Auto 💌 P frame(030) 12 MV Limiter Orr 💌 Closed Caption	Active Bitrate(Kb) 5000 H.264 Profile Main Transcode Mode Program n Subtitle Des	B Frame (13) Audio Gain (0- interlacer) 3 -400%) 0	source signal.
CI	osed Caption switch	Get	set Ma reso val	ike sure olution no ues.	the audio bit-rate and o greater than the source



♦ Output

Click "Output" from the menu to trigger the screen as Figure-6. This interface is divided into 3 parts with the first part for configuring ASI output, while the rest 2 part for configuring IP output.

ASI output: This device supports signal output through ASI ports in the form of one MPTS or one SPTS, and the stream is a mirror of the IP output stream.

IP output: This device simultaneously supports IP signal output through DATA port in the form of one MPTS and 8 SPTS. Parameters of MPTS and SPTS can be configured respectively in the second and third part in this interface.

							CDTC	A-++++
							SPIS	Output Output
	ASI Out Vlan ID(1 ~ 4095)	MPTS 2000	Pkt Length (1~7) 2	Vla	an Tag	OPF 💌	SPTS	Output
5 OUT					_		SPTS	Output
covery): this opti sparate): this opti	on 'ON', it will recovery on 'ON', it will separate	output PCR. output PCR firstly					SPTS	Output
	IP Address	Port	Protocol	Filter	PCR Re	PCR Se	SPTS	Output
MPTS	224.2.2.2	1000	UDP 💌	OFF 💌	OFF 🐱	OFF 💌		
epre 1	224.2.2.2	1001	UDP 🛩	OFF 💌	OFF 💌	OFF 💌		
SPID 1								
SPIS 1 SPIS 2	224.2.2.2	1002	UD.P 🖌	opr 💌	off 🐱	OFF 💌		
SPTS 2 SPTS 3	224.2.2.2	1002	UDP Y	orr 🗸	orr 🖌	OFF V		
SPTS 2 SPTS 3 SPTS 4	224.2.2.2 224.2.2.2 224.2.2.2	1002 1003 1004	UDP V UDP V	OFF ¥	orr v	OFF ¥		
SPTS 2 SPTS 3 SPTS 4 SPTS 5	224.2.2.2 224.2.2.2 224.2.2.2 224.2.2.2	1002 1003 1004 1005	UDP 🛩 UDP 🛩 UDP 🛩	OPT ¥ OPT ¥ OPT ¥	OFF V	OFF V OFF V OFF V		
SPTS 2 SPTS 3 SPTS 4 SPTS 5 SPTS 6	224.2.2.2 224.2.2.2 224.2.2.2 224.2.2.2 224.2.2.2 224.2.2.2 224.2.2.2	1002 1003 1004 1005 1006	UDP V UDP V UDP V	065 A 065 A 065 A 065 A	085 M 082 M 082 M			
SPIS 1 SPIS 2 SPIS 3 SPIS 4 SPIS 5 SPIS 6 SPIS 7	224.2.2.2 224.2.2.2 224.2.2.2 224.2.2.2 224.2.2.2 224.2.2.2 224.2.2.2 224.2.2.2	1002 1003 1004 1005 1006 1007	UDP V UDP V UDP V UDP V UDP V UDP V	OBL OBL OBL OBL OBL OBL	OFF V OFF V OFF V			

Figure-6

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♦ Network

Click "Network", it will display the screen as Figure-7. Here user can change the device network configuration as needed.

