

**THE HI SPEED POWER LINE COMMUNICATION SYSTEM SOLUTION**



**Overview**

SM9222 is an evaluation and development board for the SM2200 power line communication transceiver. This board is designed to allow the evaluation of functions of the SM2200's functions by connecting to a user supplied host Micro Controller Unit (MCU).

The SM9222 Evaluation and Development Board can communicate via twisted pair to another SM9222 Evaluation and Development Board, or connect to the power line via a SM9223 power line coupling board.

**Contents**

- 1 x SM9222 Evaluation / Development board for the SM2200 Power Line Transceiver
- 1 x CDROM containing datasheets, user guides and sample code

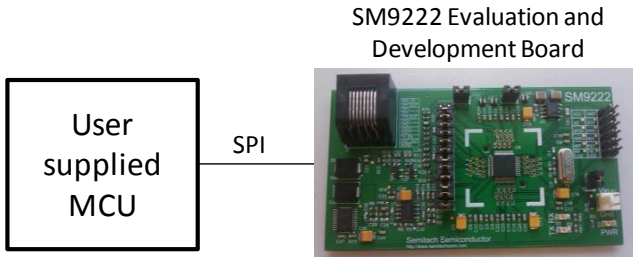
**Benefits**

- 6 x 2 pin header for connection to the host MCU via SPI
- RJ-45 jack allows for application development independent of the power line operation
- Power line operation using the SM9223 power line coupling circuit
- Access to all SM2200 analogue front end (AFE) interface
- Onboard LEDs used for indication of channel frequency operation, transmission of data, the receiving of data or application development
- Separate connector to power the board independent of the host MCU

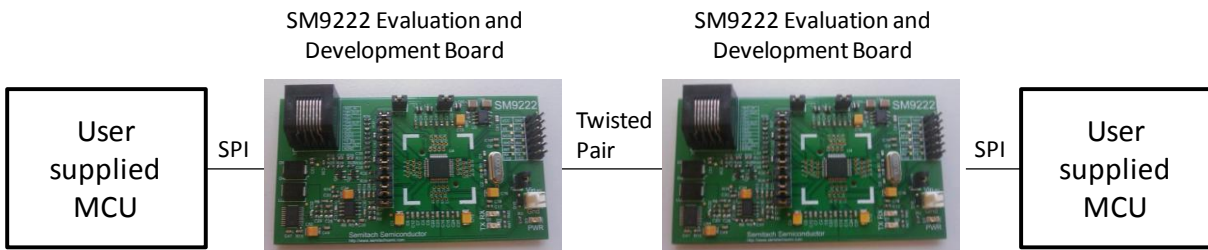
**Features**

- SPI interface to the host MCU
- Twisted pair communication via RJ-45
- Power line communication via SM9223 power line coupling board
- Header pin for every AFE pin
- Onboard power line operation LEDs
- Separate connector for power

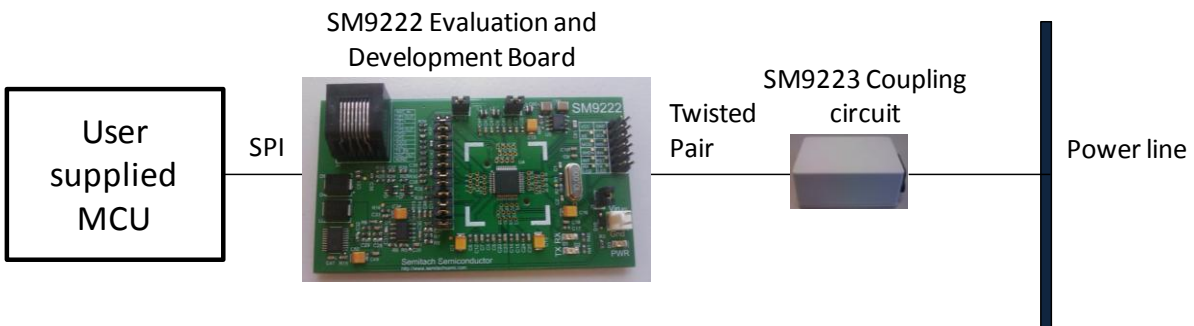
**Typical Standalone Development Setup Diagram**



**Typical Twisted Pair Development Setup Diagram**



**Typical Power Line Networking Development Setup Diagram**



## Applications

The *SM9222 Evaluation and Development Board* is ideally suited for:

- The evaluation of SM2200 electrical specifications and operation
- Twisted pair networking of more than one SM2200 power line transceiver for the development of networking applications
- Development of power line networking products or applications with the SM9223 power line coupling circuit

As can be seen in the diagrams above there are three main methodologies for setting up the *SM9222 Evaluation and Development Board*. The Standalone Development Setup Diagram is ideally suited for the evaluation of the electrical properties of the SM2200 Power Line Transceiver.

The Twisted Pair Development Setup Diagram is suited to development of networking software applications. This has the advantage of being able to perform networking applications independent of the power line.

The Power Line Networking Development Setup Diagram shows a *SM9222 Evaluation and Development Board* connected to a SM9223 Coupling circuit. This setup allows for the development and testing of application that require power line operation.

### Contact Information

For more information regarding the *SM9222 board* including reference design, pricing and ordering please contact:

Semitech Semiconductor Pte Ltd

[www.semitechsemi.com](http://www.semitechsemi.com)

[sales@semitechsemi.com](mailto:sales@semitechsemi.com)

### Revision (051-03)

Version	Description	Date
0.1	Draft	28/10/2010
1.01	Initial Release	22/11/2010
1.02	Updated formatting	07/01/2011
1.03	Updated formatting	09/05/2011