

ANT-48100 User Manual



1 Channel Transcoder (4 Channel Decoder)



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Overview

The ANT-48100 TRANSCODER is a highly flexible IP to IP transcoder. Featuring up to 4 channels of decoding on one Ethernet port (NIC) and 1 channel of re-encoding (Transcoding) on a second Ethernet Port (NIC). This transcoder is intended for IP to IP transcoding without offering any local video inputs or outputs. The Transcoder engine can take up to 4 decoded streams and re encode them as a 1x1 or 2x2 image with a single stream (no secondary stream is available). The decoder block can decode 1-4 streams then combine them as a quad image or in the case of one decoded stream a single image. These quad and single images can also be scaled to 1080P 720P and 576P resolutions. Additionally the decoder engine can decode URLs or pre recorded video files. SRT decoding is supported.

Once decoded and scaled the images pass to the Encoder engine. The encoder can then re-encode (transcode) these decoded streams as HTTP RTSP RTP MPEG-TS, RTMP and SRT streams on to a completely independent LAN Network Interface. As the Transcoder features two independent Network interfaces it acts as an effective Video stream air gap between two networks.

1.What's in the Box

The ANT-48100 box contains

- ANT-48100 Transcoder
- -12 Volt Power converter (requires an IEC AC mains lead)
- -UK/EU/USA or China IEC 110/240v AC Lead (depending on your location)
- -HDMI leads x1
- -1 sets of stereo Audio line input cables

2. Setting up the ANT-48100

Connect the ANT-48100 to a laptop or PC via an Ethernet switch using standard ethernet cables.

Connect the Output Video using an HDMI OUTPUT to a suitable monitor. Connect the HDMI input to a suitable HDMI source.

Connect the 12 volt power input and switch on.

The ANT-48100 will take approximately 1 minute to boot up. You will see there are 3 LEDS on the front panel ...Power, Not Used and LAN. On power up the RED LED will illuminate and the Green LAN LED will illuminate if connected via ethernet to a switch or laptop PC. You are now ready to setup the ANT-48100 Transcoder

3. ANT-48100 IP addresses and Log In



The ANT-48100 default IP address is **192.168.1.168 (Encoder IP output) and 192.168.1.160 (Decoder IP Input).** Please set the laptop/PC Ethernet IP address to be in the same sub-domain e.g 1**92.168.1.XXX** Open Chrome to view settings and Preview video (or other up to date browser to just view settings without video preview) and browse to

192.168.1.168/160 You will be asked to LOGIN: User : admin, password: admin

4.0 Setup of the ANT-48100 in IP INPUT(Decoder) mode (192.168.1.160)4.1 Status

Transcoder- Input		Language: English 🗸
C Status Status	Status	
 Network Video Source 	Split mode: 2×2 rtsp://192.168.1.224:554/video1 rtsp://192.168.1.224:554/video1s1	
System	rtsp://192.168.1.224:554/video1s2 rtsp://192.168.1.224:554/video1s3	

The status tab will show you information on the IP Input settings . This is effectively a decoder within the transcoder and can decode up to 4 streams or files. This screen will show if you are in 1x1 mode (1-1 transcode) or 2x2 mode (4 channels decoded and arranged as a quad image then transcoded). The input URLs or files are shown here

4.2 Network

This section defines the network settings of the IP Ethernet input port. NOTE! The ANT-48100 has two ethernet ports (NICs) which are independent. This setting is for the Transcoder IP input (decode)

Transcoder- Input			 Language: English ✓
Status	Network		
Wetwork			
Network	DHCP:	Disable 🗸	
→ Video Source	IP:	192.168.1.160	
I System	Netmask:	255.255.255.0	
	Gateway:	192.168.1.1	
	DNS:	114.114.114.114	
	MAC:	5E:4A:74:1D:FF:72	
		Apply	

4.3 Video Source

Transcoder- Input				Language: English 🗸
C Status	Video Source	<u> </u>		
Wetwork	On protocol vid	eo P2P video SRT S	ettings	
Video Source Video Source	Output Resolution:	720x480p-60 ~	1	
© System	Network Caching:	0 Set	Ms	
	MPTS Program:	2 Set	Input the relevant channel number	
	Private Protocol:	Off 🗸		
	Path Setting	URI 🗸		
	Split Mode:	2*2 🗸		
	Input 1:	rtsp://192.168.1.224:554/video		
	Input 2:	rtsp://192.168.1.224:554/video		
	Input 3:	rtsp://192.168.1.224:554/video		
	Input 4:	rtsp://192.168.1.224:554/video		
	Audio Channel:	Set 0 Set		

Video source has 3 sub sections (tabs): On protocol Video , P2P video and SRT settings

4.31 On Protocol Video XXXXX?????

Output Resolution: This allows you to set the resolution of the decoded image/ images prior to re encoding

Network Caching: This is a buffer for the decoder section and helps with Network jitter but as a result introduces latency in the overall Transcode process.