15 Port					
	IP Address MAC	192.168.57.246 Mask 00-72-74-76-78-7a Web Port	255.255.255.000 Gateway	192.168.002.001	
ATA Port					
	IP Address	192.168.001.124 Mask	255.255.255.000 Gateway	192.168.001.255	

Figure-7

Save Restore

From the menu on left side of the webpage, clicking "Save Restore", will display the screen as Figure-8 where to save or restore your configurations

FIGURATIONS		
	Save Configuration	Save
	When you change the parameter you shoud save configuration ,otherwise the new configuration will lost after reboot.	
	Restore Configuration	Restore
	Load latest saved configuration after click the "Restore" then please click the "Save config" button, otherwise the "Restore" parameter will lost after reboot	
	Factory Set	Pactory
	Set all configuration back to default, after click the "Factory Set" then please click the "Save config" button, otherwise the default parameter will lost after reboot	
	Backup Configuration	Backup
	Backup current configuration to the local file,we suggest do this before set the configuration or update firmware.	
	Upload configuration 測定···· 未选择文件。	Load File
	 New configuration will replace the old one please backup current configuration before load file if you use a wrong file the device may not work. Please do not turn off the power while the loading, utherwise the device will not work. 	

Figure-8

Save Configuration – To save the parameters after you change it.

NOTE: New configuration will replace the old one. Please backup the current configuration before loading a file. Wrong file may cause failure of device.

Factory Set – To resume the device to factory default configuration.

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Backup Configuration – To back up the device configuration to the device flash

Upload Configuration – If you need to load the backup file to restore configuration, click "Load file" to restore the latest saved configuration.

♦ Update

From the menu on left side of the webpage, clicking "Update", it will display the screen as Figure-9 where to update firmware for the device.

To update Pro100, l update button to up	JSB flash driver should be i date Pro100.	nserted to a correct usb interface((4 interfaces inside transc	oder). The suffix of updat	file is ** update*, which should be located in a directory named *pro100_u	pdate". Then
		🖽 Pro100 (1)	Pro100 (2)	Pro100 (3)	Pro100 (4)	
					Update	

Reboot

Click "Reboot" from the menu, the screen will display as Figure-10. Click "Reboot" box and it will restart the device automatically.

	Status	Input	Mux	Transcoder	Output	Network	- System
REBOOT							
Note Some configura	ion will work :	after reboo	ot the de	vice,such as Wi	eb Manage I	Port set,Firm	ware update,Configuration Load(reboot automatically).
							Reboot



Password

When you click "Password", it will display the password screen as Figure-11. Here you can change the Username and Password for logging into the device.

After putting the current and new Username and Password, click Apply" to save the configuration.

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	Status Input Mux Transcoder Output Network + System
	PASSWORD
	Note Modify the login name and password to make the device safely. If you forget the name and password,you can reset it by keyboard in menu 3.5. The default login name and password is "admin". Also please note the capical character and lowercase character.
	Current Usemane admin
	New Username
	New Password
	Confirm New Password



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Chapter 5 - Troubleshooting

THOR's ISO9001 quality assurance system has been approved by the CQC organization. We guarantee the products' quality, reliability and stability. All THOR products haven passed all testing and manual inspections before they are shipped out. The testing and inspection scheme already covers all the Optical, Electronic and Mechanical criteria which have been published by THOR. To prevent a potential hazard, please strictly follow the operation conditions.

Prevention Measures

- Installing the device in a place where the environmental temperature is between 0 to 45 °C
- Making sure the unit has plenty of ventilation for the heat-sink on the rear panel; and other heat-sink bores if necessary
- Checking the AC input within the power supply and ensure it is working, the connection is correctly installed before switching on device
- > Checking the RF output levels to stay within a tolerable range, if it is necessary
- > Checking all signal cables have been properly connected
- Frequently switching on/off device is prohibited; the interval between every switching on/off must be greater than 10 seconds.

Conditions needed to unplug power cord

- Power cord or socket damage.
- > Any liquid that got into the device.
- Any stuff that could cause a circuit short
- Device in damp environment
- > Device has suffered from physical damage; i.e. it fell off a rack.
- ➢ Longtime idle.
- After switching on and restoring to factory setting, device still won't work properly.
- Maintenance needed on device



Chapter 6 - Packing List

Thor Transcoder HD SD 8 Programs	1 PC
ASI Cables	6PCS
Ethernet Cable	1PC
Power Cord	1PC

For Further Tech Support

1-800-521-Thor(8467)

support@thorfiber.com