

User Manual



H-16QAM-IP-RF

Thor Fiber 2018

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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

1.10utline

The Thor Broadcast H-16QAM-IP-RF gateway is our new solution in converting tuner based inputs into IP transport streams. This ideal head-end conversion device has massive processing power which lets you intake up to 16 QAM frequencies and convert them to a single Ethernet output. Thor's new power packed device integrates tuner demodulation and IP gateway functionality, which can demodulate the signals from 16 tuners into 16 MPTS or 512 SPTS via UDP and RTP/RTSP protocols.

1.2 Features

- 16 QAM/ATSC/FTA DVB-S/S2 inputs (model dependent), 2 ASI inputs
- BISS descrambling
- Diseqc functionality
- 16 MPTS or 512 SPTS output (MPTS and SPTS output)
- 2 GE mirrored outputs, up to 850Mbps---SPTS
- 2 independent GE output port, GE1 + GE2---MPTS
- PCR adjusting (Only for SPTS output)
- PID filtering, re-mapping (Only SPTS output)
- PSI/SI rebuilding and editing (Only SPTS output)
- "Null PKT Filter" function (For MPTS output)
- Support Web operation



1.3 Specs

Input	Optional 1:16 QAM tuners input +2 ASI inputSPTS output Optional 2:14 QAM tuners input +2 ASI input MPTS output Optional 3:16 QAM tuners input MPTS output				
	Input Frequency 45-960MHz				
Tuner Section					
- Craine					
Output	512 SPTS IP mirrored output over UDP and RTP/RTSP protocol through GE1 and GE2 port, Unicast and Multicast				
Output	16 MPTS IP output (for T protocol through GE1 and	uner passthrough) over UDP and RTP/RTSP I GE2 port, Unicast and Multicast			
BISS descrambling	Mode 1, Mode E (Up to 8	50Mbps) (descramble individual program)			
	Dimension(W×L×H) 482mm×410mm×44mm				
	Approx weight	3.6kg			
Miscellaneous	Environment	0~45°C(work) ; -20~80°C (Storage)			
	Power requirements	100~240VAC, 50/60Hz			
	Power consumption	20W			



1.4 Flow Chart





1.5Appearance and Description

Front Panel Illustration:



1	Power Indicator
2	Reset: Reset webmaster IP address, recover to default IP address
3	USB Port for Updates
4	NMS – Network Management Interface
5	Data Ports (1 & 2) – IP Output for SPTS / MPTS
6	ASI input ports (1 & 2)

Rear Panel Illustration



7

8

10

9

7	16 channels RF IN Interface (top row)
8	Loop Out Interface (bottom row)
9	Power Switch and Socket





Chapter 2 - Installation Guide

This section is here to explain the cautions you should adhere to so you don't hurt yourself or anyone else. That would not be good for anyone; so read through before operating your new Thor Broadcast equipment.

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

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: $1X10^7 \sim 1X10^{10}\Omega$, Grounding current limiting resistance: $1M\Omega$ (Floor bearing should be greater than $450Kg/m^2$)
Environment Temperature	$5\sim40^{\circ}C(sustainable)$, $0\sim45^{\circ}C(short time)$, 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 dual level glasses for window
Fire Protection	Fire alarm system and extinguisher
Power	Device power, HVAC and lighting should be independent to each other. Device power requires AC 110V±10%, 50/60Hz or AC 220V±10%, 50/60Hz. Please carefully check before running.



2.5 Grounding Requirement

- 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 m².



Chapter 3 – WEB NMS

4.1 Setup the NMS

The default IP of this device is 192.168.0.136. 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"tostart the device setting.

4.2 NMS Operation

4.2.1 Login Interface

Once you set the units address and enter that IP into your browser this Login window appears

T BR	Please sign in	24
	admin	
	•••••	
	Sign in	

Both the default user name and password are admin.



4.2.2 Status Page

Status

When we login, it will display the status interface as shown in Figure-2.

Web Management 2017-03-011 Summary DEVICE INFORMATION Parameters System Tuner Input Software Version: 2.00 Build 200 Feb 24 2017 ASI Input Software Version: 2.00 Biss Biss DEVICE INFORMATION	
Summary DEVICE INFORMATION > Status DEVICE INFORMATION Parameters System > Tuner Input Software Version: 2.00 Build 200 Feb 24 2017 > ASI Input Hardware Version: 2.00 > Biss Biss	:16:29
Parameters System Tuner Input Software Version: 2.00 Build 200 Feb 24 2017 ASI Input Hardware Version: 2.00 Biss Biss 0.00	
Tuner Input Software Version: 2.00 Build 200 Feb 24 2017 ASI Input Hardware Version: 2.00 Biss 0.00	i -
 Program Parse P Stream System Network Date Time Password Save Restore Backup Load Firrmware 	
Click any item here to enter the corresponding interface to check information or set the parameters.	

