STREAMIT

Iris Pro series

User Manual

for software version 1.6.0

Updated on 25/04/2025

Contents

EU Declaration of Conformity

CE This product carries the CE-Mark in accordance with the related European Directives. CE marking is the responsibility of Streamit B.V. The Netherlands.

Disclaimer

This manual has been validated and reviewed for accuracy. The instructions and descriptions it contains are accurate for the Streamit Iris devices at the time of this manual's production. However, later Iris devices and manuals are subject to change without notice. Streamit assumes no liability for damages incurred directly or indirectly from errors, omissions or discrepancies between Iris device and the manual.

Understanding of Instructions

WARNING: These are instructions which can cause harm to people or damage to the device if not followed properly. It is important to read and follow these instructions carefully.

IMPORTANT: These instructions are important in order to understand the correct behavior of the device.

Notices about trademarks

- The Iris family of devices is a registered trademark of Streamit
- Streamit is a registered trademark
- All other trade names that are used in this manual are owned by their respective owners

1 Getting started

This is the consolidated user manual for the Iris Pro Receiver and the Iris Pro Transmitter running software version 1.6.0.

We strongly recommend reading the manual thoroughly before you start installing and using the device for the first time.

1.1 Introduction

Iris devices connect high-quality audio systems wirelessly. Employing DECT technology and a highly versatile audio codec you can move full-band audio unfailingly and securely with minimal latency. Connect media players and audio mixers with your active or passive speakers reliably when wired connections are expensive or impractical.

The Iris Pro Transmitter broadcasts high quality audio to the receiver devices that have joined its network though the pairing mechanism.

Any receiver device (RX-device), including the Iris wireless amplifiers, are compatible with and interoperable with all available transmitter variants.

With the built-in relay control functionality, digital input pin changes on the transmitter get broadcasted to the digital output pins of all connected receivers, to control speakers and amplifiers and save energy.

Based on the application requirements, many Iris devices can be paired (wirelessly connected) to form wireless audio networks. Until the the mobile app **'Iris configurator'** becomes available, pairing devices is done using the Iris Service Tool.

For more information on Streamit products and technologies, we invite you to visit our website (https://www.streamit.eu).

1.2 Important safety instructions

Use the following safety guidelines to help ensure your own personal safety and to help protect your equipment and working environment from potential damage.

1. Read these instructions.
2. Keep these instructions.
3. Follow all instructions.
4. Keep your equipment away from extremely hot or cold temperatures to ensure that it is used within the specified operating range:

   Operating temperature: -20°C to 50°C

   Humidity: 30% to 90%, RHL non-condensing
5. Install in accordance with the manufacturer's instructions.
6. Only use accessories specified by the manufacturer.

7. Refer all servicing to qualified service personnel. Servicing is required when the product has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the product, the product has been exposed to rain or moisture, does not operate normally, or has been dropped.

8. The power supply and power cord for this product is intended for indoor use only.

9. Use only the supplied power adapter (if applicable).

2 Installation

This section of the manual covers the installation of your Iris audio networking devices, and includes some general installation notes.

2.1 Unpacking your device

Carefully unpack the device and the supplied materials. Make sure that all components listed in the table below are included:

Product name	Iris Pro Transmitter	Iris Pro Receiver	Iris Pro Starterkit
Article number	PTX-1	PRX-1	PSX-1
USB-A 5V/1A power supply	1x	1x	2x
USB-A to USB-C cable 2m	1x	1x	2x
Set of EU/UK/USA mains plugs	1x	1x	2x
Iris Pro Transmitter PTX-1	1x		1x
Iris Pro Receiver RX-1		1x	1x
External antenna	1x	1x	2x

