

Web Interface-User Manual
UAV Nano
ANT-1773

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Home Page



Neptune

1. Main menu



- Streaming
- Network Stream
- Playback
- Info
- Setting
- Control
- About

2. Status and Navigation- bottom menu.



Bottom Menu

1. Connection Status



Connected

When the board is connected to the browser and network.



Waiting 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

-  On the streaming page you can enable streaming and/or recording.

Streaming Operation

1. If your board is a transmitter, select mux 1,2, 3or 4 and click on play button(2).
2. To stop streaming click on stop button  Replaces Green Triangle when streaming

Streaming Configuration

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

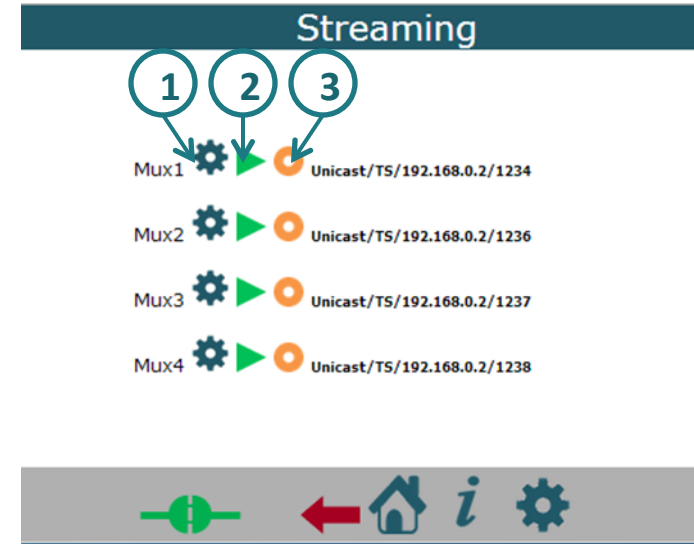
To configure **video** or **audio** see pages 15 and 16.


Recording Operation

1. Select mux 1-4 and click on record button(3), the button will start to flash when recording has started.
2. To stop recording - click the flashing button again.
3. Auto recording can be set to on within the Mux settings

Recording Configuration

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



 **Notice:**
During the recording do not remove the flash device.

Camera

Before you start streaming/recording - make sure the camera is active in the info page (See page 11). In case the camera is not active or you want to replace a camera, go to the system menu (See page 13) and set Camera CSI1/CSI2.

Streaming Configuration

1. **Mux:** Mux1/Mux2/Mux3/Mux4

2. **Auto:** Off/On

Select "On" to auto stream when the system is turned on.

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

To test the streaming without a camera, select "Test" and then click on the 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

Using the **RTSP** protocol the user needs to enable the RTSP server, because the transmission IP and ports 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. The settings are as follows:

