PRO3 Series

PRO340   PRO360-5G   PRO380

AVIWEST
Shaping tomorrow's *live* video

CONTENTS

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Compliance

Before using the unit, please inform yourself about laws and regulations in force in the country in which you use it. Please refer to the sticker pasted on the unit to know its version.

The declaration of conformity is available upon request. Should you need it, please contact AVIWEST.

Safety and Health Precautions

⚠️ Handling the Unit

- To avoid any injury during the installation, observe local health and safety requirements and guidelines for manual material handling.

- The unit must be handled carefully and thoughtfully to prevent safety hazards and damage.

⚠️ Electronic and Radio Interference

- To avoid interferences with electronic devices contained in vehicles, keep the unit away from the vehicle's dashboard.

- When connected to wireless networks (3G/4G/5G or Wi-Fi), the unit emits microwaves that can interfere with other electronic devices.

- The operation of this equipment in a residential environment could cause radio interference.

⚠️ Safety Precautions

- Do not use the unit in any place where the use of mobile phones is usually banned: airplanes, hospitals, and areas with potentially explosive atmosphere (e.g. gas stations, repair shops, fuel or chemical storage areas).

- In accordance with IEC 62368-1:2014 standard, devices must be connected to PS2 power sources. Consequently, only PS2 type external batteries must be used. PRO3 Series devices are delivered with a design PS2 type power block.

⚠️ Coin Battery Safety Precautions

- Lithium battery (ref: BR1225A)

- There is a risk of explosion if the battery is replaced by an incorrect type.

⚠️ Health Precautions

Operating the unit is not recomended for:

- People with electronic implants (e.g. pacemakers, insulin pumps, implanted pulse generators, hearing aids).

- Pregnant women, old people, children, teenagers and people suffering from epilepsy.

⚠️ **Servicing the Unit**

- Only trained and approved service engineers are permitted to service this unit.

- Unauthorized maintenance or the use of non-approved replacements may affect the unit specifications and invalidate any warranties.

Operating Environment

- Make sure that the environment corresponds to the conditions mentionned below:

  ◦ Only use at altitude not exceeding 2000 meters.

  ◦ Only use in not-tropical climate regions.

    ▪ Ambient operating temperature: 0°C to 45°C (0°C to 35°C when unit placed in backpack).

    ▪ Ambient operating temperature: 0°C to 40°C (for the DC adapter).

    ▪ Ambient operating humidity: 10% to 85% (no condensation).

> ⓘ **Important:** Operating the unit out of these ranges may cause damage and void the warranty.

- Protect the unit against rain, dust and shocks.

- Avoid long exposure to direct sunlight.

- Do not obstruct the air inlets and outlets.

- Only use the backpack provided by AVIWEST. Insufficient air flow may damage the unit and may void the warranty.

- Do not place a rain cover on the backpack when the unit is operating.

- The unit relies on the building's installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than: 250V, 20 A.

- The unit does not have any protective earthing connector. Connection to earth is made through the DC adapter to which the unit is connected.

⚠ Caution - Safety precautions

Only use the DC adapter and the power cord provided by AVIWEST.

Using another DC adapter and power cord can damage the device and void the warranty.

- Important notice for Japan territory:

  ◦ Using the 5GHz band (W52) outdoors is prohibited by radio regulations.

  ◦ Turn off Wi-Fi capabilities or select only 2.4GHz band when the device is used outdoors.

Product Presentation

Overview

The PRO3 Series is a range of camera mounted mobile encoders & transmitters allowing video professionals to broadcast news, sports of field events from any location around the world. This solution supports video live transmission, record and forward over unmanaged networks - such as 3G/4G-LTE and 5G cellular network, LAN/WAN or public internet.

With its large set of professional audio and video interfaces, the PRO3 Series supports the best state-of-the-art H.265/HEVC and H.264/AVC hardware encoder by offering premium video quality with less data usage and low end-to-end latency.

On the transmission side, the solution features up multiple world-wide compliant embedded cellular modems with high efficiencypatented custom antenna array: up to x6 3G/4G/5G or x8 3G/4G modms. Additional extension links such as built-in Wi-Fi, Dual Gigabit Ethernet for streaming over LAN/WAN, BGAN, GX or Ka band Satellite are also natively supported, and controlled by our SST (Safe Stream Transport) technology. This award-winning technology powered by AVIWEST is an intelligent IP bonding stack offering a set of powerful contribution network protocols. It ensures the delivery of video even in the midst of unpredictable and unmanaged networks conditions by:

- aggregating simultaneously multiple network connections,
- dynamically adapting the video bitrate according to the network bandwidth fluctuations,
- protecting stream content,
- supporting retransmission of lost data.

The PRO3 Series is organized as illustrated in the following chart.

	PRO360-5G	PRO380	PRO340
Embedded cellular modems	6	8	4
Cellular networks	3G/4G/5G	3G/4G	3G/4G

Front Panel

Touchscreen

Link Indicator

Activity Indicator

SD Card slot

Intercom mini XLR
(headphone, micro)

Remote Antennas
PRO340 & PRO380

USB 3.0 port

Power Button

Rear Panel

Ethernet 2

Analog Audio
input/output (right)

Ethernet 1

Analog Audio
input/output (left)

HDMI 1.4 Output

HDMI 1.4 Input

8 x Micro SIM Card for PRO380
6 x Micro SIM Card for PRO360-5G
4 x Micro SIM Card for PRO340

3G-SDI Output

3G-SDI Input

Auto-Start Switch

DC IN (18 V nominal)

Left and Right Sides

Camera Mounting plate
(Gold Mount, V-mount)

Battery Mounting plate
(Gold Mount, V-mount)

Indicators Meaning

Table 1. ↻ **Activity Indicator**

Status	Meaning
Fixed Green	The unit is starting.
Flashing Green	Live, Record or Forward in progress.
Off	No Live, Record or Forward in progress.

Table 2. ⌒ **Link Indicator**

Status	Meaning
Fixed Green	The unit is starting or connected to a StreamHub.
Off	The unit is not connected to a StreamHub.

Installation

Checking Package Content

Please check that the packange contains:

- PRO3 Unit

- 18V AC/DC adapter

- A printed Quick Start Guide

- A flyer with QR code redirecting to Web site with technical documents (User Guide, and Quick Start Guide)

- SD card (if ordered)

- A remote control (if ordered)

Installing the unit

1. Install the external battery onto the unit side or connect the AC/DC adapter and the power cable.

2. Insert a SD card (if not already installed). It is recommended to use FAT 32 or exFAT formats and class 10 SD card.

3. Remove the SIM card cover and insert a SIM card into a slot according to indications written on the cover.

4. For the Ethernet transmittion, connect the Ethernet cable.

5. Connect video input cables (SDI or HDMI).
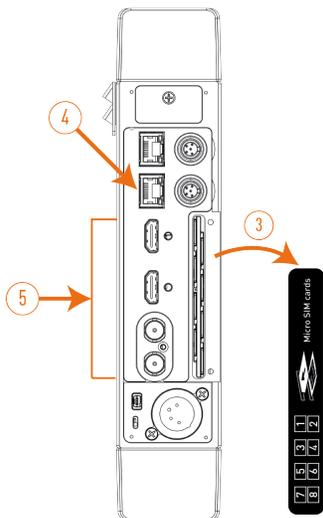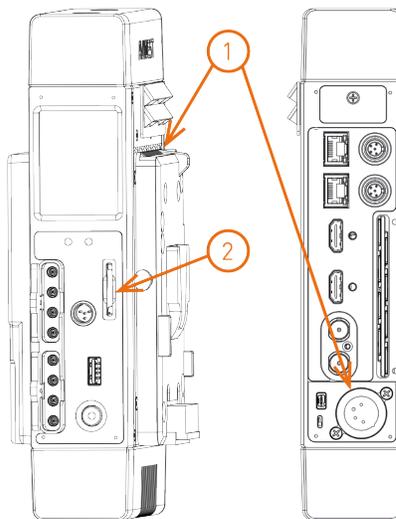
Connecting a QUAD Antenna to the Unit

> **ⓘ** **Note:** For PRO340 and PRO380 only. Connecting a QUAD antenna is not mandatory for the unit's good use.

You can connect up to 2 QUAD Antenna to MCX connectors.

QUAD Antenna using modems 1, 2, 3 and 4

QUAD Antenna using modems 5, 6, 7 and 8
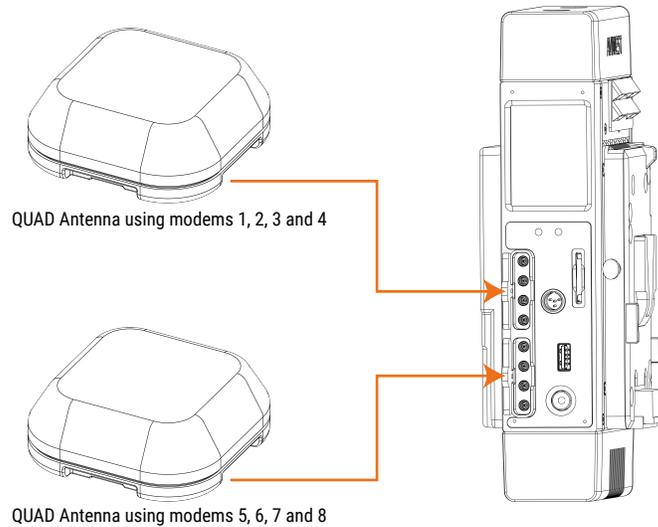
> **ⓘ** **Note:**
>
> • When plugging a QUAD Antenna, the unit automatically switches from its embedded antennas to the QUAD Antenna's external antenna arrays.
>
> • If only one QUAD Antenna is connected to the unit, you need to disable the modems that are not used (please refer to Enabling / Disabling a Cellular Modem).
>
> • When restarting the unit, the configuration that you applied to modems is kept.

Unit Front Panel

The unit front panel allows you to:

- Configure the unit

- Start / stop live

- Start / stop record

- Forward stored files

Menus

The diagram below shows the different menus accessible from **Home** and **Settings** Menus.

Start a Live			Config. Data Bridge
Start a Record			Config. Network Interfaces
Forward Stored Files			

Home Menu

Settings Menu

| Mission Configuration (Optional) | Input/Output Configuration | Network Configuration | Destination Profile Configuration | Live Profile Configuration | Record Profile Configuration | Forward Settings Configuration | BGAN Profile Configuration | SD Card Management | Unit Settings | Device information |

Icons

On the front panel screen, some icons indicate the unit state.

Video Source

	SDI input selected receiving a stream		HDMI input selected receiving a stream		Circles Pattern selected	Black Pattern selected
	SDI input selected but no received stream		HDMI input selected but no received stream		Bars Pattern selected	

Video Return

Video Return (if enabled)

Data Bridge

Data Bridge enabled and connected

Data Bridge enabled and not connected

Missions

Mission Selected

Live at startup

Live at startup (if enabled)

USB Keys

1 USB key memory space

2 USB keys memory space

Unit geolocation

Unit located

Ethernet Connection

Ethernet connection

2 Ethernet connections

WiFi Connection

WiFi Connection in Client Mode

WiFi Access Point configured

At least 1 client connected to WiFi Access Point

Intercom

Communication with Master Room

Mass Storage Status (SD card)

SD card locked

SD card memory space

SD card in Hot Folder mode

Power Supply / Battery Status

Unit connected to Power Supply

Battery Unloading Level

Cellular Connection Signal Level

1 Cellular connection

2 Cellular Connections

.
.
.

6 Cellular Connections

Error icons

Error with modem connection

Error with Ethernet connection

Launching the Web Interface

The web interface allows you to:

- Configure the unit

- Start / stop live

- Start / stop record

- Forward stored files

To access the Web interface, use an Ethernet connection or a Wi-Fi connection.

Ethernet Connection

1. From the **Home** menu, click on .
   The screen displays the IP address assigned to the unit (by default in DHCP mode):

2. From a web browser, enter the unit IP address and append ":8888" to it.
   Example: 10.50.1.139:8888
   The login screen opens.
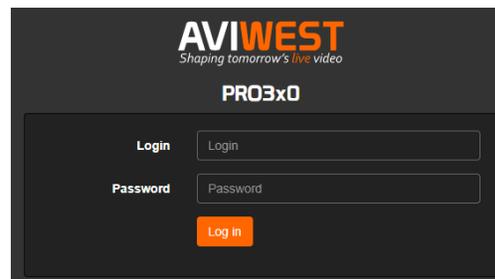
3. Enter the login and password (by default: login= **admin** ; password= **password**).

> ℹ **Note:** It is highly recommended to modify this factory password.

The web interface opens.
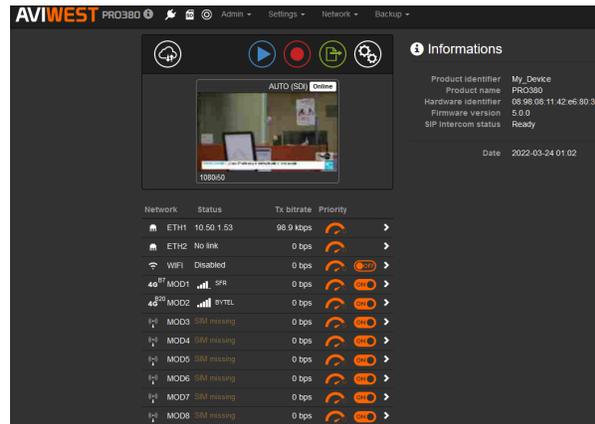
Wi-Fi Connection (Access Point Mode)

1. From the Unit Panel, configure the unit as a Wi-Fi Access Point (see chapter Configuring a WiFi Interface).

2. On your Wi-Fi client device (computer, notebook, smartphone), go to the Wi-Fi settings menu, and select the Wi-Fi access point that you configured.
PRO_bf:98:10:01:02:8e:80:c0

3. Enter the password that you defined.

4. In a web browser, enter the unit url: http://192.168.30.10:8888 (default IP address if it has not been changed).
The login screen opens:
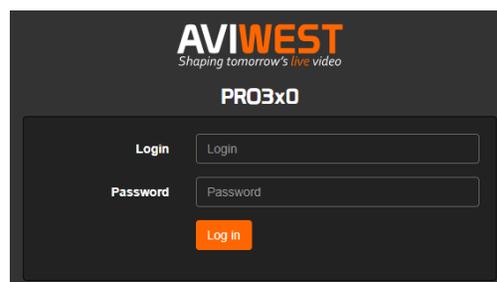
5. Enter the login and password.

   Default login = **admin**

   Default password = **password**

> **ℹ Note:** It is highly recommended to modify the password.

The unit web interface opens:

Configuring an Ethernet Interface

Devices connected to a local LAN transmitter are remotely controllable from the Media Control Room. The unit can operate in different Ethernet modes:

- DHCP

  To use the unit in a domain that has a DHCP server.

  The DHCP server assigns the IP address, subnet mask and default gateway to the equipment.

  DHCP is the default configuration mode for Ethernet 1.

- STATIC

  To connect the unit to a domain without using a DHCP server.

  This requires that you are the network administrator to set IP settings of the Ethernet interface (IP addess, netmask and gateway).

- GATEWAY

  To connect a host to the unit (for instance a laptop).

  The unit acts as a DHCP server and assigns an IP address to the connected host.

  The unit automatically detects from the netmask the range of IP addresses that it can use for assigning an IP address to the host connected.

Table 3. Factory Settings According to Selected Mode

Interface	MODE	IP Address	Netmask	Gateway
Ethernet 1	DHCP *	Assigned by DHCP server		
	STATIC	192.168.1.10	255.255.255.0	192.168.1.1
Ethernet 2	DHCP *	Assigned by DHCP server		
	STATIC	192.168.20.10	255.255.255.0	192.168.20.1
	GATEWAY	192.168.20.10	255.255.255.0	
	OFF	N/A	N/A	N/A

* Default configuration

> **ℹ** **Note:** When you select the OFF option, you disable the Ethernet mode. Configuring Ethernet interface may disconnect the unit.

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on the Ethernet line to configure it.

3. Click on the **Mode** field to enter the mode selection menu.

4. Click on a new mode.

5. The selected mode appears.

> • When selecting DHCP mode, settings are automatically retrieved.
>
> • When selecting STATIC mode, you need to enter network settings.
>
> • When selecting GATEWAY mode, you need to enter the IP Address, the netmask and the DNS server address.
>
> a. Click on .
>
> b. Click on settings fields to be modified.
>
> c. Use the keyboard to enter new settings and click on to confirm.
>
> d. Click on to scroll down and click on to save new settings.