2.2 Device appearance and connections

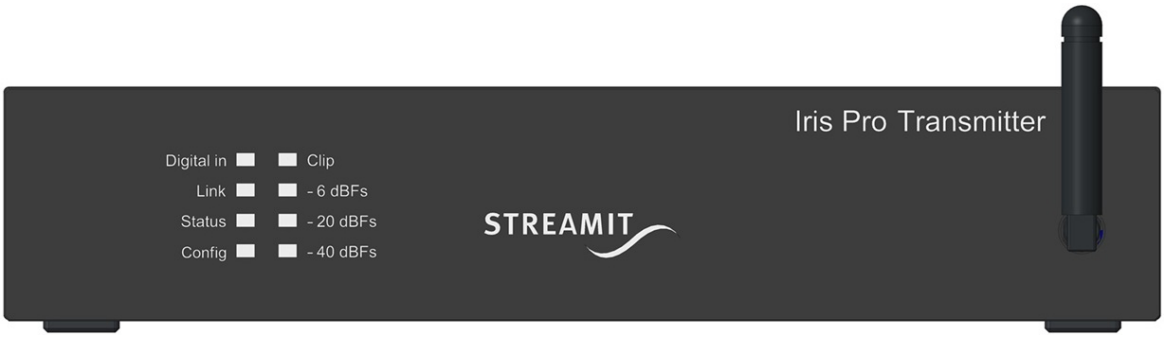
The Iris Pro Transmitter

The Iris Pro Transmitter also referred to as the TX-device, is connected at the audio source and it is the center point of your audio network. It can be placed standalone, or mounted in a 19" rack with the optional Streamit Rackmount kit.

Looking at the hardware, on the front side we find:

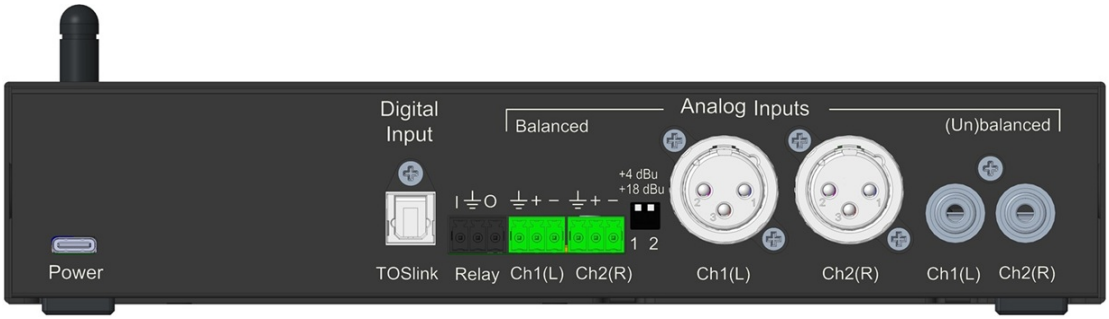
- Eight LEDs used to communicate status information and input audio levels

- The external antenna connector



On the back side we find:

- The USB-C connector used for power, configuration and firmware updates.
- The Toslink digital audio input connector.
- The Phoenix Contact plug for input relay control.
- Two Phoenix Contact plugs for balanced audio input.
- Two dip switches for selecting the maximum input level for each audio channel.
- Two female XLR connectors for balanced audio input.
- Two RCA connectors for balanced or unbalanced audio input.

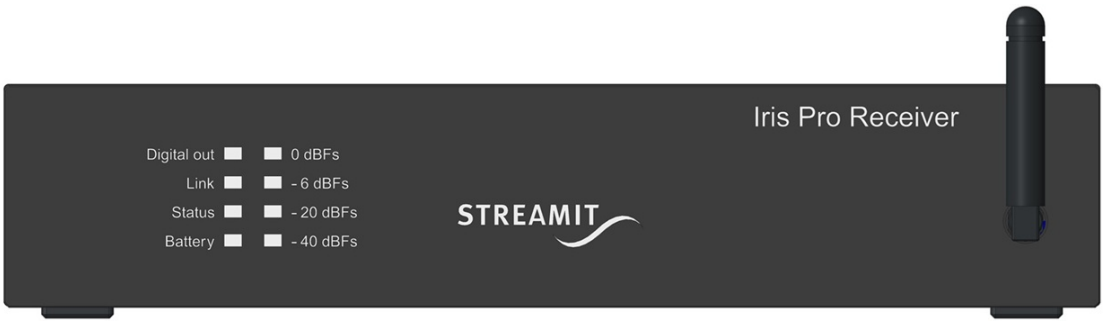


The Iris Pro Receiver

The Iris Pro Receiver also referred to as the RX-device, is connected at the playout location. It can be placed standalone, or mounted in a 19" rack with the optional Streamit Rackmount kit.

