

# USER MANUAL



## USB 2.0 extender over CAT6a AV-UEx150

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## Markings

The Product has Markings. The labels are placed at the bottom of the Product and on the packaging. See the respective figures below:





Figure 1: Markings (Product)



Figure 2: Markings (Packaging)

# EC DECLARATION OF CONFORMITY

Table 1: EC Declaration of Conformity

 AVONIC	
<b>EC DECLARATION OF CONFORMITY</b>	
1. Models No:	AV-UEX150
2. Brand Name:	Avonic
3. Product Name:	USB 2.0 extender over CAT6a
4. Manufacturer:	Avonic Exportweg 11a 2645ED Delfgauw The Netherlands
3. This declaration of conformity is issued under the sole responsibility of the manufacturer	
4. The object of the declaration described in point 1 is in conformity with the EMC2014/30/EU	
5. Standards	EN 55032: 2015 EN 61000-3-2: 2014 EN 61000-3-3: 2013 EN 55035: 2017
6. Signed for and on behalf of Avonic:	
Delfgauw, 12th of March, 2020	
	
Martijn van Bodegom, Product Manager	

# IMPORTANT INFORMATION

## Liability

Avonic will NOT be held responsible for any damage or injury caused by unqualified persons carrying out these tasks, or by not following the instructions in this Manual.

## Intended Use and Non-Intended Use

### Installation



The following applies to the **installation** of the Product:

- The installation activities described in this Manual should ONLY be executed by experienced technicians.
- The installation activities should NOT be executed by minors, mentally disabled persons or other persons not qualified to perform these tasks.





### Operation






The following applies to the **operation** of the Product:




- The operational activities described in this Manual should ONLY be executed by people with enough technical knowledge to perform the activities in a safe manner.
- This Product is specifically developed for video conferencing / streaming via internet by companies, institutes and universities. It is NOT meant for private use in the residential area.
- This Product should ONLY be used indoors.
- This Product is NOT a medical device and should NOT be used as a substitute for professional medical judgment. It is NOT designed or intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of any condition or disease. Please consult your healthcare provider prior to making any decisions related to your health.

### Important Precautions

	This Product is NOT intended for use where failure of the device could lead to death, personal injury, or severe environmental damage.
	Be sure that you have COMPLETELY READ and UNDERSTOOD ALL information in this Manual before unpacking, installing and using this Product. Keep the Manual in a safe place for future reference or download it from <a href="http://www.avonic.com">www.avonic.com</a> .
	Failure to follow the SAFETY NOTES as described in this chapter could result in fire, electric shock, injury, or damage to the Product or other property.
	Power the Product ONLY with the included cable and power adapter. Other adapters may not meet applicable safety standards, and could pose a risk of death or injury when connected.

## Symbols Used in This Manual

Symbol	Meaning	Description
	Danger	Not following the instructions associated with this symbol may lead to personal injury and / or serious damage to the Product.
	Electrical Shock	Not following the instructions associated with this symbol may lead to life-threatening situations and / or serious damage to the Product.
	Important	The information associated with this symbol requires special attention.

Symbol	Meaning	Description
	Information	The information associated with symbol refers to a general remark or a reference to other documentation.
	Instruction	This symbol refers to one or more user instructions.
	Recycling	Specific parts of the Product can be re-used.

## Acronyms

The following acronyms are used in this Manual:

<b>PSU</b>	Power Supply
<b>SKU</b>	Stock Keeping Unit
<b>USB</b>	Universal Serial Bus

# Contents

DISCLAIMER, CONTACT AND MARKINGS.....	ii
EC DECLARATION OF CONFORMITY.....	iii
IMPORTANT INFORMATION.....	iv
Liability.....	iv
Intended Use and Non-Intended Use.....	iv
Installation.....	iv
Operation.....	iv
Important Precautions.....	iv
Symbols Used in This Manual.....	iv
Acronyms.....	v
INTRODUCTION.....	7
Purpose of This Manual.....	7
Target Audience.....	7
Document Structure.....	7
SAFETY INSTRUCTIONS.....	8
Important Precautions.....	8
Intended Use.....	8
Handling.....	8
Mounting.....	8
Ventilation.....	8
Repair.....	9
Power and Adapter.....	9
Atmospheric Conditions.....	9
PRODUCT OVERVIEW.....	10
USB 2.0 extender 50m over CAT6a S/FTP.....	10
Features.....	10
UNPACKING.....	11
Package Contents.....	11
Handling precautions.....	11
Unpacking the AV-UEX150.....	12
Return Procedure.....	12
INSTALLATION.....	13
MAINTENANCE.....	14
Usage Precautions.....	14
TRANSPORT AND STORAGE.....	15
DISPOSAL AND RECYCLING.....	16
TROUBLESHOOTING.....	17
General.....	17
Power Issues.....	17
No correct picture of your camera.....	17

# INTRODUCTION

## Purpose of This Manual

The purpose of this manual is to provide safety instructions and guidelines for the proper unpacking, installation, operation, maintenance, and disposal of the Avonic UEX150.



