

1. Product Overview

The Telescada NeXGen™ LMC Load Management Controller is a powerful, flexible and economical solution for 2-Way wireless electrical load management, automatic meter reading, status monitoring, alarming and control. Built upon a modular framework, the NeXGen™ LMC meets the needs of distribution engineers for the monitoring, recording and control of new load points or the upgrade of limited capability one-way switches.

The NeXGen™ LMC provides users with a core of 4 independent digital status points usually configured as 2 sets of KYZ pulse accumulators. The RTU includes an integrated momentary “1 Form C (SPDT)” control relay rated for 30A at 250 VAC, 20A at 28 VDC.

The NeXGen™ LMC’s line voltage measurement input provides single phase AC line voltage measurement accurate to +/- 1% at 117VAC.

In addition to configurable pulse counters, status inputs, line voltage measurement and a control relay the NeXGen™ LMC can transmit data from an IED (intelligent electronic device), or smart meter via its RS-232 serial communications link.

The special Power Poll™ feature of the NeXGen™ LMC provides Load Management Controllers the actual value of the power being consumed and confirmation of actual loads running with a single poll. With Power Poll™ for KYZ pulse outputs there is no more need to pre-poll for running loads.

2-Way Load Management with Power Poll™ confirms the actual KW value of the load switched off, allowing the Load Management system to only shed the load required.

A remote communication port allows for configurable remote data transmission via radio, dial-up, cellular or other transceiver. A local maintenance port allows for direct interrogation and programming of the NeXGen™ LMC using the NeXGen™ *Link* Maintenance Utility Software. DNP3.0 standard communications protocol allows the NeXGen™ LMC to communicate with any modern SCADA system.

The NeXGen™ LMC’s small NEMA 4 rated enclosure allows for quick installation on distribution panels, walls or pole tops. A see through cover window provides visible indication for load control status with bright red and green LEDs as well as a heartbeat LED that provides quick field confirmation of proper operating status. The NeXGen™ LMC’s internal isolation transformer can be configured to support multiple input voltages.

2. Feature Set

2.1. Features Overview

- 4 (Four) Optically Isolated Digital Status Inputs
- 1 (One) AC Line Voltage Measurement Input
- 1 (One) Form “C” Integrated Control Relay
- 1 (One) RS-232 IED Serial Communication Port
- 1 (One) Remote Communications Port
- 1 (One) Shared Local Maintenance Port
- DNP3.0 Protocol