Looking at the hardware, on the front side we find:

- Eight LEDs used to communicate status information and output audio levels
- The external antenna connector



On the back side we find:

- The battery switch that activates the optional penlite battery power source
- The USB-C connector used for power, configuration and firmware updates.
- The Phoenix Contact plug for output relay control and factory reset.
- Two Phoenix Contact plugs for the balanced audio output.
- Two male XLR connectors for the balanced audio output.
- Two RCA connectors for the balanced audio output.

The bottom side provides access to the battery compartment, which features two 2-slot battery holders. This design allows for a power source of either 2 or 4 AA penlite batteries.

2.3 Connecting the Iris

Connecting the USB-C power supply

Select the correct power plug adapter for your mains socket and mount this to the base of the power adapter. Plug the power adapter to the mains outlet and plug the other side in the Iris. In the process we ask that you play careful attention to the following instructions:

⚠ Always ensure your hands are dry before plugging in or unplugging the power adapter from the mains.

⚠ Do not cut or damage the cord of the power adapter and do not place heavy objects on the cord. This can cause short-circuit, resulting in electrical shocks or even fire.

⚠ Pulling on the power cord can damage the wire or insulation, potentially causing electrical shocks or fire.

⚠ Using power adapters other than the one recommended for your Iris can result in overheating and damage to your device. This can cause fire, electrical shocks and other hazards. Always use the supplied power adapter.

⚠ Exposing your Iris to rapidly changing temperatures can result in condensation (small amount of water) on the inner and outer surface of your device. To ensure a long lifespan for your device, this should be avoided. If condensation occurs, wait until you device is completely dry before using it again.

Connecting the audio input on the TX-device

The Iris Pro Transmitter features multiple audio input interfaces, including a digital input via Toslink connector and various balanced analog input connectors. All inputs are wired in parallel, with no prioritization among them. Depending on the audio source and installation requirements, you should select the appropriate input interface, which will determine the type of cable needed for the installation. Please note that audio cables are not included.

! In case a mono audio mode is used, make sure that the input from the mono source is connected on the LEFT (Ch1) connector.

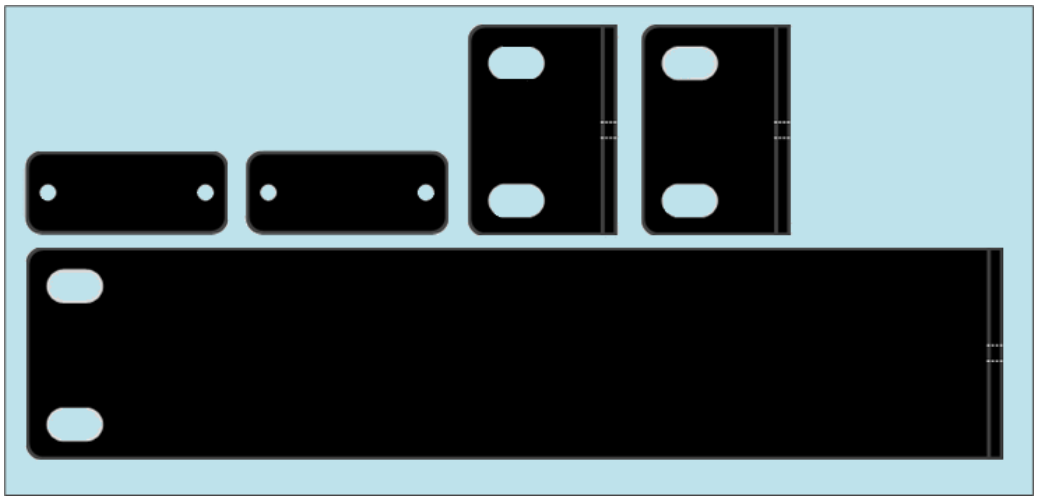
Connecting the audio output on the RX-device

The audio output of the RX-device will be connected to the line input of the audio installation or speaker system. The Iris Pro Receiver features multiple audio output interfaces. All outputs are wired in parallel with all outputs active, so you can select the one that best fits your audio installation or speaker cable. Please note that audio cables are not included.

! In case a mono audio mode is used, the same output will be present on both channels.

2.4 Rack Mount

The Iris Pro Series is designed for easy mounting in conventional 19 inch racks. For rack mounting, the Streamit Rackmount kit is required. This kit contains a total of 5 mounting plates as shown below. Using combination of these plates, it is possible to mount either one or two Iris Pro devices in a 19 inch rack.



