



# TGW-100 Professional TETRA Gateway



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# Professional TETRA Gateway

## TGW-100 and TGW-100R

The TGW-100 (Tetra Gate Way) converts serial Protocols to TETRA IP-Data and/or to TETRA SDS Messages. The device has two serial ports for interfacing to a SCADA Server or NMS Server and one IP Port. The 19 inch Rack version of the TGW-100 (TGW-100R) has a build in IP switch and provides two IP (Ethernet) ports.

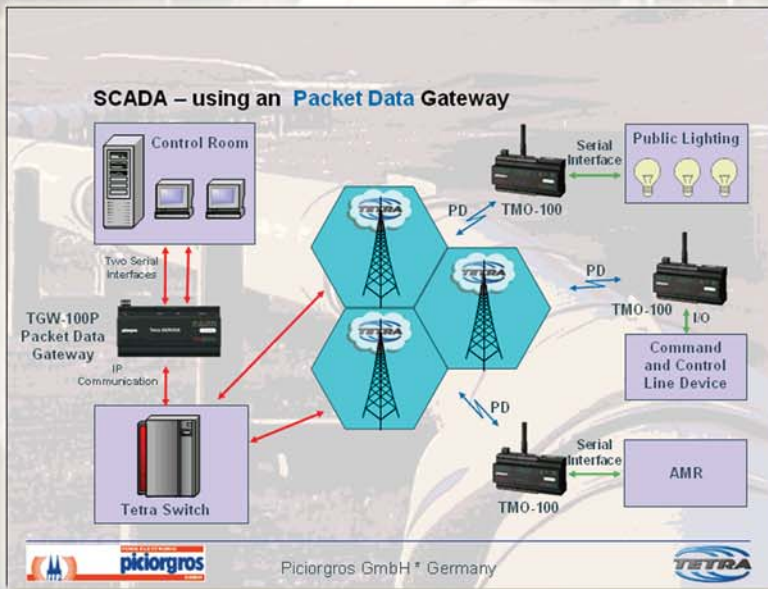
The TGW-100 has an embedded Web-Server and can be configured easily using a standard WEB browser on a Windows PC or MAC device. Individual driver software is needed to interface the TGW to the different TETRA infrastructure manufacturers only for the usage of SDS. Packet Data does not require any additional software.



## Mode of Operation

Each of the serial ports can be configured independent for a protocol such as Modbus RTU, DNP3, Sinaut and many others. And for each of these ports a Routing Table as well as an IP Reference Table will be used to route the received serial data over the TETRA infrastructure either as an SDS message or as Packet Data stream to the outstation(s).

An optional trigger threshold can be used to operate the device in mixed mode and to send the data depending on its length as an SDS Message or as a Packet Data stream. If the messages will be send as an SDS, only individual ISSI addressing is used and the data will be compressed to keep the network load as low as possible.



## Serial Ports

The two serial communication ports can be ordered as RS-232, RS485 or RS-422 in any combination. As these are hardware options, the chosen configuration can not be changed in the field.

All port parameter as Baud Rate, Parity, Numbers of Data Bits ... are configured using the embedded WEB Browser and each of the two ports can be used individually for different applications or for one application if redundant ports are required.

