

GV7011-MOD

Greenity's GV7011-MOD is a board featuring the GV7011 HomePlug Green PHY Powerline and 2.4GHz ZigBee IEEE802.15.4 RF Communications SoC meant for use with the GV-Controller (IoT Hub).

PRODUCT DESCRIPTION

The GV7011-MOD is a HomePlug Green PHY (HPGP) powerline (PLC) and 2.4GHz ZigBee IEEE802.15.4 RF communications board powered by Greenity's GV7011 Hybrii-XL SoC. The GV7011-MOD 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 RF communications over the air while featuring SPI, UART and Ethernet communications. The GV7011-MOD is part of Greenity's family of products meant to operate with the GV-Controller and is aimed at smart LED applications.

GV7011-MOD FEATURES

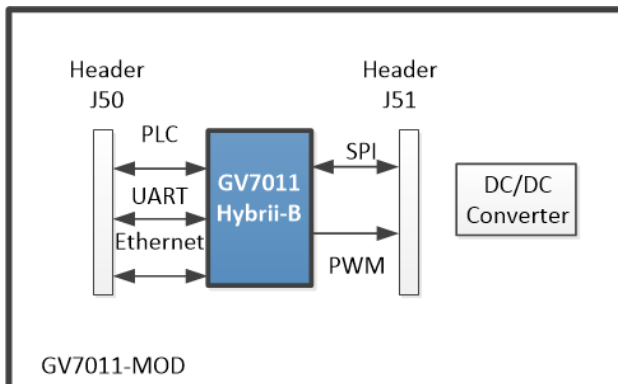
- GV7011 Hybrii-XL HomePlug PLC + 2.4GHz ZigBee SoC
- Operates with the GV-Controller (IoT Hub)
- Ethernet, SPI and UART communications



GV7011 FEATURES

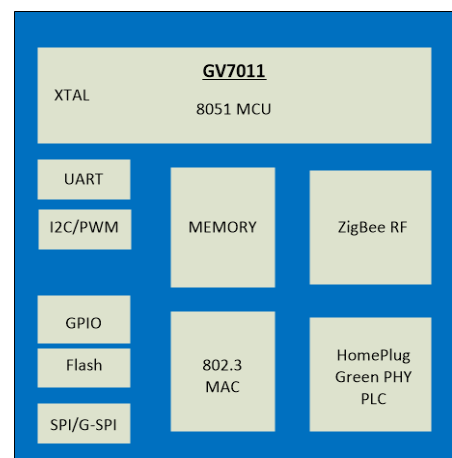
1. Integrated HomePlug Green PHY PLC, 8051 MCU, AE-128 Encryption/Decryption Co-Processor and 256 Kbytes (code) /48 Kbytes (data) RAM
2. Features 2.4GHz ZigBee IEEE802.15.4 communications
3. Compliant with HomePlug Green PHY and operable with HomePlug AV and IEEE-1901
4. Functions on up to 240 VAC and on DC lines
5. Supports OFDM Mini/Standard/High-Speed ROBO mode's and PHY rates to 9.8 Mbps
6. Wideband frequencies from 2 to 30 MHz
7. Features HPGP power modes plus Active, Standby, Sleep, and Deep Sleep
8. Boots from an external 256 kB to 1 MB serial flash
9. Utilizes a single low cost 24 MHz crystal
10. Supports multiple host interfaces including Ethernet, SPI, UART, and includes GPIO pins
11. Includes G-SPI for LED lighting driver and PWM and 0 to 10V outputs which eliminates the need for an external LED drivers
12. Digital (1.2/2.5 V), Analog (1.8/2.5 V)
13. Industrial temperature range from -40 to +85°C