From the Web Interface

1. From the Web Interface, click on on the Ethernet line.

2. In the **Mode** field, select the configuration mode according to the Ethernet connection used:

> • DHCP
>
> • STATIC
>
> • GATEWAY (only for Ethernet 2)
>
> • OFF (only for Ethernet 2)

3. According to the Ethernet connection, modify the settings if required:

> • IP Address, Netmask and Gateway if STATIC mode is selected.
>
> • IP Address, Netmask and DNS server address if GATEWAY mode is selected.

4. Click on **Apply** to save these settings.

> ℹ **Note:** Configuring Ethernet interface may disconnect the unit.
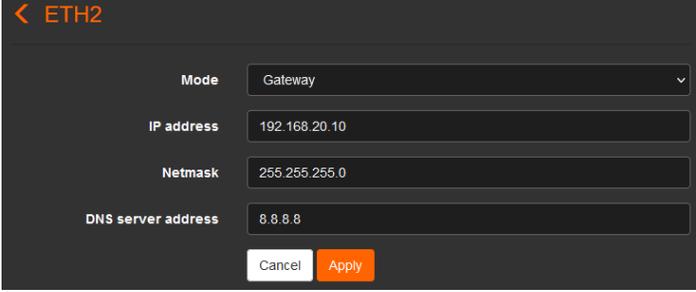
< ETH2

Mode	Gateway
IP address	192.168.20.10
Netmask	255.255.255.0
DNS server address	8.8.8.8

Cancel Apply

Configuring a Wi-Fi Interface

The unit can operate either as a Wi-Fi Access Point, or a Wi-Fi Client.

Enabling / Disabling the Wi-Fi Interface

By default, the Wi-Fi network is disabled.

From the Unit Panel

1. From the **Home** menu, click on ⬚.

2. Click on the WiFi line to access the settings menu.

3. Click on ⬚OFF to enable the WiFi.
   The button turns into ON⬤.

The WiFi network is enabled.

From the Web Interface

Click on ON⬤ or ⬚OFF in the Wi-Fi line to enable or disable the Wi-Fi network.
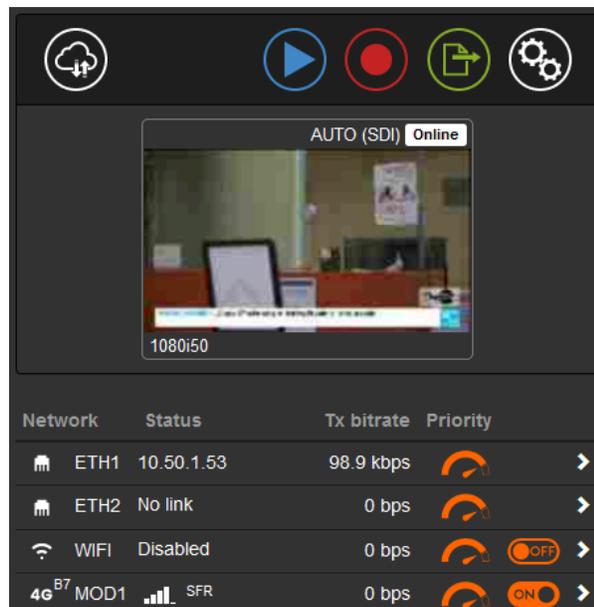
Configuring a Wi-Fi Access point

By default, the Wi-Fi network is disabled. Make sure it is enabled. If not, see Enabling / Disabling the Wi-Fi Interface.

When configured in Wi-Fi access point mode, the unit can be controlled remotely from a smartphone, tablet or laptop.

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on the Wi-Fi line to access the Wi-Fi settings menu.

3. Click on the **Mode** field.

4. Select the **Access Point** mode.

5. Click on to scroll down.

6. Click on .

7. Define the Wi-Fi settings.

- **Network name** (automatically formatted as follows: PRO3 followed by _ and the unit hardware ID. In the example beside: PRO3_bf:98:10:71:c2:26:80:6c

- **Frequency Band** Select 2.4GHz or 5.0GHz

- **Channel** Select the channel used (dynamic list according to the Frequency Band select):

  ◦ 2.4GHz: channel 1 to 11.

  ◦ 5.0GHz: channel 36, 40, 44 and 48.

- **Password** By default: password.

8. Click on and **ADVANCED +**.

9. Define IP settings (IP Address, Netmask and DNS server address).

10. Click on .

An icon indicates that the Wi-Fi Access Point is configured:

A Wi-Fi Access Point is configured.

AP At least one client is connected to the Access Point.

From the Web Interface

1. Click on the Wi-Fi line to open the Wi-Fi interface.

2. From the **Mode** scrolling list, select **Access Point**.
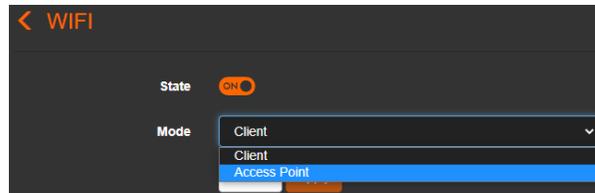
3. Define the Wi-Fi settings.

- **Network name** (automatically formatted as follows: PRO3 followed by _ and the unit hardware ID. In the example beside: PRO3_bf:98:10:71:c2:26:80:6c

- **Frequency Band** Select 2.4GHz or 5.0GHz

- **Channel** Select the channel used (dynamic list according to the Frequency Band selected):

  ◦ 2.4GHz: channel 1 to 11

  ◦ 5.0GHz: channel 36, 40, 44 and 48

- **Password** By default: Password

  ◦ Click on 🔄 to reset it.

- Enter the **IP Address**, the **Netmask** and the DNS server address.

> ℹ **Note:** 5GHz band is not available for Armenia, Belarus, Kazakhstan, Kyrgyzstan and Russia.
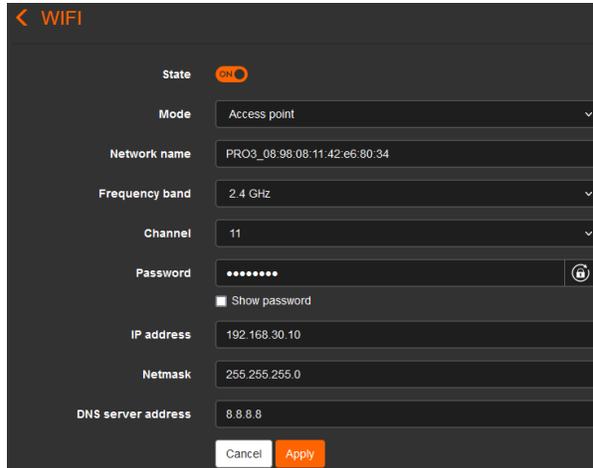
4. Click on **Apply**.

An icon indicates that the Wi-Fi Access Point is configured:

 A WiFi Access Point is configured

 At least one client is connected to the Access Point

Configuring a Wi-Fi Client Interface

By default, the Wi-Fi network is disabled. Make sure it is enabled. If not, see Enabling / Disabling the Wi-Fi Interface.

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on the Wi-Fi line to access the Wi-Fi settings menu.

3. Click on the **Mode** field.

4. Select the **Client** mode.

5. You have 2 possibilities to configure a client interface.

   • Selecting a network among the ones identified around

   • Adding manually a hidden network

Selecting a network among the ones identified around

1. Click on to scroll down and click on to scan surrounding networks.

2. Click on or to select a network.

3. Click on the screen to enter the password.

4. Click on the **Password** field to enter the password.

5. Enter the password and click on to confirm.

6. Click on .

Adding manually a hidden network

1. Click on to scroll down and click on .

2. Click on to add a new network.

3. Enter the Network name.

   • Click on the **Network name** field to enter a name.

   • Click on to confirm the network name.

4. Click on the **Security Mode** field.

5. Select the Security Mode.

6. Click on the **Password** field.

7. Enter the network password.

   • Click on to connect the network.

   • Click on to save the new network.

From the Web Interface

1. From the Web Interface, click on ![arrow button] on the Wi-Fi line.
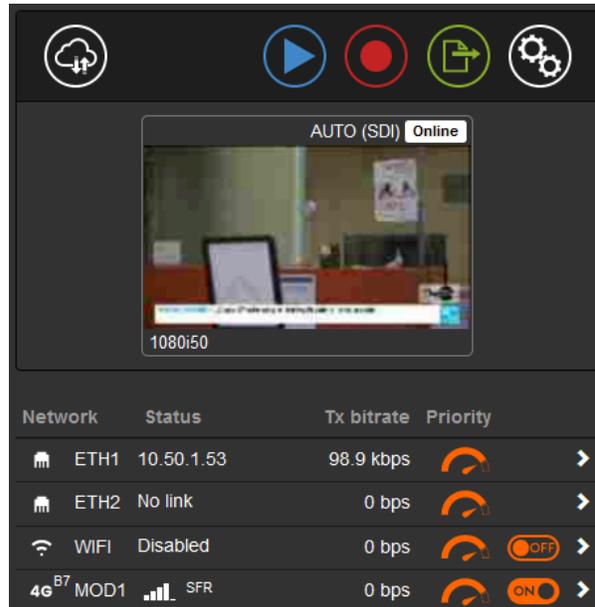
2. From the **Mode** scrolling list, select **Client** mode.

3. Click on **Apply**.
   Surrounding networks are scanned and listed.

4. You have 2 possibilities to configure a client interface:

   • Selecting a network among the ones identified around.

   • Adding manually a hidden network.

Selecting a network among the ones identified around

1. Select the network among the list.

2. Enter the **Password**.

3. Click on **Join**.

Adding manually a hidden network

1. Click on **Add**.

2. Select the **Network name**.

3. Select the **Security Mode**.

4. Enter the network **Password**.

5. Click on **Join**.

Configuring a 3G/4G/5G Cellular Interface

Inserting the SIM card

1. Make sure that your SIM card is unlocked.

> 🛈 **Note:** In some cases, you may need to identify the unit IMEI (International Mobile Equipment Identity). To know how to access this information, please refer to Getting the IMEI numbers chapter.

2. Insert the SIM card into a slot on the unit rear panel

PRO340
- A PRO340 unit is equipped with 4 modems.
- Slots 1 to 4 can be used.

Micro SIM cards

PRO360-5G
- A PRO360-5G unit is equipped with 6 x 5G modems.
- Slots 1 to 6 can be used.

Micro SIM cards

PRO380
- A PRO380 unit is equipped with 8 modems.
- Slots 1 to 8 can be used.

Micro SIM cards
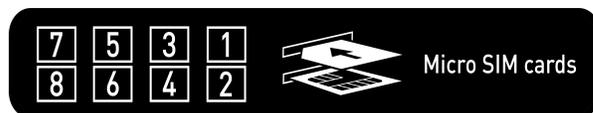
When using the unit in the USA, we recommmend inserting SIM cards as indicated in the table below:

SIM Slot Number	US Operator
1	AT&T
2	T-Mobile
3	Verizon
4	AT&T
5	T-Mobile
6	Verizon

SIM Slot Number	US Operator
7	AT&T
8	T-Mobile

Managing the APN database

The unit is delivered with a pre-defined APN database. You can enrich the database from the Web Interface. You can:

- Add and configure new APN settings to suit your requirements, so they can be easily selected from the list.

- Delete an APN.

- Enable/Disable the APN Automatic Configuration.

Adding an APN to the database

1. From the Web Interface, click on **Network > APN**.

2. Click on **Add**.

3. Enter a **Name**.

4. Fill in the parameters fields (**MCC, MNC, APN**).

> **ⓘ**   **Note:** Click on 🔅 to get some help if required.

5. Enter a **Username** and a **Password** if required.

6. Click on **Apply**.

The new APN appears in the APN database, and you can select it from the scrolling list when configuring a cellular interface operating within the same network.
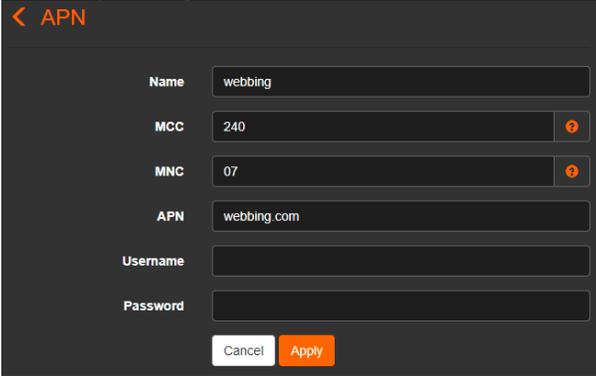
Configuring the APN

If the SIM card operator is registered in the unit's database, the unit automatically assigns a name and an APN (Access Point Name).

If the APN assigned is not relevant, you can select another one within a predefined list, or configure a new one.

<u>From the Unit Panel</u>

1. From the **Home** menu, click on .

2. Click on or to select the Modem to configure.

3. Click on the line of the modem to be configured.

4. Check the APN assigned.

    a. Click on .

    b. Click on to scroll down and display the APN.

You can change the APN by:

- selecting an APN from a predefined list, or
- configuring settings for a new APN.

Selecting a predefined APN

1. Click on to scroll up to display the button.

2. Click on to access the list of predefined APN.

3. Click on or to select an APN.

4. Click on the screen to confirm the choice.

5. Click on to save.

Configuring a new APN

1. Click on the **APN** field.

2. Use the keyboard to enter a name for the new APN and click on .

3. Click on to scroll down and enter other settings (Username and Password) if required.

4. Click on to save.

From the Web Interface

1. Check that the operator's name is indicated in the Status field and the type of network is indicated.

2. Click on to configure the APN.

3. The IMEI, IMSI and ICCID fields are automatically filled in.

4. Check if the automatically assigned APN settings are relevant.

5. If the APN is not suitable, you can click on "**Choose a pre-defined modem APN**" and select the expected APN from the pre-defined list.

6. If you cannot find a relevant APN in the pre-defined list, you can:

   • Fill in the APN fields with proper settings and click on **Apply**.

   • Enrich the pre-defined APN list by adding your APN to it (See Managing the APN database).

Deleting an APN

1. Click on **Network > APN**.

2. Double click on the trash button ( ).

Enabling / Disabling the Automatic APN Configuration

When the **APN Automatic Configuration** is enabled, an APN is automatically assigned when a new SIM card is inserted.

1. From the Web Interface, click on **Network > APN**.

> **(i)** **Note:** By default, the **APN Automatic Configuration** is enabled.

2. Click on ⬤ to disable it. The button turns into ⬤.
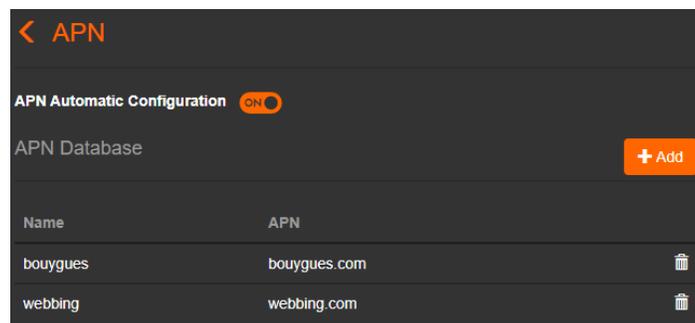
Configuring a BGAN Profile

By default, the unit do not have any BGAN profile.

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on and click on .

3. Click on .

4. Click on **Profile Name** field.

5. Use the keyboard to enter the new profile name.

6. Click on to confirm the new profile name.

7. Click on the **Model** field. Choose between:

    • Hughes 9201

    • Hughes 9211

    • Explorer 710

8. Click on the **APN** field.

9. Use the keyboard to enter a name for the APN and click on .

10. Click on the **Username** field and use the keyboard to enter a username. Click on to confirm. (Optional).

11. Click on the **Password** field and use the keyboard to enter a password. Click on to confirm. (Optional).

12. Click on the **Mode** field. Choose between:

- X-Stream

- Background

- HDR Full-Asymmetric

- HDR Full-Symmetric

13. Click on to save the BGAN profile.

From the Web Interface

1. From the Web Interface, click on **Network > BGAN**.

2. Click on .

3. Enter a profile name in the **Profile Name** field.

4. Choose a model in the drop-down list.

- Hughes 9201

- Hughes 9211

- Explorer 710

5. Enter an APN in the **APN** field.

6. Enter a username in the **Username** field if required.

7. Enter a password in the **Password** field if required.

8. Choose a **Mode** in the drop-down list.

- X-Stream

- Background

- HDR Full-Asymmetric

- HDR Full-Symmetric

9. Click on **Apply**.

Managing Cellular Operators

For each SIM card, you can decide how to manage the selection of the cellular operator.

