

GV-LED-MINI

Greenvity's GV-LED-MINI is a board featuring the GV7013 HomePlug Green PHY Powerline Communications SoC meant for use with the GV-Controller (IoT Hub).

PRODUCT DESCRIPTION

The GV-LED-MINI is a HomePlug Green PHY (HPGP) powerline communications (PLC) board powered by Greenvity's GV7013 Hybrii-Mini SoC. The GV-LED-MINI delivers half-duplex, asynchronous data communication over DC power lines at PHY data rates up to 9.8 Mbps while featuring a PWM output. The GV-LED-MINI is part of Greenvity's family of products meant to operate with the GV-Controller (IoT Hub) and is aimed at smart LED applications.

GV-LED-MINI FEATURES

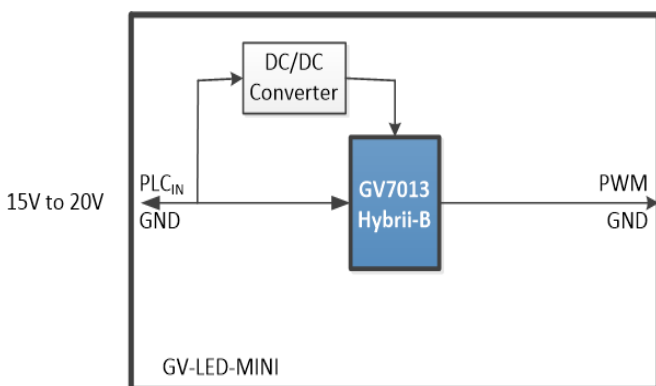
- GV7013 Hybrii-Mini HomePlug PLC SoC
- Operates with the GV-Controller (IoT Hub)
- Functions on PLC DC power lines
- Small size: 3 x 5 cm²



GV7013 FEATURES

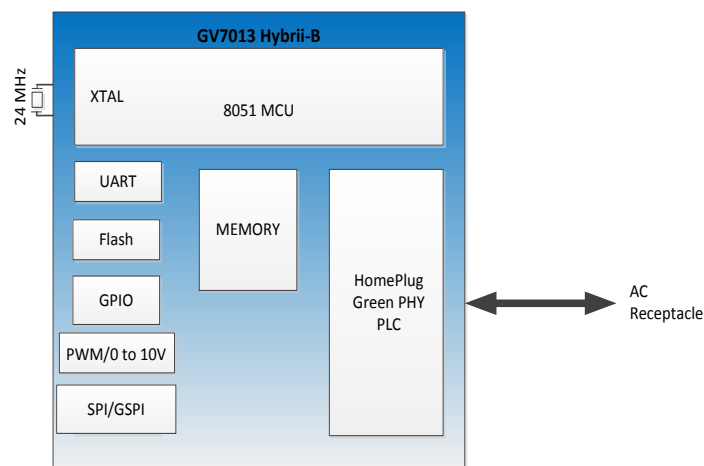
1. Integrated HomePlug Green PHY PLC, 8051 MCU, AE-128 Encryption/Decryption Co-Processor and 256 Kbytes (code) /48 Kbytes (data) RAM
2. Compliant with HomePlug Green PHY and operable with HomePlug AV and IEEE-1901
3. Functions on DC lines
4. Supports OFDM Mini/Standard/High-Speed ROBO mode's and PHY 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 UART
10. Includes PWM and 0 to 10V outputs which supported by 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

