

# ***Neptune Web 3.1***

***Created Date 01/05/13***

***Update Date 14/12/15***

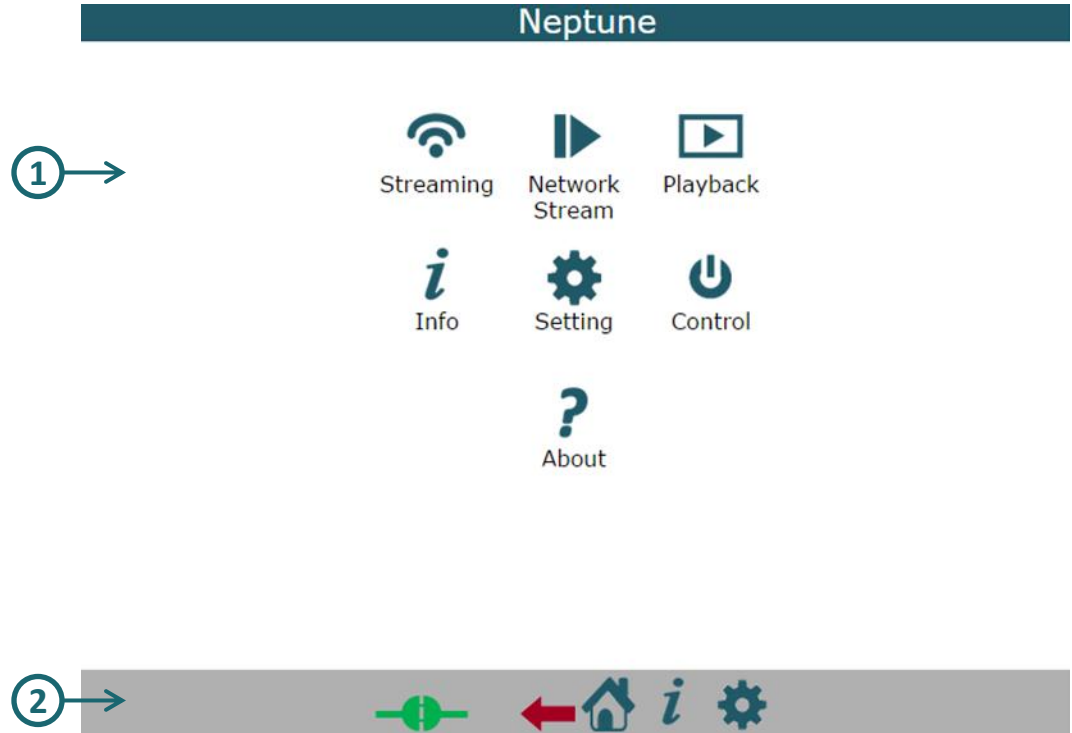
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# Home Page



1. Main menu
2. Status and Navigation bottom menu.



# Bottom Menu

## 1. Connection Status



### Connected

When the board is connected.



### Wait to Connect

When the board is trying to connect.



### Disconnected

When the board is disconnected

## 2. Last Page


## 3. Home Page

## 4. Info Page


## 5. Setting Page



# Streaming and Recording

 In streaming page you can operate streaming and/or recording.

## Streaming Operation

1. If your board is transmitter, select mux and click on play button(2).
2. To stop streaming click on stop button 

## Streaming Configuration

To configure streaming click on setting button(1), (See the next page).

To configure **video** or **audio** see pages 15 and 16.

## Recording Operation

1. Select mux and click on record button(4), the button will start to flash.
2. To stop recording - click the flashing button.

