

# Quick-Start Guide

## PowerLinc Modem™ – INSTEON® Serial Interface (Dual-Band)

Model: 2413S



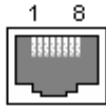
### Installation

- 1) Be sure PowerLinc Modem is not plugged into your computer
- 2) Go to <http://ftdichip.com/Drivers/VCP.htm> to download the driver file
  - Under the section VCP drivers, select the setup executable file for Windows
- 3) Save and then open/run the driver file
- 4) Plug PowerLinc Modem into an AC outlet. Then, plug the clear end of the included DB-9 serial cable into PowerLinc Modem's interface port and the black end of the cable into an available serial port on your PC.

*The PC should detect the new hardware  
PowerLinc Modem should be ready for use*

### Connector Specifications

- Pin 1: RS232 to PC pin 2 (Rx)
- Pin 2: Not Connected
- Pin 3: TTL Output (from PLM)
- Pins 4 & 5: Not connected
- Pin 6: TTL Input (from PLM)
- Pin 7: Common Ground
- Pin 8: RS232 from PC pin 3 (Tx)



Interface Port

### Communications

The RS-232 Serial communications to PowerLinc Modem are:

19,200 baud	8 data bits	No parity	1 stop bit
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NOTE: Each byte send to PowerLinc Modem will be echoed back to the host.

### Tips for Using PowerLinc Modem

- Do not use a serial cable any longer than 10 feet (6 feet or less is recommended)
- Do not plug PowerLinc Modem into a power strip or AC line filter
- Use only one PowerLinc Modem per computer
- Do not place near large metal objects, such as refrigerators or TVs
- Some computers and their accessories can absorb PowerLinc Carrier (PLC) signals off the power lines. Since PowerLinc Modem will be so close to the computer, the power strip for the computer should be filtered. Use a Smarthome FilterLinc™ (#1626-10) on the computer's power strip to keep the PowerLinc Modem signals from getting absorbed by the computer equipment.
- If the computer's serial port is shared with another hardware device (scanner, pda, etc.) be sure to turn off that device's program on the PC. If left running, the home automation software will not be able to communicate with PowerLinc Modem.
- To reset PowerLinc Modem to its original factory setting, unplug it from the wall outlet and wait 10 seconds. Press & hold its Set button, plug it back in, continue holding the Set button for 3 seconds and then release.

*After several seconds, the Status LED should turn on, indicating a reset is complete*

### Using PowerLinc Modem as a Phase Bridger

PowerLinc Modem can help bridge the phases in your home allowing RF-only devices access to power line-only devices. For the best INSTEON network performance, it is recommended that you install at least two dual-band INSTEON devices.

Use the following procedure to test that the phases have been bridged:

- 1) Install additional dual-band INSTEON devices if they are not already installed
- 2) Start Phase Bridging Detection Mode by tapping the Set button on PowerLinc Modem four times quickly  
*PowerLinc Modem should begin beeping and the Status LED should turn on solid green*
- 3) Check the LED behavior of the other dual-band devices to see if they are on the opposite phase  
*If at least one of the dual-band device LEDs is blinking green or is bright solid white or blue, the device is on the opposite phase. Continue on to step 4.*  
If none of the dual-band devices exhibit the behavior above, they are on the same electrical phase. Try one or both of the following:
  - Follow steps 2 and 3 with the other dual-band devices to see if they are exhibiting the desired LED behavior
  - Move a dual-band device to another location until it exhibits the desired LED behavior
- 4) Tap the Set button on PowerLinc Modem to exit Phase Bridging Detection Mode  
*PowerLinc Modem should stop beeping and the Status LED should turn off*

### Troubleshooting and Tech Support

Call: INSTEON Gold Support Line at 800-762-7845

### Become a Developer

For information about becoming an INSTEON developer, visit:  
[www.smarthome.com/insteon/sdk2600s.html](http://www.smarthome.com/insteon/sdk2600s.html)

### FCC Compliance Statement

This device complies with FCC Rules Part 15. Operation is subject to 2 conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference that may be received or that may cause undesired operation. The digital circuitry of this device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in residential installations. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio and television reception. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause such interference, which can be verified by turning the device off and on, the user is encouraged to eliminate the interference by one or more of the following measures:

- Re-orient or re-locate the receiving antenna of the device experiencing the interference
- Increase the distance between this device and the receiver
- Connect the device to an AC outlet on a circuit different from the one that supplies power to the receiver
- Consult the dealer or an experienced radio/TV technician

WARNING! Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

\* Setup Modes will automatically time out after 4 minutes.