GV-LED-MINI BLOCK DIAGRAM



3 x 5 cm²

GV Block Diagram

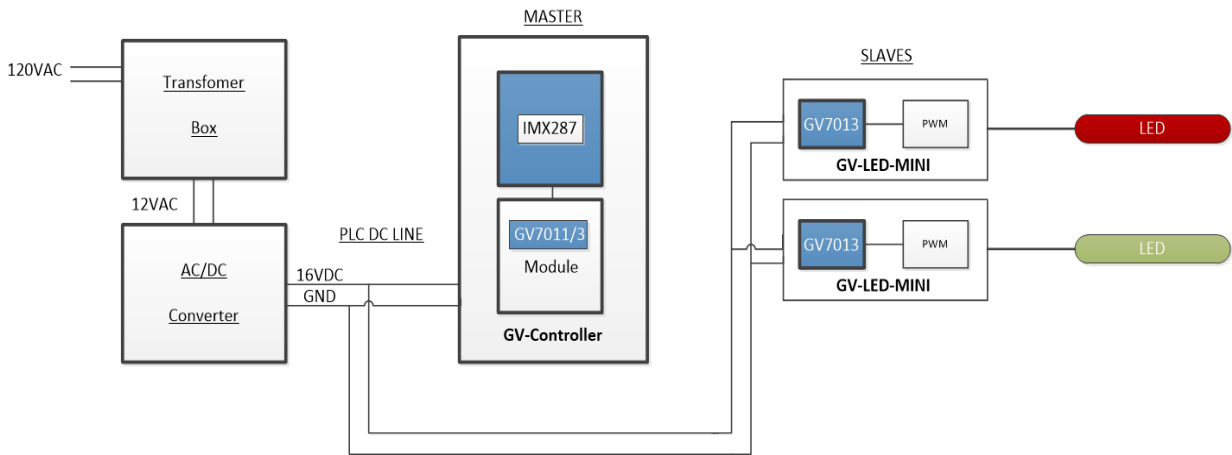


GV7013 Block Diagram

Document GV7013-LED-PB-001

GV-LED-MINI and GV-Controller

The GV-LED-MINI is meant to operate with the GV-Controller through the power line to form a smart LED system. In order to complete a LED system, Greenvity also offers the GV-Controller and the GV-Sensor to form a Smart LED system.



Smart LED System featuring the GV-Controller and GV-LED-MINI

GV-LED-MINI BOARD

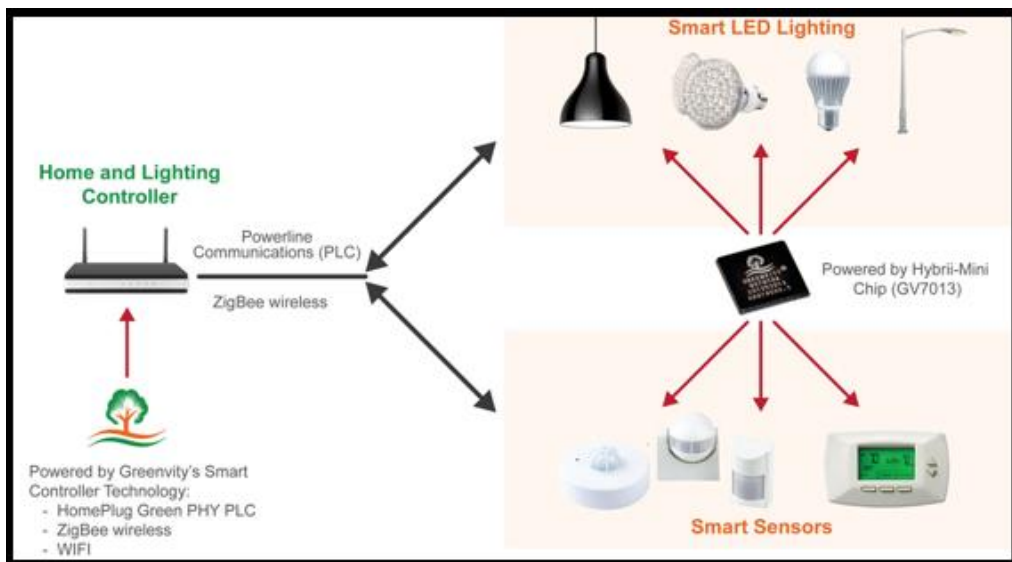
In order for the GV-LED-MINI to function, the GV-LED-MINI only requires a 15 to 20V DC supply which is extracted from the PLC line. Once commands from the master are issued, the GV-LED-MINI PWM outputs will be provided.

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
GV7013-MOD	Smart LED board (Master)
GV-LED-MINI	Smart LED board (Slave)
GV-LED-DP	Complete LED Lighting Control Development Platform
GV-Controller (IoT Hub)	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

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