

ANT-1773 encoder HD-SDI &/or HMDI and composite to display on VLC and Neptune player

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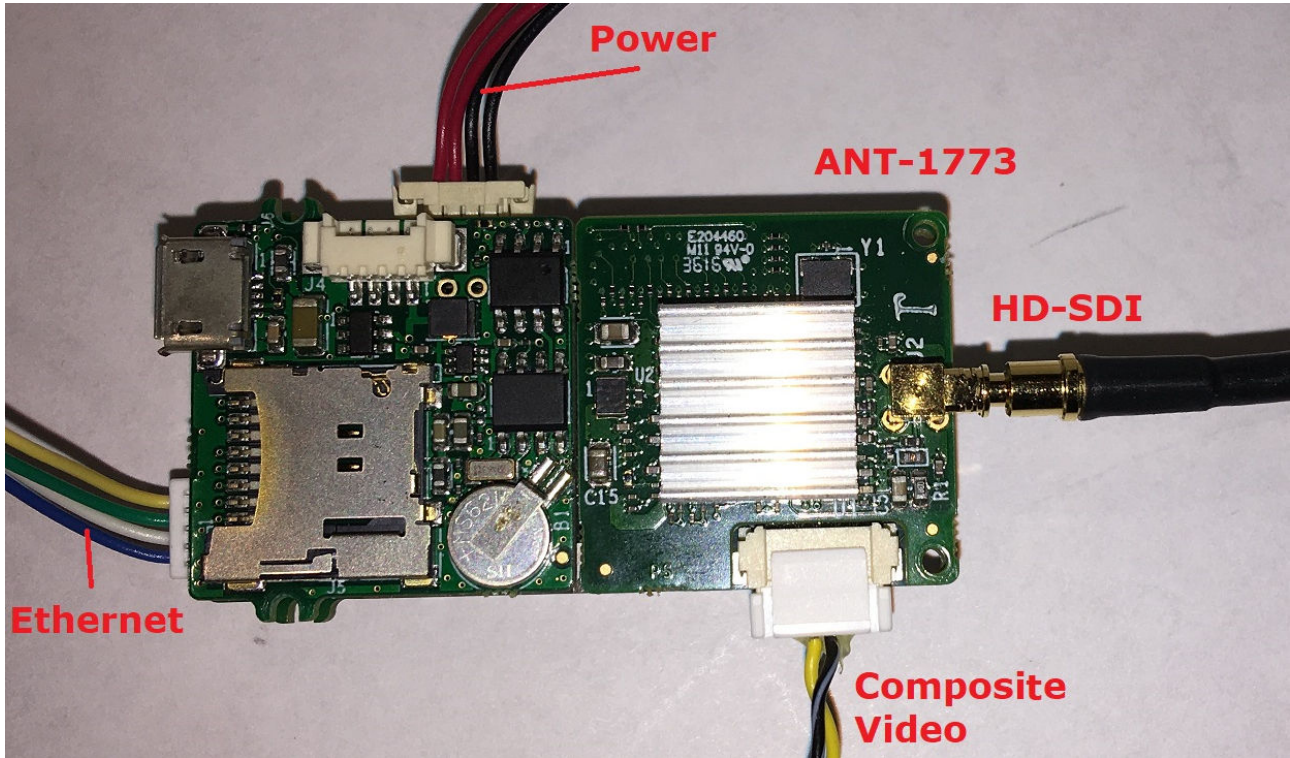
Document info

Version	date	author	Comments
1.0	6-Mar-18	David M	Initial for HD-SDI & Composite setup
2.0	7-Mar-18	David M	Added step by step guide
3.0	8-Mar-18	David M	Added index and VLC & Neptune player
4.0	4-Jul-19	David M	Added HMDI setup
4.1	4-jul-19	David M	Correction for supply voltage
4.2	18-Dec-19	David M	Additions for 2.4.1.2 & added this document info
4.3	1-Feb-21	David M	Reset / factory default and "Time laps" Frame rate adjustment

1. Encoder setup

1.1. Encoder connectivity – HD-SDI and composite video

The image shows connections on the Ant-1773 for the Video feeds (HD-SDI and composite), ethernet connector and power. **NOTE:** the power connector is center positive $\ominus - \oplus$ and is in the range 4.5-15V DC



