

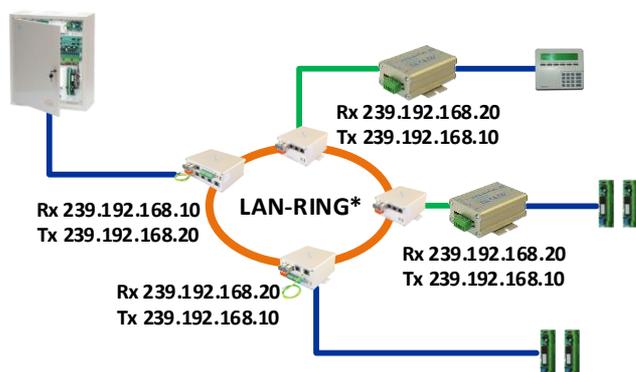
Transmission of System RS485 EZS Buses over LAN

Introduction

For transferring RS485 data from EZS systems over LAN we use multicast communication on LAN-RING switches and miniLAN-485 modules. This solution was tested by Testalarm. Currently valid certificates from Testalarm, Trezortest and NBÚ can be found at www.metel.eu.

 In 2018, this solution was certified with the GALAXY and ASSET system.

Example of Asset System Connection



LEGEND:

- 1x MM / SM Fiber
- Fast Ethernet
- Fast Ethernet with PoE
- Serial Bus

* When interconnecting the RS485 buses of alarm systems we recommend using only our miniLAN and LAN-RING devices optimized for low delays of RS485 transmission. Find more at www.metel.eu for an up-to-date list of compatible systems that have been tested with our devices.

RS485 Transmission Settings in UDP Mode (Multicast)

The setting is simple and consists of the following steps:

1. In menu „Bus/Mode“ set the system you are using. If not provided select “RS485”. If the system is provided in the menu no further setting in menu „Bus“ is needed. The converter sets it automatically.

2. In menu „Extension/ETH-Bus“ set receiving and transmitting addresses in range 239.0.0.0 - 239.255.255.255 (multicast).

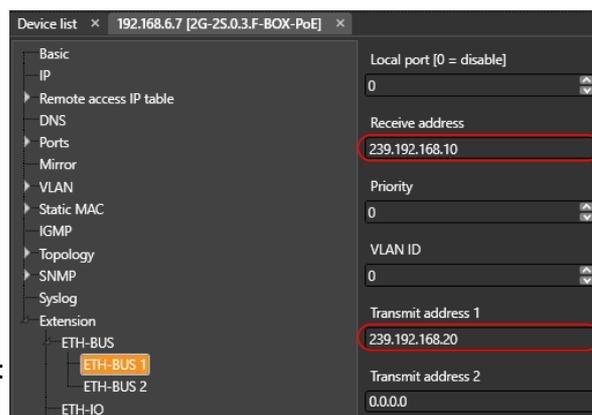
topology BUS - set the same receiving and transmitting address on all converters

topology POINT-to-POINT - set the addresses “crosswise”:

Example:

Device 1 Receiving address - 239.192.168.10
Transmitting address 1 - 239.192.168.20

Device 2 Receiving address - 239.192.168.20
Transmitting address 1 - 239.192.168.10



VLAN and QoS

The transmission path setting must guarantee reliable transmission of the ESS system data (EN 50131-1 paragraph 8.8).

Therefore, it is always necessary to set:

- ❖ unique VLAN for ESS data system,
- ❖ set the highest level of QoS (7) for the system's ESS data,
- ❖ set the signaling of the connection failure to relay or via SNMP protocol to the monitoring software,
- ❖ powered transmission devices from the backed-up sources of ESS system,
- ❖ install transmission devices in the tamper enclosures.

Only in compliance with these conditions can the security of data transmission over the LAN be guaranteed.