Mount a single Iris Pro in a 19" rack

To mount a single Iris Pro device in an 19'' rack, we only make use of the large side mounting plate and one of the small side mounting plates. The sides of the Iris Pro has two screws and two small slot-looking openings in each.

1. Start with one sides of your Iris and remove the Phillips-head screws using an appropriate screwdriver.

2. Place the large side mounting plate as shown below. The holes of the mount plate will match those of the Iris Pro.

3. Carefully fasten the screws back on to bind the Iris together with the mounting plate.

The same is done for the other side, but in this case one of the small side mounting plates is used.

At this point the whole setup can be mounted in the rack by bolting the sides to the frame of the rack. It is recommended to connect the Lisa before mounting. All connections of the Lisa are located in the back and once mounted, the Lisa will not be as easy to access.

Mount two Iris Pro devices in a 19" rack

Mounting two Iris Pro devices in a 19'' rack requires using the two device-to-device mounting plates and the two small side mounting plates. Mounting the side plates is done in the same way as when mounting a single Iris Pro (please see above). You have to make sure that the plates are oriented from outside as shown below.

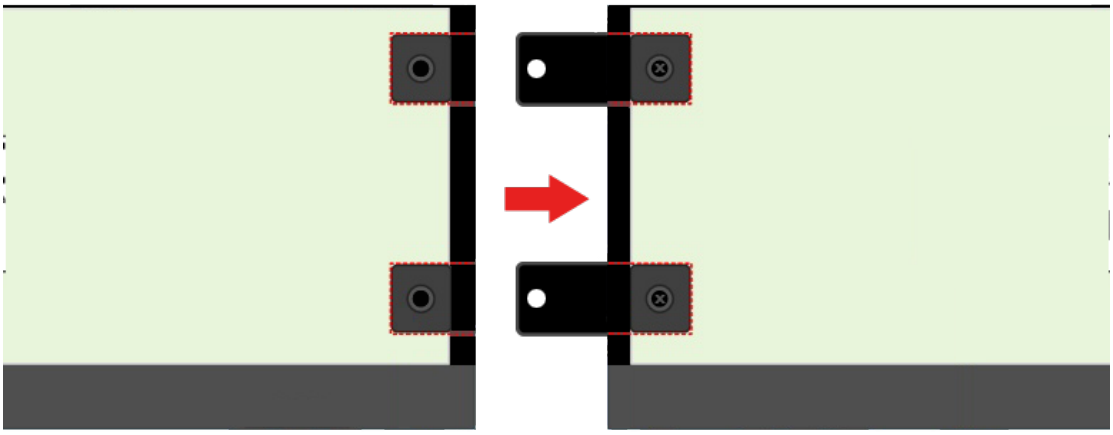
Next, connect the two devices together using the device-to-device mounting plates:

1. Turn the first device over. You will see it has four Phillips-head screws with black rubber feet, two for each side.

2. Using an appropriate screwdriver, remove the two feet on the side opposing the side mounting plate. The openings of the side now form slots with the same width as the device-to-device mounting plates and depth of half the length of the device-to-device mounting plates.

3. Fit the device-to-device mounting plates in the slots, the holes match with those of the device.

4. Carefully screw the rubber feet back on.



Now take the second device and remove the rubber feet just like you did with the first one then connect the two devices together by screwing the rubber feet of the second device back on. When properly done, the resulting setup will look same as the one shown below.

At this stage, the entire setup can be mounted in the rack by securing the sides to the frame with bolts. It is recommended to connect the Iris devices before mounting as all connections are located at the back, and once mounted are not easy to access.

2.5 Battery power

For added wireless freedom, the Iris Pro Receiver can be battery powered using batteries. The design allows for a power source of either 2 or 4 AA penlite batteries. Initial field tests have demonstrated that the device can operate for at least 24 hours with 2 batteries, and for a minimum of 48 hours when using 4 batteries.

The battery switch can be used to activate the battery power source.

2.6 General installation notes

For optimal performance of the audio network, proper placement of the devices is essential.

Attention needs to be paid to the following:

- Always try to have the TX-device placed in the “middle” of the installation.
- Make sure to fasten the external antenna tightly for improved range and stability.
- Try to place the products as high as possible and prevent moving obstacles between the devices.
- Use the Iris Service Tool to monitor the received signal strength of your RX-device, and calibrate the antenna orientation for best reception.

