



User Manual

TVoE - TV & Data over Ethernet

Article		Article no.	
TVoE	TV & Data over Ethernet	310700/310710 310711/310720 310721/310722 310723	
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1 Safety Instructions



Read these instructions carefully before connecting the unit

ATTENTION

- Failure to comply with the specified precautionary measures may cause serious injury to persons or damage to property.
- The assembly, installation, additional electrical wiring, servicing and commissioning may only be performed by suitably qualified persons, technicians or installers in compliance with safety regulations.
- Damage due to improper installation and commissioning, defective connectors on cables or any other incorrect handling will void the warranty.

CAUTION

- The safety requirements are according to the standards EN 62368-1 resp. EN 60728-11 and must be observed, especially concerning equipotential bonding and earthing.
- Observe the relevant country-specific standards, regulations and guidelines on the installation and operation of antenna systems.
- Before starting installation or service work disconnect the receiving system from mains.
- Installation or service work should NEVER be undertaken during electrical / thunderstorms.
- Avoid short circuits!
- To ensure electromagnetic compatibility, make sure all connections are tight and that the covers are screwed on securely.
- Take action to prevent static discharge when working on the device!
- Due to the risk of fires caused by lightning strikes, we recommend that all mechanical parts (e.g. distributor, equipotential bonding rail, etc.) be mounted on a non-combustible base. Wood panelling, wooden beams, plastic covered panels and plastic panels are all examples of combustible bases.



To prevent fire, short circuit or shock hazard:

- Do not expose the unit to rain or moisture.
- Install the unit in a dry location without infiltration or condensation of water.
- Do not expose it to dripping or splashing.
- Do not place objects filled with liquids, such as vases, on the apparatus.
- If any liquid should accidentally fall into the cabinet, disconnect the power plug.



To avoid any risk of overheating:

- Install the unit in a well aired location and keep a minimum distance of 5 cm around the apparatus for sufficient ventilation.
- Do not place any items such as newspapers, tablecloths, curtains, on the unit that might cover the ventilation holes.
- Do not place any naked flame sources, such as lit candles, on the apparatus.
- Do not install the product in a dusty place.
- Use the apparatus only in moderate climates (not in tropical climates).
- Respect the minimum and maximum temperature specifications.



To avoid any risk of electrical shocks:

- Connect apparatus only to a power socket with a protective earth connection.
- The mains plug shall remain readily operable.
- Pull out power plug to make the different connections of cables.
- To avoid electrical shock, do not open the housing of the product.



Maintenance



Only use a dry soft cloth to clean the cabinet.



Do not use solvent.



For repairing and servicing, refer to qualified personnel.



Dispose according your local authority's recycling processes

Electronic devices should never be disposed of in the household rubbish. In accordance with directive 2002/96/EC of the European Parliament and the European Council from January 27, 2003 which addresses old electronic and electrical devices, such devices must be disposed of at a designated collection facility. At the end of its service life, please take your device to one of these public collection facilities for proper disposal.

2 Introduction

2.1 Product description

The TRIAX TVoE series enables seamless distribution of TV signals and Internet data over standard CAT5E or higher-grade Ethernet cables - ideal for installations without existing coaxial infrastructure.

Each unit features a built-in, high-performance amplifier and equalizer, allowing precise adjustment of the TV output level on every port.

The MAIN hub includes four Ethernet ports, each supporting both TV signal output and 1 Gbit data transmission, with integrated Power over Ethernet (PoE) functionality.