## Power Supply and Mechanical Design TGW-100

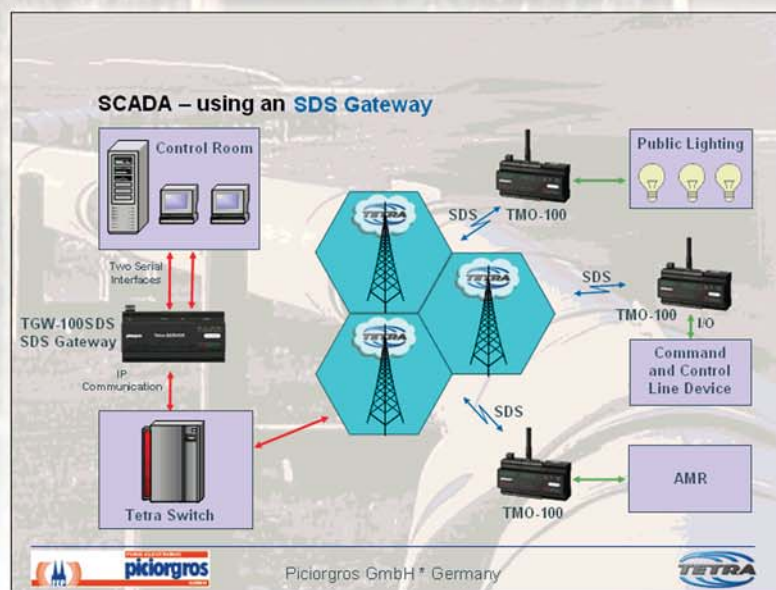
The TGW-100 is designed for DIN-Rail mounting and it needs a 12-24 (+/- 20%) Volt DC power supply.

## Ethernet Port

The Ethernet (IP) Port is used for configuring the device and also for interfacing to the TETRA infrastructure. Once connected to the TETRA Network, the physical port is occupied at the TGW-100, where at the TGW-100R a second physical IP port is available and a Computer for configuration or service can be connected even during TGW operation without the need of an external ethernet switch.

## Power Supply and mechanical design TGW-100R

Up to four TGW-100R fit into one 19 inch rack (TGW-Rack). The Rack has a redundant 230 Volt AC power supply.





# Technical Features

| General Info   | Technical Info  |
|--|---|
| <p><b>Type of Device:</b><br/>Gateway for connecting serial based equipment directly to the TETRA infrastructure (Switch to radio communication)</p> <p><b>Hardware Options:</b><br/>TGW-100: Gateway for DIN-Rail-Mounting<br/>TGW-100R: Rack version (19") with redundant power supply</p> <p><b>Operating Voltage:</b><br/>12-24 Volt DC +/- 20%<br/>TGW-100R: 100-240V AC, redundant power supply</p> <p><b>Power Consumption:</b><br/>TGW-100: P &lt;= 3 Watt<br/>TGW-100R: TBD</p> <p><b>Operating Temperature:</b><br/>-20 deg C to +70 deg C</p> <p><b>Enclosure:</b><br/>TGW-100: Anodized aluminum with plastic ends according to DIN 43880<br/>TGW-100R: 19" rack mount enclosure</p> <p><b>Sustainability:</b><br/>Waste Electrical and Electronic Equipment (WEEE) and Restriction of Hazardous Substances (RoHS) compliant</p> | <p><b>Interfaces:</b><br/>COM: RS-232 or RS-485/422, Subin-D pole female<br/>AUX: RS-232 or RS-485, RJ12 pole female<br/>Ethernet: One (TGW-100) or two (TGW-100R) Ethernet interfaces, RJ-45, 10/100 Mbit</p> <p><b>Operating Modes:</b><br/>Data gateway for interfacing two serial ports directly to the TETRA infrastructure for data communication to TMO-100 TETRA modems.<br/>The mode of transmission on the TETRA network can be either packet data or SDS (SDS needs infrastructure manufacturer specific implementation)</p> <p><b>Protocols:</b><br/>MODBUS-RTU<br/>IEC60870-5-101<br/>DNP3<br/>ROC<br/>BSAP<br/>PakBus<br/>Siemens SINAUT<br/>any customer specific or propriety protocols</p> <p><b>Flexibility:</b><br/>The serial ports can be used totally independent from each other, even with different protocols<br/>A routing table with up to 1024 entries for each port provides individual routing of the data to the affected outstations</p> <p><b>Special Device Features:</b><br/>Embedded webserver for the complete configuration, no need for software installation<br/>Embedded event logger for recording exceptions and errors<br/>19" rack mount version available</p> |



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