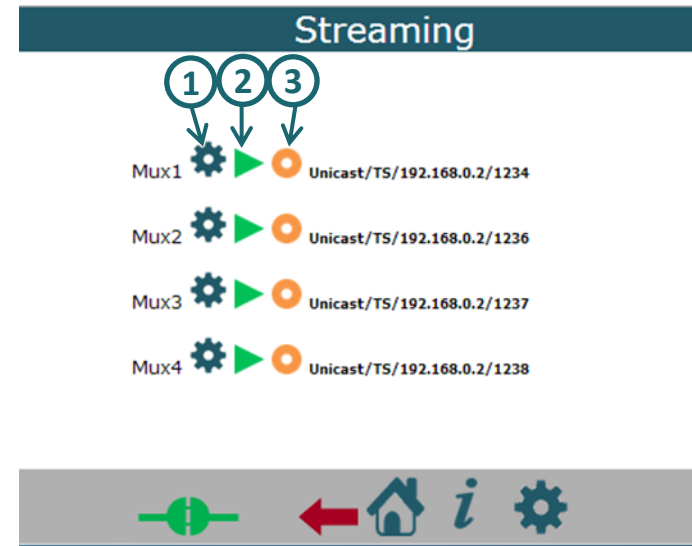
## Recording Configuration


To configure **video** or **audio** see pages 15 and 16.

## Camera

Before you start streaming/recording - make sure the camera as active in info page (See page 11).

In case the camera is not active or you want to replace a camera, go to system menu (See page 13) and set Camera CSI1/CSI2.




 **Notice:**  
During the recording don't remove the device.

## Streaming Configuration

1. **Mux:** Mux1/Mux2/Mux3/Mux4
2. **Auto:** Off/On

Select "On" to auto streaming when the system is turn on.

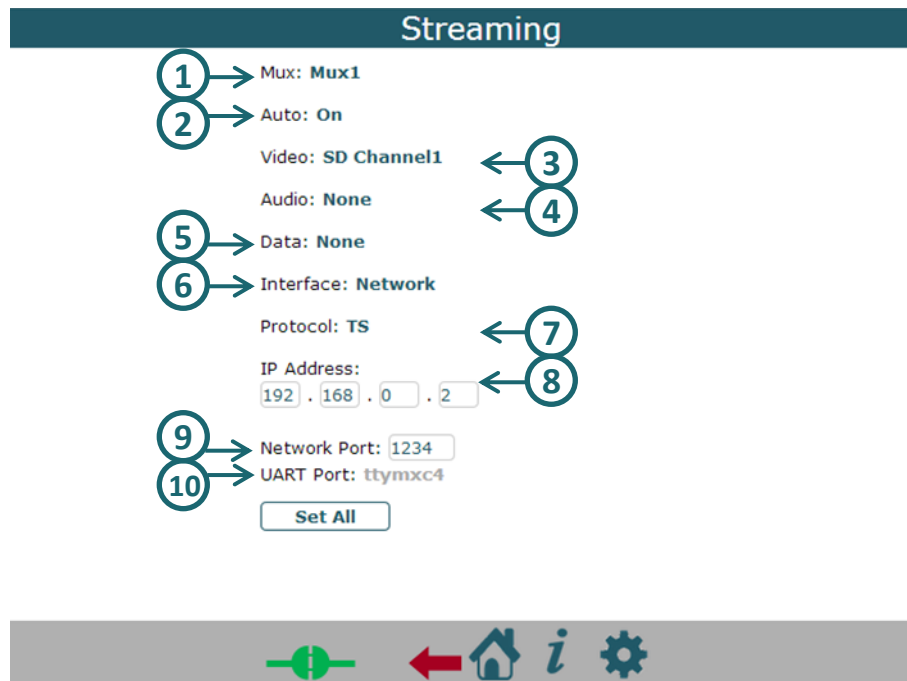
3. **Video:** None/video channel/Test

To test the streaming without camera select "Test" and than click on streaming play button . Explanation on page 7.

4. **Audio:** None/Channel1/Channel2
5. **Data:** None/Data1/Data2
6. **Interface:** Network/Data Clock/UART
7. **Protocol:** Private/TS/RTP/RTSP/Split

In **RTSP** protocol the user needs to enable the RTSP server, because the transition IP and ports and are selected by the client.

