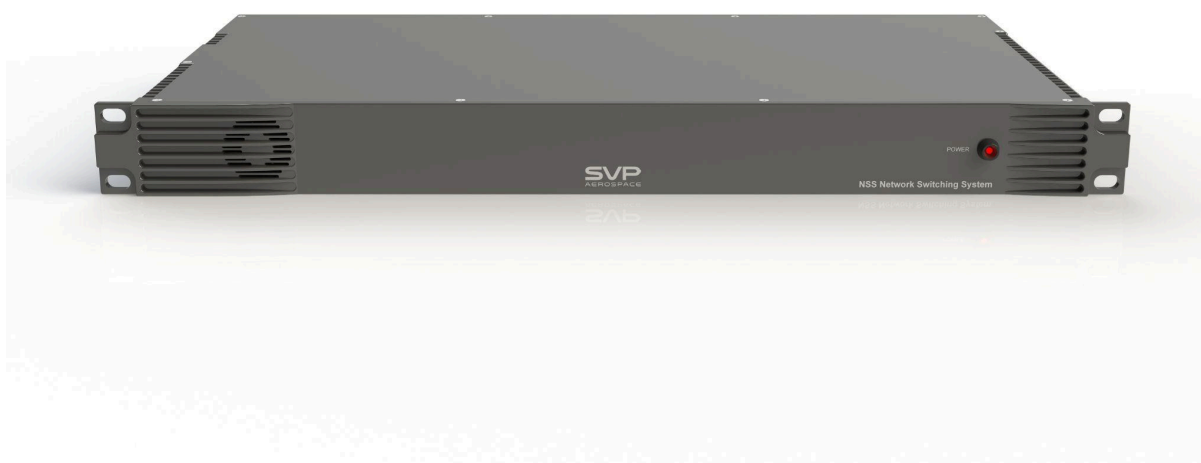


NSS - Network Stream Selector Manual v3



SVP Aerospace

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1. Introduction

Welcome to the NSS (Network Stream Selector) Webserver. This interface allows you to manage, monitor, and configure live video streams from multiple remote receivers (RX units). Using the NSS Webserver, you can:

- Check the status of connected receivers (i.e., whether they have a valid Ethernet link and provide usable video).
- Add or remove receiving endpoints.
- Specify forwarding destinations for the selected (“best”) video stream.
- Adjust network parameters such as IP addresses, gateways, and masks.
- Access a built-in RTSP server for easy viewing of the current selected stream from any compatible device.

This manual will guide you through each section of the Webserver. Please read it carefully to ensure optimal use of your NSS device.

2. Accessing the Webserver

1. **Network Connection:** Ensure that your PC or device is on the same local network (or has a route) to the NSS.
2. **Supported Browsers:**
 - The NSS Webserver has been **extensively tested** on the latest versions of **Google Chrome** and **Microsoft Edge**, ensuring full functionality and stability.
 - Other modern browsers may provide partial or variable compatibility, but **Mozilla Firefox is not supported** and does not work reliably with the NSS Web interface.
 - For best results, we highly recommend using Google Chrome or Microsoft Edge to avoid unexpected behavior.
3. **Login:** If prompted, enter the username and password provided by your system administrator. (These can be updated later in the **Security Configuration** section.)

3. Inputs Status

This section displays a **table** with the names of your remote receivers and their connectivity/video status:

Column	Description
Name	The user-friendly label for each remote receiver (e.g., “Oz”, “Mountain Site”).
Status (Net/Video)	Indicates whether the remote device is reachable over Ethernet and if its video is valid. Possible values: - Online (Video) : Device reachable, valid video present. - Online (No Video) : Device reachable, no valid video stream detected. - Unreachable : No Ethernet response from the receiver. Video status unknown.
Selected	Shows whether this source is currently chosen as the “best” stream. A “Yes” means it is the active feed being forwarded by the NSS.

How It Works

- **Reachability (Ethernet)**: The NSS attempts to contact each receiver’s Webserver or status endpoint.
- **Video Detection**: If the receiver is reachable, the NSS checks if a valid Transport Stream (TS) is present on the specified port.

Use this section primarily to **monitor** which receivers are online/offline and whether they’re providing video.

