

# GV-LED

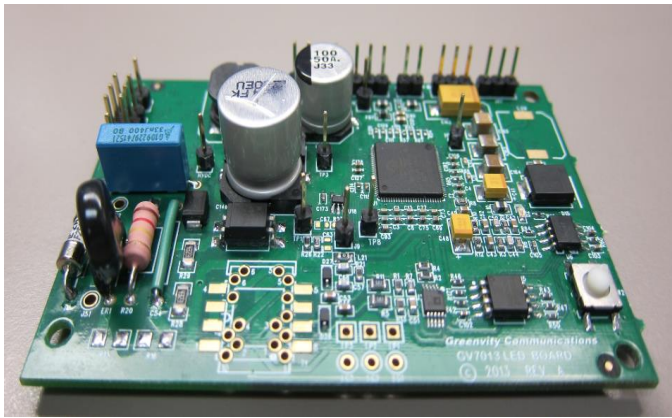
Greenity's GV-LED is a HomePlug Green PHY Powerline Communications (PLC) SoC and LED driver for Smart LED Lighting.

## PRODUCT DESCRIPTION

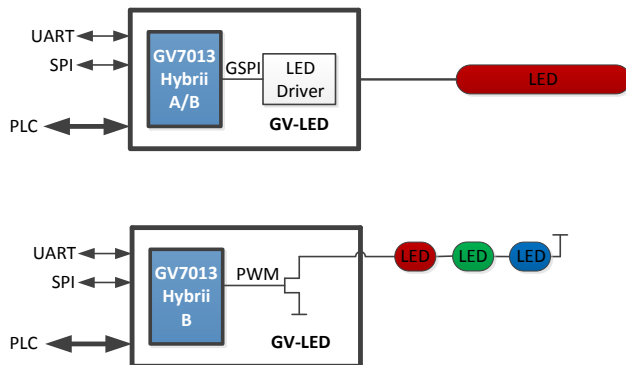
The GV-LED is a HomePlug Green PHY (HPGP) powerline communications (PLC) and LED driver powered by Greenity GV7013 Hybrii-Mini SoC. The GV-LED delivers half-duplex, asynchronous data communication over (50/60 Hz) AC and DC power lines at PHY data rates up to 9.8 Mbps and features G-SPI (Greenity proprietary SPI) and Pulse Width Modulation (PWM) used to drive LED's. With PWM, the need for stand alone LED drivers are eliminated. The GV-LED is designed to operate with the GV-Controller and GV-Sensor to form a complete Smart LED Lighting system.

## GV-LED FEATURES

- Powered by GV7013 Hybrii-Mini SoC
- Support PWM and 0 – 10 volts interface
- LED Full Color LED Controller Driver
- Controllability: On/ff, dimming, color temperature and color RGB



