



# Protocol Analyzer

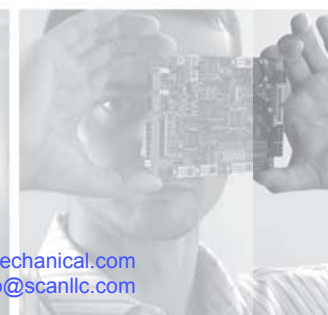
with PTR-xxx hardware module

Protocol Analyzer with PTR-xxx interface enables:

- errors detecting and communication monitoring
- acquisition and analysis of data transmitted by means of various protocols and transmission media, such as RS-232, RS-485 or fiber optic connections
- transmission protocols testing and evaluation

The Analyzed data is displayed on the PC screen and saved in non-volatile memory.

Analyzer's interface is equipped with a built-in DB-25 port to connect the monitored transmission channel. Optionally we provide ports for plastic or glass fiber optic. Supervised communication can be performed in Tx, Rx directions simultaneously, in half- or full-duplex mode, up to 115kb/s. The device is equipped with USB port to connect with a host PC so there is no need for additional power supply.



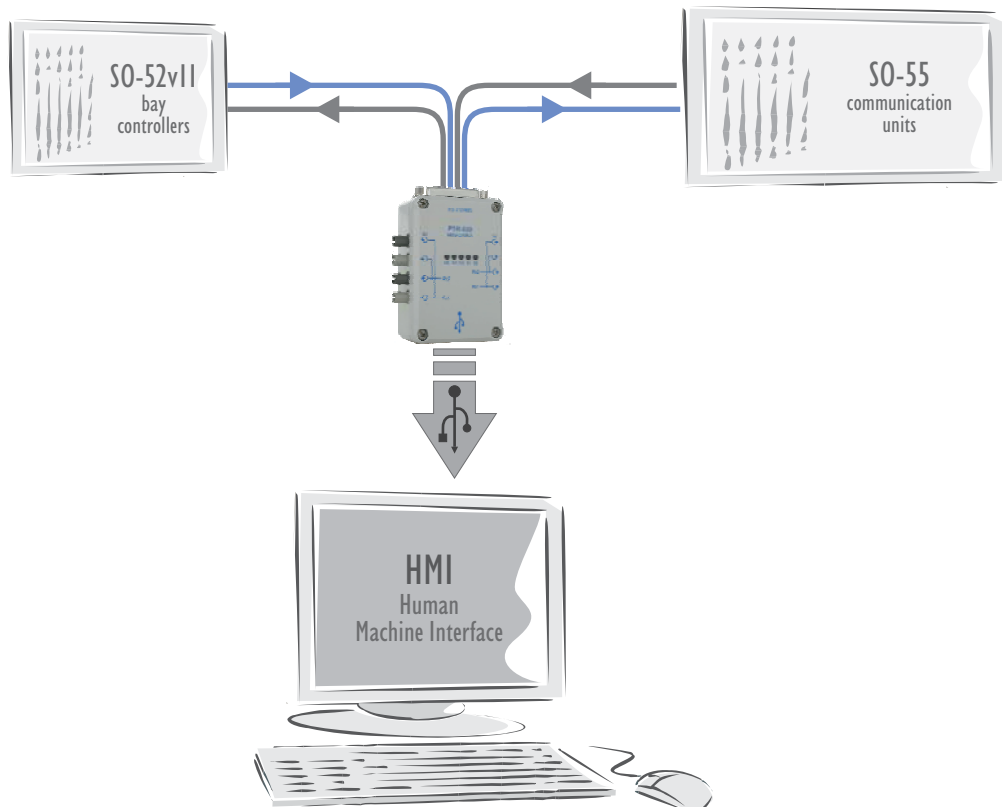
# Features

Registered data is continuously displayed on the screen in a form of Hex or ASCII symbols and are saved to file on a PC. Each data frame is time-stamped with up to 1ms resolution. The already registered data can be filtered or searched considering also contents of individual data frames. The data can be also calculated using a built-in calculator.

The application enables analysis of such protocols as:

- DNP 3.0 Serial
- DNP 3.0 UDP/TCP/IP
- SYNDIS
- Modbus Serial
- Modbus UDP/TCP/IP
- IEC 60870-5-101
- IEC 60870-5-103
- IEC 60870-5-104
- Ethernet
- TCP/IP
- SPA
- others, on request

Optionally, MIKRONIKA offers a dedicated application enabling analyse IEC 61850 and IEC 60870-6 (Tase.2) protocols.



The received data frames are presented as tree-structures and an additional table with contents of particular data objects. The TCP/IP connection allows remote monitoring of transmission channels. The analyzer enables also transmission signals registration on physical layer directly. In both data channels and both control lines each signal change is identified and registered. The feature supports the errors detecting in the basic, hardware protocol layer.