Thanks to the stability of the solution, it is possible to install hundreds of devices at a single site. For such large installations, the following is important:

- There can be a maximum of 50 RX-devices in one audio network.
- There can be a maximum of 10 audio networks at one site.

3 Configuration

The configuration of your Iris audio networks will be done using the Iris configurator, a companion mobile app for Android and iOS. The mobile app is currently under development and not yet available to the user.

For as long as the mobile app is not available, the Iris Service Tool should be used. The Windows PC app initially designed for service purposes, has been updated to allow users to configure and monitor their Iris audio networks.

All receiver device types, including the Iris wireless amplifiers, the Pro and standard receivers are compatible with and interoperable with all available transmitter variants (standard and Pro).

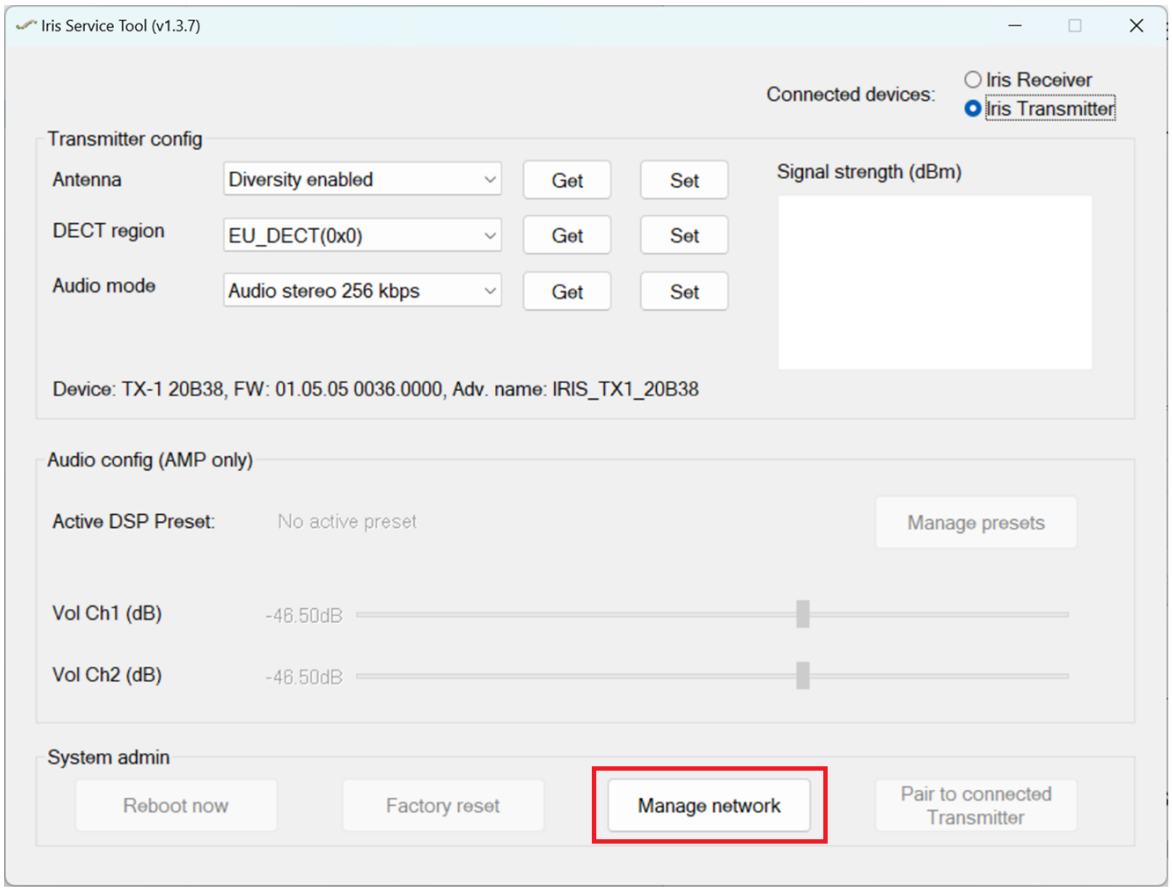
3.1 Setting up an audio network

You can configure the individual Iris devices as well as the audio network using the Iris Service Tool.

To add a receiver device to the audio network, both the TX-device and the RX-device must be connected via USB to the PC where the tool is running.