The URLs to use with VLC are:

For the HD-SDI / HDMI : `rtsp://192.168.0.30:554/mux1.sdp`
 For the composite video : `rtsp://192.168.0.30:554/mux2.sdp`

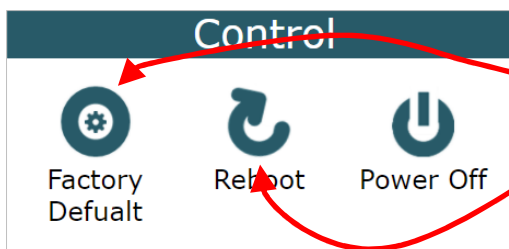
The IP address, in the above URLs, is that of the ANT-1773, so if the control address of the ANT-1773 is changed the decoder URLs will need to change.

1.2. Factory default / reset ANT-1773

Reset or Factory default the ANT-1773 before setting up. This will set an un-needed parameter to their default values.

On the web GUI

Home → Control



Click "Factory Default"

Click "Reboot" or power cycle the ANT-1773

Wait for the ANT-1773 to reboot

1.2.1. Camera selection

Ensure suitable feed(s) are connected to the ANT-1773. The maximum HD-SDI is **1080i60** or **1080p30**.

On the web GUI

Home → Setting → System



Config Number: **CFG 1**

Operation State: **Operational**

USB to Disk: **Disable**

Camera CSI1: **tw9910**

tvp5158
hdsdi
tw9910
opgal
panasonic
generic
hdmi
None

Camera CSI2: **hdsdi**

tvp5158
hdsdi
tw9910
opgal
panasonic
generic
hdmi
None

[Setup Generic Camera](#)

[Setup Analog Camera](#)

[Camera Ext Setup](#)

[Control UART](#)

[Network](#)

[Cellular Network](#)

[Time and Date](#)

[RTSP Server](#)

Mode: **On**

Port:

[Display Drivers](#)

[Emergency Boot](#)

[FPGA](#)

[Record Auto Delete](#)

Onvif: **Off**

Application: **None**

For CSI1 select **tw9910** from the drop-down list

For CSI2 select **hdsdi** from the drop-down menu

Select "**On**" for RTSP Server. Use the default port of **554**

Save when finished

When using newer code, like 2.4.1.2, the Camera description now more informative for the analogue feeds


Camera CSI1: **analog**

4Xanalog
hdsdi
analog
lepton
analog_hd
generic
hdmi
CP
None

Camera CSI2: **hdsdi**

4Xanalog
hdsdi
analog
lepton
analog_hd
generic
hdmi
CP
None

1.2.2. info page

Select  and this shows the camera details,

note the Camera "Name" in this case SD1 and HD2 or CSI-1 CH-0 and CSI-2 CH-0

Camera				
Name	Status	Resolution	Interlaced	FPS
SD1	Lock	PAL	Interlaced	25
SD2	Not Exist	Unknown	Unknown	0
SD3	Not Exist	Unknown	Unknown	0
SD4	Not Exist	Unknown	Unknown	0
HD1	Not Exist	Unknown	Unknown	0
HD2	Lock	1920x1080	Interlaced	60
SD5	Not Exist	Unknown	Unknown	0
SD6	Not Exist	Unknown	Unknown	0
SD7	Not Exist	Unknown	Unknown	0
SD8	Not Exist	Unknown	Unknown	0

When using newer code, like 2.4.1.2, only inputs with active signals are listed.


Camera				
Name	Status	resolution	Interlaced	FPS
CSI-1 CH-0	Lock	PAL	Interlaced	50
CSI-2 CH-0	Lock	1920x1080	Noninterlaced	25

