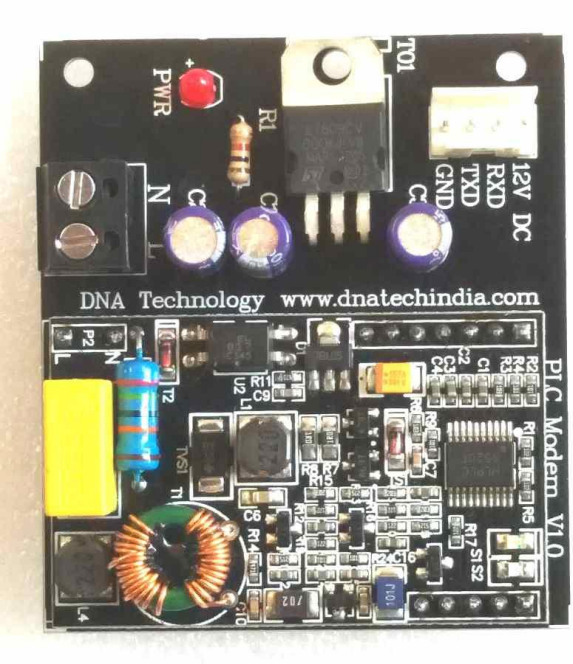
PLC1672: Power Line Communication Modem

PLC1672 Power Line Communication Module

PLC1672 is **a Power Line communication Module/Modem** from DNA Technology. It is an easy to use Module designed to send serial data via Power Line.

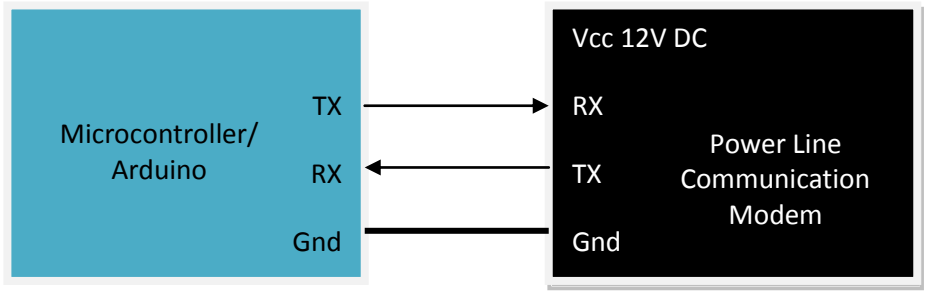
INTRODUCTION

Power line Modem is a communication module which sends data on the 230 Volt mains power lines. Power line communication module basically uses the existing power lines to transfer both AC power as well as data simultaneously. This form of communication is also known as power-line carrier, power-line digital subscriber line (PDSL), mains communication, power-line telecommunications, or power-line networking (PLN).



This module provides bi directional communication in half duplex mode i.e. it can either transmit or receive data at one time but cannot do both at the same time. If the module received data via power line it sends data via Tx pin to your controller and if it receives data serially via your microcontroller it switches to transmit mode and sends data via the power line.

The communication is quite simple and any serial data at 9600 bps can be easily transmitted via power line. The interfacing is also quite simple just connect your controllers Tx line to Modules Rx line and the controllers Rx line to the Modules Tx line and you are ready to go. No need of any settings or anything just a simple plug and play module.



You can interface the module with any microcontroller with serial interface you can use 8051 Based Microcontrollers, Microchip's PIC Microcontrollers, AVR Microcontrollers or ARM processors as well. This module can also be interfaced to Arduino & Raspberry pi. This is an easy to use plug and play power line communication module. No need for settings of any type just connects it to the mains, power it up and you are ready to go.

This Power Line Communication modem used FSK modulation technique with a center frequency of 72 Khz.
The module has onboard voltage regulator so you can provide external supply of 12-24 Volt DC. We recommend 12Volt DC supply.

Normally the data transfer rate over power line is 100 bytes/Second (bps) i.e. though it takes data at 9600 bps from controller it can send data over the power line only at 100 bps. So when you are transmitting data serially please make sure the there is a delay of 5 ms after each byte.

Two LED's S1 & S2 are provided onboard

S1: A Green LED which blinks whenever data is being sent over power line
S2: A Red LED which blinks whenever data is received over power line

FEATURES

- Power Supply: DC 12-24 Volt (12 Volt recommended)
- Max current 200ma
- Default Baudrate of 9600.
- Communication in half duplex mode.
- Working environment: 230V 50/60Hz
- Communication distance: 100m
- Power line carrier frequency: 72kHz
- Modulation and demodulation mode: FSK
- Unix Connector Provided for easy screwing of power line cable.
- Relimate connector provided for easy interfacing with your circuit.

APPLICATIONS

Power Line communication Modules are used for different applications right from simple home automation to internet access. Here are some of the basic applications of Power line communication Modem

- Home Automation
- Data Acquisition System
- Automatic Meter Reading (AMR)
- Lighting Control

WARNING

DO NOT TOUCH. This module has 230 Volts connected to it so do not touch the module when it is plugged in. Isolation has been provided at the low voltage side i.e. the pins that are connected to your controller but rest of the board has 230 Volts.