- Start the Iris Service Tool and make sure both TX-device and RX-device are connected.
- Select the TX-device and make sure the transmitter configuration (the DECT region in particular) is correct. Unless you have a good reason to use a fixed antenna setting, the (default) diversity mode is likely the best option.The audio mode setting should align with your application's requirements. Higher bitrates enhance frequency response but may slightly reduce operating distance. When changing settings like the audio mode or the DECT mode, the TX-device requires a power cycle. Simply unplug the USB cable and then plug it back in.
- Select the RX-device and make sure the DECT region configuration matches that of the TX-device. When changing settings like the DECT mode, the RX-device requires a power cycle. Simply unplug the USB cable and then plug it back in.
- Press the button "Pair to connected Transmitter". Once pairing has completed, a dialog will inform you that the TX-device requires a power cycle. Make sure to follow this instruction.
- A couple of seconds after the power cycle the RX-device will be able to listen to the broadcast and the signal strength monitor will display a value other than -110dBm.
- Follow the same steps to add another RX-device

Each Iris audio network supports up to 50 receiver devices. Press the ‘Manage network’ button from the Transmitter configuration page to list the receivers or remove receivers off the network.



3.2 Relay control functionality

The Iris has been designed to facilitate switching of equipment such as amplifiers or active speakers whenever audio is not required.

With the relay control functionality, digital input pin changes on the transmitter are transparently communicated to the digital output pins of all receivers in the audio network. This is default behavior and requires no configuration.

To close a circuit connected on the receiver side to the Output and Ground and power on your equipment, you short the Input pin to Ground on the TX-device. Releasing the Input on the transmitter will break the circuit on the receiver side and the connected equipment will turn off.

The relay circuit is out of scope for this manual. Please check the electrical details in § Technical specifications.

4 LED status information

The Iris Pro device features a total of 8 LEDs, arranged in two rows of four. The LEDs on the left communicate different status information, while the right hand side implements a VU meter.

! The VU meter functionality is not yet supported.

A LED can be switched **off** or light up: **solid**, **slow blink (**  **)**, **fast blink(**  **).**

Status LEDs on the Iris Pro Transmitter

LED: Digital in	
	Digital input detected
	No digital input detected

LED: Link (Not yet implemented)	
	Broadcast not active (No RX device listening to the broadcast)
	Broadcast active and all RX-devices report RSSI above -65dBm)
	FUTURE -> One or more RX-devices report RSSI between -65dBm and -85dBm
	FUTURE -> One or more RX-devices report RSSI below -85dBm

LED: Status	
	At least one RX-device is listening to the audio broadcast (audio channel is active)
	At least one registration in the database, but no RX-device is listening (audio channel not inactive)
	At least one RX-device locked, but audio channel inactive (should not happen)
	No RX registrations in the database
	Pairing mode is active

LED: Status	
	There is an issue with the DECT hardware or interface

LED: Config	
	Iris is discoverable, no active BLE connections
	App has connected, but authentication is required
	BLE connection is active, and user (app) has authenticated
	There is an issue with the BLE hardware or interface

Status LEDs on the Iris Pro Receiver

LED: Digital out	
	Digital input detected (Not supported by the hardware)
	No digital output detected

LED: Link (Not yet implemented)	
	Not listening to a broadcast
	Listening to broadcast -> RSSI above -65dBm
	Listening to broadcast -> RSSI between -65dBm and -85dBm
	Listening to broadcast -> RSSI below -85dBm

LED: Status	
	Paired to a TX-device and listening to the broacast (audio channel is active)
	Contains pairing information, but TX-device is not reachable (not listening to broadcast)

LED: Status	
	Locked to a TX-device, but audio channel inactive (should not happen)
	Not paired to a TX-device
	Pairing mode is active
	There is an issue with the DECT hardware or interface

LED: Battery	
	Battery power levels are good
	Battery power is low, or no batteries used

5 Updating your Iris

The complete software functionality of Iris technology has been implemented using either one or two embedded controllers. The main controller featured on all products implements all audio and networking functionality, driving the device's UI elements, which is sufficient for some products. Additionally, certain Iris products may include a secondary controller responsible for additional processing and remote-control connectivity, allowing users to manage and monitor audio networks.