Figure-2



$Parameters {\rightarrow} Tuner \ input$

From the menu on left side of the webpage, click "Tuner Input", it displays the interface where you

can check the 16 Tuner input status. (Figure-3)

Tuner to IP Gatew	/ay	
Web Management		2017-03-01 17:16:29
Summary Status 	TUNER INPUT	<u>^</u>
Status Parameters Tuner Input ASI Input Biss Program Parse IP Stream Network Date Time Password Save Restore Backup Load Firmware	Tuner1 $D \lor BS2$ Quality :0% Strength:2 $D \lor BS2$ Quality :0% Strength:3 $D \lor BS2$ Quality :0% Strength:4 $D \lor BS2$ Quality :0% Strength:5 $D \lor BS2$ Quality :0% Strength:6 $D \lor BS2$ Quality :0% Strength:	 0.000 Mbps
16 Tuner input status	7 D∨BS2 Quality : 0% 8 D∨BS2 Quality : 0% 8 D∨BS2 Quality : 0% 8 D∨BS2 Quality : 0%	0.000 Mbps
	9 D∨BS2 Quality : 0% Strength: 0% 10 D∨BS2 Quality : 0% Strength: 0%	• 0.000 Mbps
	11 D∨BS2 Quality : 0% Strength: 0%	0.000 Mbps
	12 DVBS2 Guality : 0% Strength: 0%	0.000 Mbps
	13 D∀BS2 Quality : 0% Strength: 0%	• 0.000 Mbps
	14 D∨BS2 Quality : 0% Strength: 0%	0.000 Mbps
	15 D∨BS2 Quality : 0% Strength: 0%	0.000 Mbps
	Quality : 0% 16 D∨BS2 _Strength:0%	• 0.000 Mbps

Figure-3



Parameters→ASI input

From the menu on left side of the webpage, click "ASI Input", it displays the interface where you can

check the 2x ASI input status. (Figure-4)

Tuner to IP Gate	eway		
Web Management			2017-03-01 17:16:29
Summary Status 	ASI INPUT		
Parameters Tuner Input ASI Input Biss Program Parse IP Stream	ASI1: Signal Lock: Bitrate: ASI2:	• 0.000 Mbps	
System Network Date Time Password	Signal Lock: Bitrate:	е 0.000 Мbps	
 Save Restore Backup Load Firmware 			
	<		8

Figure-4



Parameters→BISS

From the menu on left side of the webpage, click "BISS", it displays the interface where you can configure BISS and descramble the input channels (Figure-5).

Tuner to IP Ga	teway					
Web Management					2017-0	3-01 17:16:29
Summary Status Parameters	BISS CONFIGURATION	nt Output:	Сні	- Salar	t the out	aut
Tuner Input ASI Input	Overview					Jui
Biss Program Parse IP Stream	Index	Alias	Session Word(0x)	Inject ID(0x)	Mode	Add
System						
 Network Date Time Password Save Restore Backup Load Firmware 						
	<					>

Figure-5



Parameters→**Program Parse**

From the menu on left side of the webpage, click "Program Parse", it displays the interface where you can parse the program from the input channels.

When you disable the ASI input, the RF to IP Gateway can support 16 Tuner inputs with 16 MPTS IP outputs (Figure-6).

