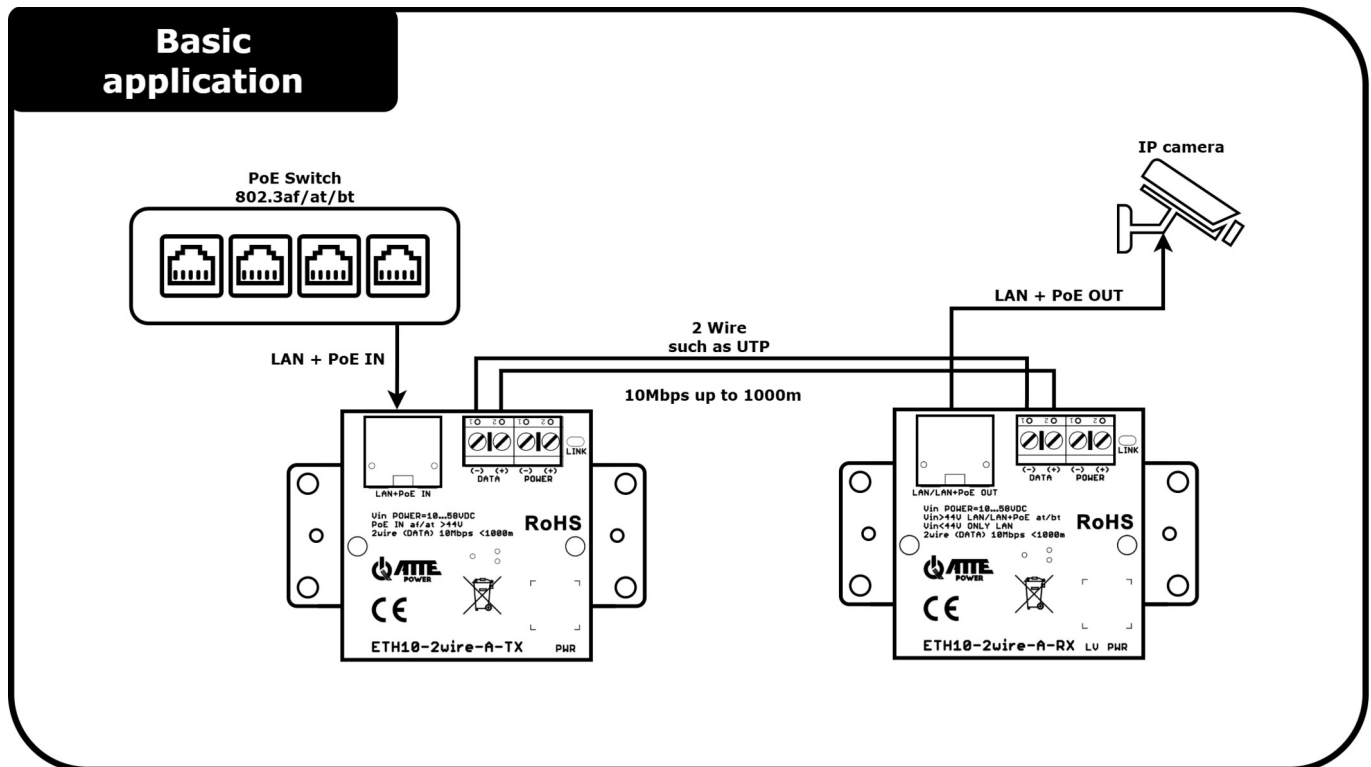


Set for LAN + PoE transmission over 2 wires
10Mbps up to 1000m

Operation Indication

1. **LED PWR** (red) – power
2. **LED LINK** (green) – link and data transmission on 2wire line
3. **LED LV** (red) – low voltage on the module (<44V)
4. **LED** in RJ45 port (yellow) – presence of PoE power on the port
5. **LED** in RJ45 port (green) – link and data transmission



Description

ETH10-2wire-A-SET is a set of active converters for the transmission of Ethernet data and PoE power using 2 wires, e.g. one pair of twisted pair UTP cable. The kit allows the installation of cameras or other IP PoE devices in locations where the replacement of existing cabling is not possible or cost-effective.

ETH10-2wire-A-TX module is powered from any PoE switch (RJ45 port) and then, via 2 cables, enables bi-directional network communication and powering of the ETH10-2wire-A-RX module together with the PoE camera.

Due to its high resistance to interference, ETH10-2wire-A-SET can be used on any cable, but the maximum transmission distances may vary depending on the type of cable.

The maximum transmission distance for data and PoE power supply depends on the type, length and cross-section of the cables used. The presence of other cables in the cable route and additional intermediate connections have a large impact on the stability of transmission. The best parameters and the longest transmission range can be obtained by using 2 single twisted wires, e.g. one pair of twisted-pair UTP cable.

Installation

1. Set equipment should be mounted in a location or enclosure that provides adequate protection from moisture and dust, in accordance with class IP20.
2. Connect the 2wire line transmission cables to the **DATA** screw connectors, maintaining the correct polarity at the beginning and end of the line.
3. Connect the power line from the PoE switch to the **LAN + PoE IN** port of the **ETH10-2wire-A-TX**.
4. If you are not using PoE power, you can connect an external power supply to the terminals of the **POWER** connector (for PoE <44V).
5. Connect the desired network device to the **LAN + PoE OUT** port of the **ETH10-2wire-A-RX**.
6. If everything has been connected correctly, the **LINK** LEDs on the TX and RX module should blink.