8. **IP Address** (destination address)
9. **Port** (destination port)
10. **UART Port** (only for audio)



The screenshot shows the 'Streaming' configuration page. It features a list of settings with numbered callouts (1-10) pointing to specific fields:

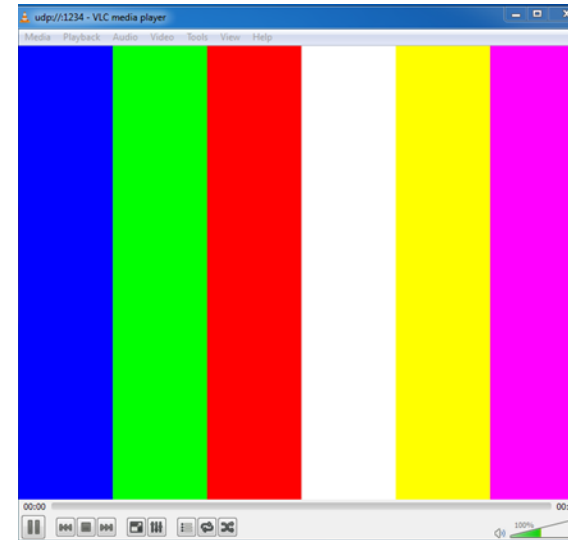
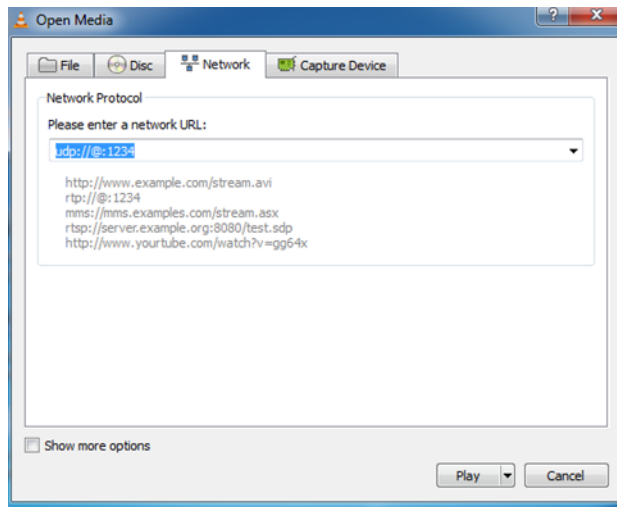
- 1: Mux: Mux1
- 2: Auto: On
- 3: Video: SD Channel1
- 4: Audio: None
- 5: Data: None
- 6: Interface: Network
- 7: Protocol: TS
- 8: IP Address: 192 . 168 . 0 . 2
- 9: Network Port: 1234
- 10: UART Port: ttymxc4

At the bottom of the configuration area is a 'Set All' button. Below the configuration area is a navigation bar with icons for a play button, a red arrow, a home icon, an information icon, and a settings gear icon.

## Test Streaming



To test the streaming, open VLC and get stream to your URL. If the test is successful – you need to see color bar on VLC screen.