The firmware update instructions including the release notes are available as a separate document on our website (https://www.streamit.eu/downloads/firmware-update-instructions/)

6 Technical specifications

	Iris Pro Transmitter	Iris Pro Receiver
Wireless		
Wireless technology	DECT 1.9GHz	
Reception Range	50m indoors to 300m outdoors	
Latency	16.5ms	
Synchronicity between receivers	0.15ms	
Internal antenna	yes	
External antenna	yes	
Analog audio		
Audio frequency range	20 Hz to 20 kHz	
Input channels	2 (balanced)	-
Output channels	-	2
Input level	+4/+18dBu (switchable)	'-
Output level	-	2dBu(max)
Signal-to-noise ratio (SNR)	>90 dB	
THD+N(@1 kHz)	<0,01%	
Digital audio input		
Frequency range	20 Hz - 20 kHz	-
Input channels	2	-
Codec support	PCM	-
THD+N(@1 kHz)	<0,01%	-
Signal-to-noise ratio (SNR)	>90 dB	-
Input resolutions	16-24 bit	-
Sample rates	44.1, 48, 88.2, 96 kHz	-
Electrical		
Power supply	5V DC adapter, 1A	

	Iris Pro Transmitter	Iris Pro Receiver
Operating voltage	100~240VAC/50~60Hz	
Power consumption (AC)	Max 5W, <0,5W (idle)	
Power consumption (DC)	5V DC, 125mA	5V DC, 100mA
Peak current	500mA	
Batteries	4xAlkaline AA (option)	-
Digital input		
Logical low	<=0.8V	-
Logical high	>=2.5V	-
Internal pull-up resistance	10 kΩ	-
Maximum input voltage	3.3V	-
Digital output		
Maximum switching voltage	-	42V
Maximum output current	-	1.4A
Mechanical		
SMA antenna connector	female	
Audio input connector	RCA, terminal block, XLR	-
Audio output connector	-	RCA, terminal block, XLR
Digital audio input connector	Toslink	-
Power/service connector	USB-C	
Relay control input	terminal block	terminal block (*1)
Relay control output	terminal block (*2)	terminal block

	Iris Pro Transmitter	Iris Pro Receiver
LEDs	8	
Dimensions (LxWxH)	220x125x48 mm	
Weight	790 gr	
Environmental and safety		
Operating temperature	-20°C to 50°C	
Humidity	30% to 90%, RHL non-condensing	
Regulatory compliance	CE, WEEE	
Radio Equipment Directive (RED)	2014/53/EU	
RoHS	2011/65/EU & (EU) 2015/863	

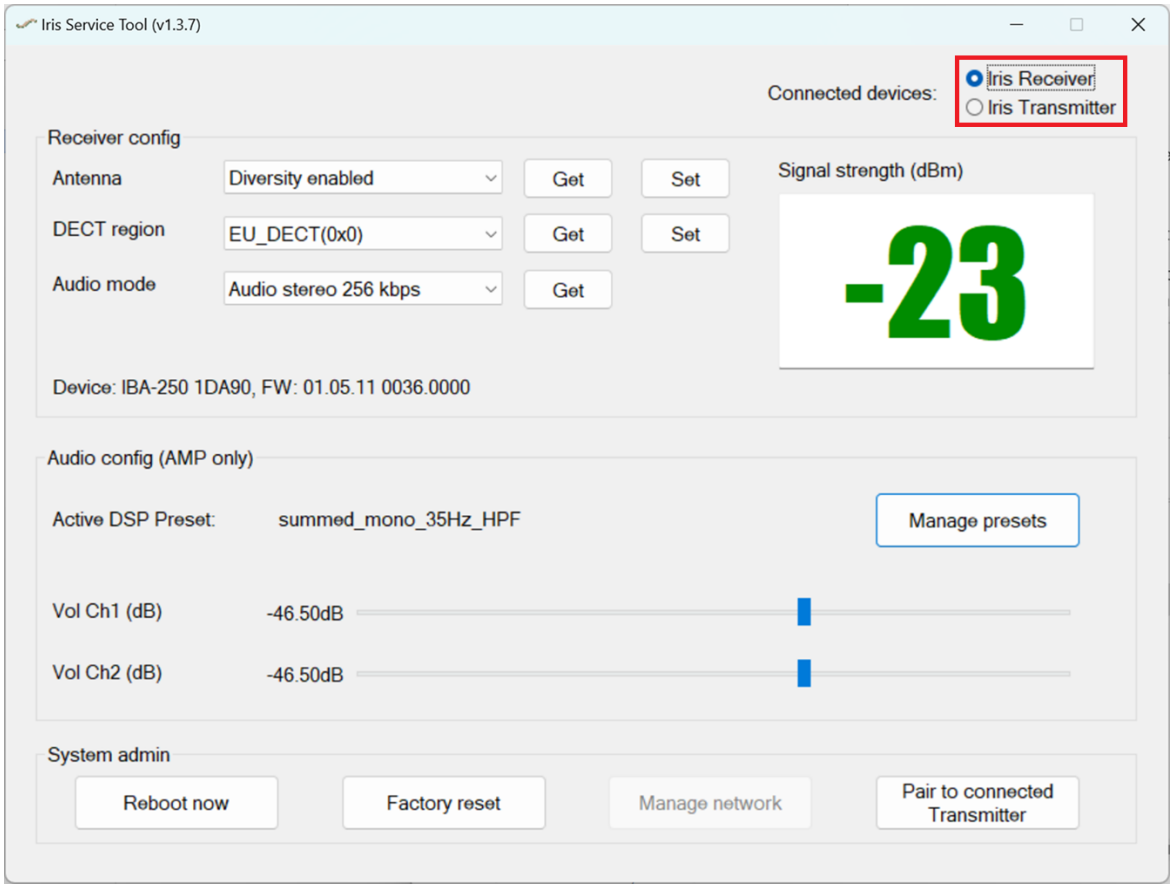
(*1) Can be used to factory reset a receiver device