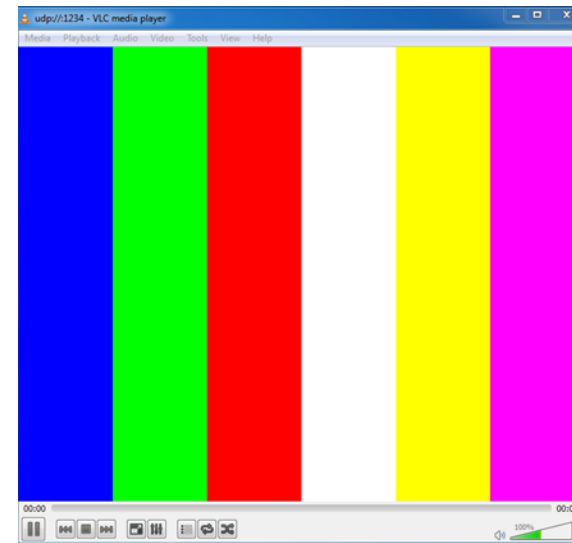
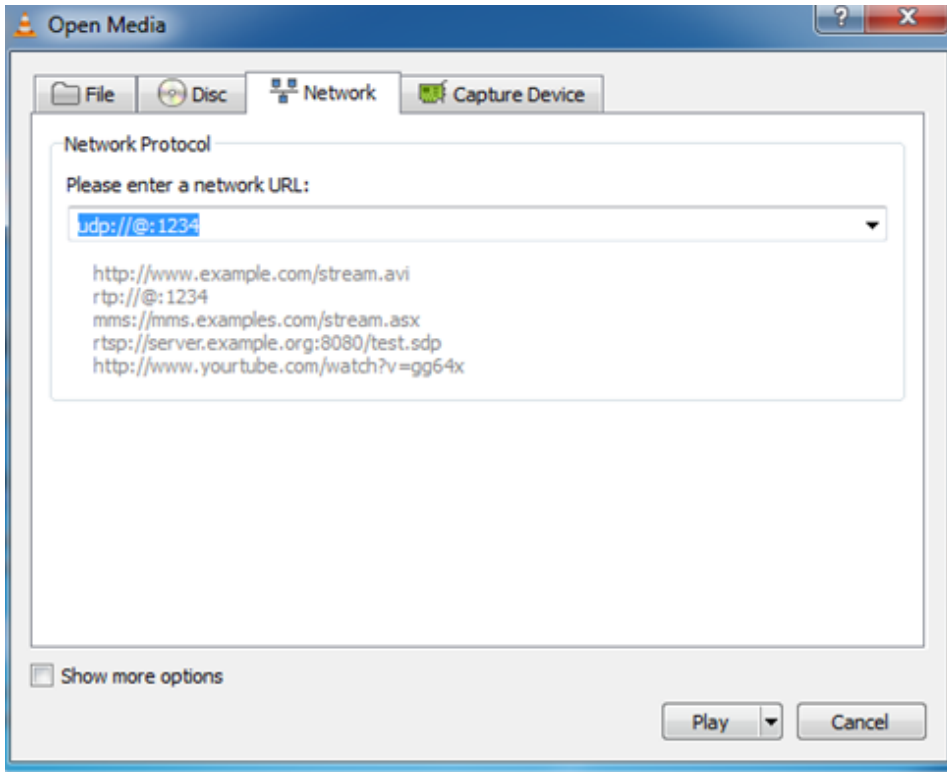
- 1. Mux: Mux1
- 2. Auto: On
- 3. Video: SD Channel1
- 4. Audio: None
- 5. Data: None
- 6. Interface: Network
- 7. Protocol: TS
- 8. IP Address: 192 . 168 . 0 . 2
- 9. Network Port: 1234
- 10. UART Port: ttyMXC4

At the bottom of the interface, there is a 'Set All' button and 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 streaming, open VLC and Enter the stream URL in VLCs “Open Network” . If the test is successful – you will see a color bar on the VLC screen.