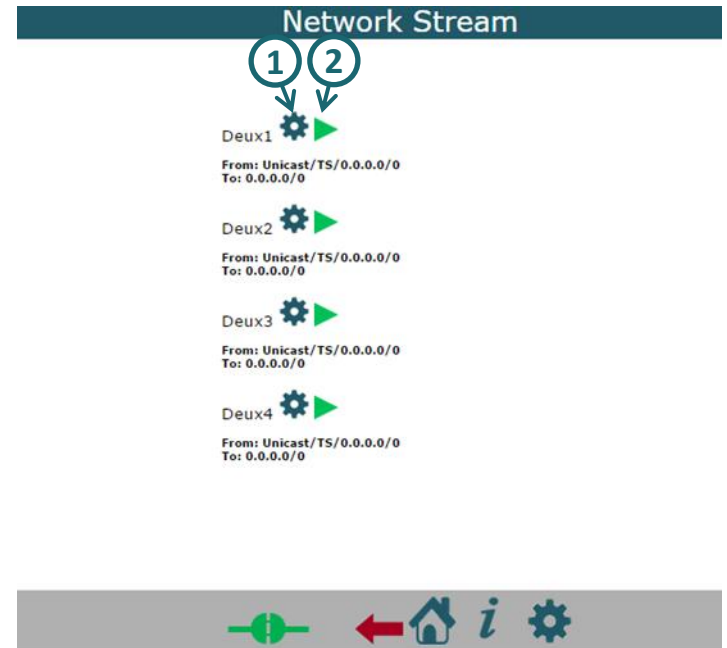
# Network Stream

## ▶ Network Stream Operation

1. If this board is receiver, in player page select mux and click on play button(2).
2. To stop player click on stop button ■.

## Network Stream Configuration

To configure player click on setting button(1), (See the next page).





# Network Stream Configuration

General:

1. **Demux:** Demux1/Demux2/Demux3/Demux4
2. **Auto:** Off/On
3. **Delay** (0 - 1000 in MS) To create constant bitrate when narrow network.

From:

4. **Interface:** Network/Data Clock/UART
5. **Protocol:** Private/TS/RTP/RTSP
6. **Net Mode:** Unicast/Multicast
7. **IP Address**
8. **Port**
9. **UART Port** (if the interface is UART)

To:

10. **Base IP Address**
11. **Base Port**
12. **Demux Mode:** Separated/Combined

*Video*

13. **TV:** TV-Out1/ TV-Out2/HD-Out1/HD-Out2
14. **Network:** Off/On
15. **Port**

*Audio*

16. **Channel:** Channel1/Channel2
17. **Network:** Off/On
18. **Port**

*Data*


19. **Internal:** None/Data0/Data1
20. **Network:** Off/On
21. **Port**

The screenshot shows a configuration window titled "Player". The settings are organized into sections:

- Deux:** Deux1
- Auto:** Off
- Volume:** 100
- Delay:** 0
- From:**
  - Interface:** Network
  - Protocol:** TS
  - Net Mode:** Unicast
  - IP Address:** 0 . 0 . 0 . 0
  - Port:** 0
  - UART Port:** ttymx2
- To:**
  - Base IP Address:** 0 . 0 . 0 . 0
  - Base Port:** 0
  - Demux Mode:** Separated
- Video:**
  - TV:** TV-OUT1
  - Network:** Off
  - Port:** 0
- Audio:**
  - Channel:** Channel1
  - Network:** Off
  - Port:** 1
- Data:**
  - Internal:** None
  - Network:** Off
  - Port:** 2


At the bottom of the configuration area is a "Set All" button. Below the configuration area is a navigation bar with icons for a green play button, a red back arrow, a home icon, an information icon, and a settings gear icon.


# Playback

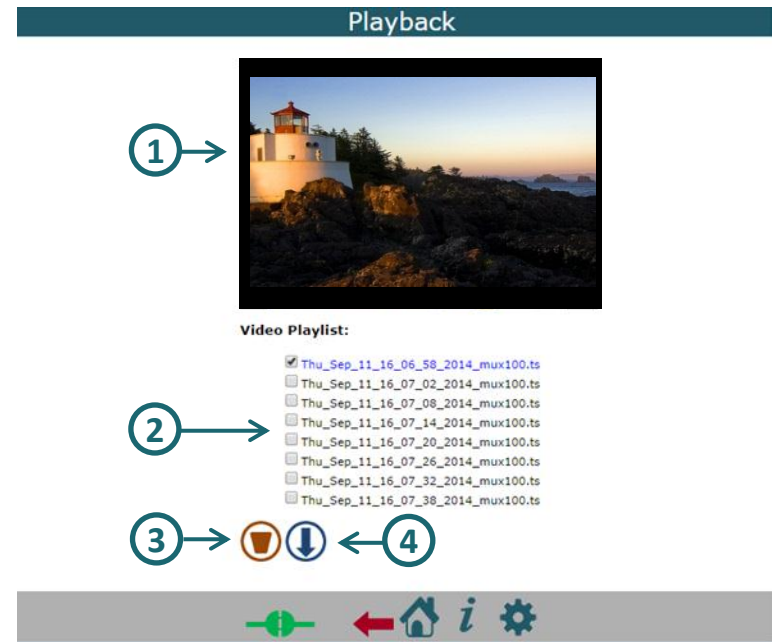
 In playback page you can play, delete or download the recorded files.  
The recorded files in this board will appear in Video Playlist(2).