You have 3 possibilities:

- **Automatic mode**: The unit selects the operator by itself.

- **Manual Selection**: This mode is selected from the Web Interface. It allows entering the MCC and the MNC of the operator that you want to use.

- **Scan and Select**: You select among a list of operators detected via the scan of networks.

> **Note:** From the Web Interface, click on **Network > SIM** to have an overview of your SIM Cards. Sort the SIM Cards by clicking on the column titles.

Modem ▲	IMSI or ICCID	APN	Operator	
MOD1	89852350119100073339	wbdata	(Auto)	🗑
MOD2	89852350119100073347	wbdata	(Auto)	🗑
	89852350119100073313	wbdata	(Auto)	🗑

Selecting the Automatic Mode

> **Note:** The Automatic Mode is the default setting.

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on to scroll down to the modem to be configured.

3. Click on the modem line to enter the **MOD. CONFIG** menu.

4. Click on .

5. Click on the **Operator** field.

6. Click on to enable the Automatic Mode.
   The Automatic Mode is selected.

7. Click on to scroll down and click on to save.

From the Web Interface

1. Click on the modem line.

2. Select **Auto** in the **Selection mode** scrolling list.

3. Click on **Apply**.
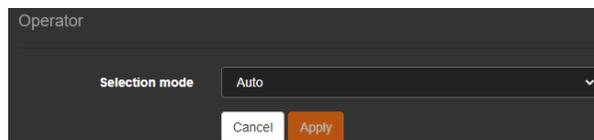
Scanning and Selecting a Cellular Operator

From the Unit Panel

1. From the **Home** menu, click on ![wifi icon].

2. Click on ![down arrow icon] to scroll down to the modem to be configured.

3. Click on the modem line to enter the **MOD. CONFIG** menu.

4. Click on ![gear icon].

5. Click on the **Operator** field.

6. Click on ![ON toggle] to disable the Automatic Mode. The button turns into ![OFF toggle]. The scan starts. It may take few minutes.

7. Click on the operator that you want to select.

> ![info icon] **Note:** Only white operators in the list can be selected.

8. Click on ![down arrow icon] to scroll down and click on ![save icon] to save.

From the Web Interface

1. Click on the modem line.

2. Select **Scan and select** in the **Selection mode** scrolling list.

3. Select the operator among the operators listed.

> ![info icon] **Note:** Only white operators in the list can be selected.

4. Click on **Apply**.
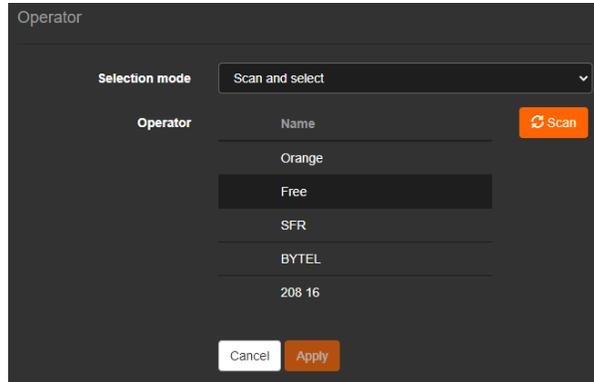
Selecting Manually a Cellular Operator

This option only available on the Web Interface allows to set the MCC (Mobile Country Code) and MNC (Mobile Network Code) manually.

1. Click on the modem line.

2. Select **Manual** in the **Selection mode** scrolling list.

3. Fill the **MCC** and **MNC** fields.

> ℹ️ **Note:** You can click on ❓ to access the lists of MCC and MNC.

4. Click on **Apply**.
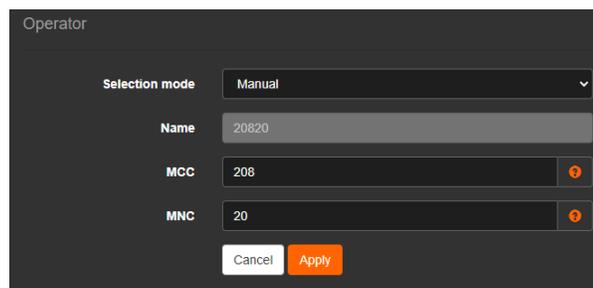
Configuring Modem Bands

> **ⓘ** **Note:** A star is displayed on the modem line, if modem bands are not set in automatic mode or of they are not all selected.

From the Unit Panel

Using the Standard mode

1. From the **Home** menu, click on ⬤.

2. Click on ⬆ or ⬇ to select the modem to configure.

3. Click on the line of the modem to be configured.

4. Click on ⬤ to configure the modem.

5. Click on the **Frequency Bands** field.

6. Define the **Network Mode** field and choose:

   - Auto

   - 5G/4G

   - 5G Only

   - 4G Only

   - 3G Only

> **ⓘ** **Note:**
>
> - 5G/4G and 5G Only are available on PRO-5G model.
>
> - For 5G networks operating in Non-Standalone mode (NSA), select 5G/4G settings.

7. Click on the **Preset** field and choose:

   - All Bands

   - Low Frequency

> **ⓘ** **Note:** Low Frequency bands are useful for indoor operations.

8. Click on 🖫 to save.

Using the Expert mode

1. From the **Home** menu, click on 📡.

2. Click on ⌃ or ⌄ to select the modem to configure.

3. Click on the line of the modem to be configured.

4. Click on ⚙ to configure the modem.

5. Click on the **Frequency Bands** field.

6. Click on ⦿OFF to enable the **Expert Mode**. The **Expert Mode** is selected, all bands are displayed on the screen.

7. Click on ⌄ to scroll down and display all the 5G, 4G and 3G bands.

8. Click on 🟢 to unselect the different cellular bands. The green dots turn to grey.

9. Click on ⌄ to scroll down and click on 🖫 to save.

From the Web Interface

Using the Standard mode

1. Click on ❯ to configure the cellular bands.

2. Click on the **Modem** tab.

3. Define the **Network Mode** field and choose:

- Auto

- 5G/4G

- 5G Only

- 4G Only

- 3G Only

> ⓘ **Note:**
>
> - 5G/4G and 5G Only are available on PRO-5G model.
>
> - For 5G networks operating in Non-Standalone mode (NSA), select 5G/4G settings.

4. Click on the **Preset** field and choose:

- All Bands

- Low Frequency

> ⓘ **Note:** Low Frequency bands are useful for indoor operations.

5. Click on **Apply**.
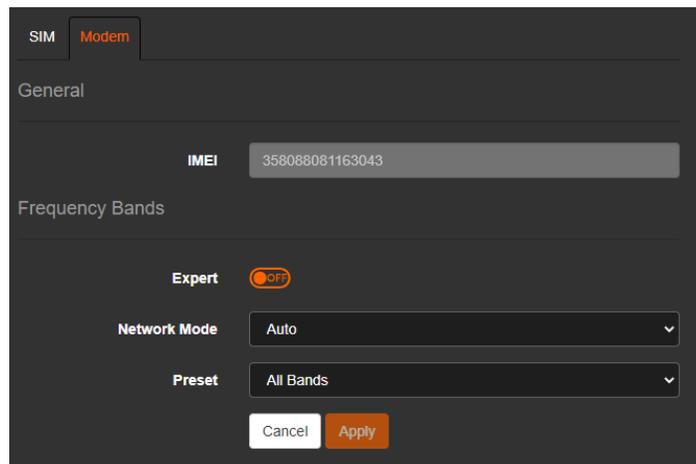
Using the Expert mode

1. Click on ![>] to configure the cellular bands.

2. Click on the **Modem** tab.

3. Click on ![OFF] to enable the **Expert Mode**.
   The button turns into ![ON] and all the cellular bands appear on the screen.

4. Click on ![green dot] to unselect the different cellular bands. The green dots turn to grey.

5. Click on **Apply**.
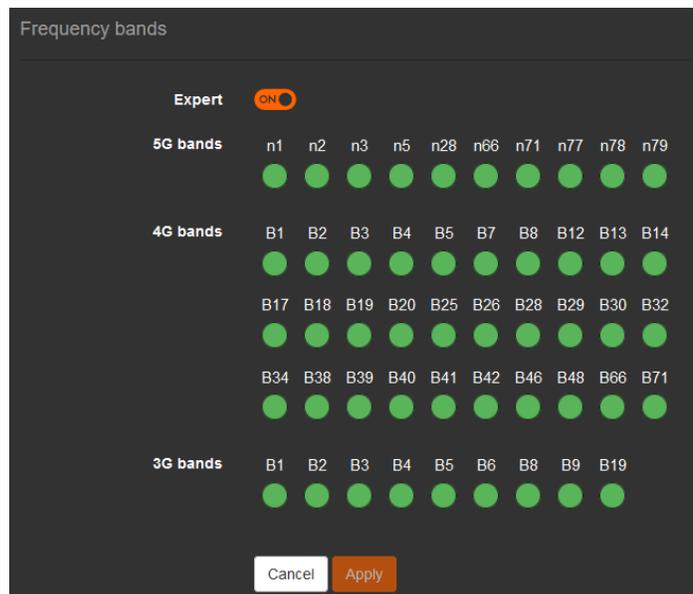
Managing Priorities of Network Links

You can decide of a priority level (High or Low) for each network link used for Live or Forward operations.

These low and high priorities are managed as shown on the diagram below:
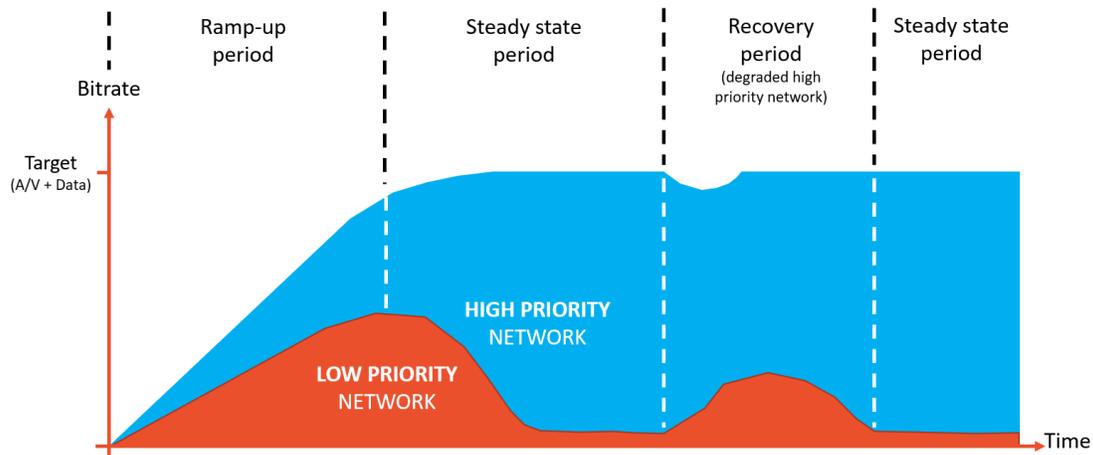
- For Live:

    ◦ Both high and low priority links are used as long as the bitrate target set in the Live profile is not been reached.

    ◦ Once the bitrate target is reached, high priority links are mainly used.

- For Forward:

    ◦ Both high and low priority links are used as long as the bitrate target is lower than 1Mbps.

    ◦ When the bitrate target is lower than, low priority links are mainly used.

By default, each network link is a set as a high priority link.

This setting can be changed, either from the unit panel or from the Web Interface, before starting an operation or while the operation is in progress:

• From the Web Interface, click on the gauge icon to select High ( ) or Low ( ) priority.

High priority link

Low priority link
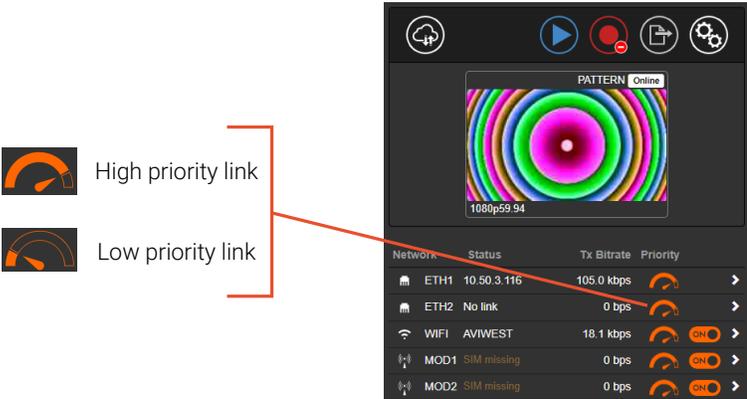
• From the unit panel, select the priority level when configuring network links (see chapter Configuring an Ethernet Interface, Configuring a WiFi Client Interface).

Configuration

The following settings are related to this general menu.
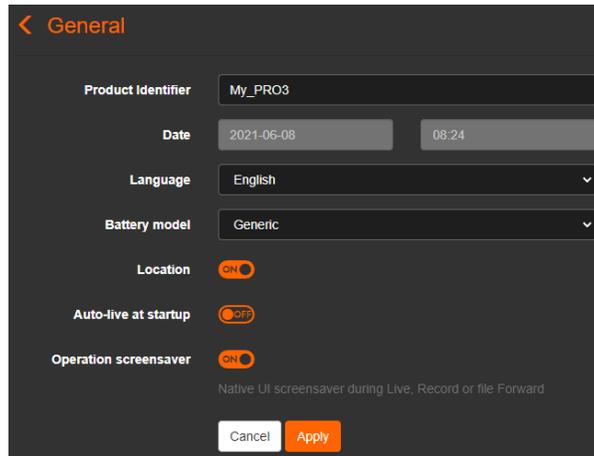
Configuring the Unit Name

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on and click on .

3. Click on **General**.

4. Click on the **Product Identifier** field.

5. Use the keyboard to enter an ID (up to 15 characters).

6. Click on to confirm.

From the Web Interface

1. From the Web Interface, click on **Settings > General**.

2. In the **Product Identifier** field, enter an ID (up to 15 characters).

3. Click on **Apply**.

Configuring the Time and Date

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on and click on .

3. Click on **General**.

4. Click on the **Date** field.

5. Set the Time and date.

> ⓘ   **Note:** The Time and Date format is set to: YYYY-MM-DD HH:MM.

From the Web Interface

1. From the Web Interface, click on **Settings > General**.

2. Click on the **Date** and/or **Time** field to change it as required.

3. Click on **Apply**.

Selecting the Language

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on and click on .

3. Click on **General**.

4. Click on the **Language** field.

5. Click on the language required.

From the Web Interface

1. From the Web Interface, click on **Settings > General**.

2. Select the language.

3. Click on **Apply**.

Selecting the Battery Model

From the Unit Panel

1. From the **Home** menu, click on [icon].

2. Click on [icon] and click on [icon].

3. Click on **General**.

4. Click on [icon] to scroll down.

5. Click on the **Battery model** field to select your battery.

> [i] **Note:** If the battery used is not listed, select **Generic**.

From the Web Interface

1. From the Web Interface, click on **Settings > General**.

2. Select the Battery model.

> [i] **Note:** If the battery used is not listed, select **Generic**.

3. Click on **Apply**.

> [i] **Note:** You can access to this menu by clicking on the battery icon on the top bar of the screen. This shortcut is available only if an external battery is plugged.
>
>
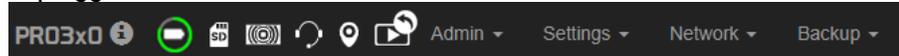
Enabling / Disabling the Unit Location

You can enable or disable the unit location to allow (or not) the Manager application locating the unit.

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on and click on .