In this Manual, the Avonic UEX150 is referred to as the 'Product'.

## Target Audience

This Manual is developed for installation technicians who install the Product at client sites, and for IT professionals who are responsible for operating the Product.

## Document Structure





The Manual is subdivided into the following **Chapters**:

1. Introduction
2. Safety
3. Product Overview
4. Unpacking
5. Mounting and Installation
6. Maintenance
7. Transport and Storage
8. Disposal and Recycling
9. Troubleshooting

# SAFETY INSTRUCTIONS

This chapter contains important safety information regarding the unpacking, installation and use of the UEX150.


## Important Precautions

	This Product is NOT intended for use where failure of the device could lead to death, personal injury, or severe environmental damage.
	Be sure that you have COMPLETELY READ and UNDERSTOOD ALL information in this Manual before unpacking, installing and using this Product. Keep the Manual in a safe place for future reference or download it from <a href="http://www.avonic.com">www.avonic.com</a> .
	Failure to follow the SAFETY NOTES as described in this chapter could result in fire, electric shock, injury, or damage to the Product or other property.
	Power the Product ONLY with the included cable and power adapter. Other adapters may not meet applicable safety standards, and could pose a risk of death or injury when connected.


## Intended Use

 See section [Intended Use and Non-Intended Use](#) on page iv for details.


## Handling

-  To prevent the risk of injury, take the following precautions when handling the Product:
- Handle the Product with care. It is made of metal and plastic and has sensitive electronic components inside.
  - The Product can be damaged if dropped, burned, punctured or crushed, or if it comes into contact with liquid.
  - If you suspect any damage to the Product, discontinue its use, as it may cause overheating or injury.

## Mounting

-  To prevent the Product from falling down which may cause injuries:
- Set up the Product on a hard, stable surface.
  - Ensure the mounting construction is capable of supporting four times the weight of the Product. (See 'General Specifications > Weight product' in the Product Datasheet for the exact weight.)
  - Use a safety loop or drop protection that prevents the Product from falling if the mounting construction fails.
  - During installation, NEVER install a the Product above a person.
  - Check the installation at least once a year. An improper mounting could cause the unit to fall off, resulting in personal injury.

## Ventilation

-  To prevent the risk of life-threatening injury or damage to the Product or other property, caused by electric shock or fire hazard due to overheating:
- Maintain adequate ventilation by NOT installing or placing the Product unit in a bookcase, built-in cabinet or any other confined space.
  - Ensure that curtains or any other material does NOT obstruct the ventilation.



## Repair



Take the following precautions if the Product should be repaired:

- Don't open the Product and don't attempt to repair it yourself. Disassembling the Product may damage it or may cause injury to you.
- If this Product is damaged, malfunctioning, or if it comes into contact with liquid, contact Avonic or an Avonic Authorized Service Provider.
- Repairs by service providers other than Avonic or an Avonic Authorized Service Provider may not involve the use of Avonic genuine parts and may affect the safety and functionality of the device. You can find more information about repairs and service at [www.avonic.com](http://www.avonic.com).

## Power and Adapter



To prevent the risk of life-threatening injury or damage to the Product or other property, caused by electric shock or fire hazard:

- Power the Product ONLY with the included cable and power adapter. Other adapters may not meet the applicable safety standards. They could pose a risk of death or injury when connected.
- Do NOT use damaged cables.
- Do NOT power the Product in a moist / wet environment.
- Before you power the Product, ensure the cable is fully inserted into the power adapter.
- Plug the power adapter directly into a power outlet.
- Do NOT use the power adapter at a moist / wet location.
- Do NOT connector disconnect the power adapter with wet hands.
- Keep the Product, cable, and power adapter in a dry and well-ventilated area when in use.
- Stop using the power adapter and any cables if any of the following conditions exist:
  - The power adapter plug or prongs are damaged.
  - The cable becomes frayed or otherwise damaged.
  - The power adapter is exposed to excessive moisture, or liquid is spilled into it.
  - The power adapter has been dropped, and its enclosure is damaged.

