NetUP Streamer HD v2 8-24x

User manual

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1/7, Ulofa Palme str., Moscow, Russia +7 (495)510-1025 | info@netup.tv | http://netup.tv

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Chapter 1 Introduction

NetUP Streamer HD v2 8-24x is a professional HD audio & video encoding and multiplexing device. It has 12 HDMI (8/16/20/24 HDMI optional) video input interfaces, supporting MPEG-4 video encoding and MPEG 1 Layer 2 audio encoding. This device can simultaneously encode 12(8/16/20/24 HDMI optional) channel HD audio & video; moreover, it has an IP output port can support 1MPTS and 12SPTS (8/16/20/24 SPTS) IP out. In conclusion, its high integration and design make the device widely used in varieties of digital distribution systems such as cable TV digital head-end, satellite digital TV broadcasting etc.

Appearance and illustration



Front panel:

1	Reset key
3	ASI output port (Optional)
4	Data port indicator
5	DATA Port (one GE port and one FE for IP stream output)
6	NMS/CAS





Rear panel:

1	Power switch, fuse, power socket and grounding pole
2	24 HDMI input



Specifications

Input	12 HDMI inputs (8/12/16/20/24 input optional)				
	Encoding			MPEG-4 AVC/H.264	
	Resolution	ution input		1920×1080_60P, 1920×1080_60i,	
				1920×1080_50P, 1920×1080_50i,	
				1280×720_60P, 1280×720_50P,	
				720×576_50i,720×480_60i	
Video		output		1920×1080_30P, 1920×1080_25P,	
				1280×720_30P, 1280×720_25P,	
				720×576_25P,720×480_30P	
	Bitrate			1Mbps~13Mbps (each channel)	
	Rate control			CBR/VBR	
	GOP Structure			IPP (P Frame adjustment, without B Frame)	
	Encoding			MPEG-1 Layer 2	
	Sample rate			48KHz	
Audio	Resolution			24-bit	
	Bitrate			64kbps, 128Kbps, 192kbps, 224kbps, 256kbps,	
				320kbps, 384kbps	
	Maximum PID F	Remapping		180 input per channel	
Multiploving				PID remapping (automatically or manually)	
Multiplexing	Function			Accurate PCR adjusting	
				Generate PSI/ SI table automatically	
Output	12×SPTS IP or 1	MPTS outp	ut ove	er UDP/RTP, 1×1000 Base-T Ethernet interface	
Output	ASI output (opt	ional) as co	py of	MPTS	
System	Network management (WEB)				
System	Ethernet software upgrade				
	Dimension (W×	:L×H)	482r	nm×410mm×44mm	
Othor	Approx. weight		8kg		
narametors	Temperature		0~45	5°C (work); -20~80°C (storage)	
parameters	Power requiren	nents	AC 1	00V-220V±10%, 50/60Hz	
	Power consump	otion	70W		



Chapter 2 Installation guide

Device's installation flow chart



Before installing and connecting the device, carefully read the environment and grounding requirements, as well as safety instructions for the sake of your safety and for the safety of the device

Packing list check

Check items according to packing list. Normally it should include the following items:

- NetUP Streamer HD v2 8-24x
- Power Cord
- HDMI cable

Safety instructions

- Before installing and connecting the device make sure that the device was not damaged during delivery.
- Install the device in an appropriate place. The device is designed to work in a clean and dry room. It must be operated and maintained free of dust.
- Before switching on the device make sure that it is adjusted to the mains voltage you intend to use. Make sure that you keep within the specifications AC 100V-220V±10%, 50/60Hz.
- Check that all the cables are connected properly. Connect cables only to a device that is turned off.



Item	Requirement
Room space	When installing a rack in the room, make sure the distance between two
	rows of racks is 1.2~1.5m and the distance to the wall must be at least 0.8m.
Room floor	Electric isolation. Dust free. The volume resistivity of ground anti-static
	material: 1×107~1×1010 Ω . Grounding current limiting resistance: 1M (Floor
	bearing should be greater than 450Kg/m ²).
Environment	5~40°C (sustainable), 0~45°C (short time).
temperature	Installing air-conditioning is recommended.
Relative temperature	20%~80% (sustainable); 10%~90% (short time).
Pressure	86~105KPa
Door & window	Install rubber strip for sealing door-gaps and dual level glasses for windows
Walls	Can be covered with wallpaper or dark paint.
Fire protection	Fire alarm system and extinguisher.
Power	The device requires AC 100V-220V±10%, 50/60Hz.
	Please carefully check before running.

