# PL360G55CB-EK

## PL360G55CB-EK Quick Start Guide

## Overview

PL360G55CB-EK is an evaluation kit for the PL360 modem, a multi-protocol device to implement standard and customized PLC solutions. PL360G55CB-EK includes a SAMG55 ARM® Cortex®-M4 microcontroller, which provides a full-featured platform to develop a complete communication system over PLC technology.

## Getting Started

**Attention:** Before starting, please obtain PL360G55CB-EK online resources from the Microchip website. Please follow the instructions in the welcome letter included with this kit.

**Important:** This guide assumes the use of 2 units of PL360G55CB-EK board running a G3-PLC PHY Tester.

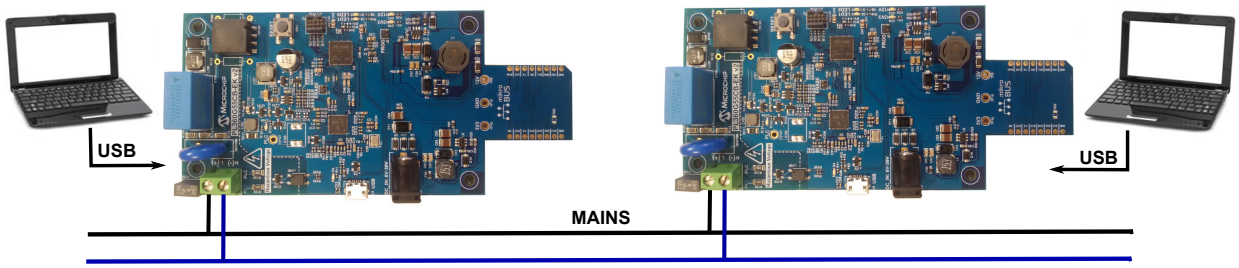
### Power-Up

The board can be supplied with the included USB cable or from an external DC power supply ranging from 6V to 30V. When powered-up, LED 3V3 and LED 12V turn on. Please check the *PL360G55CB-EK User Guide* to learn more about the power supply requirements.

The kit comes already programmed with the G3-PLC PHY Tester for CENELEC-B application, allowing the transmission and reception of PLC messages at PHY layer level. LED0 (green) blinks to indicate that the application is running. LED1 (red) flashes when a PLC message is received and LED D104 (yellow) will flash at each transmission.

### Running the PHY Tester Demo

**Figure 1. PLC Test Setup**




1. Download *Microchip PLC PHY Tester* from the online resources site and install it

2. Power-up PL360G55CB-EK board #1 connecting it to a PC using the included micro USB cable
3. Launch the PHY Tester PC Tool, select the serial COM port assigned to board #1 and 230400bps for the baud rate
4. Follow on-screen instructions and configure a Tx test
5. Power-up PL360G55CB-EK board #2 connecting it to a PC using the included micro USB cable
6. Launch the PHY Tester PC Tool, select the serial COM port assigned to board #2 and 230400bps for the baud rate
7. Follow on-screen instructions and configure an Rx test
8. Start Rx test in PL360G55CB-EK board #2
9. Start Tx test in PL360G55CB-EK board #1
10. Transmitted frames from board #1 are received in board #2

For more information about usage and configuration of the PLC PHY Tester Tool, please check the user manual embedded in the tool: **Help** tab > **User Manual**.

## Navigating the Kit



**Important:** In order to explore all the features of this kit, please check the firmware user guides provided with the online contents of the EK.

### Online Resources

PL360G55CB-EK is complemented with a set of online resources. To access these resources, please follow the procedure described in the welcome letter. These online resources include:

- Board schematics, PCB layout and Bill of Materials
- Last version of supported firmware stacks for Power Line Communications
- Set of PC tools to evaluate the performance of Microchip PLC solutions

### Firmware Projects

PL360G55CB-EK currently supports only G3-PLC protocol. The G3-PLC firmware stack includes several projects and examples of use. For more information about the firmware projects and how to build and debug the different examples, please read the appropriate documentation provided with the online contents of the kit:

- *G3-PLC Firmware Stack*

### Tools

Some of the projects included in the firmware release require a PC application:

- G3-PLC Manager PC Tool: enables users to easily interface with the highest layer of the provided PLC stacks
- PHY Tester Tool: provides users with complete access to PHY layer configuration. Excellent tool for point-to-point tests
- PHY Sniffer: captures, analyzes and displays PLC traffic. Excellent tool for network supervision and debugging

For more information about the tools, please read the documentation of the firmware stack.

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## Revision History

| Revision | Date | Description |
|---|---|---|
| Document | 03/2019 | Initial Release |

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