3. Click on **General**.

4. Click on to scroll down.

5. Click on to disable the unit location.
   The button turns into .

From the Web Interface

1. From the Web Interface, click on **Settings > General**.

2. Click on to disable the unit location.
   The button turns into .

3. Click on **Apply**.

> **Note:** You can access to this menu by clicking on the Location icon on the top bar of the screen.
>
> PRO3x0 ● SD (◎) ○ ○ Admin ▾   Settings ▾   Network ▾   Backup ▾
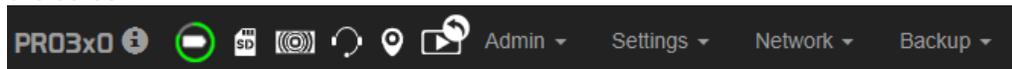
Enabling / Disabling Auto-Live at Startup

This option allows you to start a Live automatically once the unit is connected to a StreamHub or a Manager and once there is a video source (Pattern, SDI or HDMI).

From the Unit Panel

1. From the **Home** menu, click on ⚙.

2. Click on ❯ and click on ⚒.

3. Click on **General**.

4. Click on ⌄ to scroll down.

5. Click on ⬤OFF to enable and on ON⬤ to disable **Auto-live at startup**.
   An icon appears on the top bar of the screen when **Auto-live at startup** is enabled.

From the Web Interface

1. From the Web Interface, click on **Settings General** .

2. Click on ⬤OFF to enable or on ON⬤ to disable Auto-live at startup.

3. Click on **Apply**.

Enabling / Disabling Screensaver

This option allows to display a screensaver during a Live, a Record or a Forward.

From the Unit Panel

1. From the **Home** menu, click on ⚙.

2. Click on ❯ and click on ⚒.

3. Click on **General**.

4. Click on ⌄ to scroll down.

5. Click on ⬤OFF to enable and on ON⬤ to disable Operation screensaver.

When this option is enabled, a moving screen appears during a Live, a Record or a Forward after 2 minutes of inactivity. Touching the screen do not interrupt the operation in process. It shows the screen displayed before the screensaver.

From the Web Interface

1. From the Web Interface, click on **Settings General** .

2. Click on ⬤OFF to enable or on ON⬤ to disable **Operation screensaver**.

3. Click on **Apply**.

Selecting the Video Source

You can select amongst:

- Auto
- SDI input
- HDMI input
- Pattern (Internal Pattern Generator)

> ℹ **Note:**
>
> - When selecting the Pattern generator as a source, you can select the pattern shape amongst color circles, color bars or a black pattern.
>
> - You can also select amongst the following standards: NTSC, PAL, 720p50, 720p59.84, 720p60, 1080p25, 1080p29.97, 1080i59.94, 1080i60, 1080p50, 1080p59.94 and 1080p60.
>
> - When the Auto mode is selected (default mode), the following rules are applied:
>
> | SDI input presence | HDMI input presence | Selected input |
> |---|---|---|
> | Yes | No | SDI |
> | No | Yes | HDMI |
> | Yes | Yes | SDI |

From the Unit Panel

1. From the Home menu, click on ⚙.

2. Click on 🔍.
   The current source is displayed.

3. Click on the **Video Source** field to select another source.

4. Select the expected source.

> ℹ️ **Note:**
>
> When selecting **Pattern**, the **Pattern Shape** and the **Pattern Standard** fields appear.
> On the upper part of the screen, an icon indicates the selected source:
>
>
>
> ◎ SDI
> ▦ HDMI
> ((◎)) COLOR CIRCLES
> ▥ COLOR BARS PATTERN
> ▬ BLACK PATTERN
>
> You can preview the selected video source.

5. Click on ⌄ and on 👁 to preview the video.

From the Web Interface

You can access to the video source configuration by clicking on the icon in the top bar of the Web Interface.
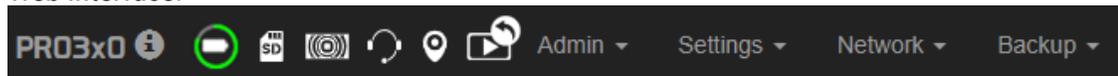
1. From the Web Interface, click on **Settings > I/O**.

2. From the scrolling list, select the source:

- Auto

- SDI

- HDMI

- Pattern

> ℹ️ **Note:**
>
> - If Pattern is selected, you need to define the shape and the resolution to be used.
>
> - If SDI, HDMI or Auto is selected, the video resolution is automatically detected.

Selecting the Audio Source

You can select amongst 2 options:

• From video:

When using the SDI or HDMI inputs (A), the audio is embedded in the video source.

• Analog (Balanced):

When analog audio inputs (B) are used to connect to an analog audio source.
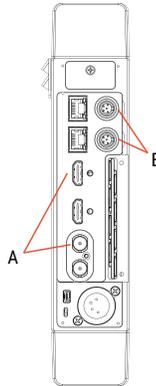
From the Unit Panel

1. From the Home menu, click on ⚙.

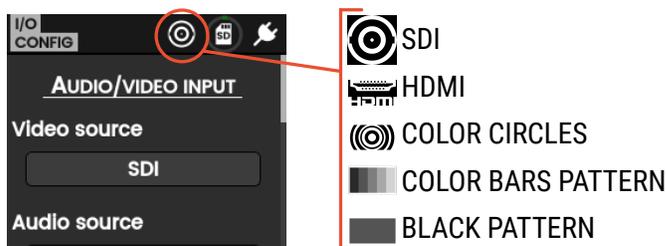2. Click on I/O.

3. Click on ⌄ .
   The current source is displayed.

4. Click on the **Audio source** field to select another source.

5. Select the expected source.

6. Click on ➖ or ➕ to adjust the analog input level.

> ℹ **Note:**
> • 0% is for audio muted.
> • 100% is for the max applicable gain.

From the Web Interface

1. From the Web Interface, click on **Settings > I/O**.

2. From the scrolling list, select the audio source amongst 2 options:

> • From video

> • Analog (Balanced)

3. When the audio source is analog, move the **Audio level** cursor to adjust it.

> ℹ️ **Note:**
>
> > • 0% is for audio muted.
> >
> > • 100% is the max applicable gain.

Adding and configuring a Live Profile

A **Live Profile** is a set of audio and video settings to fit with specific broadcasting requirements.

Live Profiles can be configured from either the Web Interface or on the Unit Front Panel.

The unit is delivered with default Live Profiles:

- DEFAULT
- LOW DELAY
- HQUALITY 10s

Recommendations when configuring a Live Profile:

Broadcast over SST mode	For CBR, enter a value within the 500ms - 10s range.		
	For VBR, enter a value within the 800ms - 10s range.		
Broadcast (low latency) mode	For CBR, enter a value within the 200ms - 10s range.		
	VBR mode is not available		
Bitrate Control mode	CBR mode for streaming over managed networks.		
	VBR mode for streaming over unmanaged networks.		
Resolution	• As source for an encoding in the same resolution as source.		
	• Dynamic when the resolution is adapted to available bitrate (only for H.264)		
Live Bitrate (static resolution as source)	Video Resolution	Bitrate Range	
		H.265 / HEVC	H.264/AVC
	1080p 50/59.94/60	600 kbps - 20 Mbps	3 Mbps - 20 Mbps
	1080p 25/29.97/30	600 kbps - 20 Mbps	1.8 Mbps - 20 Mbps
	1080i 50/59.94/60	300 kbps - 20 Mbps	1.8 Mbps - 20 Mbps
	720p 50/59.94/60	300 kbps - 20 Mbps	1.4 Mbps - 20 Mbps
	SD (PAL or NTSC)	200 kbps - 20 Mbps	0.5 Mbps - 20 Mbps
Live Bitrate (dynamic resolution)	1080p 50/59.94/60	-	200 Kbps - 20 Mbps
	1080p 25/29.97/30		
	1080i 50/59.94/60		
	720p 50/59.94/60		

	SD (PAL or NTSC)		
Manual Resolution	1920 x 1080p 50/59.94/60	-	3 Mbps - 20 Mbps
	1920 x 1080p 25/29.97/30	-	1.8 Mbps - 20 Mbps
	1280 x 720p	-	1.4 Mbps - 20 Mbps
	854 x 480p	-	0.5 Mbps - 20 Mbps
	640 x 360p	-	0.4 Mbps - 20 Mbps
	426 x 240p	-	0.3 Mbps - 20 Mbps
Audio Settings	Channel Layout	Bitrate Range	
	1 x MONO	32 kbps - 256 kbps	
	1 x STEREO	64 kbps - 512 kbps	
	2 x MONO	64 kbps - 512 kbps	
	2 x STEREO	128 kbps - 1024 kbps	

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on and click on .

3. Click on .

4. Click on **Profile Name** field.

5. Use the keyboard to enter the new profile name.

6. Click on to confirm the new profile name.

7. Click on to configure the Live Profile settings following the recommendations mentionned in the table above:

   • Application: Broadcast (SST), Broadcast (SRT), or Video Return

   • End-to-End Latency

   • BGAN profile (if required)

   • Video settings

   • Audio settings

8. Click on ![down arrow icon] and **ADVANCED +**.

> ⓘ **Note:** Advanced parameters are available only if the **Encoder Type** is H.264.

9. Click on ![OFF toggle] to enable **I and P frames only**.
   The button turns into ![ON toggle] .

10. Click on ![OFF toggle] to enable **Manual Resolution**.
    The button turns into ![ON toggle] and the **Resolution** field appears.

> ⓘ **Note:** The **Manual Resolution** field is available only if the **Bitrate Control** is VBR.

11. Click on the **Resolution** field to display the resolution list.

> ⓘ **Note:** Only downscaling or same resolution are supported.

12. Click on the resolution that you want to apply.

13. Click on ![save icon] to save the new Live Profile settings.

From the Web Interface

1. Click on **Settings > Live**.

2. Click on ![+ Add button] .

3. Enter a profile name in the **Profile Name** field.

4. Select the **Application** (Broadcast SST, Broadcast SRT or Video Return).

5. In **Network** settings, enter an **End-to-End Latency** according to the Bitrate Control used (CBR or VBR).

6. Select a **BGAN profile** in the drop-down list if needed.

7. In the **Video** settings:

   a. Select the **Encoder Type** (H.264/AVC or H.265/HEVC).

   b. Select the **Bitrate Control** mode (VBR or CBR).

   c. Enter a **Capped Bitrate**.

8. Fill in the **Audio** settings.

      a. Select the audio **Channel Layout**.

      b. Enter the total audio bitrate.

9. Click on **Advanced**.

> ℹ **Note:** Advanced parameters are available only if the **Encoder Type** is H.264.

10. Click on to enable **I and P frames only**.

11. Click on to enable **Manual Resolution**.
The button turns into and the **Resolution** field appears.

> ℹ **Note:** The **Resolution** field is available only if the **Bitrate Control** is VBR.

12. Click on the **Resolution** field to select the resolution to apply.

13. Click on **Apply**.

◁ Live

Profile name	
Application	Broadcast (SST)

Network

End-to-end latency	2000

Delay (ms) - 800 ms (min) / 10000 ms (max)

BGAN profile	

Video

Encoder type	H.265/HEVC
Bitrate control	VBR
Capped bitrate	6000

Bitrate (kbps) - 200 kbps (min) / 20000 kbps (max)

Audio

Encoder type	AAC LC
Channel layout	1 x Stereo
Bitrate	128

Bitrate (kbps) - 64 kbps (min) / 512 kbps (max)

Cancel   Apply

━ Advanced

I and P frames only	OFF

Recommended for legacy video players

Manual resolution	ON
Resolution	As source

Min video bitrate required:
- 3000 kbps for 1080p50/59.94/60
- 1800 kbps for 1080p25/29.97/30 and 1080i
- 1400 kbps for 720p
- 500 kbps for PAL/NTSC

Cancel   Apply

Deleting a Live Profile

From the Unit Panel

1. From the **Home** menu, click on ⚙ .

2. Click on ❯ and click on ▶ .

3. Click on ⌄ to display the profile to delete.

4. Long press the profile to delete.

5. Click on **YES** to confirm the profile deletion.

From the Web Interface

1. Click on **Settings > Live**.

2. Double click the trash button (🗑).

Selecting a Live Profile

From the Unit Panel

You can select a Live Profile from the Unit Panel when you are starting a Live.

See the chapter Starting a Live.

From the Web Interface

1. Click the ⚙ icon.
   The encoder current settings are displayed.

2. Select a pre-defined **Live Profile**.

3. Activate **Auto-record** if required.

> **ⓘ Note:**
>
> - When this option is enabled, a Record starts automatically when a Live is started.
>
> - The record profile used for the **Auto-record** can be different than the one used for a Record.

4. Select a pre-defined **Record Profile**.
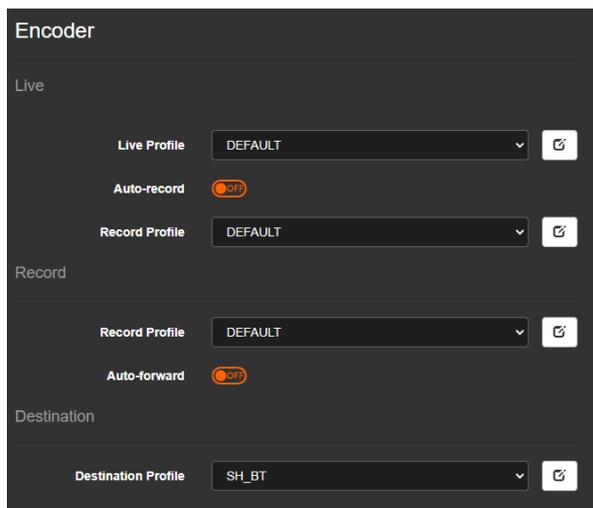
Adding and configuring a Record Profile

A **Record Profile** is a set of audio and video settings to fit specific broadcasting requirements. The supported file formats are Transport Stream and MP4.

Record Profiles can be configured from either the web interface or on the unit front panel.

The unit is delivered with a DEFAULT Record Profile.

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on and click on .

3. Click on .

4. Click on the **Profile Name** field.

5. Use the keyboard to enter the new profile name.

6. Click on to confirm.

7. Click on the **File Format** field and select Transport Stream or MP4 format.

8. Click on to configure the Record Profile settings:

   - Video Settings (**Encoder Type**, **Bitrate**)

     When recording, the video is encoded in CBR mode with a resolution as source.

   - Audio Settings (**Encoder Type**, **Channel Layout**, **Bitrate**)

9. Click on to save the new Record Profile settings.

From the Web Interface

1. Click on **Settings > Record**.

2. Click on .

3. Enter a profile name in the **Profile Name** field.

4. Choose the **File Format** between Transport Stream and MP4.

5. Choose the video **Encoder Type**.

6. Set the video **Bitrate** (within 200kb/s and 20Mb/s).

7. Select the audio **Channel Layout**.

8. Set the total audio **Bitrate**.

9. Click on **Apply**.

Deleting a Record Profile

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on and click on .

3. Click on to display the profile to delete.

4. Long press the profile to delete.

5. Click on **YES** to confirm the profile deletion.

From the Web Interface

1. Click on **Settings > Record**.

2. Double click the trash button ().

Selecting a Record Profile

You can select different record profiles for:

- Live + Auto-record

- Record only

From the Unit Panel

You can select a Record Profile from the Unit Panel when you are starting a Live or a Record.

See the chapter Starting a Record and chapter Starting a Live.

From the Web Interface

1. Click the icon.
   The encoder current settings are displayed.

2. Select a pre-defined **Record Profile**.

3. Activate **Auto-forward** if required.

> ℹ **Note:**
>
> - When this option is enabled, a Forward starts automatically when a Live is started.
>
> - The record profile used for the **Auto-record** can be different than the one used for a Record.

Adding and Configuring a Destination Profile

A **Destination Profile** is a set of parameters allowing the unit to connect to a StreamHub, a Manager or a SRT Receiver.

> ℹ **Note:** StreamHub is a web-based platform that recieves, decodes, records and distributes video and audio feeds.
>
> Manager is a web-based platform that monitors and manage a contribution ecosystem. It is in charge of routing dynamically transmitters to appropriate StreamHub.

From the Unit Panel

1. From the **Home** menu, click on ⚙ .

2. Click on ❯ and click on 🛰 .

3. Click on + .

4. Click on the **Profile Name** field.

5. Use the keyboard to enter the new **Profile Name**.

6. Click on ✓ to confirm the new Destination Profile name.

7. Click on ⌄ to configure the new Destination Profile settings:

a. For a StreamHub:

- StreamHub IP address or Hostname.

- Input assignment on the StreamHub (Automatic Assignment possible).