2.2 Detailed features

- **TV & Data Over a Single Ethernet Cable** - Transmits both TV signals and internet data efficiently through CAT5e/6 Ethernet cables, eliminating the need for coaxial infrastructure.
- **Built-in Adjustable Amplifier & Equalizer** - Allows fine-tuning of TV output levels for optimal signal strength across all connected devices.
- **1Gbit Data Throughput** - Provides high-speed data transmission, ensuring smooth connectivity and reliable network performance.
- **PoE Two-Wire Output** - Supports Power over Ethernet (PoE) functionality, eliminating the need for a separate power supply for the receiver unit.
- **High-Speed Data Transfer** - Delivers fast and efficient data distribution for demanding network environments.
- **Four Ethernet Ports with TV Out Support** - Enables multi-room connectivity, distributing both TV and internet data from a single controller to multiple locations.
- **Super Easy Installation** - Designed for hassle-free setup, making it a practical and cost-effective solution for residential and commercial applications

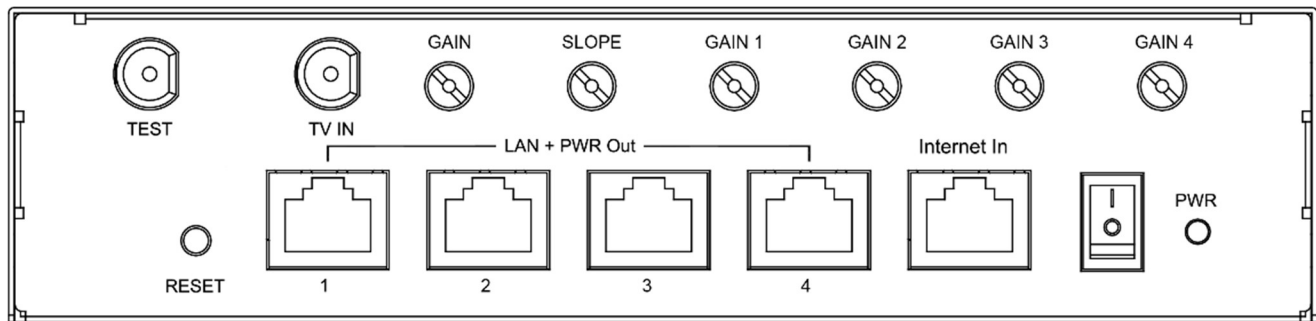
2.3 Items available

- **TVoE-CONT** Art. No.310700: controller, TV and Internet input, 4 combined TV + Internet outputs, TV input signal level gain and slope adjustment, on each combined signal output, test point, PoE function
- **TVoE-Rx** Art. No.310710: receiver without LAN PoE function
- **TVoE-Rx+** Art. No.310711: receiver with LAN PoE function
- **TVoE PSU** Art. No.310720UK / 310722EU: 60W PSU (Use only with non-PoE LAN Rx)
- **TVoE PSU+** Art. No.310721UK / 310723EU: 96W PSU (Must use with PoE LAN Rx+)

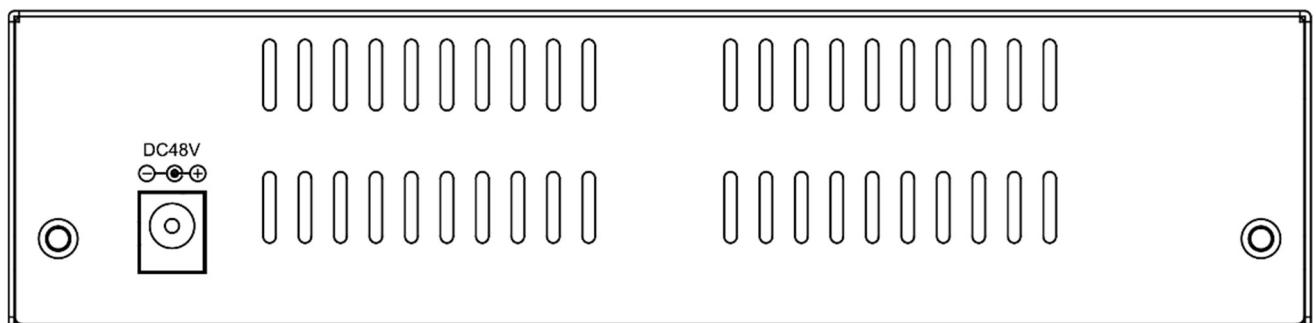
(If a TVoE Rx+ is used only fit 96W PSU+)