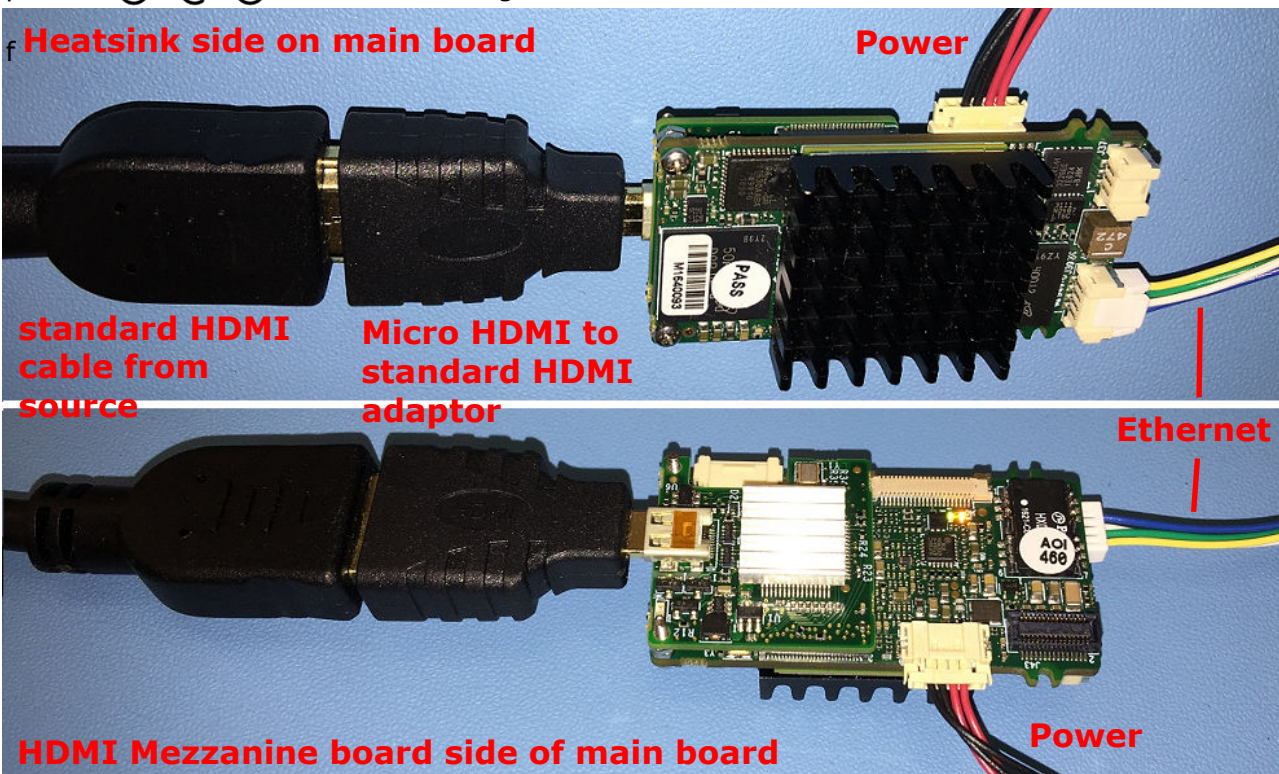
Composite camera – SD1 or "CSI-1 CH-0"

HD-SDI camera – HD2 or "CSI-2 CH-0"

In the above images the HD sources are 1920x1080i60 (left) and 1920x1080p25 (right)

1.3. Encoder connectivity – HDMI

The image below shows connections on the Ant-1773 for the Video feed (HDMI via a standard to micro HDMI adaptor), ethernet connector and power. **NOTE:** the power connector is center positive  and is in the range 4.5-15V DC.



The URL to use with VLC are:

For the HDMI : `rtsp://192.168.0.30:554/mux1.sdp`

The IP address, in the above URLs, is that of the ANT-1773, so if the control address of the ANT-1773 is changed the decoder URLs will need to change.

1.3.1. Camera selection

NOTE: For newer code, like 2.4.1.2, the camera source selection, [1.2.1 Camera selection](#) and info, [1.2.2 info page](#) web pages below, will look like those mentioned in [1.1.1 Camera selection](#) and [1.1.2 info page](#).

Ensure suitable feed to connected to the ANT-1773. The maximum HDMI resolution is **1080p60**.