- Auto-connect function (Enabling/Disabling). This connection cannot be established through a BGAN terminal.

- Port used. By default: 7900

- Username. By default: aviwest.

- Password. By default: safestreams

- AES key if required.

b. For a Manager:

- Manager IP address or Hostname.

- Auto-connect function (Enabling / Disabling). This connection cannot be established through a BGAN terminal.

- Port used. By default: 9000

- Username. By default: username

- Password (if required). By default: password

c. For a SRT Receiver:

- SRT mode (Caller or Listener).

- Host.

- SRT port.

- Ethernet port.

- Latency.

- SRT Encryption (and passphrase if enabled).

- Stream ID (in Caller mode only).

ℹ **Note:** These settings may have been changed by the system administrator.

8. Click on ⬛ to save the new Destination Profile settings.

> ℹ **Note:** To select the newly created Destination Profile, see Selecting a Destination Profile.

From the Web Interface

1. Click on **Settings > Destination**.

2. Click the **+ Add** button.

3. Enter a **Name** for the Profile.

4. Select the type of Destination Profile (StreamHub, Manager or SRT Receiver).

a. For a StreamHub profile, you need to configure:

- StreamHub IP address or Hostname.

- Input assignment on the StreamHub (Automatic Assignment possible).

- Auto-connect function (Enabling/Disabling). This connection cannot be established through a BGAN terminal.

- Port used. By default: 7900

- Username. By default: aviwest.

- Password. By default: safestreams

- AES key if required.

b. For a Manager profile, you need to configure:

- Manager IP address or Hostname.

- Auto-connect function (Enabling / Disabling). This connection cannot be established through a BGAN terminal.

- Port used. By default: 9000

- Username. By default: username

- Password (if required). By default: password

c. For a SRT Receiver:

- SRT mode (Caller or Listener).

- Host.

- SRT port.

- Ethernet port.

- Latency.

- SRT Encryption (and passphrase if enabled).

- Stream ID (in Caller mode only).

> ℹ **Note:** The **Auto-connect** option is selected to connect automatically to a receiveer when the unit is powered. This connection cannot be established through a BGAN terminal. To select the newly created Destination Profile, see Selecting a Destination Profile.

Deleting a Destination Profile

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on and click on .

   A green dot ( ) indicates the currently selected profile.

3. Click on to display the profile to delete.

4. Long press the profile to delete.

5. Click on **YES** to confirm the profile deletion.

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on and click on .

   A green dot ( ) indicates the currently selected profile.

3. Click on to display the profile to delete.

4. Long press the profile to delete.

5. Click on **YES** to confirm the profile deletion.

From the Web Interface

1. Click on **Settings > Destination**.

2. Double click the trash button. ( )
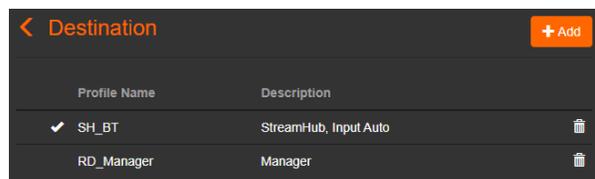
Select a Destination Profile

From the Unit Panel

1. From the **Home** menu, click on ⚙ .

2. Click on ❯ and click on 🎛 .

3. Click on ⌄ until the profile required is displayed.

   A green dot (🟢) indicates the currently selected profile.

4. Click on ⬤ to select the destination profile.

   A green dot (🟢) indicates the newly selected profile.

From the Web Interface

1. Click the ⚙ icon.
   The encoder current settings are displayed.

2. Select a pre-defined **Destination Profile**.

Configuring AES encryption

You can decide to encrypt / scramble a video during a Live operation, provided the destination server's license includes this option.

You can enable and disable the video AES encryption from the Unit Panel or the Web Interface.
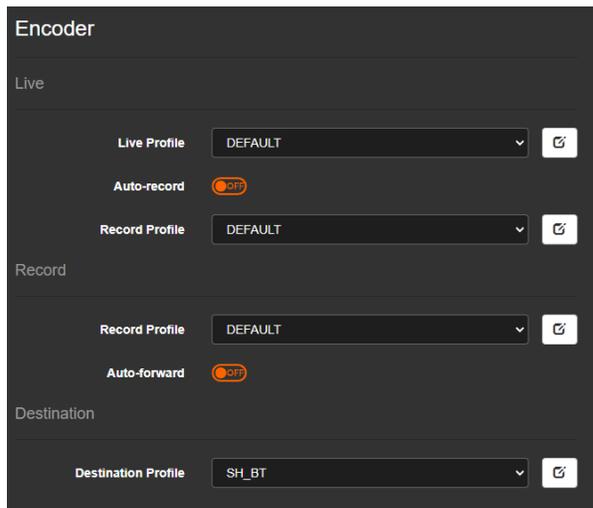
From the Unit Panel

1. From the **Home** menu, click on .

2. Click on and click on .

3. Click on until the profile concerned is displayed.

4. Click on the destination profile.

5. Click on and click on **ADVANCED +**.

6. Click on to display the AES scrambling option.

7. Click on to enable it, or on to disable it. If enabled, enter the AES key as defined in the destination server interface (please refer to the Server User Guide).

From the Web Interface

1. Click on **Settings > Destination**.

2. Click on the Destination Profile where the video is sent to.

3. Click on **Advanced**.
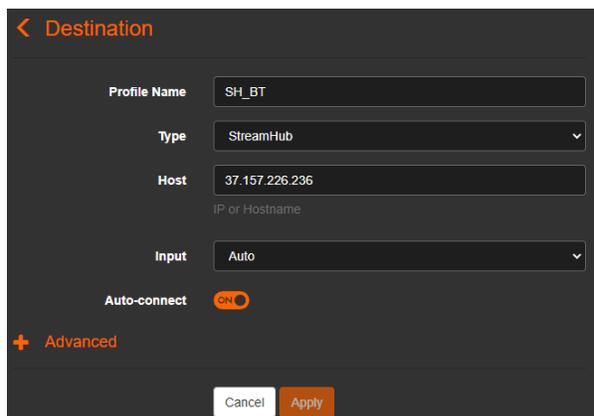
4. Click on ⬤OFF or ON⬤ to enable or disable the **AES Scrambling** function.
   If enabled, enter the AES key as defined in the destination server interface (please refer to the Server User Guide).

Advanced	
Port	7900
Username	aviwest
Password	··········
AES scrambling	⬤OFF
AES key	
	Cancel Apply

Configuring Forward Settings

The Forward function offers three possibilities:

- Forwarding one or several files saved on a mass-storage device,

- Forwarding all files saved on a mass-storage device,

- Forwarding the latest recorded file.

🛈 **Note:** Mass storage can be SD cards and USB storage devices.

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on and click on .

3. Click on ⬤OFF to enable or on ON⬤ to disable the **Resume at Startup**, **Auto-erase**, or/and**Hot Folder** options.

> **ℹ Note:**
>
> - **Resume at Startup**: If any forward is still in progress when the unit is turned off, it is resumed when the unit is started up.
>
> - **Auto-erase**: All successfully forwarded filed are automaticallt deleted once forward is completed.
>
> - **Hot Folder**: Files coming from a camera are automatically transmitted via an ftp server.

<u>From the Web Interface</u>

1. Click on **Settings > Forward**.

2. Click on `OFF` or `ON` to enable or disable the **Resume at Startup**, **Auto-erase** or/ and **Hot Folder** options.

3. Select a BGAN Profile in the drop-down list if required.
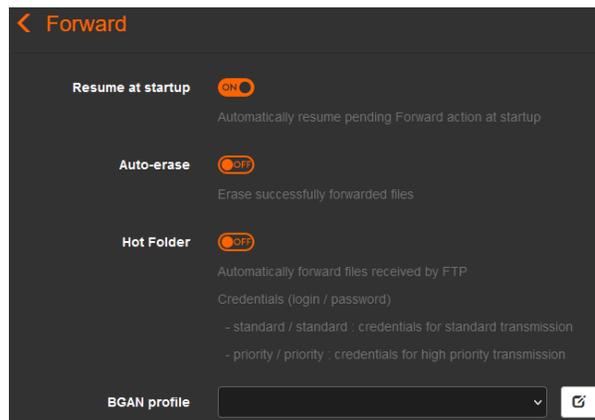
Enabling / Disabling all Internal Cellular Modems

You can enable and disable all internal cellular modems at the same time from the Unit Panel or from the Web Interface.

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on and click on .

3. Click on to enable the modems or on to disable them.

From the Web Interface

1. From the Web Interface, click on **Network > Interfaces**.

2. Click on to disable embedded modems and on to enable them.

Name	MAC Address	Mode
ETH1	b4:31:b8:fe:d7:88	DHCP
ETH2	b4:31:b8:fe:d7:87	Gateway
WIFI	80:c5:f2:c8:c5:9d	Off
Embedded cellular modems	ON	
QUAD CellLink cellular modems	ON	
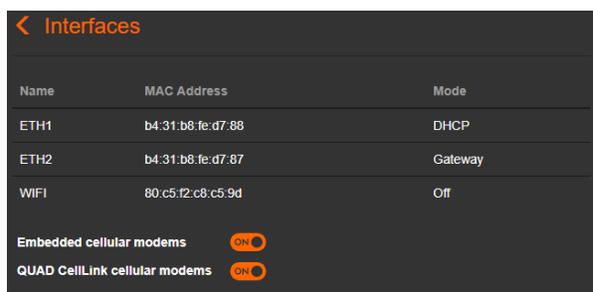
Connecting a QUAD CellLink to the Unit

Connect a QUAD CellLink to the unit to enable cellular networks.

1. Remove the SIM card cover and insert the SIM cards into slots according to indications written on the cover.

> **Note:** Make sure the SIM cards are already unlocked.

2. Replace the SIM card cover.

3. Connect the AC/DC adapter and the power cable.

> **Note:** Choose a weather protected area for this connection in order to avoid any damage due to ambient humidity or rain.
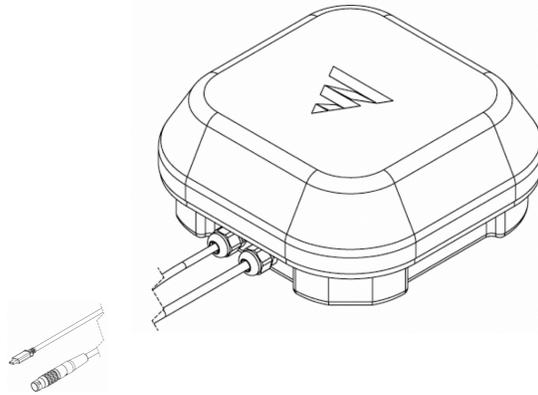
4. Connect the USB cable to the unit.

> ⓘ **Note:** Choose a weather protected area for this connection in order to avoid any damage due to ambient humidity or rain.

5. Open the Web Interface of the unit.
   The QUAD CellLink is automatically detected:

   - QUAD-1 means modem #1 from QUAD CellLink

   - QUAD-2 means modem #2 from QUAD CellLink

Enabling / Disabling a Cellular Modem

You can enable and disable modems from the Unit Panel or from the Web Interface.

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on to select the modem that you want to enable or disable.

3. Click on the modem to be enabled or disabled.

4. Click on to enable the modem or on to disable it.

From the Web Interface

Click on or to enable or disable a modem.
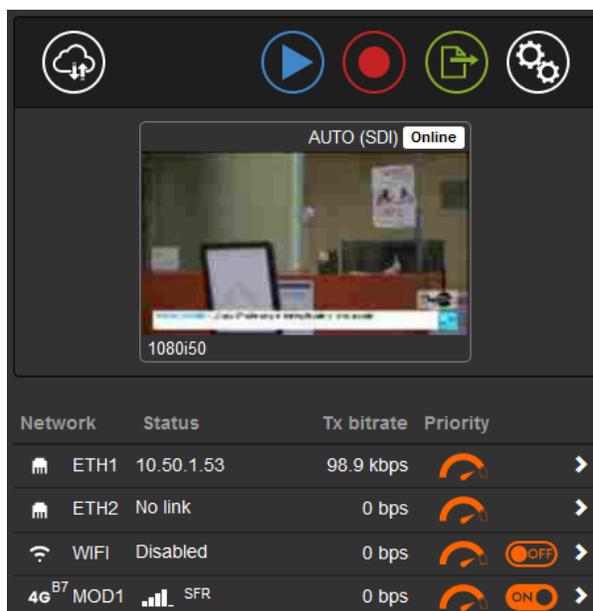
Enabling / Disabling all QUAD CellLink Cellular Modems

You can enable and disable all modems of a QUAD CellLink from the Unit Panel or from the Web Interface.

From the Unit Panel

1. From the **Home** menu, click on ⚙️ .

2. Click on ▶ and click on 📶 .

3. Click on ⬤OFF to enable all modems of a QUAD CellLink or on ON⬤ to disable them

From the Web Interface

1. From the Web Interface, click on **Network > Interfaces**.

2. Click on ⬤OFF to disable all modems of a QUAD CellLink or on ON⬤ to enable them.

Name	MAC Address	Mode
ETH1	b4:31:b8:fe:d7:88	DHCP
ETH2	b4:31:b8:fe:d7:87	Gateway
WIFI	80:c5:f2:c8:c5:9d	Off

Embedded cellular modems ON⬤
QUAD CellLink cellular modems ON⬤
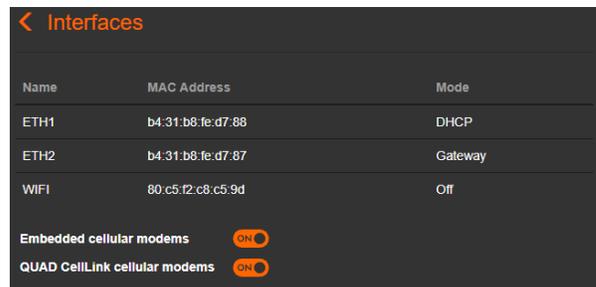
Selecting a Mission

To receive missions, the selected destination profile must be a Manager supporting the Story Centric Workflow. See Selecting a Destination Profile.

From the Unit Panel

1. Click on ⌄ or ⌃ to see the different missions.

2. Click on ⓘ to have more information on the mission.
   This screen appears.

3. Click on ↰ to go back to the previous screen.

4. Click on the mission to select it. It turns to orange during the loading.

The home screen appears with the ◎ icon on the top bar. Click on this icon for more information.

Changing the mission

1. Click on ⚙ .

2. Click on ◎ .

3. Click on a mission title to display information.

4. Click on ↰ to go back to the previous screen.

5. Click on ◯ to change the mission.
   A green dot (🟢) indicates the new selected mission.

From the Web Interface

1. A list of missions appears on screen. The missions loading may take few seconds.

2. Click on ▸ to see the description of the mission.

The description is displayed.

3. Click on a mission title to select it.

The mission icon appears on the top bar.
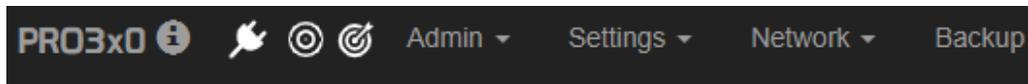
Changing the mission

1. Click on **Settings > Missions** or on the icon in the top bar.
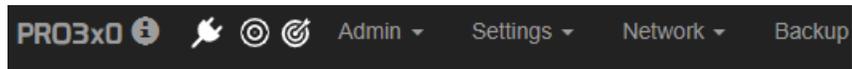
2. Click on another mission to select it.

The icon ✔ moves to the selected mission.

Setting a Video Return

The **Video Return** feature allows Field Units operating on sites to receive live feeds, such as a program currently on air or a teleprompting from the Media Control Room even if a Live is running or not.

The unit must be connected to a StreamHub to allow the Video Return feature. Please refer to the StreamHub user guide for detailed information.
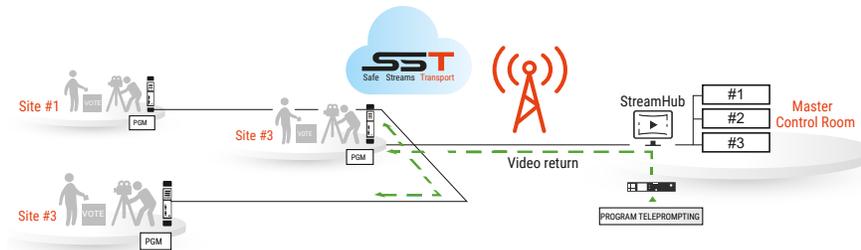
Emitting a Video Return

From the Unit Panel

1. Set a Live Profile with the application parameter set to Video Return (see chapter Adding and Configuring a Live Profile).