## Atmospheric Conditions



To prevent the risk of injury or damage to the Product or other property caused by a potentially explosive atmosphere:

- Do NOT use the Product in an area with a potentially explosive atmosphere, such as areas where the air contains high levels of flammable chemicals, vapors, or particles (such as grain, dust, or metal powders), may be hazardous.
- Exposing the Product to environments having high concentrations of industrial chemicals, including near evaporating liquified gasses such as helium, may damage or impair the Product functionality.
- Obey all signs and instructions.

## PRODUCT OVERVIEW

### USB 2.0 extender 50m over CAT6a S/FTP

The Avonic AV-UEX150 is a convenient USB 2.0 Extender over CAT6a S/FTP cabling. The set exists of a transmitter and a receiver which is powered by the provided power supply. The small form factor allows for easy integration. This extender kit supports the full 480Mbps which is required for 1080p30 video over USB 2.0. Cameras and speakerphones over a minimum distance of 5 meters and a maximum of 50 meters are supported. The UEX-150 is plug-and-play and does not require any additional drivers.



## Features

### Extension

Extend up to 50 meters over Cat6a S/FTP

### USB

Full USB 2.0 480Mbps compliant

### Plug and Play

Does not require any drivers.

### Extra USB port

Easy filesharing of USB thumbdrives (no HDD), KVM applications or connection of an Avonic USB 2.0 Speaker/ microphone.

# UNPACKING

This chapter provides information on the contents of a full product package and instructions for safe unpacking and, if necessary, returning the product.

It is subdivided into the following sections:

1. Package Contents
2. Handling Precautions
3. Unpacking the UEX150
4. Return Procedure

## Package Contents

The following table contains an overview of the package contents of the Product.

No.	Quantity	Description	Avonic SKU
1	1 pc	TX Transmitter	AV-UEX150
2	1 pc	RX Receiver	AV-UEX150
3	1 pc	Power Adaptor incl international blades 5V DC, 1.0	AV-UEX150-PSU
4	1 pc	USB A>B cable, 1.0 meter	AV-UEX150-USB

Each item is visualized below and referenced by the associated number in the table above:



## Handling precautions



- Be careful with the UEX150. The UEX150 is made of sensitive electronic components that could be easily damaged. Place the UEX150 always on a hard and stable surface! Be sure that this surface could carry the weight of the UEX150!
- Be careful with the PSU cable and check the cable regularly.

## Unpacking the AV-UEX150

 Execute the following steps to unpack the camera and associated components:

1. Open the box.
2. Verify that the UEX150 is in its protective foam as on the picture below. If this is NOT the case, contact Avonic and stop here.

The AV-UEX150 should be in its protective foam as follows:



3. Verify that the contents of the box exactly matches the items as described in [Package Contents](#). If this is NOT the case, contact Avonic and stop here.
4. Take the UEX150 out of the box.
5. Install the UEX150 following the steps as described in the chapter [Installation](#).

## Return Procedure

 If, for any reason, you have to return the UEX150 to Avonic. Execute the following steps:

1. Place the UEX150 back in its protective foam.
2. Place the UEX150 with **all** of its components in the box.
3. Verify that the contents of the box **exactly** matches the items as described in [Package Contents](#).
4. Contact [Avonic](#) for the Return Procedure.

# INSTALLATION

This chapter provides instructions on how to install the AV-UEX150.



Follow instructions below:

1. Connect a CAT6a/ SFTP cable to the UEX150 transmitter (TX) and receiver (RX) device.
2. Connect an USB2.0 cable (A to B) to the camera and the receiver (RX) device.
3. Connect an USB2.0 cable (A to A) to transmitter (TX) device and the computer.
4. Connect the 5V DC power cable to the receiver (after all other cables are connected). The UEX150 will start automatically.



On the transmitter device there is an extra USB2.0 port for a connection with a compatible USB2.0 device. Note that a HDD drive is NOT compatible with the UEX150.