## Playback:

Click on the file you want to playback. The file will play on the screen(1).

 **Delete:**  
Check file or some files and click on delete button(3).

 **Download:**  
Check file or some files and click on download button(4).



The screenshot shows the Playback interface. At the top, there is a dark teal header with the word "Playback" in white. Below the header is a video player showing a lighthouse on a rocky shore at sunset. To the left of the video player is a circled number "1" with an arrow pointing to the video. Below the video player is a "Video Playlist:" section containing a list of files with checkboxes. A circled number "2" with an arrow points to the first file in the list, which is checked. Below the playlist are three icons: a trash can, a download arrow, and a left-pointing arrow. A circled number "3" with an arrow points to the trash can icon, and a circled number "4" with an arrow points to the left-pointing arrow icon. At the bottom of the interface is a grey bar containing several icons: a green play button, a red left arrow, a blue home icon, a blue information icon, and a blue gear icon.

# Information



In info page will see the information about the board:

## 1. Board

## 2. CPU

Type  
Number  
Speed

## 3. SW Info

Built Date (date & time)  
libudvpdvr.so (version)  
LDVC (version)  
FPGA  
IP Address  
MAC Address

## 4. Camera

This menu show the status of every camera:

Status: Not Exist/Unlock/Lock

Resolution: Unknown/PAL/NTSC/1920X1080/1280X720/1440X487/1440X507

Interlaced: Unknown/Noninterlaced/Interlaced

FPS(value)

## 5. Storage

This menu show the storage information of every device:

Total Size, Used Space and format.

## 6. Temperature

This menu show the temperature of the board.

## Info

### System Info



**Board**  
NEPTUNPRO 1.1



**CPU**  
Type: IMX6Q  
Number: 4  
Speed: 792MH



### SW Info

Build Date: Jul 23 2014 01:25:36  
libudvpdvr.so: 2.1  
LDVC: 2.2.4  
FPGA: Unknown  
IP Address: 192.168.0.140  
MAC Address: 00:98:2b:62:52:dd



### 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	Not Exist	Unknown	Unknown	0
SD5	Not Exist	Unknown	Unknown	0
SD6	Not Exist	Unknown	Unknown	0
SD7	Not Exist	Unknown	Unknown	0
SD8	Not Exist	Unknown	Unknown	0