2. Start a Live with the profile previously created (see chapter Starting a Live).

From the Web Interface

1. Set a Live Profile with the application parameter set to Video Return (see chapter Adding and Configuring a Live Profile).

2. Start a Live with the profile previously created (see chapter Starting a Live).

Receiving a Video Return

From the Unit Panel

Check that the video return icon appears on the top bar of the screen. If it appears, the unit is receiving a video stream.

      1. Connect a screen to the HDMI port of the unit.
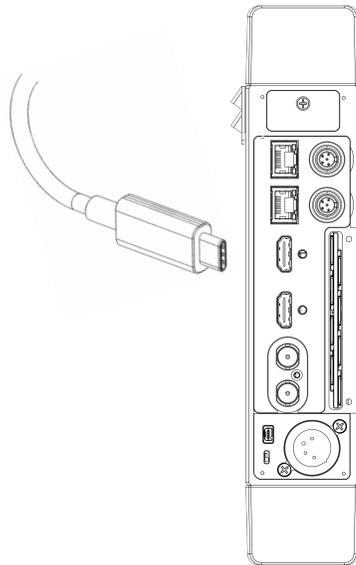
From the Web Interface

An icon on the top bar indicates that the unit is receiving a Video Return.
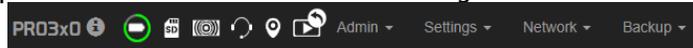
Starting a Live

You can start a live manually or you can enable the **Auto-live at startup**. See chapter Enabling / Disabling Auto-live at Startup.

From the Unit Panel

1. From the **Home** menu, click on .
   The video preview appears on screen and the live profile selected is reminded.

   When clicking on or , the Live menu reminds some information.

   Selected Live Profile
   Selected Record Profile
   If Auto-record is enabled or not (OFF/ON)
   The Selected Destination Profile
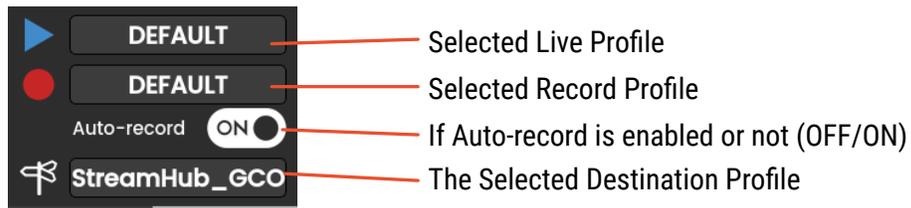
   You can modify settings before starting the Live action.

   - To select another Live profile:

     a. Click on the field.

     b. Click on another Live profile.

   - To select another Record profile:

     a. Click on the field.

     b. Click on another Record profile.

   - To modify the Auto-record mode: Click on the or button option.

   - To select another Destination profile:

     a. Click on the field.

     b. Click on another Destination profile.

2. Click on to start the Live.
   The video preview appears on screen.

Audio bars indicating audio levels

Live Duration

3. Click on ◀ to display some indications about the Live action:

End-to-end Latency configured in the Live Profile or modified remotely from StreamHub interface

Network Bitrate

Source Standard

Live Duration

> ℹ **Note:** See StreamHub User Guide to set another delay during Live operation.

In case of a Live and simultaneous Record, another screen appears alternately:

Remaining recording time possible on SD card

Space used on SD card

Source Standard

Record Duration

> ℹ **Note:**
> To stop the Live:
>
> a. Click on ▶ .
>
> b. Click on ⬛ .
>
> c. Click on CONFIRM to confirm.

To stop the Record:

    a. Click on ⟩ .

    b. Click on ⬛ .

    c. Click on CONFIRM to confirm.

From the Web Interface

1. Click on ⚙ to check that the unit settings are configured and selected as required:

    • Live profile

    • Auto-record mode (OFF / ON)

    • Record profile

    • Auto-forward option (OFF / ON)

    • Destination profile

Note: If you enable the **Auto-record** option, the video file is automatically recorded during the live.

2. Click on ▶ to start the Live.
   Some indications appear on screen:

Stop Live button

Stop Record button

Indication of the kind of action started

Transmission bitrate

Duration of the Live in progress

End-to-end latency / delay configured in the Live Profile

Space percentage used on SD card (when record is enabled)

Progress bar indicating remaining space on SD card

SDI Live + Rec
4.30 Mbps

● 00:00:12

1080i50   2.0 s

Record   ⏱ 01:26:06 9%

Network	Status	Tx bitrate	Priority
ETH1	10.50.1.101	2.7 Mbps	
ETH2	No link	0 bps	
WIFI	AVIWEST	2.3 Mbps	ON
4G B3 MOD1	Free	0 bps	ON
4G B28 MOD2	Free	0 bps	ON
MOD3	SIM missing	0 bps	ON
MOD4	SIM missing	0 bps	ON
MOD5	SIM missing	0 bps	ON
MOD6	SIM missing	0 bps	ON
MOD7	SIM missing	0 bps	ON
MOD8	SIM missing	0 bps	ON

Real-time graph

Tx bitrate
5 Mbps
4 Mbps
3 Mbps
2 Mbps
1 Mbps
0 kbps
        14:42   14:43

☑ Total
☑ ETH1
☑ WIFI

ℹ **Note:**
To stop the Live:

a. Click on ⬛ . A Confirm popup appears.

b. Click on Confirm or the ⬛ icon to stop the video transmisson.

Starting a Record

> ⓘ **Note:** Make sure that you inserted a SD card before starting a record. This SD card must not be in read only (or locked) mode.

From the Unit Panel

1. From the **Home** menu, click on ⏺ .
   The video preview appears on screen and the record profile selected is reminded.
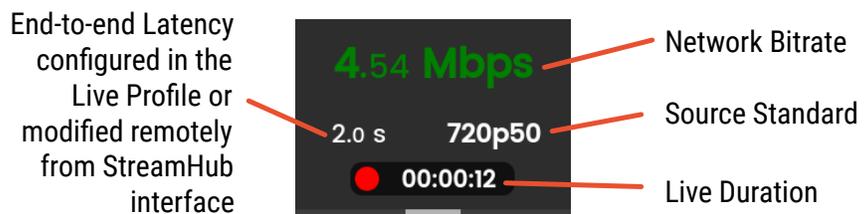   When clicking on ◀ or ▶ , the Record menu reminds some information.
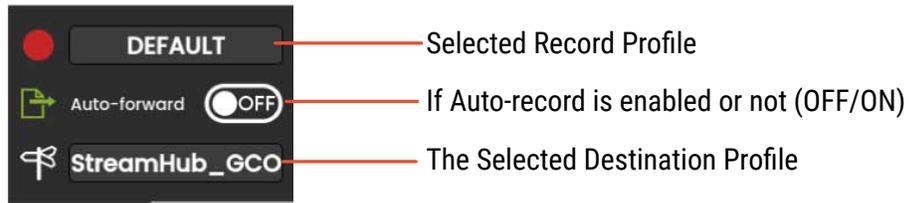
   | DEFAULT ————————— Selected Record Profile
   | Auto-forward OFF ————— If Auto-record is enabled or not (OFF/ON)
   | StreamHub_GCO ————— The Selected Destination Profile

   • To select another Record profile:

       a. Click on the ⏺ field.

       b. Click on another Record profile.

   • To modify the Auto-forward mode: Click on the OFF or ON button option.

   • To select another Destination profile:

       a. Click on the 🪧 field.

       b. Click on another Destination profile.

2. Click on ⏺ to start the Record.
   The video preview appears on screen.

Audio bars indicating audio levels

Record Duration
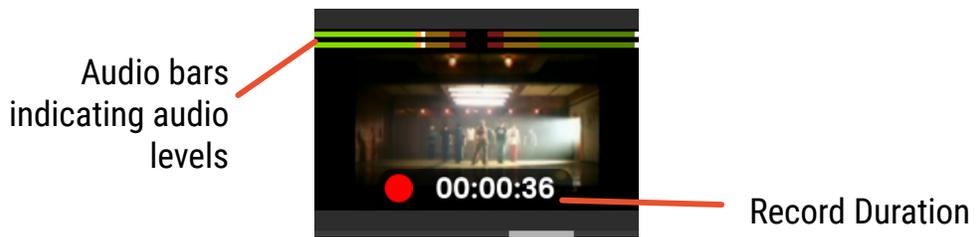
3. Click on ◀ to display some indications about the record action:

Remaining recording time possible on SD card

Source Standard

Space used on SD card

Record Duration
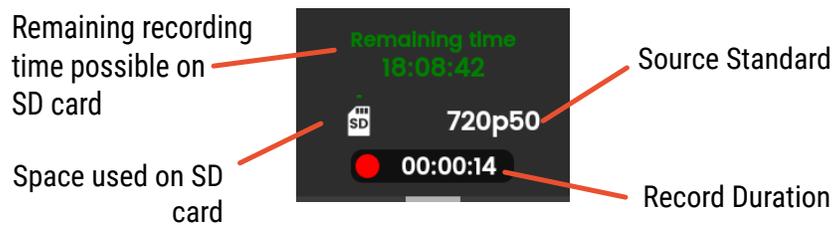
In case of a Record and simultaneous Forward, another screen appears when you click on the unit panel:

Amount and percentage of data already forwarded (if option enabled)

Network Bitrate

Record Duration

ℹ **Note:**
To stop the Record:
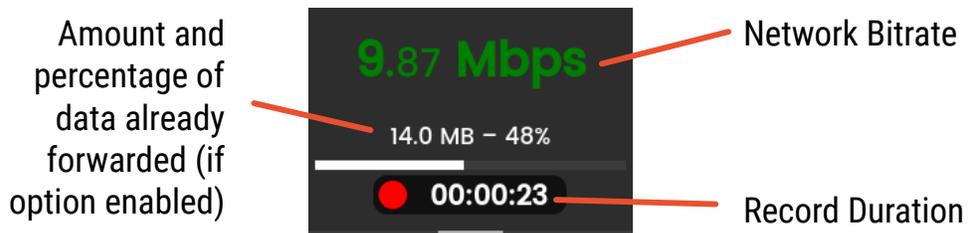
    a. Click on ▶ .

    b. Click on ⏹ .

    c. Click on CONFIRM to confirm.

> **ℹ** To stop the Forward:
>
> a. Click on **>** .
>
> b. Click on **■** .
>
> c. Click on **CONFIRM** to confirm.

From the Web Interface

1. Click on **⚙** to check that the unit settings are configured and selected as required:

   • Record profile

   • Auto-forward option (OFF / ON)

   • Destination profile

> **ℹ** **Note:** If you enable the **Auto-forward** option, the video file is automatically forwarded during the record.

2. Click on **●** to start the Record.
   Some indications appear on screen:
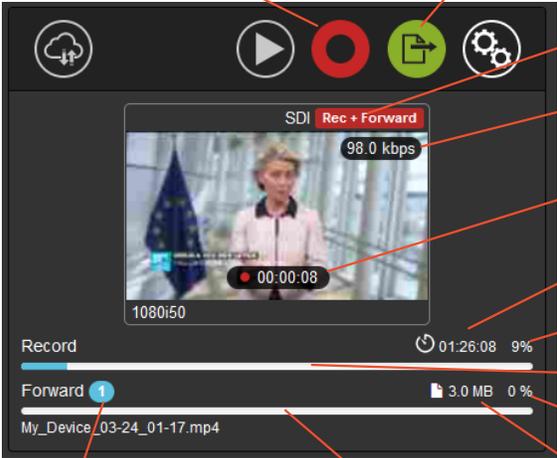
Stop Record button

Forward button

Indication of the kind of action running

Transmission bitrate (if forward in progress)

Duration of the Record in progress

Remaining recording time possible on SD card

Space percentage used on SD card

Progress bar indicating remaining space on SD card

Percentage of file forwarded

Size of file to be forwarded and percentage already forwarded

Number of Forward actions in progress

Forward progress bar

> **Note:**
> To stop the Record:
>
> a. Click on ⬤ . A [Confirm] popup appears.
>
> b. Click on [Confirm] or the ⬤ icon to stop the video recording.
>
> To stop the Forward:
>
> a. Click on 🔲 . A [Confirm] popup appears.
>
> b. Click on [Confirm] or the 🔲 icon to stop the video transmission.

Starting a Forward

Make sure that a mass storage such as an SD card or a USB memory tick is connected to the unit.

You can choose to forward:

- The last record

- A selection of records

- All files

From the Unit Panel

From the **Home** menu, click on .
The forward interface appears:

- To forward the last record

    a. Click on .

    The forward is starting.

- To forward some specific files

    a. Click on and on .

    b. Click on to open the SD card content.

    c. Click on the files that you want to forward. Use to scroll down if required

    d. Click on to start Forward

    The forward is starting.

- To forward all files

    a. Click on to scroll.

    b. Click on .

    The forward is starting.

From the Web Interface

Click on . The Forward interface appears.
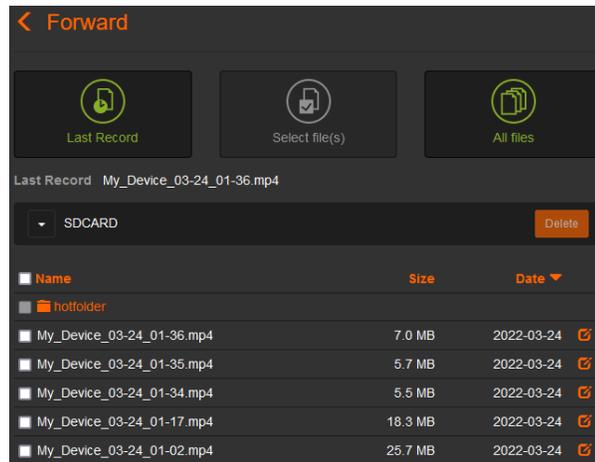
a. To forward the last record, click on Last record .

b. To forward some specific files, select the files and click on Select file(s) .

c. To forward all files, click on All files .

The forward in progress is indicated on the screen.

Transmitting Files via the Hot Folder

The Hot Folder function enables you to transmit files (eg. photos) automatically over unmanaged networks wherever the action is taking place. This function uses an ftp push to transmit files following the FIFO method (First In, First Out). You can enable or disable the function as required.
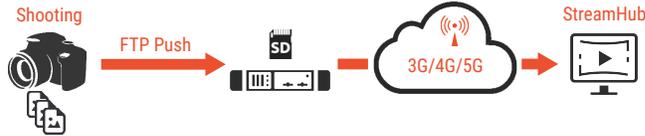
ℹ️ **Note:**

- You can manage the hot folder content on the SD card as you wish.

- Please refer to the procedure about deleting files in the chapter "Deleting file(s) from the SD card".

- Files can be transmitted according to 2 priority levels (Standard or Priority), as defined on the device that transmits files.
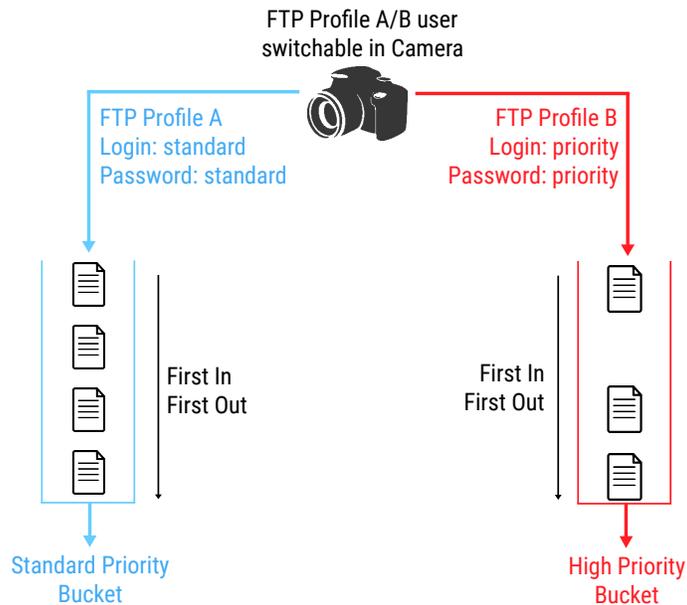
Enabling / Disabling the Hot Folder Function

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on and on .