Web Management 2017-03-01 17:16:29 Summary Status Parameters ASI Input ASI Input ASI Input Biss Program Parse IP Stream Losked System 10000 MI Ast Tuner DVBS2 1 (prog: 0) 0.0000 MI -2 Tuner DVBS2 2 (prog: 0) 0.0000 MI -3 Tuner DVBS2 2 (prog: 0) 0.0000 MI -4 Tuner DVBS2 2 (prog: 0) 0.0000 MI -9 Stream 0.0000 MI -9 Tuner DVBS2 2 (prog: 0) 0.0000 MI -9 Tuner DVBS2 10 (prog: 0) 0.0000 MI -9 Tuner DVBS2 10 (prog: 0) 0.0000 MI -9 Tuner DVBS2 10 (prog: 0) 0.0000 MI -9 Tuner DVBS2 12 (prog: 0) 0.0000 MI	Web Management 2017-03-01 17:16:29 Summary Status Parameters ASI Input: Tuner Input ASI Input: Program Parse Image: Construction of the construc	Tuner to IP Gatew	/ay		
Summary • Status Parameters • Tuner Input • ASI Input • Biss • Program Parse • P Stream • Status • Date Time • Password • Save Restore • Bisk • Password • Save Restore • Backup Load • Firmware	Summary Status Parameters Asl Input Sise Pargam Parse Porgam Parse Porgam Parse Password Save Restore Save Restore Save Restore Firmware Pirmware Persent Conter DVBS2 2 (prog. 0) Imput Conter DVBS2 2 (prog. 0) Imput Conter DVBS2 2 (prog. 0) Imput Conter DVBS2 2 (prog. 0) Tuner DVBS2 1 (prog. 0)<th>Web Management</th><th></th><th></th><th>2017-03-01 17:16:29</th>	Web Management			2017-03-01 17:16:29
Parameters ASI Input Enable and Disable the ASI input ▲ ASI Input ■ Inse ■ Inse ■ Inse ■ ASI Input ● Program Parse ■ Inse ■ Lose ■ Locked ■ Inse ■ Inse ■ Inse ● JP Stream ■ One DVBS2 1 (prog: 0) ■ 0.000 M ■ 0.000 M ■ 0.000 M ● Date Time DVBS2 1 (prog: 0) ■ 0.000 M ■ 0.000 M ■ 0.000 M ● Save Restore ■ One DVBS2 8 (prog: 0) ■ 0.000 M ■ 0.000 M ● Stare DVBS2 10 (prog: 0) ■ 0.000 M ■ 0.000 M ■ 0.000 M ● Tuner DVBS2 10 (prog: 0) ■ 0.000 M ■ 0.000 M ■ 0.000 M ● Save Restore ■ 0.000 M ■ 0.000 M ■ 0.000 M ■ 0.000 M ● Tuner DVBS2 10 (prog: 0) ■ 0.000 M ■ 0.000 M ■ 0.000 M ■ 0.000 M ● Tuner DVBS2 10 (prog: 0) ■ 0.000 M ■ 0.00	Parameters Tuner Input ASI Input Biss Program Parse IP Stream Parse Date Tuner DVBS2 1 (prog: 0) 2 Tuner DVBS2 2 (prog: 0) 3 Tuner DVBS2 3 (prog: 0) 3 Tuner DVBS2 3 (prog: 0) 9 Course of the transport of transp	Summary Status 	PROGRAM PARSE		
ASI Input Parse ASI input Program Parse IP Stream Common Co	 ASI Input Biss Program Parse IP Stream ASI input Cose ⇒ Locked I Turer DVBS2 (prog. 0) Q.000 M] Q.000 M]	Parameters Tuner Input	ASI Input:	disable	Enable and Disable
Program Parse IP Stream System Network Date Time Password Save Restore Backup Load Firmware Uner DVBS2 1 (prog: 0) (0.000 M] -4 Tuner DVBS2 3 (prog: 0) (0.000 M] -5 Tuner DVBS2 4 (prog: 0) -6 Tuner DVBS2 5 (prog: 0) -7 Tuner DVBS2 6 (prog: 0) -8 Tuner DVBS2 7 (prog: 0) -9 Tuner DVBS2 9 (prog: 0) -9 Tuner DVBS2 9 (prog: 0) -10 Tuner DVBS2 19 (prog: 0) -11 Tuner DVBS2 11 (prog: 0) -11 Tuner DVBS2 12 (prog: 0) -11 Tuner DVBS2 13 (prog: 0) -11 Tuner DVBS2 14 (prog: 0) -11 Tuner DVBS2 15 (prog: 0) -11 Tuner DVBS2 16 (prog: 0) <td>▶ Program Parse ▶ Network ▶ Date Time ▶ Date Time ▶ Password ▶ Save Restore ▶ Backup Load ▶ Firmware ▶ To uner DVBS2 6 (prog: 0) ▶ 10000 M] → 10000 M] → 5 Tuner DVBS2 6 (prog: 0) ⊕ Backup Load ▶ Firmware ▶ To uner DVBS2 9 (prog: 0) → 10 Tuner DVBS2 10 (prog: 0) → 10 Tuner DVBS2 12 (prog: 0) → 10 Tuner DVBS2 13 (prog: 0) → 10 Tuner DVBS2 13 (prog: 0) → 10 Tuner DVBS2 16 (prog: 0) → 10 Tuner DVBS2 10 (prog: 0) → 10 Tuner DVBS2 10 (prog: 0)<</td> <td> ASI Input Biss </td> <td>Parse</td> <td></td> <td>ASI input</td>	▶ Program Parse ▶ Network ▶ Date Time ▶ Date Time ▶ Password ▶ Save Restore ▶ Backup Load ▶ Firmware ▶ To uner DVBS2 6 (prog: 0) ▶ 10000 M] → 10000 M] → 5 Tuner DVBS2 6 (prog: 0) ⊕ Backup Load ▶ Firmware ▶ To uner DVBS2 9 (prog: 0) → 10 Tuner DVBS2 10 (prog: 0) → 10 Tuner DVBS2 12 (prog: 0) → 10 Tuner DVBS2 13 (prog: 0) → 10 Tuner DVBS2 13 (prog: 0) → 10 Tuner DVBS2 16 (prog: 0) → 10 Tuner DVBS2 10 (prog: 0) → 10 Tuner DVBS2 10 (prog: 0)<	 ASI Input Biss 	Parse		ASI input
	Parse program time out: 60 seconds	 Program Parse IP Stream System Network Date Time Password Save Restore Backup Load Firmware 	→Lose → Locked →1 Tuner DVBS2 1 (prog: 0) →2 Tuner DVBS2 2 (prog: 0) →3 Tuner DVBS2 3 (prog: 0) →4 Tuner DVBS2 4 (prog: 0) →5 Tuner DVBS2 5 (prog: 0) →6 Tuner DVBS2 6 (prog: 0) →7 Tuner DVBS2 8 (prog: 0) →9 Tuner DVBS2 8 (prog: 0) →10 Tuner DVBS2 10 (prog: 0) →11 Tuner DVBS2 11 (prog: 0) →11 Tuner DVBS2 13 (prog: 0) →14 Tuner DVBS2 14 (prog: 0) →15 Tuner DVBS2 15 (prog: 0) →16 Tuner DVBS2 16 (prog: 0)		[0 000 M] [0 000 M]
					.:

Figure-6



When you enable the ASI input, the RF to IP Gateway can support 14 Tuner inputs and 2 ASI inputs with 16 MPTS IP outputs (Figure-7).

Tuner to IP Gate	eway	
Web Management		2017-03-01 17:16:29
Summary Status Parameters Tuner Input ASI Input Biss Program Parse IP Stream System Network Date Time Password Save Restore Backup Load Firmware	Program parse Asinpr: Parse Close Locked Image: 1 Tuner DVBS2 1 (prog: 0) -2 Tuner DVBS2 2 (prog: 0) -3 Tuner DVBS2 2 (prog: 0) -3 Tuner DVBS2 4 (prog: 0) -5 Tuner DVBS2 5 (prog: 0) -5 Tuner DVBS2 5 (prog: 0) -5 Tuner DVBS2 8 (prog: 0) -9 Tuner DVBS2 10 (prog: 0) -9 Tuner DVBS2 10 (prog: 0) -9 Tuner DVBS2 10 (prog: 0) -9 Tuner DVBS2 11 (prog: 0) -9 Tuner DVBS2 11 (prog: 0) -9 Tuner DVBS2 13 (prog: 0) -9 Tuner DVBS2 14 (prog: 0) -9 Tuner DVBS2 14 (prog: 0) -11 Tuner DVBS2 14 (prog: 0) -9 Taner DVBS2 14 (prog: 0) -15 ASI 1 (prog: 0) -9 Taner DVBS2 14 (prog: 0) -9 Taner DVBS2 14 (prog: 0) -9 Taner DVBS2 14 (prog: 0) -11 Tuner DVBS2 14 (prog: 0) -9 Taner DVBS2 14 (prog: 0) -11 Tuner DVBS2 14 (prog: 0) -9 Taner DVBS2 14 (prog: 0) -9 Taner DVBS2 14 (prog: 0) -9 Taner DVBS2 14 (prog: 0) -9 Taner DVBS2 14 (prog: 0) -9 Taner DVBS2 14 (prog: 0) -9 Taner DVBS2 14 (prog: 0) -9 Taner DVBS2 (prog: 0) -9 Taner DVBS2 14 (prog: 0) -9 Taner DVBS2 (prog: 0) -9 Taner DVBS2 (prog: 0) -9 Taner DVBS2 (prog: 0) <td>[0.000 M] [0.000 M]</td>	[0.000 M] [0.000 M]

Figure-7



Parameters→**IP** Stream

The H-16QAM-IP-RF supports TS to output in IP (16*MPTS) format through the GE1 or GE2 port. Click 'IP Stream', it will display the interface where to set IP out parameters (Figure-8).