### Storage

Storage	Total Size	Used Space	Format
/sd1	0 MB	0 MB (0%)	Unknown




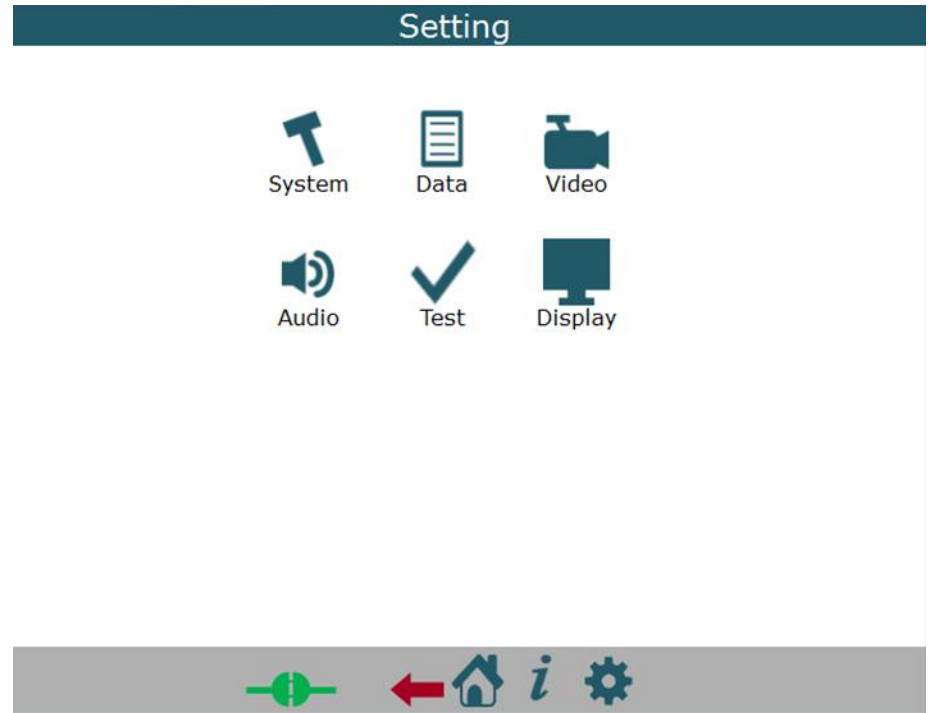
### Temperature

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# Setting

 In setting page you have links to the settings pages.



# System Configuration



1. **Config Number:** CFG1/CFG2/CFG3/CFG4
2. **Operation State:** Idle/Operational/Test Mode
3. **Camera CSI1/CSI2** (list of cameras)  
  
*- Only for generic camera-*
  4. Setup Generic Camera  
**CSI:** CSI1/CSI2  
**X** (1 - 255)  
**Y** (1 - 255)  
**w** (1 - 255)  
**H** (1 - 255)  
**Field Mode:** Progressive/Interlaced 0/Interlaced 1  
**Interface:** bt.656/bt.1120/External Sync  
**Bus Width:** 8 bits/16 bits  
**Pixel Format:** UYVY/VYUY/YVYU/YUYV
5. Network  
**Mac Address**  
**mode:** DHCP/Manual  
*- Only for Manual-*  
**IP Address**  
**Mask Address**  
**Gateway Address**
6. Time and Date
7. RTSP Server  
**Mode:** Off/On  
**Port**

**System**

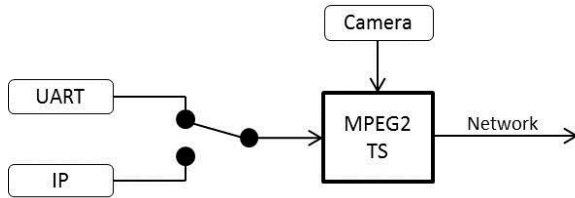
- 1 → Config Number: **CFG 1**
- 2 → Operation State: **Operational**
- 3 → Camera CSI1: **tw9910**  
Camera CSI2: **None**
- 4 → [Setup Generic Camera](#)
- 5 → [Network](#)  
Mac Address: 00 : 98 : 2b : 62 : 52 : dd  
Mode: **Manual**  
IP Address: 91 . 100 . 17 . 11  
Mask Address: 255 . 255 . 255 . 0  
Gateway Address: 192 . 168 . 0 . 1
- 6 → [Time and Date](#)  
Time: 09 : 57 : 15  
Date: 15 / 09 / 2014
- 7 → [RTSP Server](#)  
Mode: **Off**  
Port: 69  
[Set All](#)