3. Click on to enable or on to disable the Hot Folder option.

From the Web Interface

1. Click on **Settings > Forward**.

2. Click on or to enable or disable the **Hot Folder** function.
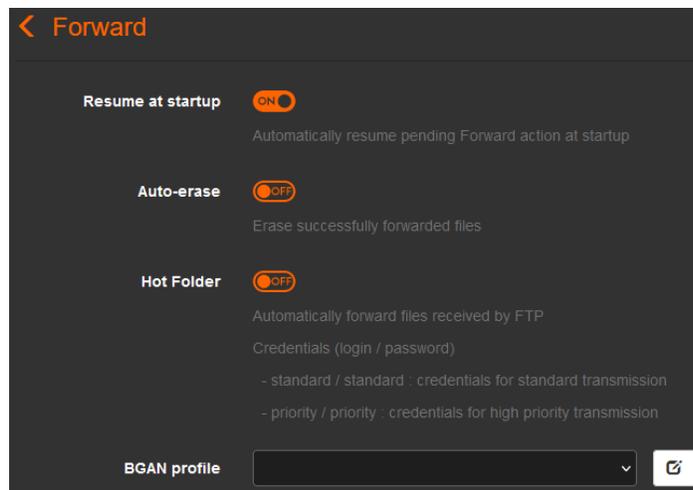
Once the **Hot Folder** function is enabled, the icon appears in the upper bar.

Files are automatically forwarded following the priority levels defined on the camera (standard or high priority).

When the file transmission is starting, the forward action can be seen on screen.

Using the intercom

The Intercom function enables you to communicate with the Master Control Room, using a microphone or a headset connected to the unit.

You can manage the Intercom function from the StreamHub interface.

1. Connect the headset, or microphone to the unit.

2. From the StreamHub interface, start the Intercom session (please refer to the StreamHub User Guide).

   The intercom session is indicated by the icon :

   Figure 1. On the Unit Front Panel

   Figure 2. On the unit Web Interface
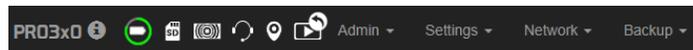
> **Note:** You can adjust intercom settings from the Web Interface by clicking on the icon in the top bar.

From the Unit Panel

1. From the **Home** menu, click on [⚙] .

2. Click on [I/O] .

3. Click on [⌄] to move to settings Micro and/or Headset levels.

4. Click on [+] or [−] to move the cursor.

From the Web Interface

1. Click on **Settings > I/O**.

2. Move the **Mic level** and the **Headset level** cursors to adjust the microphone and headset volumes.
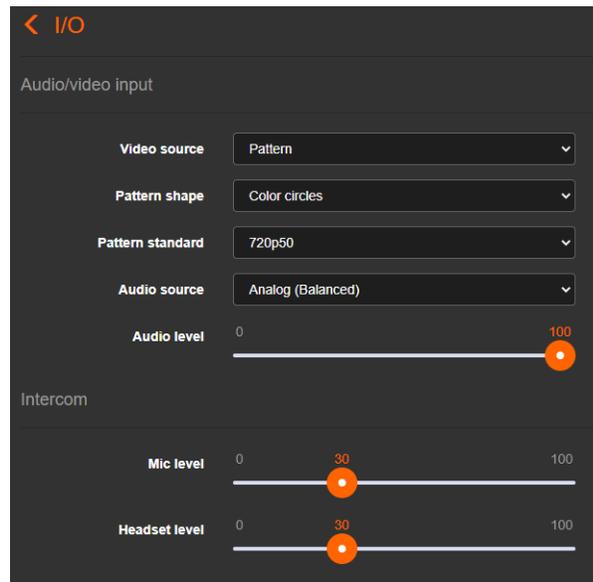
Configuring a Data Bridge

When configured in Data Bridge mode, the unit can be used as a Data Bridge that profides access to Internet from the field, or access to devices connected to the transmitter LAN from the studio (suche as remote control of camera).
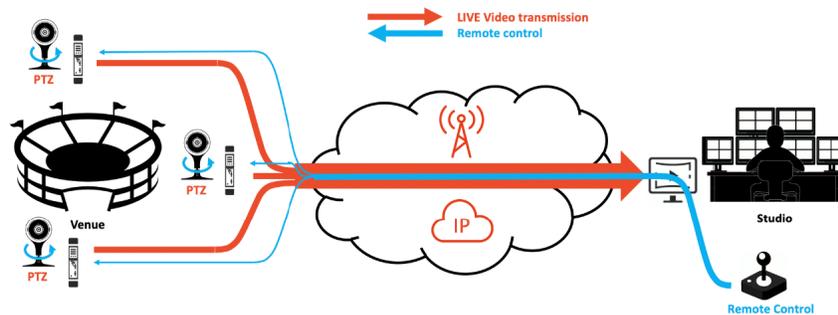
In this configuration, Live operation is still allowed, but Record and Forward operations are no more available. Up to 10 client devices can connect simultaneously to the unit's local network (Ethernet or WiFi). The Ethernet interface shall be configured in Gateway mode, see chapter Configuring an Ethernet Interface.

To configure a unit as a Data Bridge, you must select the server that should be used (Destination Profile), and then enable the Data Bridge mode. The selected server automatically allocates a license token to each Data Bridge that you enable.

From the Unit Panel

1. From the **Home** menu, click on [icon] .

2. Click on the Destination field ([icon]).

   A green dot ([icon]) indicates the currently selected profile.

3. Click on [icon] to scroll down the list of Destination Profiles.

4. Select a Destination Profile.

5. Click on [OFF icon] to enable or on [ON icon] to disable the option.

Once the Data Bridge is configured, the icon [icon] appears in the upper bar.

In case the connection is not possible, the icon [icon] appears in the upper bar.

From the Web Interface

1. From the Web Interface, click on .

2. Select the **Destination Profile** from the scrolling list.

3. Click on or to enable or disable Data Bridge.
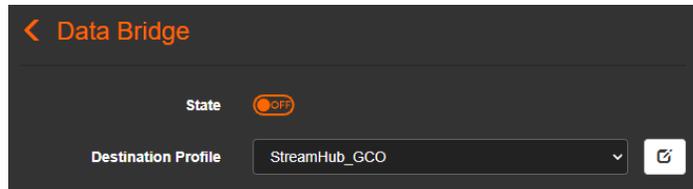
Once the Data Bridge is configured, the button turns into and an icon appears in the upper bar.

In case the connection is not possible, the icon appears in the upper bar.

Locking a Field Unit from Manager Interface

You can lock / unlock a field unit from the Manager interface.

Please refer to the Manager User Guide to get the procedure to follow.

Once the field unit is locked, you cannot:

- add/delete/modify Destination profiles,

- add/delete/modify Live profiles,

- add/delete/modify Record profiles,

- add/delete/modify BGAN profiles,

- change/select a new Destination profile,

- import/export a configuration in the unit,

- restore the factory settings,

- upgrade the Firmware.

> **Note:** The unit remain locked if:
>
> - the connection to the Manager is lost,
>
> - the unit is rebooted,
>
> - the unit is powered off/on.

Using the Remote Control

Connect the remote control to the unit thanks to the USB cable.

> ℹ **Note:** When the Remote control is connected, the Power indicator switch on and the other indicators blink for 3 seconds.

Reserved for future use

Live Indicator — Record Indicator

Power Indicator — Activity button
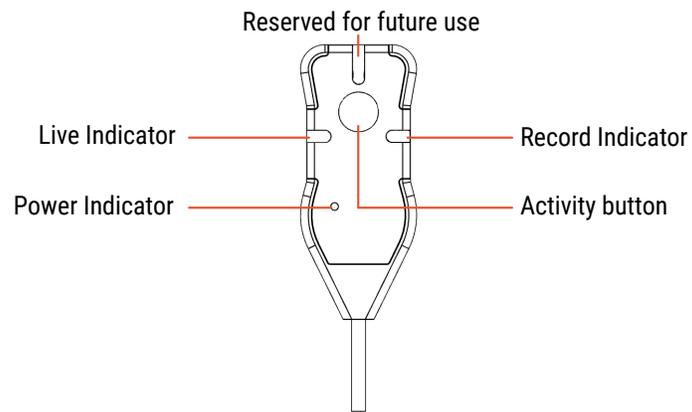
Table 4. When no action is running

To start a Live	Short press the activity button.
To start a Record	Long press the activity button.

Table 5. When an action is running

To stop all actions	Long press the activity button

Indicators Meaning

Table 6. Power Indicator

Fixed Green	The remote control is connected to the unit.
Off	The remote control is not connected to the unit.

Table 7. Live Indicator

Flashing Blue	The Live operation is starting.
Fixed Blue	The Live is in progress.
Off	No Live action is running.

Table 8. Record Indicator

Flashing Red	The Record operation is starting.
Fixed Red	The Record is in progress.
Off	No Record action is running.

Servicing

Getting the Unit Information

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on and click on .
   The Device Info screen appears:

3. Use to scroll down information.

From the Web Interface

Click the icon to display the unit information:
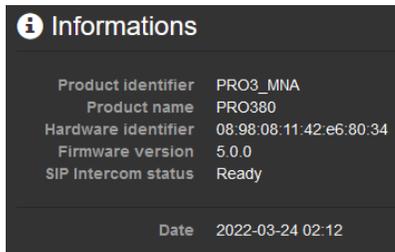
You can access the unit information:

- The **Product Identifier**

- The **Product Name**

- The **Hardware ID**

- The **Firmware Version**

- The **SIP Intercom Status**

    ◦ **Ready** if the product is registered to a Manager or connected to a StreamHub supporting SIP intercom.

    ◦ **In call** if a call is in progress with Manager or a StreamHub.

Getting the IMEI/IMSI/ICCID numbers

- **IMEI (International Mobile Equipment Identity)**

  The IMEI number is a unique 15 digit number that identifies a cellular device within a mobile network. It identifies the modem embedded within the unit.

- **IMSI (International Mobile Subscriber Identity)**

  The IMSI number is a unique 25 digit number that identifies a mobile subscriber. It identifies the SIM card inserted in the unit.

- **ICCID (Integrated Circuit Card Identifier)**

  The ICCID number is a unique 19 to 22 digit number that identifies a SIM card. It identifies the chip of the SIM card inserted in the unit.

For legal purposes, you may need to register the IMEI, IMSI and/or ICCID numbers of the modem(s) used.

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on to scroll the list of modems.

3. Long press on the modem for which you require the IMEI, the IMSI and/or the ICCID number.
   The IMEI, IMSI and ICCID numbers are displayed:

From the Web Interface

Click on on a modem line to display the modem details.

The modem IMEI, IMSI and ICCID numbers are indicated.

Testing a Live using the Pattern Mode

Once you have set a Destination Profile, you can configure a Live encoding using a Pattern and test communication between the unit and the destination StreamHub.

1. Click on ![gear icon] to access the unit's settings.

2. Select a destination profile.
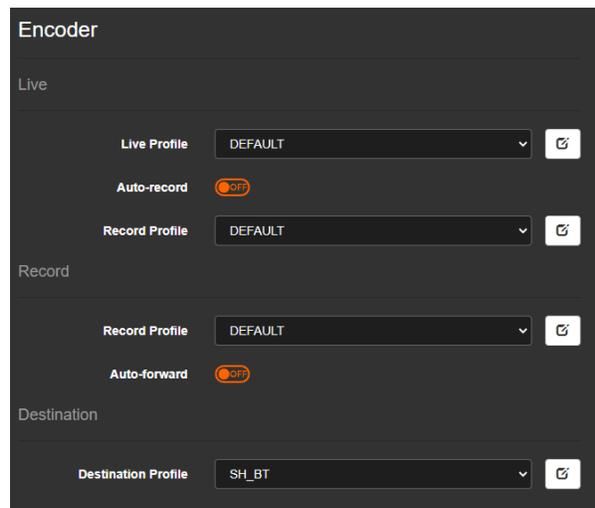
3. From the Web Interface, click on **Settings > I/O**.

4. From the scrolling list, select **Pattern** as a **Video Source** and the expected video standard.
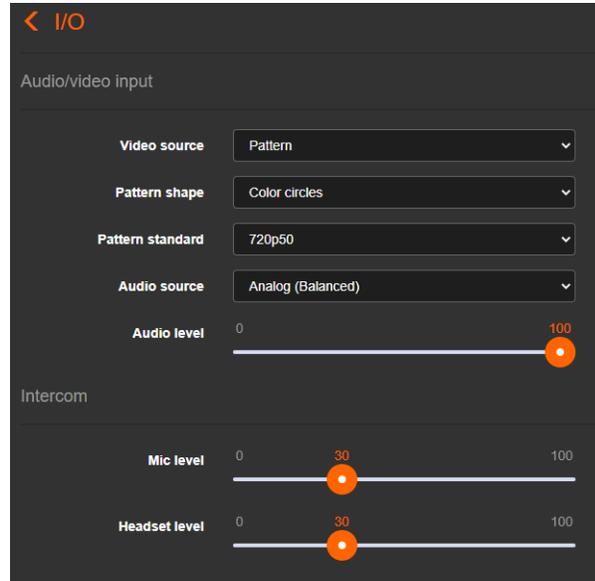
5. Select the **Pattern Shape** between:

> • Color circles pattern
>
> • Color bars pattern
>
> • Black pattern

6. Select the **Pattern Standard**.

7. Click on to start a Live.
   A graph appears on the unit's Web Interface.

Changing the Web Interface Password

1. Click on **Admin > Password**.

2. Enter the current password.

3. Enter the new password.

4. Confirm the new password.

5. Click on **Apply**.

Updating the Firmware

ℹ️ **Note:**

- Make sure that the battery is properly charged before starting to update

- The Firmware can be updated from the Manager (v3.3.0 and higher)

- A message appears on the field unit to start the update.

Update request

Your administrator has
requested a firmware
update. Proceed now?

From the Unit Panel

Make sure you have uploaded the .fw firmware file from the customer portal to an SD card or USB key.

1. Connect the USB key or insert the SD card that contains the new firmware (.fw file).

2. From the **Home** menu, click on ⚙️ .

3. Click on ▷ and click on 🔧 .

4. Click on ⌄ to scroll down and click on **Firmware**.

From the Web Interface

1. Click on **Admin > Update Firmware**.

2. Click on the **Browse** button to select the .fw software file that you saved.

3. Click on the **Update** button.

4. Follow the instructions on screen.

> ℹ **Note:** The update may take several minutes, depending if it is a major update or not. Make sure that no action is made meanwhile. At the end of the process, a message appears to reboot or switch off the unit, depending on the firmware version uploaded.

Rebooting the Unit

You can reboot the unit from the Web Interface only.

1. Click on **Admin > Reboot**.

2. Click on **Yes** to confirm.
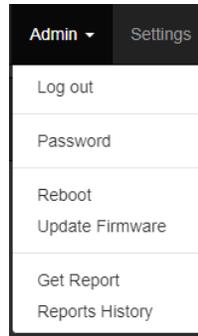
Restoring Factory Settings

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on and click on .

3. Click on **Configuration**.

4. Click on **Factory settings**.

5. Click on **Yes**.

From the Web Interface

1. Click on **Backup > Factory settings**.

2. Click on **Yes** to confirm restoration.
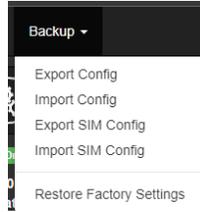
Exporting the Unit Configuration

Click on **Backup > Export Config**.

An .awj file is exported in the download space. This file can be easily imported later, once factory settings have been restored.
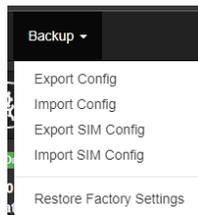
Importing the Unit Configuration

> ℹ **Note:** You can import the configuration from the Manager (v3.3.0 and higher).

From the Unit Panel

1. From the **Home** menu, click on ⚙.

2. Click on ❯ and click on 🛠.

3. Click on **Configuration**.

4. Click on **Import from file**.

5. Select the .awj file to be imported from the SD card or the USB memory key.

From the Web Interface

1. Click on **Backup > Import**.

2. Click on **Browse**, and select the .awj file to be imported.

3. Click on **Import**.
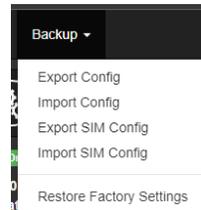
Unlocking a SIM Card

You can unlock a SIM card from the Unit Panel only.