Tuner to IP Gatew	/ay						
Web Management						2017-03-01	17:16:29
Summary Status	IP STREAM					GE1	
Parameters Tuner Input ASI Input		Output Output	Port: Protocol:	GE1			
 Biss Program Parse 	IP Out					IMP	
► IP Stream		Enable	Null PKT Filter	Output IP	Port	VDP STP/STCP	
System		01: 🗹		224. 2. 2. 2	2000	hir/hisr	
Network		02: 🗹		224. 2. 2. 2	2002		_
Date Time		03: 🗹		224. 2. 2. 2	2004		
Password		04: 🗹		224. 2. 2. 2	2006		
Save Restore Backup Load		05: 🗹		224.2.2.2	2008		
 Firmware 		06: 🗹		224.2.2.2	2010		
		07: 🗹		224.2.2.2	2012		
		08: 🗹		224.2.2.2	2014		
		09: 🗹		224. 2. 2. 2	2016		
		10: 🗹		224. 2. 2. 2	2018		
		11: 🗹		224. 2. 2. 2	2020		
		12: 🗹		224. 2. 2. 2	2022		
		13: 🗹		224. 2. 2. 2	2024		
		14: 🗹		224. 2. 2. 2	2026		
		15: 🗹		224. 2. 2. 2	2028		
		16: 🗹		224. 2. 2. 2	2030		
				Default	App	ply	

Figure-8

This RF to IP Gateway supports 16 Tuner inputs and 2 ASI input with 512 SPTS output, the parameter interface is different from MPTS. When you switch MPTS to SPTS, the new mode will work after you reboot the device.



Parameters→Tuner Input (SPTS MODE)

From the menu on the left side of the webpage, click "Tuner Input", it displays the interface where you can check the 16 Tuner input status. (Figure-9)

Tuner to IP Gatewa	ay(SPTS)					
Web Management					2017-03-01 17:16	6:29
Summary Status Parameters	TUNER INPUT					<
Tuner Input ASI Input TE Confirm	Tuner 1 DVB-S/S2	Quality: Strength:	0% 0%	🛑 0.000 Mbps	Freq:3840.000MHz LNB Freq:5150.000MHz Symbolrate:27500Ksps	
Biss SPTS select	2 DVB-S/S2	Quality: Strength:	0% 0%	😑 0.000 Mbps	Freq:3840.000MHz LNB Freq:5150.000MHz Symbolrate:27500Ksps	
System	3 DVB-S/S2	Quality: Strength:	0% 0%	😑 0.000 Mbps	Freq:3840.000MHz LNB Freq:5150.000MHz Symbolrate:27500Ksps	
Restore	4 DVB-S/S2	Quality: Strength:	0%	😑 0.000 Mbps	Freq:3840.000MHz LNB Freq:5150.000MHz Symbolrate:27500Ksps	
 Backup Load Firmware 	5 DVB-S/S2	Quality: Strength:	0%	😑 0.000 Mbps	Freq:3840.000MHz LNB Freq:5150.000MHz Symbolrate:27500Ksps	
	6 DVB-S/S2	Quality: Strength:	0% 0%	🔴 0.000 Mbps	Freq:3840.000MHz LNB Freq:5150.000MHz Symbolrate:27500Ksps	
	7 DVB-S/S2	Quality : Strength:	0% 0%	0.000 Mbps	Freq:3840.000MHz LNB Freq:5150.000MHz Symbolrate:27500Ksps	
16 Tuner	8 DVB-S/S2	Quality : Strength:	0% 0%	0.000 Mbps	Freq:3840.000MHz LNB Freq:5150.000MHz Symbolrate:27500Ksps	
input status	9 DVB-S/S2	Quality: Strength:	0% 0%	🔴 0.000 Mbps	Freq:3840.000MHz LNB Freq:5150.000MHz Symbolrate:27500Ksps	
	10 DVB-S/S2	Quality: Strength:	0% 0%	😑 0.000 Mbps	Freq:3840.000MHz LNB Freq:5150.000MHz Symbolrate:27500Ksps	
	11 DVB-S/S2	Quality : Strength:	0% 0%	🔴 0.000 Mbps	Freq:3840.000MHz LNB Freq:5150.000MHz Symbolrate:27500Ksps	
	12 DVB-S/S2	Quality: Strength:	0% 0%	😑 0.000 Mbps	Freq:3840.000MHz LNB Freq:5150.000MHz Symbolrate:27500Ksps	
	13 DVB-S/S2	Quality: Strength:	0% 0%	😑 0.000 Mbps	Freq:3840.000MHz LNB Freq:5150.000MHz Symbolrate:27500Ksps	
	14 DVB-S/S2	Quality: Strength:	0% 0%	😑 0.000 Mbps	Freq:3840.000MHz LNB Freq:5150.000MHz Symbolrate:27500Ksps	
	15 DVB-S/S2	Quality: Strength:	0% 0%	🔴 0.000 Mbps	Freq:3840.000MHz LNB Freq:5150.000MHz Symbolrate:27500Ksps	
	16 DVB-S/S2	Quality: Strength:	0% 0%	😑 0.000 Mbps	Freq:3840.000MHz LNB Freq:5150.000MHz Symbolrate:27500Ksps	
				.1		~