3 System components

3.1 310700 TVoE controller



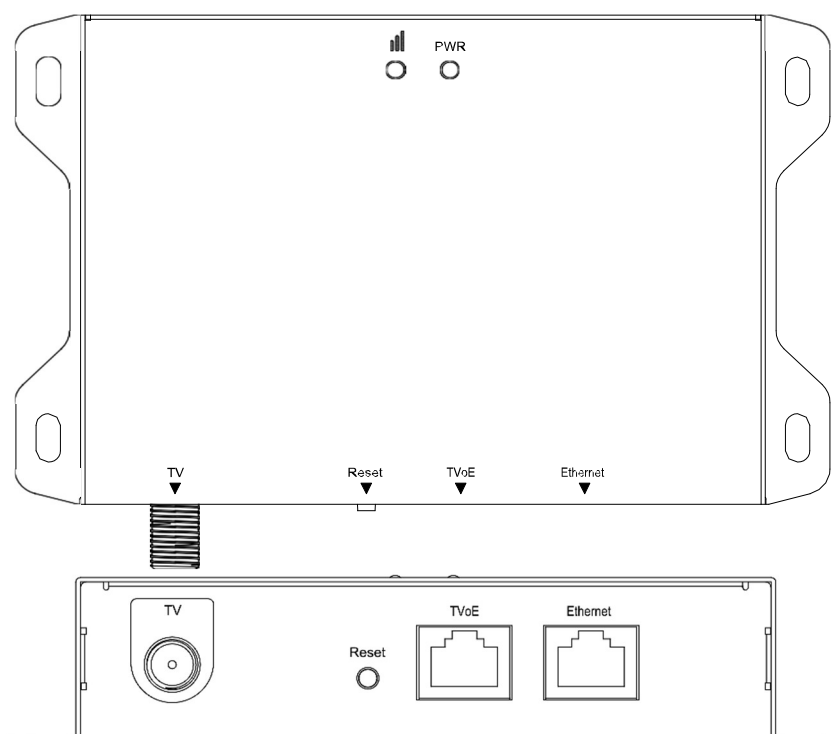
Front panel



Rear panel

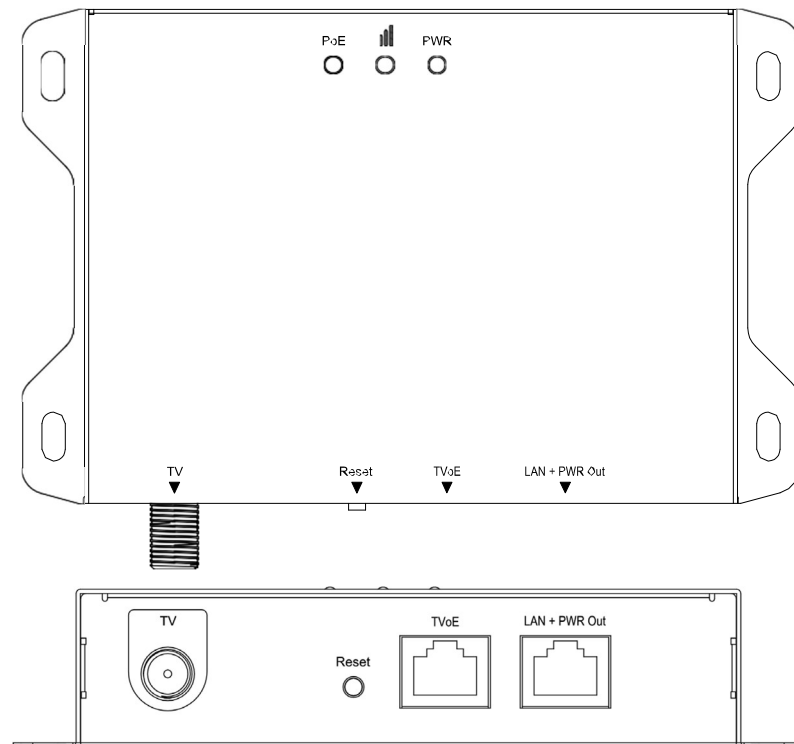
- **“Test”**: F female connector: Measures the input TV signal level with a -20 dB attenuation applied.
- **“TV IN”**: F female connector: Receives the TV signal.
- **“GAIN”** control: Adjusts the gain value to optimize TV signal level.
- **“SLOPE”** control: Fine-tunes the signal flatness across the frequency band
- **“GAIN1”** to **“GAIN4”** controls: Individually adjust the gain for the TV signal on each “LAN+PWR Out” port.
- **“RESET”** Button: Press and hold the button for more than 10 seconds to restore the system to its factory default settings.
- **“LAN+PWR Out”** LAN Port 1 to Port 4: Transmits TV and Internet signals along with 48V DC power to each receiver using a CAT5e/CAT6 Ethernet cable.
- **“Internet In”** LAN Port: Receives the Internet signal from a networking source via a CAT5e/CAT6 Ethernet cable.
- **POWER Switch**: Powers the device on or off. Switch to the ON position to activate system operation.
- **“DC48V”** DC Jack: Connects a standard DC 48V/1.5A or DC 48V/2A power adapter, which is purchased separately to the product.
- **“PWR” Indicator**: Displays the power connection status.

3.2 310710 TVoE receiver



- **“TV”** F female connector: Delivers TV signal to the display device.
- **“RESET”** Button: Press and hold the button for more than 10 seconds to restore the system to its factory default settings.
- **“TVoE”** LAN port: Receives the TV and Internet signal while providing 48V DC power to the device.
- **“Ethernet”** LAN port: Transmits the Internet signal to a connected networking device.
- **“ Link Indicator**: Displays the connection status between the controller and the receiver.
- **“PWR”** Indicator: Shows the power connection status.

