

Dims (L x W): 57.8mm x 21.8mm

OVERVIEW

A Green PHY compliant powerline communication (PLC) modem designed for use in Electric Vehicle Supply Equipment (EVSE) in accordance with the IEC/ISO 15118 standard for road vehicle to grid digital communication.

The module consists of a Green PHY transceiver, on-board transformer and coupling components that allow it to be connected to a customer provided Control Pilot line.

An optional non-isolated zero-cross digital input is provided to allow coexistence with PLC running over mains wiring.

PIN DESIGNATIONS & DESCRIPTIONS

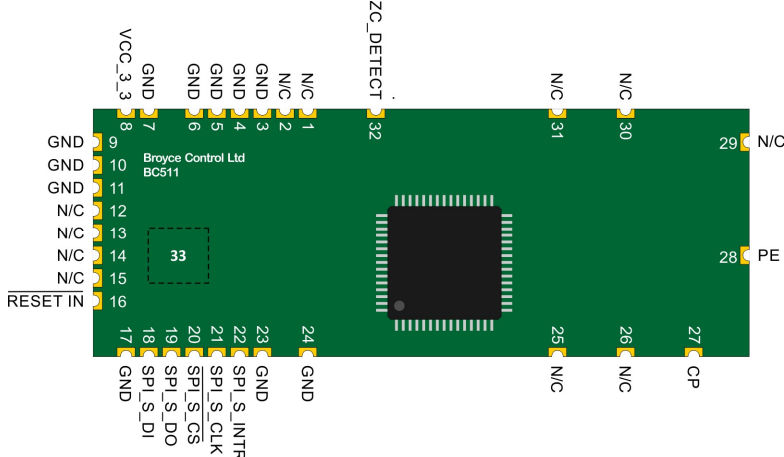


Fig. 2 Pin Arrangement

Pin	Name	Type	Description
3, 4, 5, 6, 7, 9, 10, 11, 17, 23, 24, 33	GND	Power	-
8	VCC_3_3	Power In	3.3V DC power input
16	RESET_IN	Reset In	Active low reset signal to allow the host microcontroller to manage booting of the module (Optional)
18	SPI_S_DI	Data In	Master Out Slave In (MOSI) line of the module SPI slave interface
19	SPI_S_DO	Data Out	Master In Slave Out (MISO) line of the module SPI slave interface
20	SPI_S_CS	Digital In	Active low SPI chip select asserted by the host microcontroller when communicating with the module (3.3V)
21	SPI_S_CLK	Digital In	SPI clock input from the host microcontroller
22	SPI_S_INTR	Digital Out	Interrupt line to instruct the host microcontroller that the module has data to return (3.3V)
27	CPL	Signal	Control Pilot
28	PE	Power	Protective Earth
32	ZC_DETECT	Digital In	Non-isolated AC mains zero crossing detect input (3.3V, Optional)
1, 2, 12, 13, 14, 15, 25, 26, 29, 30, 31	N/C	-	No connection

- Designed specifically for EVSE
- Compliant with IEC/ISO 15118-3
- 3.3V DC operation
- On-board transformer and coupling components for connection to customer CP line
- Built-in overvoltage protection
- Industrial temperature range operation
- Line-driver included resulting in greater noise immunity and allowing longer cable runs
- Low profile, small form factor design utilising single-sided components
- Surface mount assembly suitable for reflow soldering



BLOCK DIAGRAM

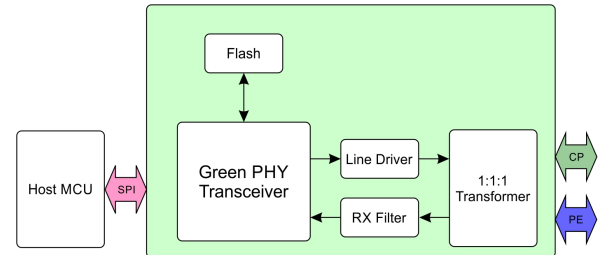


Fig. 1 Basic Block Diagram

TECHNICAL SPECIFICATION

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit
Supply voltage:	V _{CC_3_3}			3.6	V
Supply current:	I			500	mA
Ambient operating temp.:	T _A	-40		+85	°C

Operating Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit
Supply voltage:	V _{CC_3_3}	3.13	3.3	3.47	V
SPI_S_CLK frequency:		6		7.14	MHz

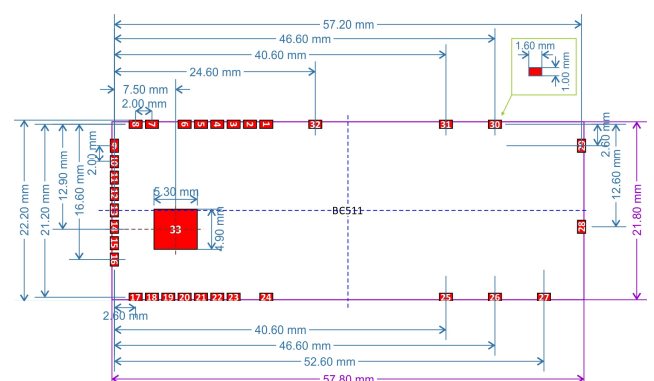
General

Printed Circuit Board

Dimensions (W x L x H ¹):	57.8 mm x 21.8mm x 6mm ¹
Material:	FR4, UL94-V0, 1.6mm
Connections:	Refer to drawing on left
Approvals:	CE and RoHS Compliant.

¹ overall height includes components

PCB FOOTPRINT



Notes:

For optimum performance, avoid routing signal traces beneath the module.