

REMOTE TERMINAL UNIT

The RTU, as part of a telecontrol system, executes the local functions in a substation.

Basic functions

- Obtaining, keeping updated, dating and transmitting to superior levels, the status and changes of digital and analog inputs.
- Executing orders coming from superior levels.
- · Synchronizing clocks with superior levels, GPS or IRIG-B.
- Storing information during the communications failure periods.
- Checking its internal operation, self-diagnostic taking action in case of failure.
- · Carrying out the communications with superior levels.

Standard Features

- Isolated digital inputs, simple, double, pulses, counters, associated.
- Digital relay outputs, by pulse, by states, unitary or associated.
- Measurement of active, reactive power, energy, frequency and harmonics.
- Analog inputs for transducers with or without isolation.
- Current and voltage direct measurement inputs from the measurement transformers.
- Simple or duplicated link with the control center.
- Basic ports: RS232, RS485 and Ethernet.
- Communications: direct line, Ethernet, modem, fiber optic, carrier wave, point-to-point radio or multipoint, modem for celular network CDPD and GPRS.

Advanced Features

- Standard real time operating system.
- Fully solid state CPU
- Digital inputs time stamps with 1 ms resolution
- Virtual RTU.
 - Each control center has allocated a configurable group of the variables internal data base.
 - Multiprotocol, it could communicate with each control center through a different protocol.
 - Local console or local control center.
- Multiprotocol with varied slave equipment.
- Master of slave RTUs.
- Gateway or communications node, acts as master of slave equipment such as protection relays and transfers its data to the control center.
- PLC ability, the user could add automatic routines to add not predicted or specific functions.
- Remote administration and configuration through Ethernet and TCP/IP.
- · Hardware and software modularity.
- Easy and quick tray mount, allows that the initial mounting and the modifications could be done with standard tools and minimum internal wiring.
- The digital inputs and outputs do not require intermediate terminals.
- Duplicated power supply.

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Hardware and Software

The RTU allows great configuration flexibility and is designed to be used in diverse size stations.

The flexibility is based on independent modules both hardware and software that let to add and remove abilities easily.

The modularity lets to incorporate new qualities after the start-up protecting this way the initial investment.

- Hardware configuration
 - From 0 to 65536 points.
 - One or more distributed enclosures, connected by serial link
 - Internal structure based on local network Rs485
- Software configuration
 - Specific modules are insatalled for the required function
 - Modules could be updated, added or removed with the administration module locally or remotely.
 - Program and configuration in Flash EPROM

Ordering options

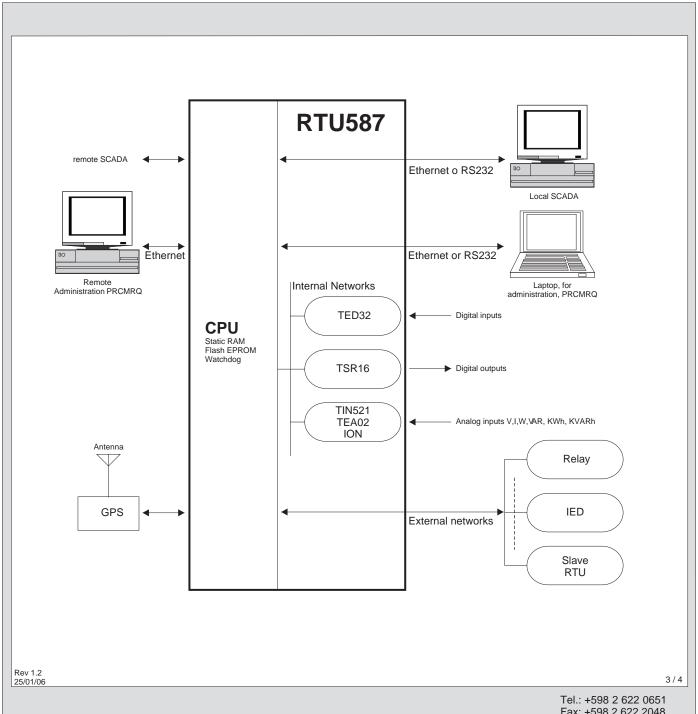
- Complete and configured RTU
- Complete but non-configured RTU
- Installation, configuration and set-up services.
- OEM supply of hardware and software components
- Hardware modules
- Software modules
- Training, configuration, tests and set-up
- Post-sale service

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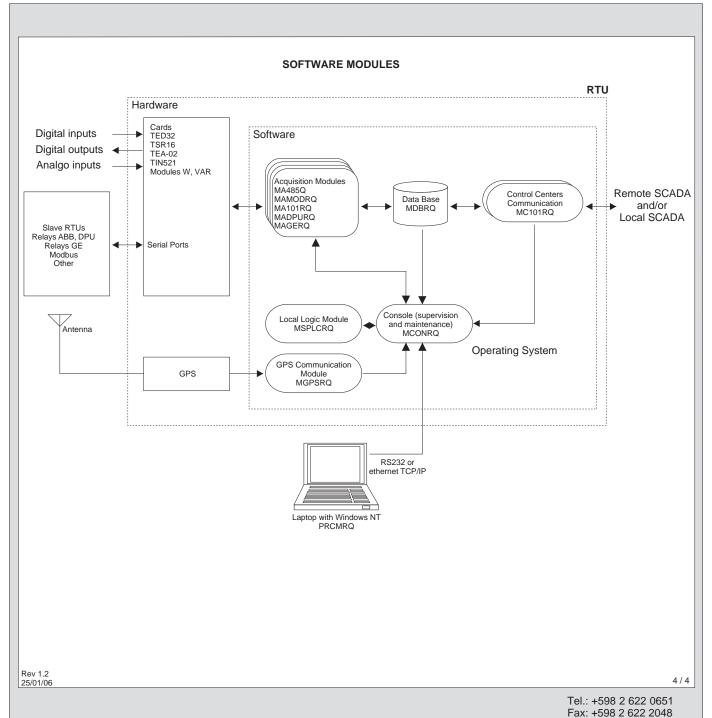
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