Environment requirement

Grounding requirement

- Connect the ground wire to the grounding hardware on the device. Ground resistance should be no more than 1 Ω



Grounding is essential for device's functionality, surge and electronic interference protection

- Keep proper contact with the metal housing of the device
- Grounding wire must be made out of copper and as thick and short as possible
- Make sure the two ends of grounding wire conduct electricity and are not rusty
- It is prohibited to use any other devices as a part of grounding electric circuit
- All racks should be connected with a protective copper strip. Ground loops should be avoided
- Grounding wire's contact area with the rack should be no less than 25mm²



Chapter 3 WEB NMS Operation

Use the Web interface to control NetUP Streamer HD v2 8-24x.

Login

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



Make sure that the computer's IP address is different from the device's IP address; otherwise, it would cause an IP conflict

The default IP address of NetUP Streamer HD v2 8-24x is **192.168.0.136**. Thus, set the computer's IP address to 192.168.0.X, where X can be from 0 to 255, except 136. Open a web browser, enter the device's IP address in the browser address bar and press **Enter**. If the network is configured correctly, you will see the login interface (Figure 1).

Enter username and password and click **LOGIN** to enter the web interface. Default username is "admin", default password is "admin".

Web Management	+	÷
€ → 192,168.0.136	למי עי 😋 🛃 - Google	۹ 🗈
	TELEPANY	
	Password:	
	Default User:admin	
	Derault Password:admin	
	Conversity @2011	

Figure-1



Summary → Status

After login, you will get the **Status** page which displays the current system status (Figure-2).

Encoder				
Summary ▶ Status Parameters	DEVICE INFORMATION			
Module 1 Module 2 Module 3 TS Config IP Stream OSD System		Software Version: Hardware Version: Web Version: System Version: Product ID: Unitme:	1.70 Build 153.01 Mar 23 2017 1.2.0.0.0 1.01 1.01.1.62 03642400-00000010-0000000-000 0.0av 21:53:30	00000
Network Password Configuration Firmware Date Time Log	Use this menu to navigate between the interface pages	<u> </u>	rstem information	



Parameters \rightarrow Module 1-6

This encoder supports up from 2 to 6 modules with 8/12/16/20/24 HDMI input. Use the **Module 1-6** page to set coding parameters for each channel (Figure-3).

Encoder						
Summary Status Parameters Module 1 Module 2	MODULE 1	nc CH 2 Enc CH 3	Enc CH 4	Select a	a channel	
 Module 3 TS Config IP Stream OSD Set 	Video Bitrate: H.264 Profile:	13.00 High Profile	(1 ~ 13 Mbps)	RateMode: Share PCR PID:	VBR	•
System Network Password Configuration	Audio Bitrate: System	384 Kbps 💌		Audio Gain:	128	<u>(</u> 0 ~ 255)
 ▶ Firmware ▶ Date Time ▶ Log 	PCR Interval: Status	20	0~35)			
	Video Lock: Bitrate: Audio Samplerate:	10.505 Mbps 48.0K-48.0K	[Video Resolution: Error Code: Rom Version: Confirm chan	1920×1080 50P 0 206.09.1.12 ges	ply

Figure-3



Parameters \rightarrow TS Config

Use the **TS Config** page to configure the TS output parameters and select one of the following tabs: **Stream Select, General** or **PID Bypass**.

Stream Select

Select the **Stream Select** tab to select streams that should be sent to Mux out and to modify program info (Figure-4).

Encoder					
Summary Status Parameters Module 1 Module 2	NFIG Stream Select General	PID Bypass			-
 Module 3 ►TS Config ►P Stream OSD System Network Password Configuration Firmware Date Time Log 	→LOSE → Locked →1: Module 1 (prog: 4/4) 1: 12 [101] TV-101 2: 102] TV-102 1: 3: 103] TV-103 1: 4: 104] TV-104 4: →2: Module 2 (prog: 4/4) 1: →3: Module 3 (prog: 4/4) Input area Parse program time out 60 second	[52.4.52.4M] [52.1/52.1M] [52.3/52.3M]	CA Filter FID Remap Refresh Input Refresh Output	Normal → Overflow ⇒ Overflow ⇒ Output (prog: 12) ^{III} : TV-101=>224.2.2.2:3000 ^{III} : TV-102=>224.2.2.2:3002 ^{III} : TV-103=>224.2.2.2:3004 ^{III} : TV-201=>224.2.2.2:3006 ^{III} : TV-201=>224.2.2.2:3010 ^{III} : TV-203=>224.2.2.2:3010 ^{III} : TV-203=>224.2.2.2:3011 ^{III} : TV-301=>224.2.2.2:3011 ^{III} : TV-301=>224.2.2.2:3010 ^{III} : TV-301=>224.2.2.2:3010 ^{III} : TV-301=>224.2.2.2:3010 ^{III} : TV-301=>224.2.2.2:3010 ^{III} : TV-303=>224.2.2.2:3010 ^{III} : TV-303=>224.2.2.2:3020 ^{IIII} : TV-303=>224.2.2.2:3022 ^{IIII} : TV-304=>224.2.2.2:3022	(151.0/200.0M) Output area