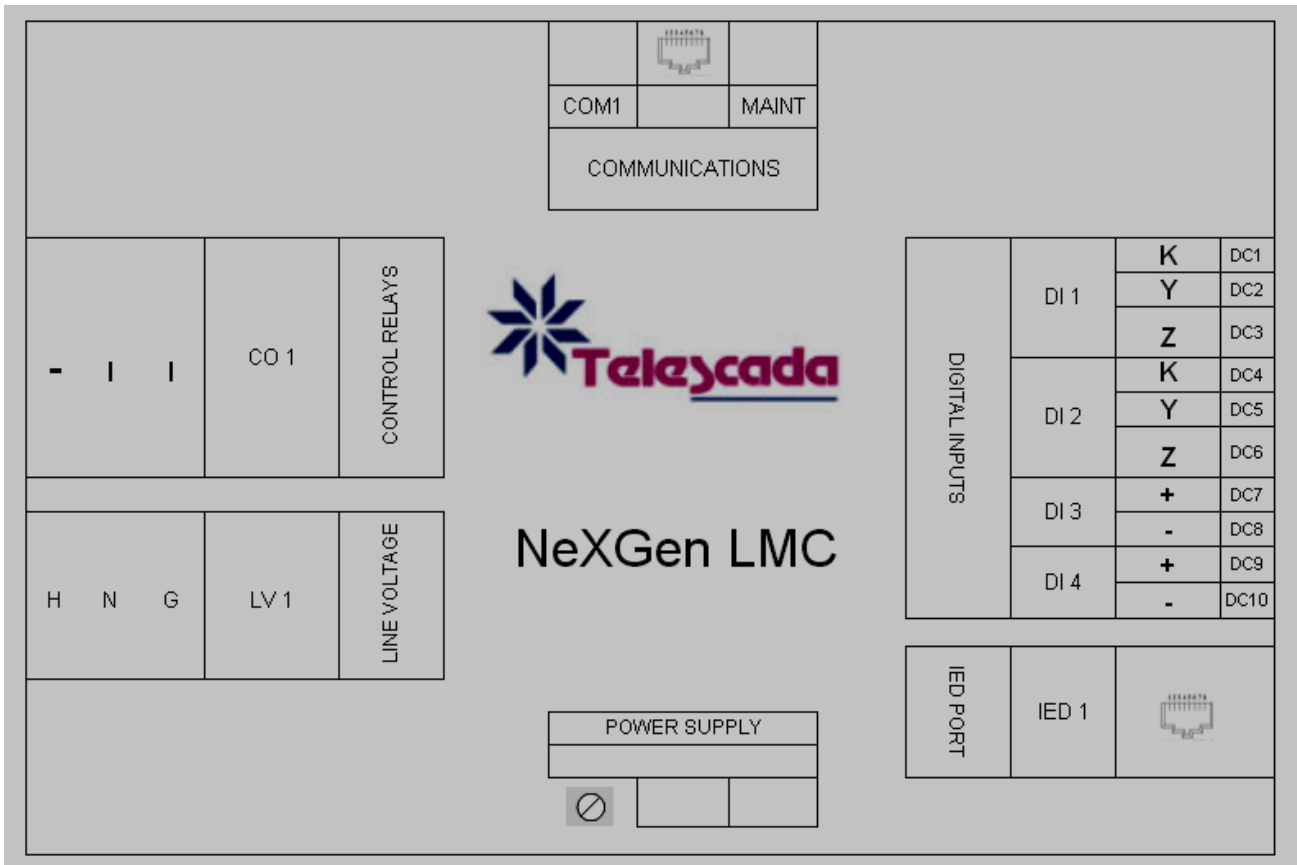


Figure 1. NeXGen LMC

2.2. Features Detail

- The low cost of the NeXGen™ LMC allows for economic 2-Way wireless load management throughout the distribution system.
- The pulse counting or serial meter connectivity of the NeXGen™ LMC provides remote automatic meter reading.
- AC line voltage measurement provides accurate measurement of single phase line voltage throughout the distribution system
- Connectivity for IEDs allows more powerful distributed communications and control. The flexibility of the NeXGen™ programming core allows for integration of IEDs using various IED communications protocol options. DNP3.0 standard.
- Remote Communication serial ports are RS-232 type and configurable for any manner of RF, cellular or dial-up modem.
- Local interrogation and configuration of the NeXGen™ LMC via dropdown lists in the Windows® Based NeXGen™ Link Utility software requires no programming knowledge.

3. Technical Specifications

3.1. Digital Status Inputs

- 4 (four) optically-isolated Digital Inputs configured as
 - 2 (two) KYZ pulse count accumulators
 - 4 (four) general purpose digital status inputs
 - Dry Contact supported
- Data recording on each channel
- LED status indication for each digital input

3.2. AC Line Voltage Input

- 1 (One) AC Line Voltage Measurement Input
 - Single phase
 - +/- 1% accuracy @ 117VAC
- Data recording

3.3. Control Outputs

- 1 (one) Built-In Control Relay
 - Form C (SPDT)
 - Software configured as timed, momentary or latching
 - Rated for 30A at 250 VAC, 20A at 28 VDC
- LED indicator for relay status
- Configurable cold load pick-up allows user to configure the LMC to restore or change the control state upon return from a power failure
 - Programmable randomization

3.4. Communications

3.4.1. Remote Communications

- 1 (one) serial communication port configured for RS-232
- Configurable baud rates up to 38.4kbps
- Connectors for serial communications ports are RJ-12 type
- Routing supported
- Store and forward repeating supported
- DNP3.0 Protocol standard

3.4.2. Local Communications

- RS-232 serial maintenance port for interrogation, configuration and data transfer.
- Configurable baud rates up to 38.4kbps
- Connectors for serial communications ports are RJ-12 type
- Interrogation, programming and data transfer via the maintenance port is achieved using Telescada NeXGen Link Utility Software, DNP3.0 Protocol

3.4.3. IED Communications

- 1 (one) serial communication port configured for RS-232
- Configurable baud rates up to 38.4kbps
- Connectors for serial communications ports are RJ-12 type
- DNP3.0 Protocol standard

3.5. Power Supply

- The NeXGen LMC core and input/output module is powered by an internal isolation transformer
 - 120 VAV Input Option
 - 240 VAC Input Option
 - 480 VAC Input Option
- Always on when powered
- Normal operation indication LED
- Short circuit protection
- Fused input

3.6. Processor and Memory

- The NeXGen instrument series operates from a programmable core module. The Core module processor is the RM3000 operating at speeds up to 27 MHz.
 - FLASH memory: 512K
 - SRAM memory: 256K
 - Serial FLASH memory: 1MB
- Firmware field programmable
- Watchdog timer
- Reset button

3.7. Physical & Environmental

3.7.1. Physical Specifications

- The NeXGen RTU is housed in a NEMA 4 rated thermoformed high impact plastic enclosure 9.00"L x 7.00"W by 4.00"H
- Pole or Wall Mountable Design
- See through cover LED status indications for
 - Load Control ON/OFF
 - Power On
 - μ Processor Normal Operating Status
- Standard RJ-12 connectors are provided for serial communications
- Standard RJ-12 connectors are provided for IED communications
- Standard #14, 300V Compression Terminal Blocks are provided for status field terminations
- Standard #14, 300V Compression Terminal Blocks are provided for line voltage field terminations

- Press fit terminations (fast on terminals) for control output relay.
- All field termination locations are clearly indicated on the PCB

3.7.2. Environmental Operating Conditions

- Operating Temperature range: -40° to +80°C
- Storage Temperature: -40° to +90°C
- Humidity: 93% non-condensing at 55°C