Inputs Status

Name	Status (Net/Video)	Selected
Oiz	Unreachable	Yes
Ganeta	Unreachable	No
Zaldiaran	Unreachable	No
Jaizkibel	Unreachable	No

Status (Net/Video):
Online (Video): device reachable, video present.
Online (No Video): device reachable, no video.
Unreachable: no response from device.

4. Inputs Configuration

Here, you define each remote receiver's **Name**, **Streaming Port**, and **Remote IP WebServer**:

1. **Name**: A descriptive label for the receiver's location or function (e.g., "TowerCam1", "Zaldieran").
2. **Streaming Port**: The UDP/RTP port on which the receiver sends its Transport Stream (TS) to the NSS.
3. **Remote IP WebServer**: The IP address of the receiver's own network interface, used by the NSS to confirm Ethernet connectivity and video presence.

Important:

- Configure the **receiver** itself to send its TS data to the NSS IP address (found in **NSS Configuration**), using the same **port** specified here.
- The NSS needs both the correct port **and** the correct "Remote IP WebServer" to accurately detect the signal.

Add Input / Delete Input buttons:

- **Add Input** creates a new row for a receiver.
- **Delete Input** removes the last row from the table.

Inputs Configurations

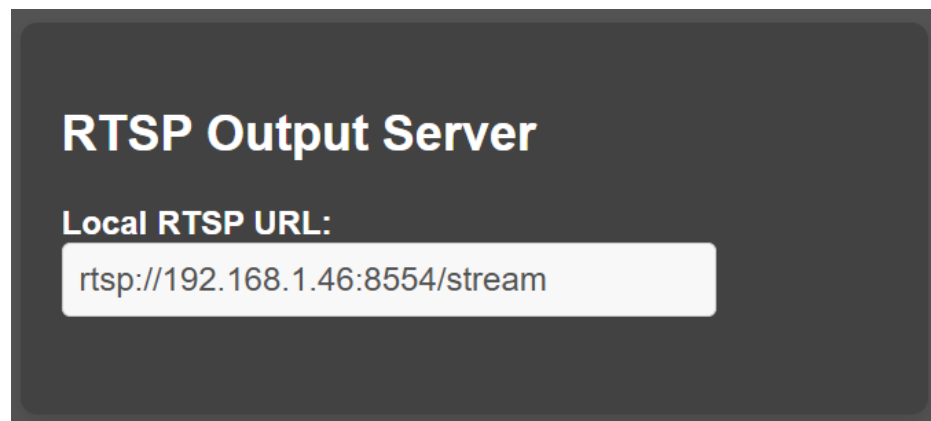
Name	Streaming Port	Remote IP WebServer
Oiz	3481	192.168.1.71
Ganeta	3482	192.168.1.72
Zaldieran	3483	192.168.1.73
Jaizkibel	3484	192.168.1.74

Add Input
Delete Input

5. RTSP Output Server

This section displays two RTSP URL fields:

1. **Public RTSP URL:** If you have configured a public RTSP endpoint (and possibly subscribed to the external service), this field shows the link that users outside the local network can use to view the stream.
2. **Local RTSP URL:** The internal RTSP address (`rtsp://<NSS_IP>:8554/stream`) that can be used within the local network. Connect any standard RTSP-compatible client (VLC, FFmpeg, Milestone, etc.) to watch the currently selected video in real time.



6. Output Configurations

Here you specify the IP:PORT destinations where you want to **forward** the selected (“best”) video stream. For each destination:

1. **Destination IP:PORT:** Enter the IP address and port of the receiving device or server expecting the Transport Stream.
2. **Add Output / Delete Output:** You can insert or remove outputs as needed.

Note: The NSS forwards the same selected TS to **all** listed outputs simultaneously (via UDP or RTP, matching the protocol from the receiver).