Navigation icons: Home, Info, Back, Forward, Settings

# Data Configuration



## 1. Data Source



**Source ID:** Data 1/Data2

**Source Type:** Unicast/Multicast/UART

**IP Address**

**Port**

**UART Number**

**Baud Rate:** 2400/4800/9600/19200/38400/57600/115200/230400

**Flow Control:** None/Hardware

## 2. GPIO

**Number** - According to the hw

**Interval**

**Function** (from list)

## 3. UART



**UART (Number)**

**Port**

**Delay**

**Baud Rate:** 9600/19200/38400/57600/115200

**Flow Control:** None/Hardware

**State:** Off/On

### Data

① → [Data Source](#)

Source ID: **Data 1**

Source Type: **Unicast**

IP Address:  .  .  .

Port:

UART Number: **ttymxc0**

Baud Rate: **115200**

Flow Control: **None**

② → [GPIO](#)

Number:

Interval(ms):

Function: **Is live**

③ → [UART](#)

UART Number: **ttymxc0**

IP Address:  .  .  .

Port:

Delay(ms):

Baud Rate: **9600**

Parity: **None**

size: **8 bit**

Flow Control: **None**

State: **Off**

# Video Configuration 1/2



1. **Mux:** Mux1/Mux2/Mux3/Mux4
2. Frame Rate  
**Frame Rate:** Full/Time Laps  
**Time Laps**(1 - max camera frame rate)
3. Encoding  
**Encode Mode:** VBR/CBR/VBR Block  
**GOP** (0-255)  
**QL Value** (15 (better)-45(worst), work only in VBR mode)  
**Bitrate** (values in KBPS)  
**IQ:** Auto/Manual (work only in CBR mode)  
**IQ Value** (0 (highest) – 51(lowset))
4. Bitrate  
**Const Bitrate:** Off/On  
**Jitter** (In MS, Values between 0 – 200) it create delay buffer to solve jitter problem in network.
5. Zoom  
**Mode:** Disabled/Manual/Auto Full D1/Auto 4CIF/Auto CIF  
**Source W** (value)  
**Source H** (value)  
**Source X** (value)  
**Source Y** (value)  
**Dest W** (value)  
**Dest H** (value)  
Region of interest, auto resize

## Video

① → **Mux: Mux1**

② → **Frame Rate**  
Frame Rate: **Full**  
Time Laps:

③ → **Encoding**  
Encode Mode: **CBR**  
GOP:   
QL Value:   
Bitrate:   
IQ: **Auto**  
IQ Value:

[Extended](#)

④ → **Bitrate**  
Const Bitrate: **Off**  
Jitter:

⑤ → **Zoom**  
Mode: **Disabled**  
Source W:   
Source H:   
Source X:   
Source Y:   
Dest W:   
Dest H:

[Stabilizer](#)

[Deinterlace](#)

[Extended Codec](#)

## Video Configuration 2/2



6. Stabilizer  
**Mode:** Disable/Enable  
**Margin W** (value)  
**Margin H** (value)
7. Deinterlaced  
**Mode:** Disable/Enable
8. Extended Codec  
**Codec:** H264/MPEG  
**File Format:** TS/MP4  
**Color:** Colorful/Gray-Level
9. Split Setup  
**X Overlay** (Value)  
**Y Overlay** (Value)  
**Size Mode:** Split Size/Count Size  
**Split W**(Value)  
**Split H**(Value)  
- *Only for Split Size*  
**Count W:**1/2/3/4/5  
**Count H:**1/2/3/4/5  
- *Only for Split Count*  
**Buffer Pool Size**(Value)  
**Split Task Count:**1/2/3/4/5/6  
**Net Protocol:**UDP/TCP  
**Packet Size** (Value)  
**MD Delay** 0/1//2/3/4/5/6  
**Start Skip** 0/1//2/3/4/5