GV7011-MOD BLOCK DIAGRAM



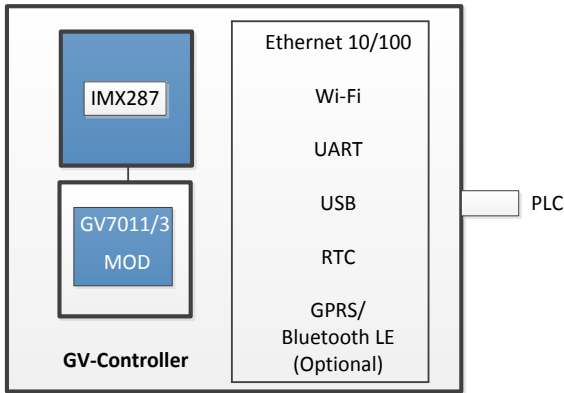
44.45 x 38.1 mm²

GV7011-MOD Block Diagram



GV7011 Block Diagram

GV7011-MOD and GV-Controller

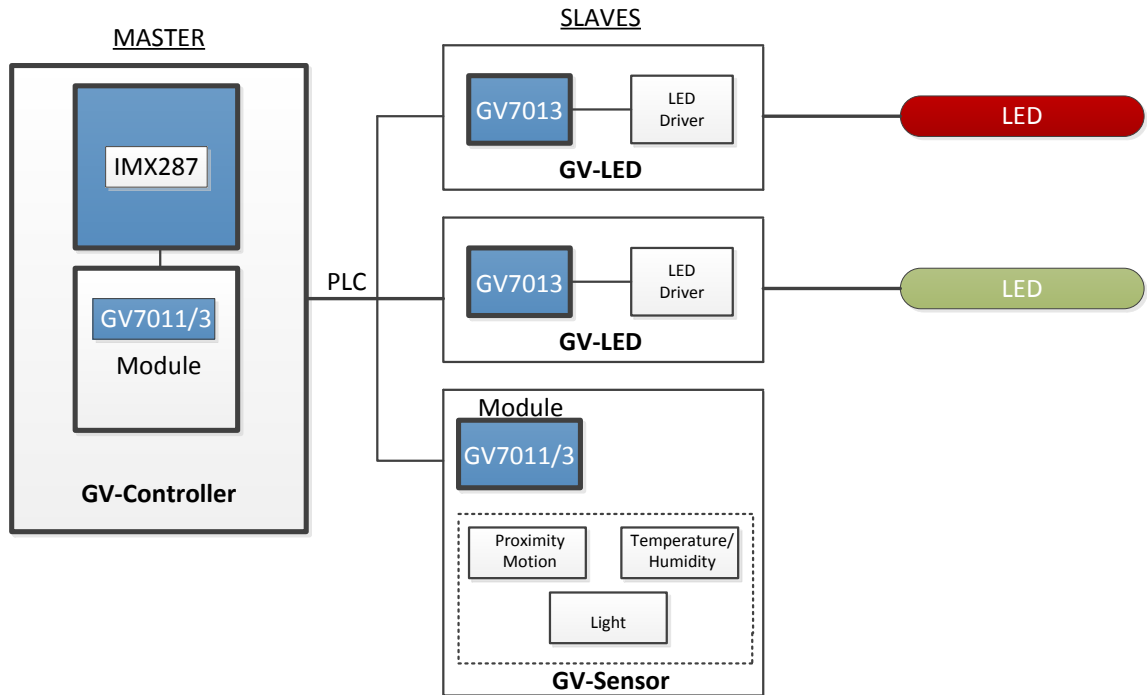


**GV-Controller with GV7011-MOD
Block Diagram**



GV-Controller with GV7011-MOD

The GV7011-MOD is meant to operate with the GV-Controller through header pins (J50 and J51) and physically docks to the top side of the GV-Controller board. When the GV7011-MOD is paired with a processor it can be used as a Master within a Smart LED system. In order to complete a LED system, Greenity offers the GV-LED and the GV-Sensor to form a Smart LED system.



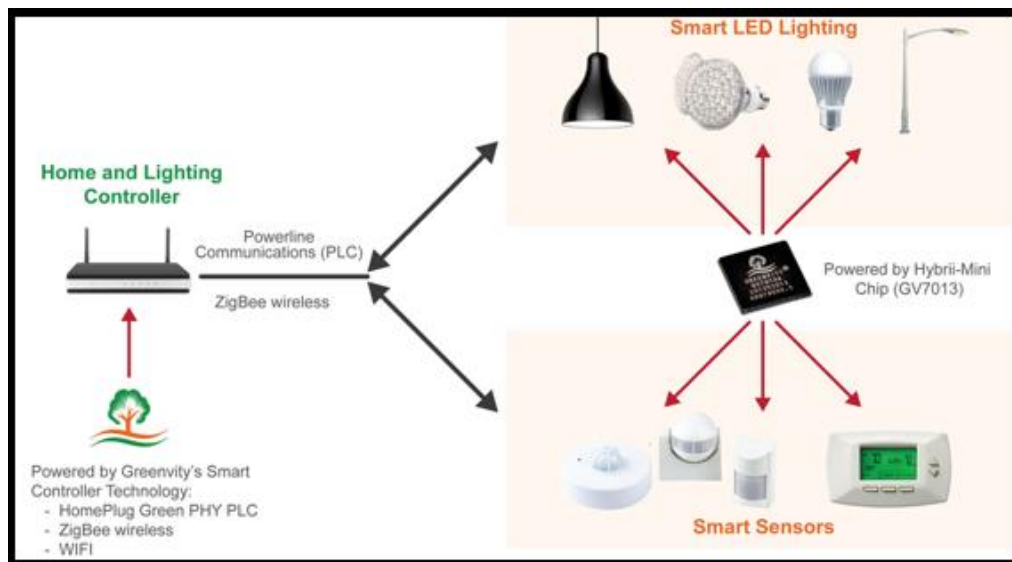
Smart LED System featuring the GV-Controller, GV-LED and GV-Sensor

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
GV7011-MOD	PLC + ZigBee RF (Master)
GV7013-LED	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

For more information, please contact Greenvity

Greenvity Communications

Phone: +1 408 935 9434

Email: sales@greenvity.com

www.greenvity.com

673S. Milpitas Blvd., Suite 204, Milpitas, CA 95035

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