1. From the **Home** menu, click on .

2. Click on or to select the concerned Modem.

3. Click on the modem line indicating "Need pin".

4. Click on .
   The screen reminds the number of attempts left to enter the PIN code to unlock the SIM card.

5. Click on **OK** to activate the keyboard.

6. Enter the PIN code and click on to confirm.

> ⓘ **Note:** In case you exceeded the number of attempts allowed, this message is displayed. The SIM card needs to be unlocked by entering the PUK code using another device such as a phone, a tablet...

Deleting file(s) from the SD card

> ⓘ **Note:** Make sure that the SD card is not locked.

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on and click on .

3. Click on **Delete**.

4. Click on files you want to delete and click on .

5. Click on **Yes** to confirm.

From the Web Interface

1. On the menu bar, click on the SD card icon .

> ⓘ
> **Note:** If the Hot Folder function is enabled, the icon looks like .

2. You can:

- Select one or several files to delete.

  a. Click the files to be deleted.

  b. Click on Delete .

- Select all files.

  a. Click on the **Name** box. All files are selected.

  b. Click on Delete .

- Select files stored in the Hot Folder.

  a. Click on **Hot Folder**.

  b. Enter priority or standard folder to select files to be deleted.

Formatting the SD Card

> **Note:** This operation can be done only from the Unit Panel

1. From the **Home** menu, click on .

2. Click on and click on .

3. Click on **Format**.

4. Choose between FAT32 or exFAT.

5. Click on **Yes** to confirm.

6. Click on **OK** to complete the operation.

Troubleshooting

Getting a Report File

AVIWEST's support team may ask for a Report File that you can send by email to help them in investigating about unexpected behaviors.

From the Unit Panel

1. From the **Home** menu, click on .

2. Click on and click on .

3. Click on **Report**.
   A report is generated. It is accessible from the Web Interface or from the SD card (if present).

4. From the Web Interface, click on **Admin > Reports History**.

5. Click on the report that you want to download.
   A report file (.bin) is generated.

6. Attach the .bin file to an email in which you explain the issue you are facing, and send it to AVIWEST's support team. See contact addresses at the end of this manual.

From the Web Interface

1. Click on **Admin > Get Report**.

2. Click on **Download**.

   A report file (.bin) is generated.

3. Attach the .bin file to an email in which you explain the issue you are facing and send it to AVIWEST's support team. See contact addresses at the end of this manual.

Exporting a Report File from the History Folder

1. Click on **Admin > Reports History**.

> ℹ️ **Note:** The last 5 reports are listed.

2. Click on the report that you want to download.
   A report file (.bin) is generated.

3. Attach the .bin file to an email in which you explain the issue you are facing and send it to AVIWEST's support team. See contact addresses at the end of this manual.

Alarm Messages

Message	Solutions
Read-only SD card	Unlock the SD card inserted into the unit.
receiver not defined	Please see Adding and Configuring a Destination Profile.
Bad Video synchronization	• Check that the video cable(s) are properly connected to the camera and to the unit. • On the Web Interface, check that the video input standard is properly identified.
Missiong signal on SDI/HD-MI	Check that the source set in the video settings corresponds to the actual video input.
Missing audio signal on HDMI	If the source should embed audio signals, please check the camera settings.
Connection to receiver Failed	Edit the profile to connect to the receiver in the settings of the unit: select another channel or select the Auto-connect option (see Adding and Configuring a Destination Profile).
Receiver not available	Call the MCR. Make sure that the StreamHub is turned on and reachable.
No interface connected	Check that the network interfaces of the unit are enabled. Check that the SIM card is identified and that the modem is properly connected to network. Check the Ethernet cable.
Failed to connect to the server	The bandwidth is not sufficient to connect to the server.

Message	Solutions
	Wrong IP address
Authentification failed	Check username and password entered for the Destination profile used.
	Make sure to use a StreamHub for which AES is not activated.
Connection to server failed (max devices reached)	There is no more availble channel on the server to connect a unit. Select another receiver (see Adding and Configuring a Destination Profile).
Connection to server failed (Invalid license) / (Expired license) / (No license found)	The license applied on the server is invalid, expired or there is no locense applied on the server.
	You cannot connect the unit to this server until a valid license is applied on the server.
Connection to Input closed by server	The unit has been disconnected from the server by the user of the StreamHub.
Connection Lost	The unit has been disconnected from the Internet Network.
	Check your internet connection.
Connection to Input not authorized for this product	The unit tries to connect to a receiver's channel not available for this type of product.
	Edit the profile to connect to the receiver in the settings of the unit: select another channel (see Adding and Configuring a Destination Profile).
Error : check server profile	The server profile is not configured properly (see Adding and Configuring a Destination Profile).

Specifications

Video

		H.265/HEVC	**H.264/AVC**
Standards	HD	1920x1080p 25/29.97/30/50/59.94/60 fps 1920x1080i 50/59.94/60 fps 1280x720p 50/59.94/60 fps	
	SD	720x576i (PAL) 720x480i (NTSC)	
Compression	Codec	H.265/HEVC	H.264/AVC
	Profile	Main	High
	Level	Up to 4.1	Up to 4.2
	Bit depth	8-bit	
	Chroma format	4:2:0	
Bitrate mode		VBR (Live) CBR (Live, Record)	
Live Bitrate (static resolution as source)	1080p 50/59.94/60	600kbps – 20Mbps	3Mbps – 20Mbps
	1080p 25/29.97/30	600kbps – 20Mbps	1.8Mbps – 20Mbps
	1080i 50/59.94/60	300kbps – 20Mbps	1.8Mbps – 20Mbps
	720p 50/59.94/60	300kbps – 20Mbps	1.4Mbps – 20Mbps
	SD (PAL or NTSC)	200kbps – 20Mbps	0.5Mbps – 20Mbps
Live Bitrate (dynamic resolution)	1080p 50/59.94/60	-	200kpb - 20Mbps
	1080p 25/29.97/30	-	
	1080i 50/59.94/60	-	
	720p 50/59.94/60	-	

		H.265/HEVC	H.264/AVC
	SD (PAL or NTSC)	-	
Live Bitrate (downscaled resolution)	1920x1080p 50/59.94/60	-	3Mbps – 20Mbps
	1920x1080p 25/29.97/30	-	1.8Mbps – 20Mbps
	1280x720p	-	1.4Mbps – 20Mbps
	854x480p	-	0.5Mbps – 20Mbps
	640x340p	-	0.4Mbps – 20Mbps
	426x240p	-	0.3Mbps – 20Mbps
Record File Format	MP4 Transport Stream		
Record Bitrate	2Mbps - 20Mbps		
Input/Output	1x 3G-SDI input 1x 3G-SDI output: video source loop through (SDI input/ HDMI input/ Pattern) 1x HDMI 1.4 input: HD only 1x HDMI 1.4 output: Video Return		

Audio

Channels	Up to 4 channels (SDI input) Up to 2 channels (HDMI input)
Codec	AAC-LC
Bitrate	32 to 256Kbps per channel
Mode	Mono, Dual Mono, Stereo, Dual Stereo (SDI Only)
Input/Output	1x 3G-SDI input embedded audio 1x 3G-SDI output (loop though) embedded audio

		1x HDMI 1.4 input

Video Return

Video	Codec	H.264/AVC 4:2:0 8 bit
	Resolution	720p50/60 1080p25/30 1080p50/60
	Bitrate Mode	CBR
	Bitrate	200Kbps to 6Mbps
Audio	Codec	AAC-LC
	Mode	Mono and Stereo
	Bitrate	32Kbps (for Mono) 64Kbps (for Stereo)

Networks

3G, 4G and 5G	For PRO360-5G model

	• 6 modems with embedded high gain custom antennas
	• Worldwide compliant
	• 5G SA and NSA modes supported
	• 5G sub 6GHz supported
	• Supported bands
	◦ 5G: n1, n2, n3, n5, n28, n66, n71, n77, n78, n79
	◦ 4G: B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B30, B32, B34, B38, B39, B40, B41, B42, B46, B48, B66, B71
	◦ 3G: B1, B2, B3, B4, B5, B6, B8, B9, B19

3G and 4G	For PRO340 and PRO380 models
	
	• Modems with embedded high custom antennas
	    ◦ 4 modems for PRO340
	    ◦ 8 modems for PRO380
	• Worldwide compliant
	• Supported bands
	    ◦ 4G: B1, B2, B3, B4, B5, B7, B8, B12, B13, B17, B18, B19, B20, B21, B25, B26, B28, B29, B30, B38, B39, B40, B41, B66
	    ◦ 3G: B1, B2, B3, B4, B5, B6, B8, B19

Ethernet	2x Links
Wi-Fi	Configurable in Access Point Mode or Client Mode Maximum simultaneous connections to Access Point: 10 Frequency Band: 2.4 GHz or 5 GHz Dynamic list of channels (Access Point Mode): • 1 to 11 for 2.4 GHz • 36, 40, 44 and 48 for 5 GHz
Latency (end-to-end)	User configurable

	• Broadcast over SST mode
	◦ CBR: 500ms to 10s
	◦ VBR: 800ms to 10s
	• Broadcast low latency mode
	◦ CBR: 200ms to 500ms
	◦ VBR: not available

Interfaces

Table 9. Audio/Video

3G-SDI Input 3G-SDI Output	Connector type: BNC connector Impedance: 75 Ohms Complies with SMPTE 259M, SMPTE 292M and SMPTE424M level A and level B-DS (limited to one SDI stream for level B-DS) Supported Embedded Audio at 48kHz
HDMI Input HDMI Output	Connector type: Type A Complies with HDMI 1.4 Fully Shielded HDMI cable is mandatory

Analog Audio Input / Output	Connector type: Mini-XLR (Male, 5 pins)
	Mates with
	
	    • Rean/Neutrik RT5FCT-B (Female, 5 pins)
	    • Switchcraft Mini-XLR TA5F Series (Female, 5 pins)
	
	Pins (Mating plugs)
	
	    1. Common GND
	    2. Balanced Input Hot (+)
	    3. Balanced Input Cold (-)
	    4. Microphone Input
	    5. Headphone/Line Output
	
	Balanced channel input impedance: 59.6 kΩ

Table 9. Audio/Video (continued)

	Balanced channel input level (nominal): 4 dBu (1.23 Vp)
	Balanced channel input level (0dB Full Scale): 18 dBu (8.7 Vp)
	Balanced channel input level (max): 19.4 dBu (10.2 Vp)
	HeadPhone Dynamic Range (20 kHz Filter): 101 dB
	HeadPhone THD+N: -70 dB max
	HeadPhone Load Impedance: 16 Ω or higher
	HeadPhone Output Power: 55.8 mW max (16 Ω)
	Line full scale output voltage: 0.97 VRMS
	Line load impedance (typical): 10 kΩ
	Microphone Bias: 2 V
	Microphone Maximum Level : 0.5 VRMS

Table 10. Return IFB Channels

Intercom Headset	Connector type: Mini-XLR (Male, 4 pins)
	(Signal comply with Apple and Samsung headsets)
	Mates with
	• Rean/Neutrik RT4FCT-B (Female, 4 pins)
	• Switchcraft Mini-XLR TA4F Series (Female, 4 pins)
	• Pins (Mating plugs)
	1. Common GND
	2. Microphone Input
	3. Headphone Left Output
	4. Headphone Right Output
	Headphone Dynamic Range (20 kHz Filter): 100 dB
	Headphone THD+N: -70 dB max
	Headphone Load Impedance: 16 Ω or higher
	HeadPhone Output Power: 2 x 55 mW max (16 Ω)
	HeadPhone Full Scale output voltage: 0.65 VRMS
	Microphone Bias : 2.5 V

Table 10. Return IFB Channels (continued)

	Microphone Maximum Level : 0.5 VRMS

Table 11. LAN / WAN

Ethernet	Two Ethernet ports 10/100/1000 Base-T RJ45 connector Green LED indicates link Orange LED indicated speed (on: 1000BT, off:10/100BT)
Wi-Fi	Dual Band 2.4 GHz and 5 GHz 802.11 b/g/n/ac

Table 12. Remote Antenna

QUAD Antennas	2x4 MCX Connectors

Table 13. Storage

SD Card	SD slot, class10 recommended (FAT32, exFAT)
USB	One USB 3.0 Type A connector

Table 14. Power

DC Input	Input type: Standard self-latching 2-pole connector with alignment key Automatic under-voltage protection at 11.8 Volts Automatic over-voltage protection at 24 Volts
AC/DC Adapter	Manufacturer: EDAC POWER ELEC. Model: EA10951E-180 DC Output: 18V / 5A max AC Input: 100-240V-2.5A,50-60Hz

Hardware Specifications

Power Supply	DC input 18 V nominal, 5A Max		
	External battery with V mount or Gold mount plates		
Power Consumption	70 W max		
	From 25 to 35 W typical		
Weight	PRO340	PRO360-5G	PRO380
	1,36 kg	1,4 kg	1,43 kg
Dimensions (LxWxD)	PRO340	PRO360−5G	PRO380
	22,2 x 8,4 x 12,5 cm	25,6 x 8,4 x 12,5 cm	24,5 x 8,4 x 12,5 cm
	8.7" x 3.3" x 4.9"	10.1" x 3.3" x 4.9"	9.6" x 3.3" x 4.9"
Operating temperature	0°C to 45°C (0° to 35°C when unit in backpack)		
	32°F to 113°F (32°Fto 95°F when unit in backpack)		
	-5°C to 40°C		
	0°C to 40°C for the DC adapter		
	32°F to 104°F for the DC adapter		
Storage temperature	-20°C to 80°C		
	-4°F to 176°F		

GNSS Receiver

Frequency Range	1575.42 +/- 1.023 MHz

Radiated Output Power

WiFi 2.4GHz	Frequency Range	Maximal radiated power
	from 2400 MHz to 2483.5 MHz	41.69 mW
		79,5 mW ☼

WiFi 5GHz*	Frequency Range	Maximal radiated power
	from 5150 MHz to 5250 MHz	77.6 mW ☼
UMTS	Frequency Range	Maximal radiated power
	from 1920 MHz to 1980 MHz	104.47 mW
		124 mW ☼
	from 880 MHz to 915 MHz	225.42 mW
		84 mW ☼
LTE	Frequency Range	Maximal radiated power
	from 1920 MHz to 1980 MHz	119.12mW
		148 mW ☼
	from 1710 MHz to 1785 MHz	180.30 mW
		98 mW ☼
	from 2500 MHz to 2570 MHz	197.70 mW
		200 mW ☼
	from 880 MHz to 862 MHz	105 mW ☼
	from 832 MHz to 862 MHz	121.06 mW
		182 mW ☼
	from 703 MHz to 748 MHz	69.66 mW
		195 mW ☼
UMTS (with external antennas)	Frequency Range	Maximal radiated power
	from 1920 MHz to 1980 MHz	123.18 mW
	from 880 MHz to 915 MHz	110.10 mW
LTE (with external antennas)	Frequency Range	Maximal radiated power
	from 1920 MHz to 1980 MHz	92.44 mW
	from 1710 MHz to 1785 MHz	94.53 mW
	from 2500 MHz to 2570 MHz	96.33 mW
	from 832 MHz to 862 MHz	191.87 mW
	from 703 MHz to 748 MHz	129.72 mW
5G (with internal antennas)	Frequency Range	Maximal radiated power
	from 3300 MHz to 3800 MHz	108 mW ☼
	from 1920 MHz to 1980 MHz	148 mW ☼
	from 1710 MHz to 1785 MHz	98 mW ☼

from 2500 MHz to 2570 MHz	200 mW ✿
from 880 MHz to 915 MHz	105 mW ✿
from 832 MHz to 862 MHz	182 mW ✿
from 703 MHz to 748 MHz	195 mW ✿

* Not available for Armenia, Belarus, Kazakhstan, Kyrgyzstan and Russia.

✿ Radiated output power for PRO360-5G only

Device disposal

Dispose of this product in a separate waste collection facility according to the requirements in force in your country. Please check the regulation in force in your country. In the European Union, please refer to the WEEE Directive.

Contact Us

Should you have any question or require complementary information, feel free to visit www.aviwest.com or contact AVIWEST's technical support team:

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