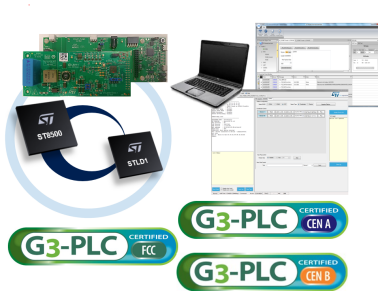


## ST8500 G3-PLC platform development environment for smart city and energy applications



### Features

- Complete power line communication (PLC) package for G3-PLC:
  - Plug and play
  - Certified ST G3-PLC technology supporting worldwide band plan up to 500kHz: FCC (default), CENELEC A, CENELEC B
  - Support for multiple regions and applications with a single design
- Suitable for data communication over AC or DC power line for:
  - Smart home
  - Smart building
  - Smart lighting
  - Smart city
  - Smart railway
  - Energy management systems
  - Smart solar
  - Smart metering
  - Smart grid
- Developed for EVALKITST8500-1 power line communication evaluation kit based on ST8500 and STLD1 devices
- Single modem protocol engine and real time engine firmware images (binaries) for both PAN coordinator and device
- Compatible with the user-friendly STSW-SGKITGUI SmartGrid LabTool PC GUI:
  - Easy modem firmware download
  - Simplified configuration
  - PLC application example panel: command and control, data transfer
- Full open source firmware framework:
  - Based on STM32 general purpose companion microcontroller
  - Command and control and data transfer application firmware example
  - Ready for customer application firmware development and integration
- Full documentation
  - STM32 firmware user manual
  - G3-PLC host interface driver application note

Product status link

[STSW-ST8500G3](#)

# 1 Description

The package includes the documentation and firmware framework for ST G3-PLC technology evaluation, based on the EVALKITST8500-1 kit that embeds all the functions required for plug-and-play G3-PLC power line communication networking.

An intuitive user-friendly graphical user interface (GUI) for the Windows® environment allows the user to upgrade the firmware release, configure and control the evaluation kit and run application commands.

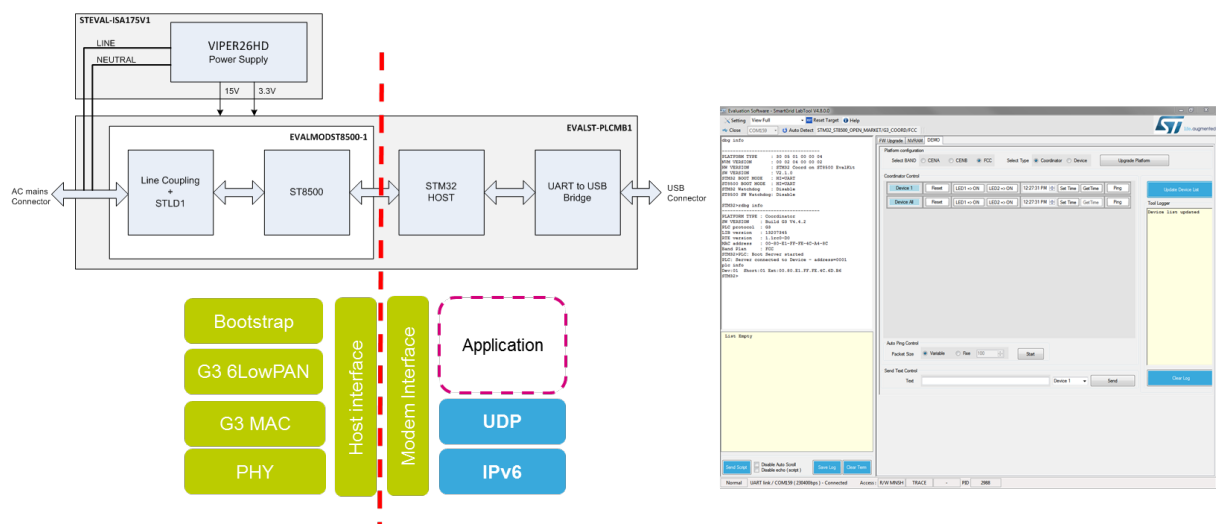
The STM32 application firmware example implements a UDP/IPv6 protocol on top of the 6LowPAN adaptation layer of the G3-PLC communication layers running on ST8500 device

The G3-PLC stack is configured to work in FCC band-plan by default and can be easily configured to work in CEN-A and CEN-B as well.

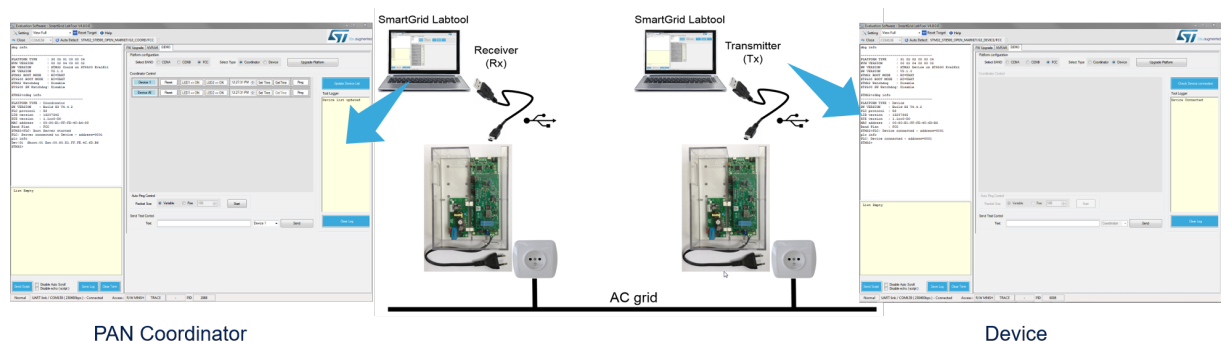
The application example includes remote LEDs control and RTC configuration, nodes ping and string data transfer.

At least two EVALKITST8500-1 kits must be separately ordered in order to run the firmware and application example.

**Figure 1. Block diagram**



**Figure 2. Basic demo setup**



## Revision history

**Table 1. Document revision history**

Date	Version	Changes
10-May-2019	1	Initial release
14-June-2019	2	Features updated

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