Parameters→ASI Input (SPTS MODE)

From the menu on top side of the webpage, click "ASI Input", it displays the interface where users

can check the 2 channels ASI input status. (Figure-10)

Tuner to IP Gate	way(SPTS)		
Web Management			2017-03-01 17:16:29
Summary Status Parameters Tuner Input ASI Input TS Config Biss SPTS select System Network Password Save Restore Backup Load Firmware	ASI INPUT ASI ASI Signal Lock: Bitrate: ASI2 Signal Lock: Bitrate:	0.000 Мbps 0.000 Мbps	2017-03-01 17:16:29

Figure-10



Parameters→TS Config (SPTS MODE)

Click "TS Config", it displays the interface where you can set the output TS and configure TS ID and ON ID the four output channel (Figure-11)..

Figure-11



Parameters→BISS: (SPTS MODE)

From the menu on left side of the webpage, click "BISS", it displays the interface where you can configure BISS and descramble the input channels (Figure-12).

Tuner to P Galeway (SPTS)	
Web Management 2017	-03-01 17:16:29
Summary Status BISS CONFIGURATION	-
Parameters	
ASI Input Index Alias Session Word(0x) Inject ID(0x) Mode TS Config Index Alias Session Word(0x) Inject ID(0x) Mode	Add
Biss SPTS select Edit	×
System • Network • Password • Save Restore • Backup Load • Firmware	
	×

Figure-12



Parameters → **SPTS Select:**

From the menu on left side of the webpage, click "SPTS Select", it displays the interface where you can choose 16 Tuner inputs and 2 ASI Input programs to output from IP (max 512 SPTS). (Figure-13)

Tuner to IP Gateway(SPTS)	
Web Management	2017-03-01 17:16:29
Summary Status Parameters Tuner Input ASI Input TS Config	[0.000 M] ■ ■ ■ Overflow [0.000 M] ■ ■ ■ Overflow [0.000 N] ■ CA Filter
► Biss ⇒3 Iuner UV8-S/S2 (prog. 0) ► SPTS select ⇒4 Tuner DV8-S/S2 (prog. 0) System ⇒6 Tuner DV8-S/S2 (prog. 0) ► Network ⇒6 Tuner DV8-S/S2 (prog. 0) ► Password ⇒7 Tuner DV8-S/S2 (prog. 0) ► Save Restore ⇒10 Tuner DV8-S/S2 (prog. 0) ► Backup Load ⇒11 Tuner DV8-S/S2 (prog. 0) ► Firmware ⇒11 Tuner DV8-S/S2 (prog. 0) ⇒11 Tuner DV8-S/S2 (prog. 0) ⇒12 Tuner DV8-S/S2 (prog. 0) ⇒13 Tuner DV8-S/S2 (prog. 0) ⇒14 Tuner DV8-S/S2 (prog. 0) ⇒14 Tuner DV8-S/S2 (prog. 0) ⇒15 Tuner DV8-S/S2 (prog. 0) ⇒14 Tuner DV8-S/S2 (prog. 0) ⇒14 Tuner DV8-S/S2 (prog. 0) ⇒15 Uner DV8-S/S2 (prog. 0) ⇒15 Tuner DV8-S/S2 (prog. 0) ⇒14 Tuner DV8-S/S2 (prog. 0) ⇒16 Tuner DV8-S/S2 (prog. 0)	0 000 N 0 000 N
Parse program time out 60 seco Input Area	Output Area
	Operation Area



Configure 'Input Area' and 'Output Area' with buttons in 'Operation Area'. Instructions are as below: CA Filter : To filter/not filter the source CA information

^I PidRemap</sup> : To enable/disable the PID remapping

Refresh Input To refresh the input program information

Refresh Output To refresh the output program information

Select one input program first and click this button to transfer the selected program to the

right box to output.

