POWER LINE
COMMUNICATIONS

N-PLC Transceiver

SM2400 EVK2

Complete Evaluation Kit for SM2400 N-PLC Modem

Configurable Evaluation Kit (V2)

Improved solution with flexible interfaces to facilitate engineering evaluation via a PC-based GUI application. Easily enables comprehensive configuration, control and monitoring/testing of the communication performance of the SM2400 modem subsystem

Kit includes a baseboard for flexible connectivity and a swappable modem module for optimized configurations

Complete EVK: Baseboard + Modem module

Product Overview

Baseboard

- mini-USB for PC connection and JTAG connector
- UART and SPI interface
- External 12V/15V DC supply
- Zero Crossing Detector

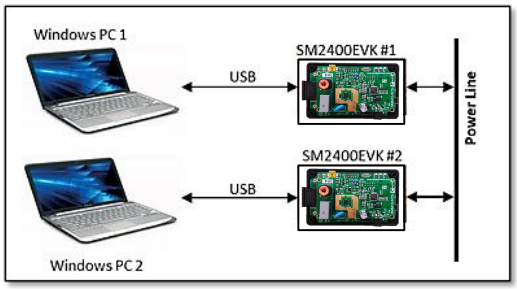
Interchangeable Modem Modules

- Module Dimensions: 83mm(L) x 45mm(W)
- Built-in power line coupling circuit
- Modules with optimized operational bands
  - CENELEC A
  - CENELEC B/C
  - FCC/ARIB
  - Full Band
- Line Driver Options
  - Texas Instruments
  - Intersil
  - Discrete Front End
  - SG Micro
  - ON Semiconductor

Modem Module

Downloadable Firmware builds

- OFDM: PRIME, G3-PLC, IEEE 1901.2, Full-Band Mode
- XXR High Robust mode
- SunSpec
- Simple Mesh Networking (SMESH)



Evaluation Configuration

Kit Content & Configurations

Includes:

- Base board
- SM2400-EV1-Mn-x module
- USB cables
- User Guide (Download)
- Firmware + GUI (Download)
- DC Power Supply

Additional firmware packages become available from time to time. These and other reference material such as schematics and bill of material is downloadable from the Adesto Technologies website.

Evaluation Kit Ordering Options:

SM2400-EVK2M*n*-*x*

n:
- 1 = Texas Instruments Line Driver
- 2 = Intersil Line Driver
- 3 = Discrete Front End
- 4 = SG Micro Line Driver
- 5 = ON Semiconductor Line Driver

x:
- A = CENELEC A Band
- B = CENELEC B/BC Band
- C = FCC Band
- D = Full Band

Adesto

Interfaces

There are 4 headers on the back of the SM2400-EV1Mn-x modules. The designator Pin 1 and the location of each header can be found in the board layout on the right. The pin out and description of each header is described below

Header H2

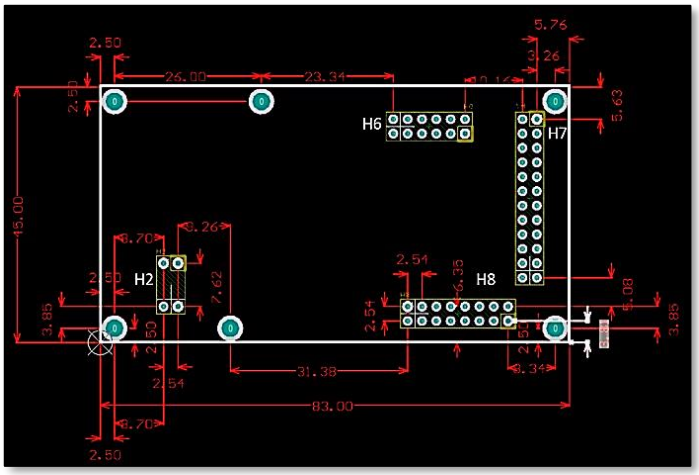
Pin #	Name	Functionality
1,2	ACTIVE	Mains Active
3,4,5,6	NC	
7,8	NEUTRAL	Mains Neutral

Header H6 (DNP)

Pin #	Name	Dir	Functionality
1	JTDO	O	JTAG Interface
2	JTMS	I	JTAG Interface
3	JTDI	I	JTAG Interface
4	JTCK	I	JTAG Interface
5	JTRSTB	I	JTAG Interface
6	GND	P	Ground
7	COREIO14	IO	COREIO
8	COREIO10	IO	COREIO
9	COREIO12	IO	COREIO
10	COREIO13	IO	COREIO
11	NC		
12	GND	P	Ground

Header H8 (DNP)

Pin #	Name	Dir	Functionality
1	NC		NC for SM2400 based module
2	SPIM_OUT	O	SPI Master Interface
3	SPIM_SCK	O	SPI Master Interface
4	SPIM_IN	I	SPI Master Interface
5	SPIM_SS0b	O	SPI Master Interface (Mapped to on board SPI boot memory)
6	SPIM_SS1b	O	SPI Master Interface
7	SPIM_SS2b	O	SPI Master Interface
8	GND	P	Ground
9	COREIO02	IO	PHYLED (Output)
10	COREIO01	IO	RXRANGE1 (output)
11	COREIO00	IO	RXRANGE0 (output)
12	COREIO11	IO	Overcurrent Flag (Output)
13	COREIO09	IO	COREIO
14	COREIO08	IO	TX Enable (Output)
15	GND	P	Ground
16	NC		NC for SM2400 based module



SM2400-EV1Mn-x Top View

Header H7

Pin #	Name	Dir	Functionality
1	NC		NC for SM2400 based module
2	NC		NC for SM2400 based module
3, 4	3V3	P	External 3.3V Supply
5, 6	AFE_VCC	P	15V @ 125mA
7, 8, 9	GND	P	Ground
10	UART_TDO	O	SM2400 UART TXD
11	UART_RDI	I	SM2400 UART RXD
12	UART_HSI	I	SM2400 UART Handshake Input
13	UART_HSO	O	SM2400 UART Handshake Output
14	Mode2	I	Boot mode pin 2
15	Mode1	I	Boot mode pin 1
16	Mode0	I	Boot mode pin 0
17	RESETb	I	Reset
18	COREIO15	IO	COREIO
19	GND	P	Ground
20	SPIS_OUT	O	Host SPI Slave Interface
21	SPIS_SCK	I	Host SPI Slave Interface
22	SPIS_IN	I	Host SPI Slave Interface
23	GND	P	Ground
24	SPIS_SSb	I	Host SPI Slave Interface

Fast Comprehensive Evaluation Tool for Rapid Deployment

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