

T646 MicroRTU™ Wireless Monitoring and Control

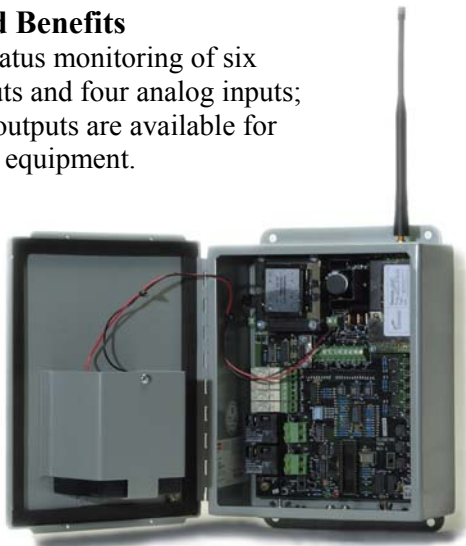
The Telemetric T646 MicroRTU is a cost effective solution for monitoring, control and automation of remote equipment such as reclosers, capacitor banks, pumps, generators, and voltage regulators. The T646 includes an integrated cellular radio that communicates over the AT&T/Cingular GSM and roaming partners cellular networks providing excellent coverage throughout North America. MicroRTU's transmit data using General Packet Radio Service (GPRS) technology on GSM networks. No license or local cellular account is required. Data is available to utility SCADA systems through Telemetric's SCADA Xchange™ or from Telemetric's hosted PowerVista™ applications.

The MicroRTU monitors both digital and analog inputs. It reports events for real-time information and can be queried for status on demand. Output relays perform control actions and they can be event driven from rules defined in Telemetric's hosted PowerVista™ applications. Easily and quickly installed, the MicroRTU provides immediate access to your equipment. The T646 is available in two models:

- **T646-GSM-MTL.** Dual-band, supporting GSM/GPRS 850/1900MHz, metal enclosure
- **T646-GSM-NEMA3R.** Dual-band, supporting GSM/GPRS 850/1900MHz, non-metallic enclosure

Features and Benefits

- Provides status monitoring of six digital inputs and four analog inputs; six digital outputs are available for controlling equipment.



- Complete integration kits are available for popular control applications, such as the Cooper 4C, to ensure a complete and easy solution.
- Includes an AC Line Voltage Monitor to report under and over voltage conditions, as well as momentary and continuing power outages.
- Monitoring, control, and remote configuration options are accessible from the secure Telemetric PowerVista applications or through an existing SCADA system using Telemetric's SCADA-Xchange™.
- Operating parameters are locally programmable and remotely selectable.



Communication is initiated in three ways:

- Automatic report upon status change
- Time-scheduled reports from once every hour to once every 240 hours (10 days) in 1 hour steps
- User requested reports through Telemetric PowerVista applications or utility SCADA system

Remote Control and User Notification

PowerVista applications display the MicroRTU data, perform control operations and configure rule-based actions. Examples include:

- Notify a designated person of a reported event by email, pager or text messaging
- Send pre-determined control commands to the same or a different MicroRTU in response to a change in status
- Define a group of MicroRTUs for sending group commands

Specifications

Point Count

- 6 Digital inputs
- 4 Analog inputs
- 6 Digital outputs
- 1 AC voltage monitor (on AC powered models)
- 1 Battery monitor

Digital I/O

Digital Inputs

- Dry contact and 120 VAC sensing
- Default configuration reports on change of state
- Reports the number of state changes per event
- Individually configurable as 5-digit counters and/or timers

Digital Outputs

- 6 Form "A" mechanical relays
 - Two 30 A, 240 VAC / 20 A, 30 VDC
 - Four 8 A, 240 VAC / 8 A, 30 VDC
- Momentary or continuous operation
- Local/remote switches enables/disables remote control and provide a local test mode

Analog Inputs

- 12-bit A/D conversion
- +12V 100mA output is provided for powering analog sensors
- Jumper selectable input ranges
 - 0 – 5 VDC
 - 0 – 1 mA
 - 4 – 20 mA
 - 0 – 10 VAC, true RMS
 - Three set points with a trigger time for each input
- 120 VAC power monitoring input is standard on all AC powered models
 - Over and under voltage monitoring
 - Outage and power-on reporting
 - Configurable over and under voltage thresholds and trigger times
- Analog and AC line voltage measurements can be reported as present values or average values

SCADA Interface

SCADA-Xchange™ provides communications to SCADA

Cellular Data Network

- Transmit power: 0.1 to 1.2W
- Dual-band, supporting GSM/GPRS 850/1900 MHz
- 50 Ohm SMA antenna connector
- Flexible, 1/2 Wave, 3.0dB antenna included

Local Serial Port

- RS-232, 9600 bps
- Includes a Windows based local configuration and test program

PowerVista™ Hosted Applications

- Data is secure and password protected
- Server authentication using 128-bit encryption key validated by VeriSign Trust Certificate
- E-mail, text messages and pager notifications are included at no extra cost

Operating Power

- 100 – 135 VAC, 60 Hz (Standard)
- 12, 24, 48 & 125 VDC (Optional)
- 4.5 A-Hr battery backup included for outage reporting; 24 hours run-time with ambient temperature > 0°C

Environmental Data

- Operating Temperature Range: -40° to +70°C
- Electrical Transient Immunity per ANSI/IEEE C37.90.1-2002

Enclosures

The standard enclosure is painted steel. Features include:

- NEMA 3R enclosure rating
- Integrated mounting flanges
- Hinged door with padlocking hasp
- Gray steel construction
- Two conduit compatible cable entry holes
- Dimensions: 10.5" x 8.5" x 4.5"
- Weight: 17 lbs

Additional Product Configurations

- Reduced input/output configurations
- AC Detection on digital inputs 3 through 6
- Variety of antenna options