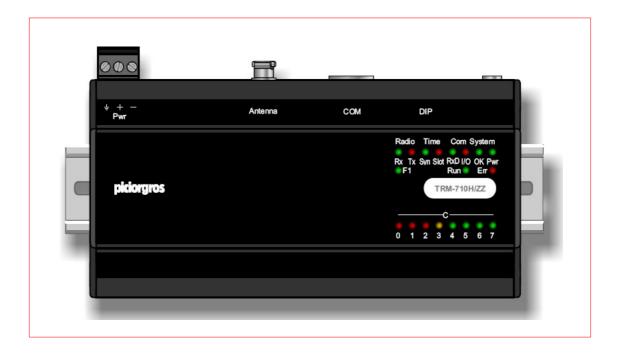# TRM-710.200H/M Master-Station Radio Modem

The TRM-710 Radio Modem serves as a radio networking interface for remote monitoring, control and data acquisition. It enables computers and PLCs to be networked with RTUs, other PLCs, instruments and controllers via serial interface transparently or using standard protocols.

The TRM-710 is suitable for a wide range of applications, including those that need radio-relaying but use industrial networking protocols that do not have inherent routing functionality, e.g. MODBUS or IEC-60870.

Protocols: At the lowest communication layer, the TRM-710 is compatible with 3964R (for transparent transmission of data) and Timeout protocols. At the application layer it supports MODBUS-RTU, MoP/MoP2 and (optionally) Profibus DP protocols. RS-232, RS-485 and RS-422 interfaces are supported at the physical layer.

Integrated routing table: The TRM-710 has an internal routing table that can hold up to 240 station addresses, allowing radio repeater links each with up to 31 intermediate stations. By adding routing headers to message frames, the TRM-710 supports radio relaying using MODBUS-RTU or IEC-60870 protocols and also proprietary message frame structures. Routing headers are stripped from message frames automatically by the destination station, thereby enabling semi-transparent radio data communication.

Master Station Routing: A TRM-710 can function simultaneously as a master station and radio repeater station. This makes it possible for a host control system of one radio network to access one or more external radio networks through their respective TRM-710 master stations.

Mixed radio networks: If a TRM-710.200 is used as a radio network master station in the TRM-710.200/ZZ mode, its network can have a mix of RTU and TRM slave stations.

Field strength indication: An 8-segment bar graph LED display on the front face of the TRM-710 indicates received radio signal strength. This simplifies commissioning and identification of radio communication problems.

Features of TRM-710.200H

Function:	Radio modem-server with integrated timeslot control (DCF-77 antenna)
RF transmit power level	User selectable from 0.1 watt to 6.0 watts
Frequency range:	410 - 470 MHz
Interfaces:	Two serial data interfaces: - RS-232 or - RS-485/422 (selectable)
Protocols supported:	- 3964R - Timeout - MoP / MoP2 - Modbus-RTU - transparent with routing - CTS-driven - IEC-60870
RF field strength indication:	display of received RF signal strength. RF field strength fluctuations can be recorded by the integrated communication logger function
Radio repeater operation:	transparent over max. 31 repeater stations
Power supply voltage:	12-24 VDC nominal (9.6 - 28.8 VDC operating)
Enclosure:	Aluminum pressure die-cast housing, DIN rail mounting. Protection class: IP-65
Operating temperature:	-20 °C to+70 °C
included in delivery:	with antenna DCF-77