Network Stream

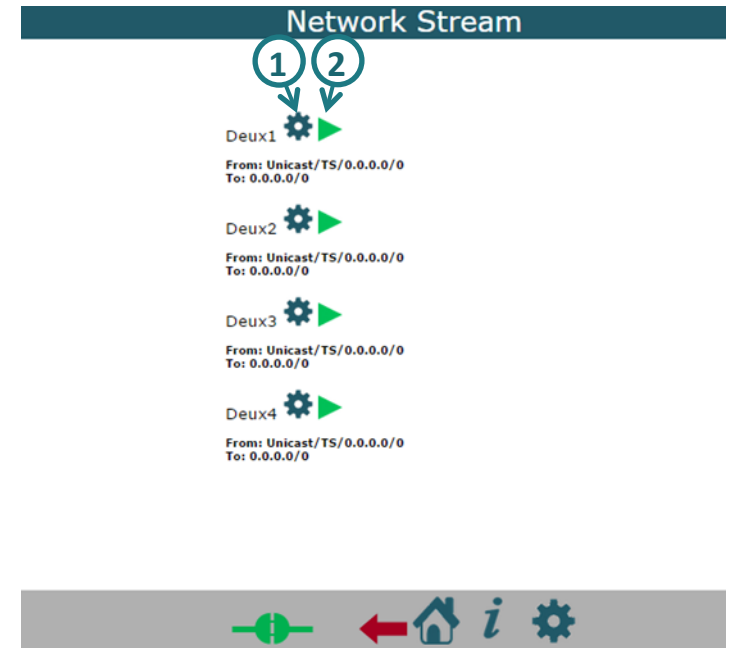


Network Stream Operation

1. If this board is a receiver, in player page select mux 1-4 and click on play button(2) Green Triangle.
2. To stop the player click on stop button  Which replaces the green triangle when playing

Network Stream Configuration

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



Player 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**

Player

Deux: Deux1

Auto: Off

Volume:

Delay:

From:

Interface: Network

Protocol: TS

Net Mode: Unicast

IP Address:
 . . .

Port:

UART Port: ttymx2

To:

Base IP Address:
 . . .

Base Port:

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









Playback

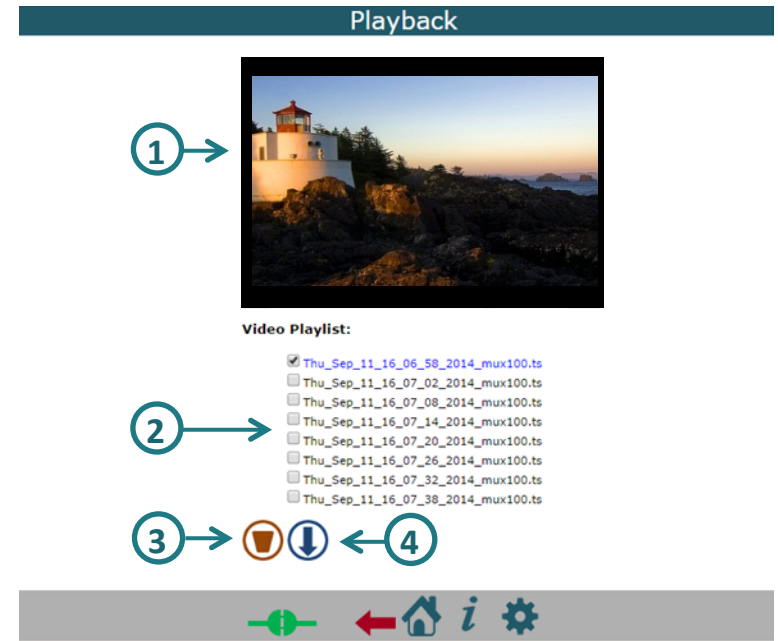
 In the playback page you can play, delete or download recorded files.
The recorded files on this board will appear in Video Playlist (2).

Playback:

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

 **Delete:**
Select a file or multiple files and click on the delete button(3).

 **Download:**
Select a file or multiple files and click on the download button(4).



The screenshot shows the 'Playback' interface. At the top, a dark blue header contains the word 'Playback'. Below the header is a large video player area showing a lighthouse on a rocky shore at sunset. A circled '1' with an arrow points to the video player. Below the video player is a 'Video Playlist' section containing a list of files with checkboxes. A circled '2' with an arrow points to the first file in the list, which is checked. Below the playlist are four icons: a circled '3' with an arrow pointing to a trash can icon, a circled '4' with an arrow pointing to a download icon, and a circled '3' with an arrow pointing to a left arrow icon. At the bottom of the interface is a grey navigation bar with icons for play/pause, back, home, help, and settings.

Information



In the info page you will see details about this 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

1 → System Info
Board
NEPTUNPRO 1.1

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

3 → 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

4 → 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

5 → Storage


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

6 → Temperature
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Setting

In the setting page you have links to the settings pages for various functions.