(*2) No function yet

7 The Iris Service Tool

The Iris Service Tool is a Windows PC app initially designed for service purposes. The tool has been updated to allow users to configure and monitor their Iris audio networks, until the mobile app (Iris configurator) becomes available.

The Iris Service Tool communicates with Iris devices over USB. Simply run the executable and connect your device (TX, RX, or both) via USB to the PC running the tool. You can connect connect a maximum of one TX-device and one RX-device at a time. You can switch between the selected device using the radio button controls to the upper right corner. Based on the type of device and hardware capabilities, certain config options will be disabled.



When a RX-device is connected, it is possible to monitor the received signal strength and change the basic receiver configuration. When the RX-device is not paired (or out of range) the value -110dBm will be displayed.

When an AMP-device is connected, the DSP configuration pane (for audio and presets) will be enabled.

8 Troubleshooting

In this section several tools and options for troubleshooting are described. Please consider these options before contacting support, this might save you time.

8.1 Audio disruptions

When the installation is done properly and the Iris devices are placed correctly as described in §General installation notes, you will not experience any audio disruptions.

- Check and make sure the external antenna is fastened tightly.

- Check the received signal strength using the Iris Service Tool and select the antenna orientation that results in the strongest signal.

- Should the received signal be weak and not possible to improve, then evaluate the application requirements in the context of the audio mode setting. When 256kbps is used, you could experiment whether 128kbps results in less or no disruptions.

8.2 Find the PIN code

In order for an instance of the Iris configurator to be authorized to connect to an Iris, the device PIN needs to be entered. Unless the PIN was already changed, the default PIN should be used.

The default PIN is '**0000**' (without quotes).

Should the PIN have been changed but you no longer remember it, you will need to reset the device.

8.3 Factory reset

Resetting a device will apply factory default values for all settings and can be executed using the Iris configurator. This action requires using the factory reset PIN which is intentionally not documented. For help, please contact Streamit support.

Receiver devices running firmware 1.6 or newer can also be reset using the relay control input. This will require making a simple reset dongle using a terminal block connector, and connecting a wire between input and ground.

- Disconnect the power

- Plug the reset dongle in the RX-device

- Connect back the power with the dongle still attached

- Remove the reset dongle within 10 seconds of startup

- When the above procdedure was followed, a factory reset will be executed 10 seconds after startup.

! When you reset a device the pairing information will be lost, which in the case of a transmitter means the complete network.

9 More information

In addition to this manual, the following sources are available for your reference:

- Support page: https://www.streamit.eu/support
- Streamit site with additional manuals: https://www.streamit.eu

10 Support

For technical support regarding the Iris devices, software tools or technical documentation, please contact your dealer first. In case you are a direct customer of Streamit, please visit the support page (https://www.streamit.eu/support) where you will find the option to submit a support ticket.

Published: 20250425