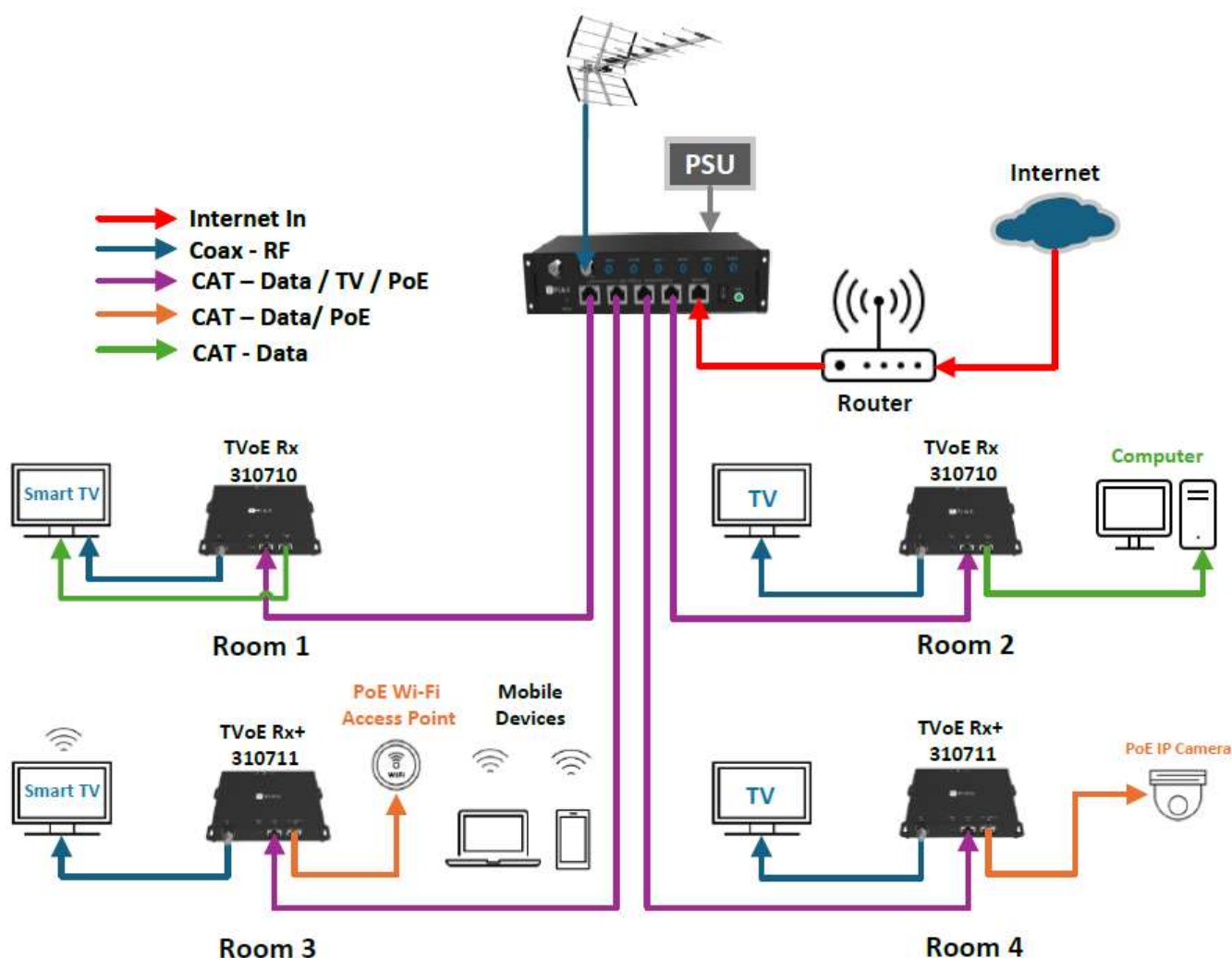
3.3 310711 TVoE-Rx+: Receiver with PoE LAN



- **“TV”** F female connector: Delivers TV signal to the display device.
- **“RESET”** Button: Press and hold the button for more than 10 seconds to restore the system to its factory default settings.
- **“TVoE”** LAN port: Receives the TV and Internet signal while providing 48V DC power to the device.
- **“LAN+PWR Out”** LAN port: Transmits the Internet signal and 48V DC power to a PoE-enabled networking device. * This port complies with the IEEE 802.3af PoE (Power over Ethernet) standard and supports Class 3.
- **“PoE”** Indicator: Displays the connection status for the PoE function.
- **“”** Link Indicator: Displays the connection status between the controller and the receiver.
- **“PWR”** Indicator: Shows the power connection status.