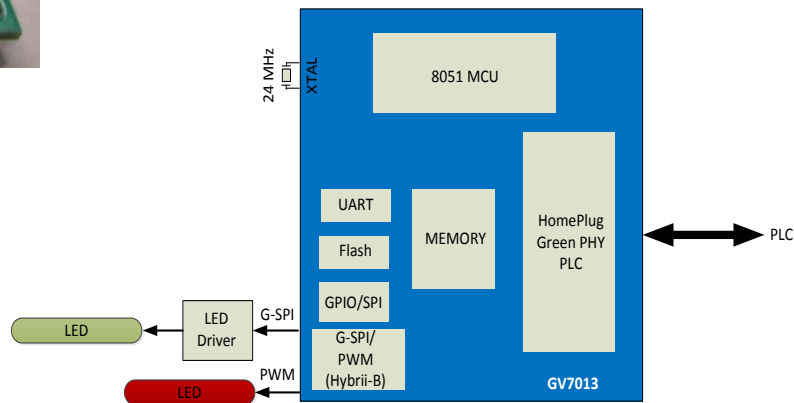
## GV-LED APPLICATION DIAGRAM



GV-LED Application Diagram

## GV7013 FEATURES

1. Integrated HomePlug Green PHY PLC, 8051 MCU, AE-128 Encryption/Decryption Co-Processor and 256 Kbytes (code) /48 Kbytes (data) RAM
2. Compliant with HomePlug Green PHY and operable with HomePlug AV and IEEE-1901
3. Functions on up to 240 VAC and on DC lines
4. Supports OFDM Mini/Standard/High-Speed ROBO mode's and PHY rates to 9.8 Mbps
5. Wideband frequencies from 2 to 30 MHz
6. Features HPGP power modes plus Active, Standby, Sleep, and Deep Sleep
7. Boots from an external 256 kB to 1 MB serial flash
8. Utilizes a single low cost 24 MHz crystal
9. Supports multiple host interfaces including SPI, UART, and includes GPIO pins
10. Includes G-SPI (Hybrii-A/B) for LED lighting driver and PWM (Hybrii-B) which eliminates the need for an external LED drivers
11. Digital (1.2/2.5 V), Analog (1.8/2.5 V)
12. Industrial temperature range from -40 to +85°C



Note: GV7013 Hybrii-B features G-SPI and PWM. PWM eliminates the need for a LED Driver.

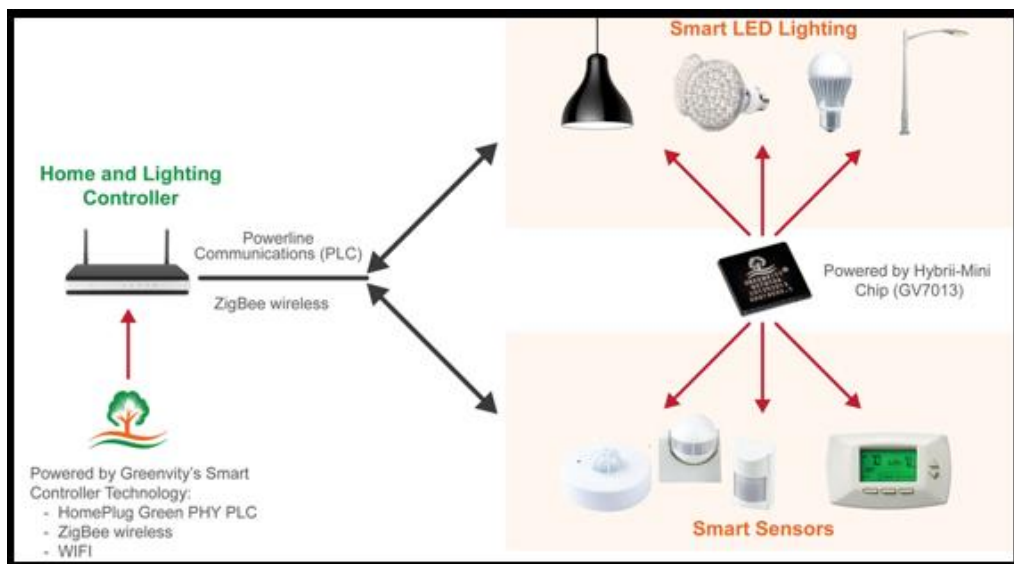
GV7013 Block Diagram

## TARGET APPLICATIONS

- LED Lighting Control for commercial buildings, streets, parking lots and factories
- Controlled LED lighting, signage and display
- Home/Building Energy Management System

## ORDERING CODE

Ordering Code	Description
<b>GV-LED</b>	<b>Smart LED driver module with LED driver chip or LED power transistor (orderable option)</b>
GV7013-LED-DP	Complete LED Lighting Control Development Platform
GV-Controller	Home Gateway and LED Lighting Controller
GV-Sensor	All-in-One Sensor module
GV7011/3	Hybrii-XL chip (HPGP & ZigBee) or Hybrii-Mini chip (HPGP)



**Smart LED Lighting Control with Sensor Network**

**For more information, please contact Greenvity**

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