On the web GUI

Home → Setting → System



Config Number: **CFG 1**

Operation State: **Operational**

USB to Disk: **Disable**

Camera CSI1: **None**

Camera CSI2: **hdmi**

[tvp5158](#)
[hdsdi](#)
[tw9910](#)
[opgal](#)
[panasonic](#)
[generic](#)
hdmi
[None](#)

[Setup Generic Camera](#)

[Setup Analog Camera](#)

For CSI2 select **hdmi** from the drop-down menu

1.3.2. info page

Select and this shows the camera details,

note the Camera "Name" in this case HD2

<u>Camera</u>				
Name	Status	Resolution	Interlaced	FPS
SD1	Not Exist	Unknown	Unknown	0
SD2	Not Exist	Unknown	Unknown	0
SD3	Not Exist	Unknown	Unknown	0
SD4	Not Exist	Unknown	Unknown	0
HD1	Not Exist	Unknown	Unknown	0
HD2	Lock	1920x1080	Noninterlaced	30
SD5	Not Exist	Unknown	Unknown	0
SD6	Not Exist	Unknown	Unknown	0
SD7	Not Exist	Unknown	Unknown	0
SD8	Not Exist	Unknown	Unknown	0

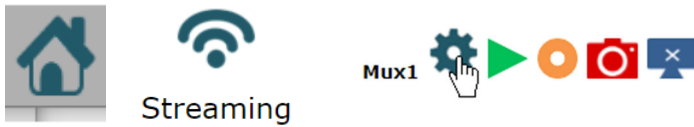
HDMI camera – HD2

In the above case the HD source is 1920x1080p30.

1.4. Streaming control

On the web GUI

Home → Streaming → Mux 1 settings



Mux: **Mux1**
Mux1
 Mux2
 Mux3
 Mux4

Auto Operation:
 Stream Record Display

Video: **HD2**
 None
 SD1
 SD2
 SD3
 SD4
 HD1
HD2
 SD5
 SD6
 SD7
 SD8
 Test

Audio: **None**

Data: **None**

Display: **None**

Interface: **Network**

Protocol: **RTSP**
 Private
 TS
 RTP
RTSP
 Split
 Row BMP

IP Address:
 192 . 168 . 0 . 1

Network Port: 1235
 UART Port: ttyMXC0

Save

After selecting **Mux1** you can select a **Mux2**, **Mux3** or **Mux4** to configure

Select for "auto start" of streaming at power up. Not really required for RTSP mode as the viewing package will start the stream

Video is "Camera" source. For this example, **Mux1** is **HD2** and **Mux2** will be is **SD1**, or **CSI-2 CH-0** and **CSI-1 CH-0**

Set Transmission protocol to **RTSP**

When using newer code, like 2.4.1.2, the Video sources will be CSI-X CH-Y. where is X is 1 or 2 and Y is 0 ~ 3

- Video: **CSI-1 CH-0**
 None
CSI-1 CH-0
 CSI-1 CH-1
 CSI-1 CH-2
 CSI-1 CH-3
 CSI-2 CH-0
 CSI-2 CH-1
 CSI-2 CH-2
 CSI-2 CH-3
 USB
 SPI
 Virtual Video

1.5. Frame rate requirement

The encoder can only encode a 1920x1080 at a maximum of 30 frame rate per second. If your source is more than 30 the "Time Laps" need to be used to limit the rate to 30.

On the web GUI

Home → Setting → Mux Setup



Setting



Mux Setup

Select the Mux required, in this example Mux1 and Mux2 are being used

<p>Mux: Mux1 Mux1 Mux2 Mux3 Mux4</p> <p>Record</p> <p>Frame Rate</p> <p>Frame Rate: Time Laps Full Time Laps</p> <p>FPS: <input type="text" value="30"/></p> <p>Encoding</p> <p>Jitter Buffer</p>	<p>From the "mux:" drop-down select the require Mux to alter parameters. In this example Mux1</p> <p>Click the Frame Rate to open the additional dialogue</p> <p>Click Time Laps</p> <p>Put 30 in this field, for the encoded video to be 30 fps</p> <p>Click save when all is done.</p>
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1.6. Optional

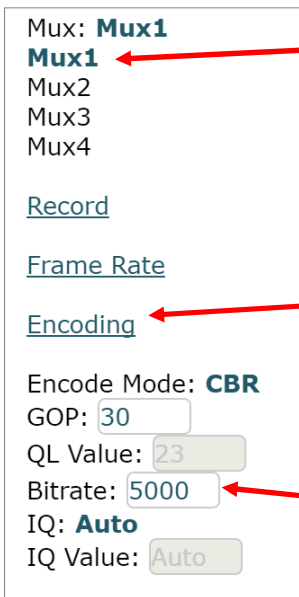
1.6.1. Alter bitrate of encoded video

On the web GUI

Home → Setting → Mux Setup



Select the Mux required, in this example Mux1 and Mux2 are being used



From the "mux:" drop-down select the require Mux to alter parameters. In this example Mux1

Click the **Encoding** to open the additional dialogue

In the bitrate input numbers like 3500 for HD-SDI and 1500 for composite. If better quality is required higher number can be used.