### Video

**6** → [Stabilizer](#)  
Mode: **Disabled**  
Margin W:   
Margins H:

**7** → [Deinterlace](#)  
Mode: **Disable**

**8** → [Extended Codec](#)  
Codec: **H264**  
File Format: **TS**  
Color: **Colorful**  
TS Flush: **On**

**9** → [Split Setup](#)  
X Overlay: **16**  
Y Overlay: **16**  
Size Mode: **Split Size**  
Split W:   
Split H:   
Count W: **None**  
Count H: **None**  
Buffer Pool Size:   
Split Task Count: **4**  
Net Protocol: **UDP**  
Feedback Port:   
Packet Size:   
MD delay: **0**  
Start Skip: **0**



## Audio Configuration



1. **Channel:** Channel1/Channel2
2. **Volume** (0 - 100)
3. **Codec:** List of possible codecs.
4. **Sample Rate:** 8000/44100/48000 (See the table below)
5. **Bitrate** (See the table below)
6. **Bit per Sample:** 8/16
7. **Channels:** Mono/Stereo

Codec	Sample Rate	Bitrate	Comment
PCM8	8000/44100/48000	—	—
PCM16			
mp2	44100	32000/64000	—
mp3	8000	8000	—
aac	—	—	Not implemented
amrnb	8000	4750/ 5150/ 5900/ 6700/ 7400/ 7950/ 10200/ 12200	—
amrwb			
G.729	—	—	Not implemented

### Audio

Channel: **Channel1**

Volume:

Codec: **mp2**

Sample Rate: **44100**

Bitrate:




Bit Per Sample: **16**

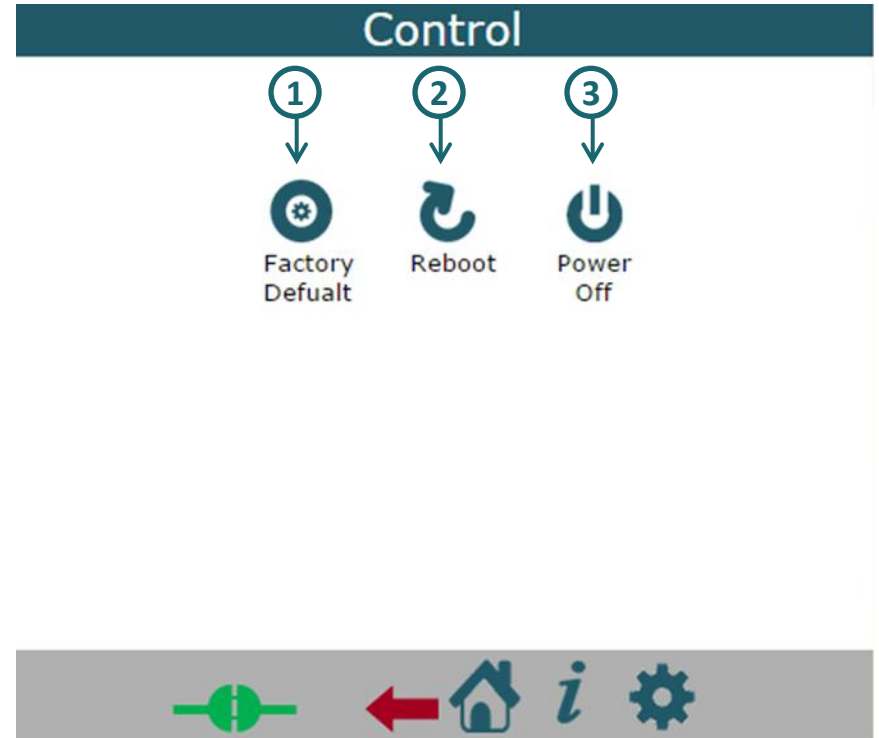
Channels: **Stereo**

# Control



Control Command:

-  **1. Factory Default**  
Delete the current config and use default setting.
-  **2. Reboot**  
Reboot the system.
-  **3. Power Off**  
Power off the system



# About



Details about the web

## About

Neptune 2.2.1

Created in 26/02/2015