3.4 Installation and connection

3.4.1 Connection diagram

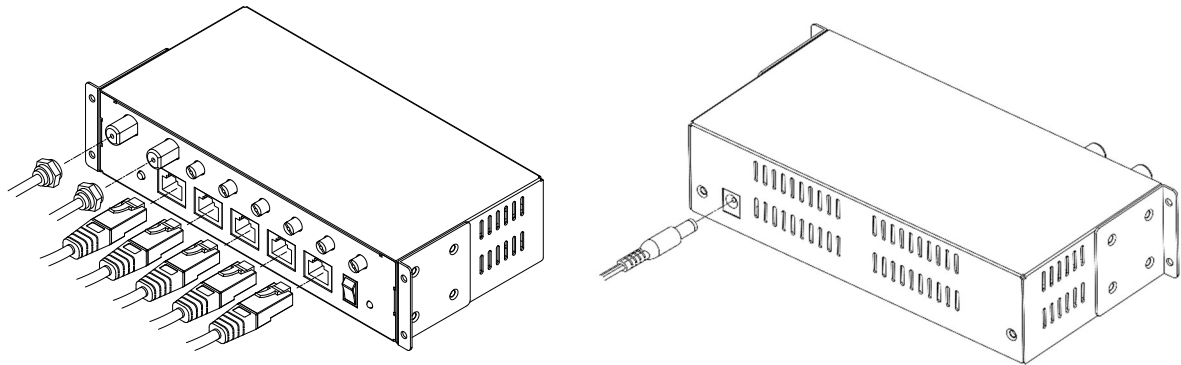


3.4.2 Connection Instructions

1. Use a **F male connector coaxial cable** to connect the controller to the TV signal.
2. Use a **standard CAT5e/6 Ethernet cable** to connect the controller to the receiver. The system supports up to four receivers.
3. Use a **standard CAT5e/6 Ethernet cable** to connect the controller to the networking source device for internet signal transmission.
4. Insert a standard 48V/1.5A (310720UK/310722EU) or **DC 48V/2A (310721UK/310723EU)** DC power adapter to operate the controller and up to 4 receivers.

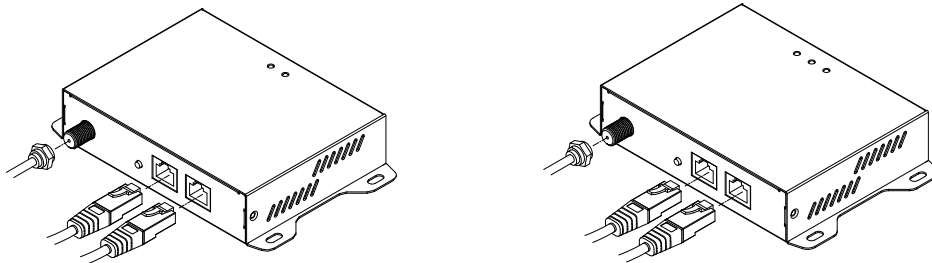
NOTE: When using a **TVoE-Rx+ (310711)** for PoE function from the LAN Port at the TVoE Receiver, use the **48V/2A (310721UK/310723EU)** DC power adapter.

<310700 TVoE-CONT Controller >



<310710 TVoE-Rx Receiver>

<310711 TVoE-Rx+ Receiver with Po E LAN >



3.4.3 Access to Web GUI

1. Connect your PC or Laptop to the network port of the TVoE devices.
2. Set the PC's IP address to 10.10.1.XXX (XXX should be a number between 2 and 254, excluding 69).
3. Once the IP address is set, you can access the Web UI of the TVoE devices.
4. The default IP address and Passwords of the TVoE devices are as follows:
 - a. Default IP Address: 10.10.1.69
 - b. Web GUI Password: Indicated on the label of the rear of the TVoE devices.
 - c. Factory Reset Password: Password Label is attached to the rear of device

3.4.4 Recovery to Factory Default Mode Settings:

There are two easy ways to reset your TVoE device back to its original factory settings - whether you prefer using the Web interface or a simple button press:

- Web UI Mode: If you're already logged into the device's Web interface, just select the Factory Reset option. After clicking "OK", a confirmation window will appear. To proceed, click "OK" again - the system will then begin the reset process simple and secure.
- Button press Mode: No need to log in if you prefer a hands-on approach. Simply press and hold the RESET button on your TVoE device for more than 10 seconds, then release. The device will take care of the rest, restoring all settings to factory defaults.