Figure-4

Configure input and output streams with following buttons:

+	add an input channel	×	delete an input channel		
	edit an input channel	â	delete all input channels		
Lose / Locked		input si	gnal lock. Green means signal is present		
Normal / Overflow		TS over you nee	flow status. Red means that TS is overflowing and ed to decrease number of channels		
CA Filter		filter or not filter the source CA information			
PID Remap		enable or disable PID remapping			
Refresh input / output		refresh an input or an output			
===> / <===		move programs between the input and the output areas			
All inp	ut / output	select all input or output programs			
Parse program		parse programs with a time limit			



Click on a program in the output area to open the **Program information** window (Figure-5):

rogram mormation		[0030
Program From Input:	CH1_Module 1 [101]	
Service Name:	TV-101	
Program Number:	1001	
Service Type:	0x01	
Service Provider:	TV-Provider	
PMT Descriptor Tag:	Ox00	
PMT Descriptor Data:	(Hex)	
PMT PID:	0x0020	
PCR PID:	0x0021	
MPEG-4 Video PID:	0x0021	
MPEG-1 Audio PID:	0x0022	

Figure-5

General

Select the **General** tab to edit common parameter for output streams (Figure-6).

Encoder		
Summary	TS CONFIG	
Status Parameters Module 1 Module 2 Module 3	Stream Select General PID Bypass	
► TS Config ► IP Stream ► OSD System	Output Bitrate: 200.000 Mbps ON ID: 1	TS ID: 1 PCR Correct V PCR State BW 1 V
Network Password Configuration	PCR Compensate	Apply
 Firmware Date Time Log 		

Figure-6



PID Bypass

Select the **PID Bypass** tab to edit the list of PIDs that should pass through (Figure-7).

Encoder		
Summan		
Status	TS CONFIG	
Parameters Module 1 Module 2	Stream Select General PID Bypass	
Module 3 TS Config Steam	Index Input Channel Input PID(0x) Output PID(0x) 1	
► OSD System		Set Del-All
 Network Password 		
Configuration Firmware Date LTime		



Parameters → IP Stream

NetUP Streamer HD v2 8-24x supports TS to output in IP format through the DATA1 and DATA2 port. Use the **IP Stream** page to set IP out parameters (Figure-8).

IP STREAM							Quick co	n
#	IP Address	Port	Protocol	Pkt Length	Null PKT Filter	Status	Bit(Act/Max)	
MPTS 1	224.2.2.2	2001	UDP	7		٠	142.9/200.0 M	j
SPTS 1	224.2.2.2	3000	UDP	7		۲	12.0/20.0 M	i
SPTS 2	224.2.2.2	3002	UDP	7		۲	12.0/20.0 M	ł
SPTS 3	224.2.2.2	3004	UDP	7		۲	12.0/20.0 M	1
SPTS 4	224.2.2.2	3006	UDP	7		`h.e.e.e.e.e.l	and in	
SPTS 5	224.2.2.2	3008	UDP	7		nannei	config	
SPTS 6	224.2.2.2	3010	UDP	7		۲	12.3/20.0 M	1
SPTS 7	224.2.2.2	3012	UDP	7		٠	12.3/20.0 M	ł
SPTS 8	224.2.2.2	3014	UDP	7		۲	12.3/20.0 M	ł
SPTS 9	224.2.2.2	3016	UDP	7		٠	12.3/20.0 M	ł
SPTS 10	224.2.2.2	3018	UDP	7		۲	12.3/20.0 M	ł
SPTS 11	224.2.2.2	3020	UDP	7		٠	12.3/20.0 M	ł
SPTS 12	224.2.2.2	3022	UDP	7		٠	12.3/20.0 M	ł

Figure-8



Parameters \rightarrow OSD

Use the **OSD** page to configure the OSD parameters and select one of the following tabs: **Logo**, **Caption** or **QRCode**.