Troubleshooting

Q1. There is no communication between modules.

A1 The **LINK** LED indicates transmission between the ETH10-2wire-A-TX and the ETH10-2wire-A-RX.

In the event that the LED is not lit, you should:

1. Verify that the 2-wire cable is connected to the **DATA** connector of both modules, and that its polarity is correct.
2. Check with a meter that the cable does not have a break in the circuit, or that there is no additional break on the 2wire route.
3. Confirm that both modules are powered. If the units are powered, the **PWR** LED will be lit.

Q2. I cannot power the IP camera.

A2. ETH10-2wire-A-RX module has a PoE 802.3af/at/bt output port from which we can power the IP camera.

If the camera is not receiving power you should:

1. First verify that there is power on the ETH10-2wire-A-RX module.
2. Then check that the LV LED on the ETH10-2wire-A-RX module is lit. If it is, then the voltage on the unit is too low (<44V) and then the LAN + PoE OUT port will not supply voltage to the IP camera.
3. Also ensure that the power consumption of the powered device does not exceed the maximum power.

Technical Specification

Connectors	ETH10-2wire-A-TX/RX: 1 RJ45 port 1 screw connector
Ports Functions	ETH10-2wire-A-TX: PoE IN (powering the trunk from the PoE line): PASSIVE (up to 30W), 802.3at (up to 30W), 802.3af (up to 15W) PoE PINOUT: 1,2 (V+/-) 3,6 (V+/-) and/or 4,5 (V+/-) 7,8 (V+/-) POWER: alternative power supply for path when no PoE Vin DATA (2wire line): data and power transmission over 2 wires ETH10-2wire-A-RX: PoE OUT (power supply to PoE receivers): 802.3af/at/bt PoE PINOUT: 1,2 (V-) 3,6 (V+) 4,5 (V+) 7,8 (V-) POWER: alternative power supply DATA (2wire line): data and power transmission over 2 wires Screw connectors - alternative power supply for the set when PoE is not available Power supply 10-58VDC (for power supply of PoE receivers Vin>44V DC) possible from both transmitter and receiver side
Input voltage	ETH10-2wire-A-TX Vin PoE = 24 ... 56 VDC Vin POWER = 10 ... 56 VDC ETH10-2wire-A-RX Vin = 10 ... 56 VDC
Output voltage	ETH10-2wire-A-TX VoutDATA=Vin ETH10-2wire-A-RX Vout = Vin
Power consumption	0,7 W (full line)
Maximum length of 2wire line	Maximum distance ETH10-2wire-A-TX to ETH10-2wire-A-RX (DATA connectors): up to 1000m - 2 single twisted UTP wires
Ports Protection	LAN and DATA ports Surge protection POWER connector: Reverse polarity protection PoE IN ETH10-2wire-A-TX port: 0.6A overload protection
Operation indication	LED PWR (red) – power LED LINK (green) – link and data transmission on 2wire line LED LV (red) – low voltage on the module (<44V) LED in RJ45 port (yellow) – presence of PoE power on the port LED in RJ45 port (green) – link and data transmission
Housing Construction	Universal mounting base
Assembly	Mounting studs, TH35 rail with additional bracket, can be screwed to a flat surface
Ingress Protection Rating	IP20
Operating Temperature	-25 ... +65°C
Dimensions	ETH10-2wire-A-TX - 51 x 51(73) x 23mm ETH10-2wire-A-RX - 51 x 51(73) x 23mm
Weight	ETH10-2wire-A-TX – 0,03 kg ETH10-2wire-A-RX – 0,03 kg

Find out more

ETH10-2wire-A-SET
on the WWW site



ATTE Technical
Support Portal



Safety Precautions

- The device is intended for installation by a qualified installer who has appropriate competences and permits and authorizations (if required for a given country) to connect (interfere with) low-voltage installations.
- The device should be installed indoors. About normal air humidity and temperature. The method of mounting the device and laying the cabling should ensure free air flow. It is recommended to use ABOX series housings, which allow for convenient installation outdoors, indoors and in RACK cabinets.
- For proper operation of the module, appropriate voltage and current capacity of the power source must be ensured.
- Any maintenance operations may only be performed after disconnecting the power supply. Under normal conditions, the device does not require any maintenance.
- In case of damage or doubts as to the correct operation of the device, stop using it immediately.
- In the case of fiber optic devices, do not look into the fiber optic port when the device is turned on. The invisible beam can damage the retina of the eye.
- Before connecting PoE PASSIVE receivers (e.g. WiFi antenna), make sure that the voltage value and polarization on the RJ45 pins of the switch or power adapter are consistent with the values allowed by the receiver.

Before installation and during maintenance make sure that the mains voltage 230VAC is disconnected

This symbol on the product or on its packaging indicates that the product must not be disposed of with normal household waste. Instead such equipment must be disposed of by arranging to return it to a designated collection point for the recycling of waste electrical and electronic equipment.