MPTS Program: XXXXXXXXXXXXXX????

Private Protocol: On or OFF XXXXXXXXXXX???

Path Setting: This is either a URL or a .SDP file location for using as the source of the decoder section

Split Mode (if using a URL): Select 1x1 or 2x2 mode (quad) for decoding

Input: 1-4: These are the URLs for the 4 decoded inputs . Generally you would use 1 input in 1x1 mode or 2,3 or 4 inputs for 2x2 mode .

Audio Channel: This defines which URL Input you will be using as the source of the audio . Enter XXXXXXXXX in this section

4.3.2 P2P Video

Transcoder- Input	Lar	nguage: English 🗸
🖵 Status	Video Source	
Hetwork	On protocol video P2P video SRT Settings	
→ Video Source	UID Input mode:	
Video Source	Intranet Search	
Ø System	×	
	Play	

In this section you are able to XXXXXXX

Intranet Search or Manual input: Allows you to XXXXXXXX

Play: This will enable XXXXXXX

4.3.3 SRT Settings

Transcoder- Input				Language: English 🗸
C Status	Video Source			
Wetwork	On protocol video	P2P video SRT Settin	gs	
Video Source Video Source	Display Mode: <mark>1</mark> * SRT1: <mark>Of</mark>	1 V Listener Mode: Off V		
Ø System	Server IP:		: -1	
	Transport SRT Port: 0		Off ~	
	Transport SRT Addr: srt:	//@192.168.1.160:0/?mode	e=server	
	SRT Delay: 0			
	SRT Password:			
		Set		

This section allows Secure Reliable Transport settings to be input if XXXXXXXX

4.4 System

System Settings Tab: This allows the Decoder section of the transcoder to be Factory reset or rebooted

	Franscoder- Input						Language: English 🗸
Q	Status	System Settings	Change Password	Update	Version	Timing Reboot	
۲	Network						
•	Video Source	Reset	Reb	oot			
٢	System						
	System						

Change Password: Allows for the default admin password or previously used password to be changed.

Transcoder- Input						Language: English 🗸
Status	System Settings	Change Password	Update	Version	Timing Reboot	
Wetwork						
→ Video Source	Old Password:					
System	New Password:					
System	Confirm New Password :					
		Apply				

Update: This allows firmware for the decoder section to be upgraded

Transcoder- Input						Language: English 🗸
Status	System Settings	Change Passwor	Update	/ersion	Timing Reboot	
Wetwork						
→ Video Source	Upgrade Settings:	Choose file No file chos	en (Upgrade	file is update.:	zip)	
System		Upload				
System						

Version: The firmware currently installed for the Decoder part of the Transcoder.

Transcoder- Input						Language: English 🗸
Status	System Settings	Change Password	Update	Version	Timing Reboot	
WetworkVideo Source	Decoder Version:	ver2.2.8_20210323_hb_	_01_03			
System System						

Timing Reboot: Allows the Decoder section to be rebooted automatically every N Hours (0-200 Hours)

ן 	Franscoder- Input						Language: English 🗸
Q	Status	System Settings	Change Password	Update	Version	Timing Reboot	
	Network						
•	Video Source	Interval Time:	0	[0-200]	hours		
0	System		Apply				
	System						

5.0 Setup of the ANT-48100 in IP OUTPUT (Encoder) mode (192.168.1.168)

5.1 Status

Status shows information about the Encoder section of the ANT-48100 Transcoder and is broken down into 4 sections:

Access Address: The URL of the encoded stream depending what stream method is selected HTTP RTSP RTP etc .

	Transcoder-C	Dutput		
Status	Access Address	Video Parameters	Hardware Status	Preview
Network	Access Address:	ton://102 169 1 169.551/b	Imi	
Output	Access Address.	nsp.// 192.100.1.100.004/nc		
: Extended				
System				

Video Parameters: Defines the resolution and frame rate of the encoder input being

	NTRIC	Transcoder-O	Dutput			
Ģ	Status	Access Address	/ideo Parameters	Hardware Status	Preview	
	Network		720*490-			
→]	Output	Input Fps:	: 60			
:0:	Extended	Encode Fps:	: 25			
٢	System					

supplied by the decoder section.