Again, click **save** when all is done.

1.6.2. Manually start streaming

On the web GUI

Home → Streaming → Click the green "play" button



In the above case Mux1 will be prepared for any RTSP connection, sometimes this is required for a VLC connection

Once clicked the play button changes to the "red square" / stop button

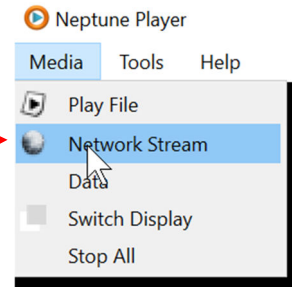
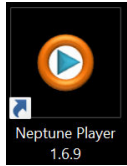


2. Display stream

2.1. Neptune Player

Neptune Player has a very low latency viewer.

Start Neptune player, from start menu; look for "Neptune" folder -> "Neptune Player 1.6.9", or use the Desktop Icon. Currently the lastes version is 1.6.9.



From the Neptune Player select Media -> Network Stream

From the "Network stream" window...

Stream mode:

Transport

RTP

Split

RTSP

Network:

URL(IP)

SDP

Serial Port

UDP

TCP

Sync Delay (MS):

Record

Trick Mode

Select **RTSP** for Stream mode:

IP address of ANT-1773

mux1.sdp for Mux1, for Mux2 use **mux2.sdp**

554 the RSTP port used Camera selection

UDP or TCP, default is UDP

Play to start

Once started Neptune player will cause the Streaming "play" button to turn from a green triangle to a red square.

2.2. Neptune player install and activation

Neptune Player has a very low latency. It is bundled with the "neptune_install_x.x.x-x.rar" which is available from <https://antrica.com/> go to the [ANT-1773 product web page](#) -> Product Info & Downloads -> Downloads -> Software-> Neptune Guard_player, then select and download neptune_install_x.x.x-x.rar.

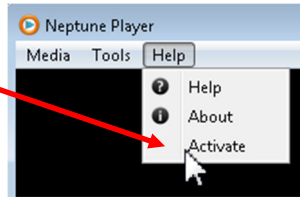
Extract and run the "neptune_install_x.x.x.exe"

Open "Neptune Player x.x.x"

Accept / "Allow access" to any Windows Firewall messages

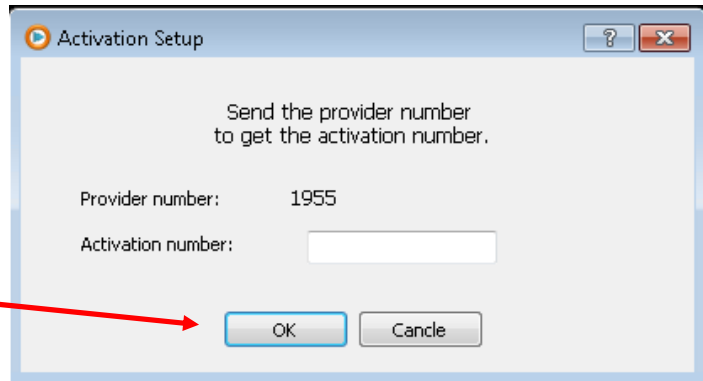
Neptune player need activating before it can used;

Neptune Player -> Help -> Activate



A new window then appears. The "Provider number" and corresponding "Activation number" will change every time the window is closed and opened.

Contact [Antrica](#) to get the "Activation number", once the 4-digit number has been typed in click OK



Neptune Player is now ready to use

To contact Antrica:

Email: support@antrica.com

Telephone: +44 (0)1628 626 098 option 3

note we are UK based, so please beware of any time difference when you telephone us

2.3. VLC

VLC is a free and open source media player available from <https://www.videolan.org/>. It supports multiple Operating systems.

Once installed open VLC media player select Media -> Open Network Stream

Then put in the URL
"rtsp://192.168.0.30:554/mux1.sdp" and click play

To view Mux2, in the URL line replace mux1 with mux2, the same for the mux3 & mux4