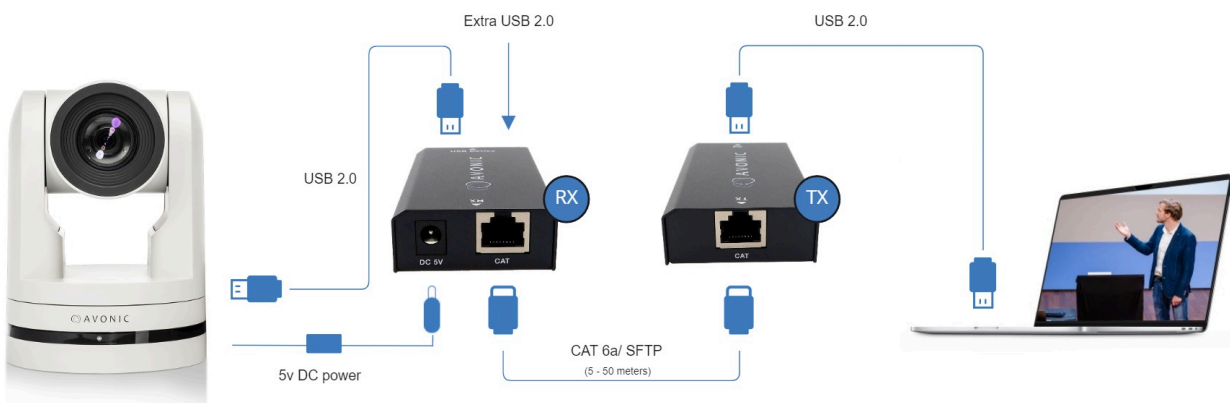


Figure 3: Connections

## USB Ports



On the transmitter and the receiver there are two different USB 2.0 ports:

1. USB 2.0 type B: on the transmitter device for a connection to a computer.
2. USB 2.0 type A: on the receiver device for a connection to a camera and another USB 2.0 compatible device.



Figure 4: USB Ports

## Plug and Play



The UEX150 is plug and play which means that no installation of additional drivers is needed. Note that the UEX150 will NOT show up after connection to a computer! Follow instructions below:

1. Open your camera connected to the UEX150 on your computer using the Windows camera app, VLC media player, Potplayer, or any other compatible video application.
2. If the picture of your camera will show up in the video application without any problems, you will have a confirmation that the UEX150 will function correctly.

## MAINTENANCE



Take the following actions to maintain the UEX150:

- If you will not be using the Product for a long time, turn off the power switch and disconnect the AC powercord of the AC adaptor to the outlet.
- Use a soft cloth or tissue to clean the camera and Product cover.
- If the Product is very dirty, clean it with diluted neutral detergent.



**Do not use any type of solvents, which may damage the surface.**

## Usage Precautions



Take the following precautions:

- Do not operate close to powerful electromagnetic radiation, such as TV or radio transmitters, etc.

# TRANSPORT AND STORAGE

Specific guidelines apply for transportation and storage of the UEX150. Follow the guidelines below:

**Transport:**

1. The UEX150 needs protection against vibration and shock. Ensure that the UEX150 cannot move inside its box and inside the transportation vehicle. Ensure also that the box is properly sealed.
2. Avonic's address and/or the address of the local distributor should be clearly visible on the package.
3. Keep the transportation vehicle dry and maintain the temperate and humidity when transporting the UEX150. See '**Operating humidity**' and '**Storage temperature**' in the provided **Datasheet** for the applicable values.

**Storage:**

1. Maintain adequate ventilation in your storage room and ensure that any (other) materials does not obstruct the ventilation.
2. Do NOT store the UEX150 in a storage room together with (highly) flammable materials or where the air contains such chemicals.
3. Ensure that the UEX150 has protection against vibration and shock inside the storage room and cannot move or fall of.
4. Keep the storage room dry and maintain the temperate and humidity when storing the UEX150. See '**Operating humidity**' and '**Storage temperature**' in the provided **Datasheet** for the applicable values.

## DISPOSAL AND RECYCLING

In general, the term 'E-Waste' or 'Waste of Electrical and Electronic Equipment' applies to items of all types of electrical and electronic equipment and its parts that have been discarded by the owner as waste without the intention of re-use.



E-Waste, like the UEX150 and **ALL** of its accessories, needs to be disposed **separately** from normal waste! See the symbol below that can be found on the product and package label:



Send the UEX150 and all its accessories to [Avonic](#) or your **local distributor**. See [Package Contents](#) to see what you have to send back. Follow the instructions from the [Return Procedure](#).

Avonic outsources the disposal and recycling of its E-Waste equipment materials to **Stichting Open**.



See <https://stichting-open.org/> for more information about the disposal and recycling.



# TROUBLESHOOTING

## General



1. Turn the UEX150 off and on again (disable 5v DC power cable and connect it again) and check if the problem persists.
2. If it does, contact Avonic.

## Power Issues



No connectivity to third party video software and no power LED:

1. Check the net power.
2. Check the power supply.

## No correct picture of your camera



No correct picture of your camera that is connected to the UEX150:

1. Check if the all the cable(s) are (correctly) attached to the UEX150 and your computer (and USB device). See [Installation](#).
2. Check if one or more cables are damaged.



USB 2.0 extender over CAT6a  
AV-UEX150

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