Outputs Configurations

Destination IP:PORT

192.168.1.79:4461

192.168.1.80:4462

192.168.1.81:4463

192.168.1.82:4464

192.168.1.34:4465

Add Output

Delete Output

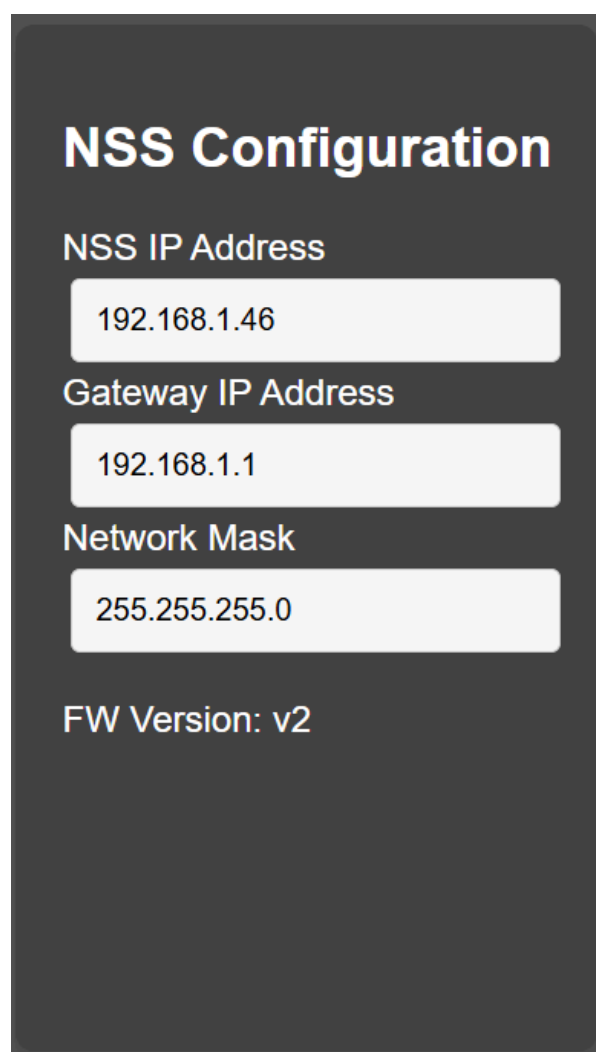
7. NSS Configuration

This section defines the **network settings** for the NSS device itself:

1. **NSS IP Address:** The IP that receivers must target when sending their video streams.
2. **Gateway IP Address:** The network gateway the NSS uses for outbound traffic beyond the local subnet.
3. **Network Mask:** The subnet mask (e.g., 255.255.255.0).
4. **FW Version:** The currently installed firmware version on the NSS (displayed as "Version: x.x").

Crucial:

- If you change the NSS IP, you must also reconfigure your receivers to send their streams to the new IP.



NSS Configuration

NSS IP Address

192.168.1.46

Gateway IP Address

192.168.1.1

Network Mask

255.255.255.0

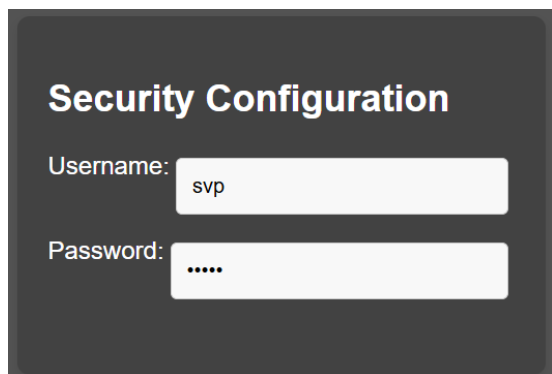
FW Version: v2

8. Security Configuration

In this section, you can **change the login credentials** for the NSS Webserver:

- **Username / Password:** Provide new credentials.
- After saving changes, a system reboot may occur (depending on your system settings), and the new credentials will be required upon the next login.

Warning: Keep your credentials secure to prevent unauthorized access.