Similarly, user can cancel the multiplexed programs from the right box.

- All Input To select all the input programs
- All Output To select all the output programs

Parse program To parse programs time out 60 seconds time limitation of parsing input programs



> Program Modification:

The multiplexed program information can be modified by clicking the program in the 'output' area. For example, when 4: © CCTV-101=>239.93.0.1.5101 clicking, it triggers a dialog box (Figure 14) where you can input new information.

Program Information		
Program From Input: Service Name: Program Number Service Type: Service Provider: PMT Descriptor Data: PMT Descriptor Data: PMT PID: PCR PID: MPEG-2 Video PID: MPEG-1 Audio PID:	CH1_Module 1 [101] [CCTV-101 [1 [Dx01 [V-Provider] x00 [Dx0020 [Dx0020 [Dx0021 [Dx0022] [Dx0022	(Hex)
		Apply Close

Figure-14

System → Network:

Click 'Network', it will display the interface as Figure-15 where to set network parameters.

Status Pictore front • Original Parse • Disis • Disis <tr< th=""><th>Web Management</th><th></th><th></th><th>2017-03-01 17:1</th></tr<>	Web Management			2017-03-01 17:1
Status • Status NMS • Status P Address: 192 100 55.35 • Status P Address: 192 100 55.35 • Branna Parse P Address: 192 100 55.35 • Date Image Parse 00 192 100 51.311.46 • Date Image Parse 00 20 55.255.05 00 • Date Image Parse 00 20 55.255.05 00 • Date Image Parse 00 20 55.255.05 00 • Date Image Parse 192 100 4.137 00 • P Address: 20 27 02 13 411.46 100 • Firmware 00 20 70 20 13 411.46 100 • Figure-15 Figure-15 100	Summary			
Pranteters NMS * ASI input Biss Biss Subnet Mask: 255,255,255,0 Gateway: 192,160,55,35 System Web Manage Port: 20 * Network Data Time Mac Address: 2017-02-13-11-46 > Save Restore Backup Load P Address: 192,160,4,137 > Save Restore Subnet Mask: 255,255,255,0 Gateway: > Save Restore Backup Load P Address: 192,160,4,137 > Save Restore Gateway: 192,160,4,137 Gateway: > Firmware P Address: 20-27-02-13-11-46 Appr	Status	NETWORK		
Funer Input P Address: 192.163.55.35 Biss Subnet Mask: 255.555.05 Gateway: 192.163.55.1 P Stream Web Manage Port: 80 Save [Restore] DATA P Address: 192.160.4.137 Save [Restore] Backup [Load P Address: 192.160.4.137 Address: Biss Gateway: 192.160.4.137 Subnet Mask: 255.255.0 Gateway: 192.160.4.137 Save [Restore] Backup [Load P Address: 192.160.4.137 MAC Address: 20.27.02.13.11.46 Address: Firmware P Address: 20.27.02.13.11.46 Address: 20.27.02.13.11.46 Address:	Parameters	NMS		
 Solver Masic: 255, 255, 0 Gateway: 192, 168, 55, 1 Web Manage Port: 80 MAC Address: 20-17-02-13-11-46 Date I Time Password Backup I Lod Firmware P Address: 20-27-02-13-11-46 Accord 	Tuner Input	IP Address:	192. 168. 55. 35	
Figs Program Gateway: 192,165,55,1 Web Manage Port: 80 MAC Address: 20:17-02:13:11-46 Date I Time Password Save I Restore Backup I Load Firmware IP Address: 192,166,41.137 Save I Restore Subnet Mask: 255,255,255,0 Gateway: 192,168,41 MAC Address: Pirmware MAC Address: 20:27:02:13:11-46	ASI Input	Subnet Mask:	255. 255. 255. 0	
P Stream System Network Data P Address: 20:17-02:13:11-46 Data P Address: 20:17-02:13:11-46 P Address: Subnet Mask: 20:27-02:13:11-46 Prigure-15	 Diss Program Parse 	Gateway:	192, 168, 55, 1	
System MAC Address: 20-17-02-13-11-46 Network Data Time Password Save Restore Backup Load Firmware MAC Address: 20-27-02-13-11-46 MAC Address: 20-27-02-13-11-46 Appen Figure-15	▶ IP Stream	Web Manage	Port: 80	
Network Data Time Password P Address: 192.160.4.137 Save Restore Backup Load Gateway: 192.180.4.1 MAC Address: 20-27-02-13-11-46 Approx	System	MAC Address	: 20-17-02-13-11-46	
Date Time Password Save Restore Backup Load Firmware DATA P Address: 192:188.4.137 Subnet Mask: 20:27:02:13:11:46 Apper Figure-15	Network			Apply
▶ Password IP Address: 192.188.4.137 > Save [Restore] Subnet Mask: 255.255.0 Backup [Load Gatewap: 192.188.4.1 MAC Address: 20-27-02-13-11-46	Date Time	DATA		
Subnet Mask: gs5. 255. 0 Gateway: 192. 108. 4.1 MAC Address: 20-27-02-13-11-46 Appr. Figure-15	Password Save I Destars	IP Address:	192.168.4.137	
Firmware Gateway: 192.108.4.1 MAC Address: 20-27-02-13-11-46 MAC Address: 20-27-02-13-11-46 Figure-15 Figure-15	 Backup Load 	Subnet Mask:	255.255.255.0	
Figure-15	Firmware	Gateway:	192.168.4.1	
Figure-15		MAC Address	20-27-02-13-11-46	
Figure-15				Apply
Figure-15				
		Eigung	. 15	
		Figure	-15	
		Figure	e-15	
		Figure	-15	
		Figure	e-15	
		Figure	15	
		Figure	e-15	
		Figure	-15	
		Figure	-15	
		Figure	e-15	
		Figure	-15	