 System

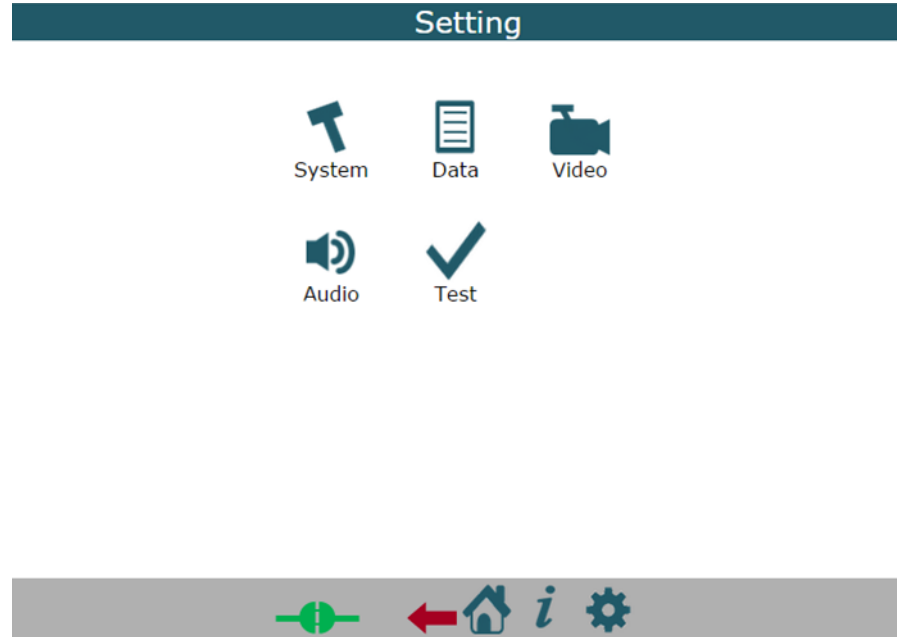
 Data

 Video

 Audio

Test

Descriptions are on the following pages



- 1. **Config Number:** CFG1/CFG2/CFG3/CFG4
- 2. **Mode:** Idle/Transmitter/Receiver
- 3. **Operation State:** Idle/Operational/Test Mode
- 4. **Camera CSI1/CSI2** (list of cameras)
 - Only for generic camera-
- 5. 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
- 6. Network
 - Mac Address**
 - mode:** DHCP/Manual
 - Only for Manual-
 - IP Address**
 - Mask Address**
 - Gateway Address**
- 7. Time and Date
- 8. RTSP Server
 - Mode:** Off/On
 - Port**

System

Config Number: **CFG 1**

Mode: **Transmitter**

Operation State: **Operational**

Camera CSI1: **tw9910**

Camera CSI2: **None**

[Setup Generic Camera](#)

[Network](#)

Mac Add:
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

[Time and Date](#)

Time: 04 : 41 : 20
Date: 01 / 01 / 1970

[RTSP Server](#)

Mode: **Off**
Port: 6777

Data Configuration



1. Data Source
Source ID: Data 1/Data2
Source Type: Unicast/Multicast/UART
IP Address
Port
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
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:

Baud Rate: **115200**

Flow Control: **None**

2 → [GPIO](#)

Number:

Interval(ms):

Function: **Is live**

3 → [UART](#)

UART: **ttymxc2**

Port:

Delay(ms):

Baud Rate: **9600**

Flow Control: **None**

State: **Off**

Video Configuration



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. ROI
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
6. Extended Codec
Codec: H264/MPEG
File Format: TS/MP4
Color: Colorful/Gray-Level

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:

4 → [Bitrate](#)
 Const Bitrate: **Off**
 Jitter:

5 → [ROI](#)
 Mode: **Disabled**
 Source W:
 Source H:
 Source X:
 Source Y:
 Dest W:
 Dest H:

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

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 Command:

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

