

Load Management Switch

Simple method to quickly shed load and immediately measure results



Fast, efficient and effective way for utilities to balance supply and demand and get customers on board with load control.

The LM-1421 is simple to install and program, either on-site or over the network. It acts as a standard TUNet endpoint, automatically associating with the LAN and finding the best path back to the Network Controller.

First generation products are controlled with a global command set. The LM family of load management switches can have their firmware upgraded over TUNet so future applications and operating scenarios can keep pace with evolving energy needs and operating practices.

Tantalus enables a utility to add an effective load management tool to its cost-saving and conservation initiatives. The LM-1421 is the cornerstone of a demand response program that works in both emergency and economic load control situations. It is also an essential part of a reliability strategy aimed to improve SAIDI and SAIFI results by avoiding overloads, blackouts and brownouts through intelligent, proactive load management efforts.



DEMAND RESPONSE

The LM-1421 gives utilities the power to remotely manage loads directly via TUNet® in order to quickly reduce electricity consumption both locally or across the service territory. Rapid and reliable two-way communications allows the utility to reduce the peak whenever necessary, validate that the command has been received, capture over-rides when customers opt out of a load shedding event, and be notified when power is disrupted. Utility staff control on, off, and cycling events via an easy-to-use web application. All events are logged and time-stamped to help ensure accurate billing. Tantalus designed the device to support both high and low current loads, and for use in a full range of deployment scenarios including residential DR programs, C&I applications, and as a means to directly manage utility distribution equipment.

TANTALUS ADVANTAGES

- Enables a utility to centrally and remotely manage load shedding events
- Operates seamlessly within the TUNet network for two-way, 24/7 connectivity so a utility can react instantly whenever a critical event occurs
- Works with a variety of loads such as electric water & baseboard heaters, pumps and central HVACs
- Supports remote switching of utility distribution devices and industrial & agricultural equipment
- Available with up to three relays; independently switch up to three loads
- Supports firmware upgrades over TUNet to ensure relevant operation and compliance to changing regulation and operational practices
- Confirms commands and operation as part of the two-way system architecture; time-stamped messages confirm start & stop time of curtailment for accurate billing and reporting
- Provides maximum end-user flexibility with over-ride capabilities that allow homeowners to opt out of a load shed event
- Presents alternatives to capital investment projects where short-term load management strategies can avoid or delay projects
- Flexible wiring options; can be powered from the appliance or a separate source
- Self-initiating & self-healing association within the Tantalus network
- Automatically re-activates power after pre-programmed time, fail-on design
- Non-volatile memory maintains data and configuration during "off" periods
- Rugged design for indoor and outdoor installation
- Features Tantalus TruPush™ technology for instant, field initiated event notifications such as outage alerts or load shed success; no device polling required

Power Management

- Internal 30A/240V relay for switching primary loads or control circuits of larger loads

Radio

- Frequency range: 902-928 MHz ISM Band
- TUNet TruPush™ Technology
- Vectored Channels: 64,000
- Data rate 10-300 kbps
- Transmit power: +27 dBm (0.5 watt)
- Receive sensitivity: -116 dBm
- Antenna: built-in

Operating Power

- Supply: 100 VAC through 240 VAC

Physical

- Operating temperature range: -22° to +140° F / -30° to +60° C
- Operating humidity range: 0% to 100% non-condensing
- Enclosure: 8" h x 8" w x 4" d / 20.3 h x 20.3 h x 10.2 d cm

Approvals / Standards

- Tested to UL916 "Energy Management Devices" for use in Canada and United States