4 Technical Specifications

Item		Contents
Frequency Range TV		300~694 MHz
Frequency Range Data		5~200 MHz
GAIN		36 dB (Min.)
Noise Figure		3.5 dB (Max)
Input Return Loss @TV IN port		14.5 dB (Min.)
Input Return Loss @TEST port		14.5 dB (Min.)
Adjustable Attenuation		0-20 dB
Input Impedance		75 ohms
Output Impedance		100 ohms
Slope Adjustment		0-7 dB
Rated Input Level@ TV IN port		70 dBuV@28 CH
Rated Output Level@ TEST port		50 dBuV@28 CH
Current Consumption		0.53A (Operating with 4pcs of 310710 TVoE-Rx)
		1.94A (Operating with 4pcs of 310711 TVoE-Rx+)
Connector@ TV IN Port		F-female
Connector@ TEST Port		F-female
Connector@ Output		RJ-45
Data Rates		Ethernet 10/100/1000Mbps
Operating Temperature		0~40 °C
TVoE-CONT 310700	Dimension	183.6*90*44(mm)
	Colour	Black
	Weight	555g
	Accessories	Bracket A*2pcs for wall-mounted Bracket B*2pcs for rack-mounted
TVoE-Rx 310710	Dimensions	127*96*30(mm) without mounting ears
	Colour	Black
	Weight	300g
TVoE-Rx+ 310711	Dimensions	127*96*30(mm) without mounting ears
	Colour	Black
	Weight	303g
	PoE Standard	IEEE 802.3af class 3
Power Adaptor	Receiver without PoE Function	48V / 1.5A (310720UK/310722EU)
	Receiver with PoE Function	48V / 2A (310721UK/310723EU)
	Note: The power adaptor selection depends on whether the receiver has PoE functionality. If PoE is present, use a DC 48V/2A adapter.	Purchased separately to suit application

5 FAQ

Q1: Can the "LAN+PWR Out" LAN Ports (Port 1 to Port 4) be connected to another networking device (e.g., Ethernet Hub, Router)?

A1: No, this is not allowed! These four LAN ports carry 48V DC power, which may damage connected devices.

Q2: Can the "LAN+PWR Out" LAN Ports (Port 1 to Port 4) support hot plugging of Ethernet cables?

A2: Not recommended! These ports contain 48V DC power, which may pose risks when hot plugging.

Q3: Can the "LAN+PWR Out" LAN Ports (Port 1 to Port 4) use standard CAT5e/CAT6 Ethernet cables?

A3: Yes! Standard RJ-45 cables (CAT5e/CAT6) can be used to connect to the receiver, supporting distances of up to approximately 100 meters.

Q4: The TV screen has no image or pixelation.

A4: Adjust the "GAIN" and "Slope" controls to achieve the desired signal quality. When adjusting, turning the control to the left will reduce the signal level, while turning it to the right will increase the output level.

6 EU Declaration of Conformity

The product Declaration of Conformity can be downloaded from the product page at www.com.com

7 Conditions of warranty

TRIAX UK warrants the product as being free from defects in material and workmanship for a period of 24 months starting from the date of production indicated on it. See note below.

If during this period of warranty, the product proves defective, under normal use, due to defective materials or workmanship, TRIAX UK, at its sole option, will repair or replace the product. Return the product to your local dealer for reparation.

THE WARRANTY IS APPLIED ONLY FOR DEFECTS IN MATERIAL AND WORKMANSHIP AND DOES NOT COVER DAMAGE RESULTING FROM:

- Misuse or use of the product outside of its specifications,
- Installation or use in a manner inconsistent with the technical or safety standards in force in the country where the product is used,
- Use of non-suitable accessories (power supply, adapters...),
- Installation in a defective system,
- External cause beyond the control of TRIAX UK such as drop, accidents, lightning, fire, ...

THE WARRANTY IS NOT APPLIED IF

- Production date or serial number on the product is illegible, altered, deleted or removed.
- The product has been opened or repaired by a non-authorized person.

NOTE

Date of production can be found in the product's serial number code. The format is "000000310710YYWW123456" (000000, 6-digits product Art. No., YEAR, WEEK, 123456 product unique number), e.g. 0000003107102532000020 = year 2025 week 32, product No.20 of this batch.



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