Hardware Status: A visual indication of XXXXXXX

	NTRIC	K Transco	ler-Output			
Q	Status	Access Address	Video Parameters	Hardware Status	Preview	
۲	Network					
Ŧ	Output	Interrupt Nur Missing Inter	nber: 44678 rupt: 853			
ö	Extended					
ø	System					

Preview: Allows a preview of the encoded video stream if using Chrome as a browser. XXXXXXX

A	NTRICP	Transco	der-Output		Language: Englist		
G	Status	Access Address	Video Parameters	Hardware Status	Preview		
¢	Network						
	Output						
÷;	Extended						
4	System						
		Ⅱ • •				-0:00	;

5.2 Network

This section allows you set the Transcoder (Encoder) network IP address, DHCP On/Off and other network settings such as Gateway, Netmask, DNS and information about the MAC address.

Transcoder-G				Dutput
	Q	Status	Network	
	۲	Network		
		Network	DHCP:	
	+	Output	IP.	
	:0:	Extended	Netmask	
	ø	System	Gateway:	
			DNS1:	223.5.5.5
			DNS2:	114.114.114
			MAC:	50:5A:5D:7A:00:01
				Apply

5.3 Output :

This section defines the Encoder parameters , type off Codec and all other encoder settings.

HDMI MAIN: This Encoder only has one stream called MAIN , no sub stream settings

Set Stream Venc: Choose H264 or H265 Encoding codec

Channel Name: Choose a channel ID / Name XXXXXXX

Mirror Control: Reverses the image in the vertical plane

Flip Control: Flips the image in the Horizontal plane

Aspect Ratio: Defines Auto, 16:9 or 4:3 aspect ratio for the streamed image

Bitrate Control: CBR or VBR modes

Key Interval: This is the GOP for the encoder ratio of I to P frames.

Encoded Size: Streams the Decoded image or scales this image based on these settings

	K Transcoder-O	lutput	Language: Eng	lish 🗸
🖵 Status	HDMI Main			
Network				
- Output	Set Stream Venc:	H264 🗸		
	Channel Name:	chan		
Output	Mirror Control:	Disable 🗸		
O: Extended	Flip Control:	Disable 🗸		
o System	Aspect Ratio:	Auto 🗸		
• • • • • • • • • • • • • • • • • • • •	Bitrate Control:	cbr 🗸		
	Key Interval:	30	[5-200]	
	Encoded Size:	auto 🗸		
	Bitrate:	3200	[16-12000]	
	Fluctuate Level:	auto 🗸		
	H.264 Profile:	main profile 🗸		
	Encoding Frame Rate:	25	[5-60]	
	Package:	Ffmpeg 🗸		
	Buffer Mode:	188x7 🗸		
	PMT ID:	260	[1-65535]	
	Transport ID:	264	[256-3840]	
	Stream ID:	280	[256-3840]	
	Program ID:	1		
	SDT Name:	Service01		
	HTTP:	/hdmi	Disable ✓ Start with "/"	
	HTTP Port:	80	[1-65535]	
	RTSP:	/hdmi	Enable V Start with ""	
	RTSP Port:	554	[1-65535]	
	RTSP Authentication:	Disable V		
	RTSP Mode:	video+audio 🗸		
	RTSP TCP:			

Bitrate: Set the encoder bit rate in kilo bits per second (1 = 1kB/s)

Fluctuation Levels: Sets the fluctuation of data ratesXXXXX

H.264 Profile: Choose Baseline Main or High profile

Encoded Frame Rate: Frames per second of encoded stream

Package: Uses FFMPEG or VLC codec packages

Buffer Mode: XXXXXX

PMT ID: XXXXXXXX

Transport ID: XXXXXXX

Stream ID : XXXXXXX

Program ID: XXXXXXXX

SDT Name: XXXXXXXXXXXXXXXXXXX

HTTP: Select Enable if you wish to use http streaming and edit the stream identifier

HTTP Port: Select the port used for HTTP streaming

RTSP: Select Enable to use RTSP mode and edit the stream identifier (/HDMI is default)

RTSP PORT: Defines the RTSP port 554 default

RTSP Authentication: Enable user name password RTSP authentication

RTSP Mode: Video + Audio, video or Audio only

RTSP TCP: select UDP or TCP streaming

	TTL:	16	[0-255]
	Unicast IP:	192.168.1.200	Disable ✓ [Support domain or ip format]
U	nicast Port:	1234	[1-65535]
N	lulticast IP:	238.0.0.1	Disable V
Mul	ticast Port:	1234	[1-65535]
RTP	Server IP:	192.168.1.123	Disable 🗸
	RTP Port:	6666	[1-65535]
	RTMP:	URL MODE V Disable V	
R	MP Mode:	video+audio 🗸	
F	TMP URL:	rtmp://	
	SRT:	Listener Disable	
	Encrypto:	Disable 🗸	
	Listen Port:	9000	
	Latency:	0	[unit:ms]
		Apply	