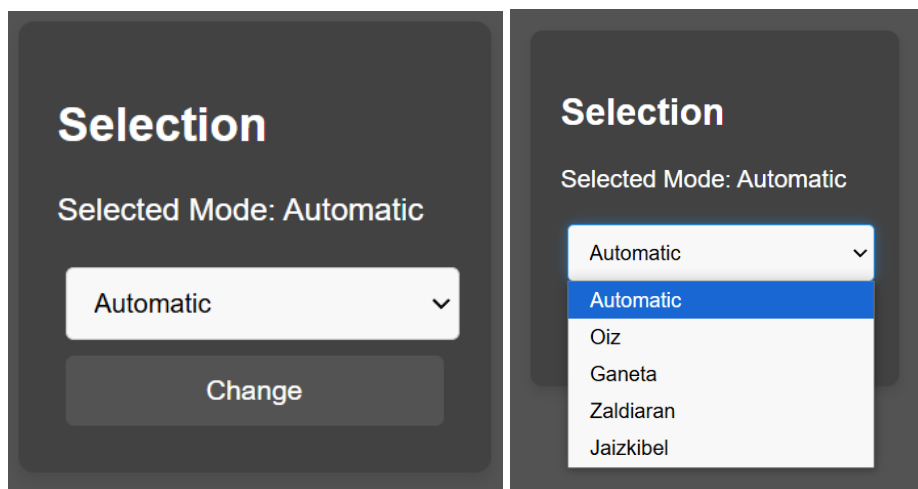


9. Selection

This area handles how the NSS decides which video feed to forward:

- **Automatic Mode:** The NSS chooses the feed with the highest quality video automatically.
- **Manual Mode:** You manually pick which receiver is active. Simply select its name from the dropdown, then click **Change** to override automatic selection.

This is useful for testing specific feeds or if you want control over a particular camera/site.



10. Fallback Mode

When **no valid video** signal is detected from any of your configured inputs, the NSS automatically switches to a fallback mode. In this mode, an external video source is used (via port **9999**) to maintain continuous streaming—applicable for both UDP and RTP transports. In the Inputs Status page, fallback mode is indicated by all inputs appearing as “Not Selected” and a green LED with the message “Fallback is Active.”

You may also manually force fallback mode via the **Manual Selection** dropdown. When forced, the NSS will remain in fallback mode—ignoring any available video on other inputs—until you manually change the selection.

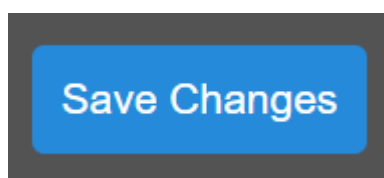
Note: Ensure that your external video source is configured to send its stream to the NSS IP address on port 9999.

11. Saving Changes

Whenever you edit **Input Configurations**, **Output Configurations**, **NSS Configuration**, or **Security Configuration**, you must:

1. Click the **Save Changes** button (usually at the bottom).
2. Wait a few moments while the system updates its configuration. Certain changes (like IP reassignments or password updates) may trigger a reboot. During reboot, the NSS will be temporarily inaccessible.

Important: If you navigate away without saving, any modifications you made will be lost.



12. Additional Recommendations

- **Network Stability:** Ensure your network links between the NSS and receivers are reliable (wired if possible) for uninterrupted streaming.
- **Receiver Setup:** Each receiver must be configured to send TS (Transport Stream) over IP to the NSS IP and the correct port.
- **Monitoring:** Regularly check the **Inputs Status** page to confirm which receiver is active and whether it is delivering valid video.
- **Firmware Updates:** Keep your NSS firmware up to date to benefit from performance improvements and new features. Consult your reseller or the official documentation for update instructions.

13. Troubleshooting

- **No Video:**
 - Verify the receiver's IP and port settings in Input Configurations.
 - Check that the NSS IP in the receiver is correct.
 - Confirm the receiver is actively streaming (e.g., via a direct local test).
- **Unreachable:**
 - Ensure the receiver's Webserver is reachable from the NSS network.
 - Double-check the IP address in the Input Configurations.
 - Verify physical cables/switches are functioning properly.
- **Cannot Login:**
 - Confirm you have the correct credentials.
 - If newly changed, wait for a system reboot and then try again.
- **RTSP URL Not Working:**
 - Make sure the streaming port (8554 by default) is open or not blocked by a firewall.
 - Confirm the selected input actually has a valid video feed.
- **Browser Incompatibility:**
 - If the interface does not load correctly, switch to a supported browser (Chrome or Edge).
 - Ensure your browser is up to date.



SVP Broadcast Microwave reserves the right to make changes to this manual and to the equipment without prior notice.

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