Logo



Figure-9



Caption



Figure-10

QRCode

oder								
mmary								
Status	OSD SETTINGS							
otatao								
rameters				MOD 1	MOD 2	MOD 3	ALL	
Module 1	Logo	Caption	QRCode	PRG 1	PRG 2	PRG 3	PRG 4	ALL
Module 2								
Module 3	Video Format	1920×1	080 50P					
TS Config	QRCode Size	128	x 128					
IP Stream	QRCode (X, Y)	(356,5	28)					
OSD	Alpha(0~128)	128 Layer (1~2 1 LOGO 💙					
stem	Start Pos (D Direct	Static 💙					
Notwork	QRCode URL:							
Password								
Configuration								
Firmware	Text Location	BOLCO	m 💌					
Date Time	Text	No Tex	t					
Log	QRCode Logo	Brows	e					
	Upload		Create			맔쟶밎		
			_					
		16161				ELM. AL		
			_					
		C	a					
		en ode 5	ð –					
		1.40						
		i fodi						
				Cot	Delete	App 1sr		(a) () ()

Figure-11



System \rightarrow Network

Use the **Network** page to edit networking parameters (Figure-12).

Encoder				
Summary	NETWORK			
Parameters	NMS			
Module 1 Module 2 Module 2		IP Address:	192.168.191.42	
TS Config IP Stream		Subnet Mask: Gateway:	255.255.255.0 192.168.0.1	
► OSD		Web Manage Port: MAC Address:	80	
► Network				- Anniha
 Password Configuration 				Арриу
Firmware Date LTime	DATA			
► Log		DATA SWITCH: IP Address:	DATA 1 (1000M)	
		Subnet Mask:	255.255.255.0	
		Gateway: MAC Address:	192.168.2.1 20:27:03:21:11:37	Confirm changes
				Apply

Figure-12

System → Password

Use the **Password** page to change current password and username (Figure-13).

Encoder	
Summary ▶ Status	PASSWORD
Parameters Module 1 Module 2 Module 3 To Confin	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 OSD System	Current UserName: admin Current Password:
Network Password Configuration Firmuma	New UserName: New Password: Confirm New Password: Confirm New Password:
Firmware Date Time Log	

Figure-13



System → Configuration

Use the **Configuration** page to save or restore the system configuration, to work with backups, to return to the factory settings and to load the configuration file (Figure-14).

Encoder	
Summary	CONFIGURATION
Status Parameters Module 1 Module 2	Save Restore Factory Set Backup Load
Module 3 TS Config IP Stream	When you change the parameter,you shoud save configuration ,otherwise the new configuration will lost after reboot.
► OSD System	Come contine
Network Password Configuration Firmware	Save comp
► Log	

Figure-14

System → Firmware

Use the Firmware page to update firmware for the device (Figure-15).

FIRMWARE
 Warning: 1. Upgrade firmware(software and hardware) to get new function,please choose the right firmware to upgrade. If you use a wrong file, the device may not work. 2. Upgrade will keep a long time, please do not turn off the power, otherwise the device will not work. 3. After upgrade, you must reboot device manually.
Current Software Version: 1.70 Build 153.01 Mar 23 2017 Current Hardware Version: 1.20.0.0 File: Browse

Figure-15



System → Date | Time

Use the **Date | Time** page to set date and time for the device (Figure-16).

Encoder			
Summary	DATE TIME		
Parameters			1070.01.01.01-59-43
Module 1		757.0	
Module 2		Limezone:	(GMT) Greenwich Mean Time, Dublin, Edinburgh
Module 3		NTP Server 1:	
► TS Config		NTP Server 2:	
▶ IP Stream		NTP Server 3:	
▶ OSD			
Svetem		NIP Server 4:	
System		NTP Server 5:	
▶ Network			
Password			Set Timezone Set NTP Update from browser
Configuration			
▶ Firmware			
▶ Date Time			
► Log			



System \rightarrow Log

Use the **Log** page to see system logs (Figure-17).

Encoder	
Summary ▶ Status	LOG
 Status Parameters Module 1 Module 2 Module 3 TS Config IP Stream OSD System Network Password Configuration Firmware Date Time Log 	Log Type: Kernel Log Auto Refresh: Image: Construction of the second seco
	 [0.000000] Mode-carbe frash table entries. Issae (0rder. 4, 5536 dytes) [0.000000] Memory: 226128K/262144K available (3790K kernel code, 219K rwdata, 1488K rodata, 192K init, 291K [0.000000] Virtual kernel memory layout: [0.000000] vector : 0xffff0000 - 0xffff1000 (4 kB)

Figure-17

Troubleshooting

Check the following before troubleshooting:

- Whether the server room is well ventilated and hot air from the back panel of the device is effectively removed?
- Does the supply voltage meet the power requirements of the device?
- Are all cables connected correctly?

Turn off the device and unplug the power cord in the following cases:

- The power cord or socket is damaged.
- A liquid is splashed on the device.
- A short circuit has occurred.
- The device is in damp environment.
- The device suffered from physical damage.
- Longtime idle.
- After switching on and restoring to factory setting, device still cannot work properly.
- Maintenance needed.



Frequent on and off switching is prohibited; the interval between switching the device on and off must be more than 10 seconds