TTL: Time to live setting

Unicast IP: Enable MPEG-TS Unicast here and set destination IP

Unicast Port: Set the port for unicast MPEG-TS

Multicast IP: Enable multicast MPEG-TS and set the IP

Multicast Port: Define the multicast MPEG-TS Port

RTP Server: Enable RTP mode and set IP

RTP Port: Set the RTP port

RTMP: Enable RTMP mode and define either IP addressing or URL addressing here

RTMP Mode: Define video + Audio, Video or Audio only

RTMP URL: If using URL mode set the URL here. If using IP mode then other boxes

will appear regarding server details for RTMP IP streaming

SRT: Enable SRT here and define if listener or caller

Encrypto: enable or disableXXXXXXXX

Listen Port : Define the listener port if this mode selected.

Latency: XXXXXXXXX

5.4 Extended

5.41 Main OSD

	A1		K Transcoder-O	utput		Language: English 🗸
	Q	Status	Main OSD			
	•	Network Output	Update Logo:	Choose file No file chosen	(Main osd logo named logo.bmp , 2nd osd logo named logo_ext.bmp)	
		Main OSD Setting	Logo: Logo X:	Close V 100	[0-1920]	
		Color Setting	Logo Y:	170	[0-1080]	
5		Image Setting	Font X:	100	[0-1920]	
2		RTMP-HLS Setting	Font Y:	100	[0-1080]	
5		Smart Encoder	Font Size:	32	[8-72]	
	٢	System	Alpha:	100	[0-128]	
(1) (1)			Font Color:	0xFFFFFFF	[0-0xFFFFFF] example: R: 0xFFFF0000 G: 0xFF00FF00 B: 0xFF0000FF	
			Text:		Up to 255 character	
2				Apply		

The extended /Main OSD Setting tab allows for a logo and text to be overlaid on the encoded images. A Logo file names logo.bmp can be uploaded and then positioned using the Logo X and Y parameters in numbers of pixels. (1920 x1080) Text can be written and positioned like the logo file using X and Y co-ordinates and font size/ colour and alpha can be selected.

Note! The Logo file must be encoded as a XXXXXXXbit bitmap

5.42 Color Setting

	NTRICI	Transcoder	r-Output		Language: English ✓
Q	Status	Color Setting			
۲	Network	Brightness:	50	[0-100] Default value:50	
⇒	Output	Contrast:	50	[0-100] Default value:50	
(<u>ö</u>)	Extended	Hue:	50	[0-100] Default value:50	
	Main OSD Setting	Saturation:	50	[0-100] Default value:50	
	Color Setting Image Setting		Apply		

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Color setting allows adjustment of the OSD parameters.

5.43 Image Setting

A voto		Transcod	Language: English v Output
Ç] Status	quality Setting	
Œ	Network	Noise:	close 🗸
-	Output	Sharpening:	close 🗸
:0	Extended	Sharpening strength:	[-4-5]
	N : 000 0 //	Filtering:	open 🗸
	Main OSD Setting	Filtering A:	[0-3]
	Color Setting	Filtering B:	0-255]
	Image Setting	Filtering C:	[0-4]
	RTMP-HLS Setting		Apply
	Smart Encoder		

5.44 RTMP-HLS Setting

		Transcode	-Output Language: English ✔
Q	Status	RTMP-HLS	
	Network	RTMP-HLS stream:	close 🛩
•	Output	RTMP-HLS Mode:	video+audio 🗸
(Ö)	Extended	RTMP access address: HLS access address:	
	Main OSD Setting		Apply
	Color Setting		
	Image Setting		
	RTMP-HLS Setting		

In this section if using RTMP or HLS parameters are input here.

5.45 Smart Encoder

	P Transcoder-Output	Language: English 🗸 59:
C Status	Smart Encoder	
Network	Smart Encoder: Close 🗸	
→ Output	Apply	anse r In
Extended		r ou
Main OSD Setting		
Color Setting		
Image Setting		
RTMP-HI S Setting		
Smart Encoder		

Smart encoder allows for XXXXXXXXXXX

13.0 Other Information

Please visit our website <u>www.antrica.com</u> and browse to the product page (e.g ANT-48100) where you can find a DOWNLOADS SECTION :

- application notes
- Full User manuals
- FAQs
- Firmware
- Other useful information
- More help Open up a Technical Support Ticket from the support page.

Contact: support@antrica.com

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