System → Date/Time:

From the menu on left side of the webpage, click "Date/Time", it will display the screen as in Figure-16 where to set date and time for the device.

Tuner to IP Gate	vav				
Web Management					2017-03-01 17:16:29
Summary Status	DATE & TIME				
Parameters Tuner Input ASI Input Biss	Date: Time:	2015 0	- 6	- 1 : 48	
Program Parse IP Stream System					
Network Date Time Password Save Restore Backup Load					
Firmware					

Figure-16

System → Password:

From the menu on left side of the webpage, click "Password", it will display the screen as in

Figure-17 where to set the login account and password for the web NMS.

Web Management	2017-03-01 17:16:29
Summary Status	PASSWORD
Parameters Tuner Input ASI Input Biss Program Parse	Modify the login name and password to make the device safely. If forget the name or password you can reset it by keyboard. The default login name and password is "admin" Also please note the capital character and lowercase character.
 IP Stream System Network Date [Time Password Sae [Restore Backup [Load Firmware 	Current VaerName:

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Figure-17

System → Save/Restore:

From the menu on left side of the webpage, clicking "Save/Restore", it will display the screen as Figure-18 where to save or restore your configurations.

Web Management	2017-03-01
ummary	SAVE CONFIGURATION
 Status 	
arameters	When you channe the norameter you should save configuration, otherwise the
Tuner Input	new configuration will lost after reboot.
ASI Input	
Program Parse	Save config
IP Stream	RESTORE CONFIGURATION
ystem	
Network	Load latest saved configuration after click the "Restore" then please click the
Date Time	"Save config" button, otherwise the "Restore" parameter will lost after reboot.
Password	
Save Restore	Restore
 Firmware 	FACTORY SET
	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 rebort.
	Fectory set

Figure-18

System → Backup/Load:

From the menu on left side of the webpage, clicking "Backup/Load", it will display the screen as

Figure-19 where to backup or load your configurations.

Web Management		2017-03-01 17:16:
Summary	BACKUP CONFIGURATION	
Parameters Tuner Input ASI Input Biss	Backup current configuration to the local file,we suggest do this before set to configuration or update firmware.	he
Program Parse IP Stream	LOAD CONFIGURATION	3
System		
Network Date Trine Password Save Restore Backup Lead Firmware	Load the backup file to restore your configuration. Warning: 1. 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. 2. Please do not turn off the power while file loading, otherwise the devi will not work. Send Loast config	ce



Figure-19

System → Firmware:

From the menu on left side of the webpage, click "Firmware", it will display the screen as in

Figure-20 where to update firmware for the device.

Figure-20



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

H-8QAM-IP-RF	1PC
User's Manual CD	1PC
Power Cord	1PC
RF In and Loop-out Cables	16PCS



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