

# GreenLight Server

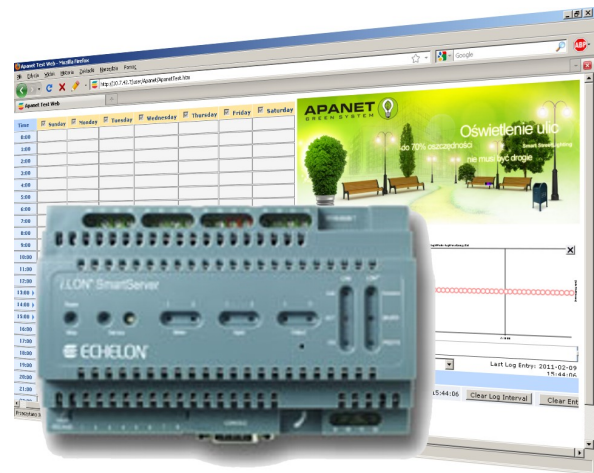
## Echelon SmartServer 2.0

GreenLights Server is designed to manage a GLC100 series controllers network controlling separate light sources (street, car park or park lighting, etc.) Communication with controllers utilises LonWorks standard over power lines (PowerLine communication).

The GreenLight system server is a key element in the entire system. Based on an Echelon hardware and APANET Green System dedicated software the GreenLight server enables:

- implementation of control algorithms helping reduce outdoor lighting cost (both energy consumption as well as running and servicing costs);
- acquisition and sharing network measurement and operational data (energy consumption, operating time, malfunction time etc.);
- advanced network component management including data flow control systems (routing) significantly increasing network range (up to 4km range in standard power grid);
- clustering light sources and creating virtual lighting installations (dedicated to individual customers with the possibility of sharing one installation by several customers and calculating energy consumption independently for each one of them);

EU regulations regarding outdoor lighting give a number of possibilities to save energy by controlling light intensity depending on current conditions (weather conditions, traffic, time of day, etc.). The GreenLight Server helps to implement current regulations and allows extremely easy adaptation of future ideas.



A very important attribute of the described solution is its scalability. In small and medium sized installations GreenLight Server acts as central network controller (either independently or in a cluster of servers). In large systems consisting of a few thousand lamps it can additionally act as a gateway to global management systems (for example urban lighting management systems). It is possible thanks to several communication protocols implemented in the device.

### Main advantages:

- Flexibility – ability to create tailored software solutions meeting customer's needs.
- Simplicity – Web 2.0 server – web browser access from anywhere using any hardware (PC, Mac, tablet, smart phone).
- Security – HTTPS/SSL support.
- Data acquisition and control with advanced alert features – FTP and e-mail support.
- Ability to work both independently as well as in large, advanced systems.
- Supporting various protocols – straightforward integration with other systems: ISO/IEC 14908-1, ISO/IEC 14908-4, IP-852, Modbus, M-Bus, SOAP/XML.
- Ethernet, analogue and GSM/GPRS/3G modems communication.