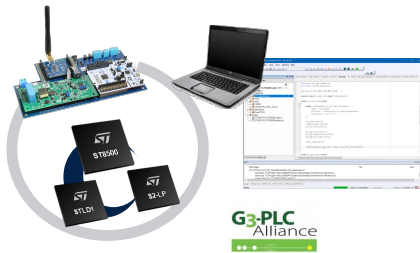# ST8500 hybrid PLC&RF connectivity development kit: G3-PLC hybrid PLC&RF software package

Features

- Complete software package for evaluation and application development based on ST's G3-PLC hybrid PLC&RF connectivity solution
- Developed for ELVKST8500GH868, EVLKST8500GH915 hybrid PLC&RF connectivity development kits based on ST8500, STLD1 and S2-LP devices, as protocol controller, PLC line driver and RF transceiver, and STM32G070RB host controller
- The package includes a single set of Protocol Engine and Real Time Engine modem firmware images (binaries) for G3-PLC hybrid PLC&RF PAN Coordinator and Device
- A complete firmware framework based on CubeMX, ready for customer application firmware development and integration, is included as source code for the host controller
- Easy expansion of the application functionalities is possible through the STM32 Nucleo Open Development Ecosystem, with a wide choice of specialized X-NUCLEO modules that can be connected to the NUCLEO host MCU board

Application

- Smart infrastructure
- Smart industrial
- Smart metering
- Smart grid
- Smart city
- Smart lighting

Product status link
STSW-ST8500GH

Description

The STSW-ST8500GH package provides the software ecosystem for ST's G3-PLC hybrid PLC&RF connectivity technology evaluation, based on the **ELVKST8500GH868**, **EVLKST8500GH915** kits that include all the functions required for plug-and-play communication networking.

The host controller application firmware example allows testing the PLC and RF communication exploiting the IPv6 layer interface of the ST8500 modem.

The G3-PLC hybrid PLC&RF communication stack has full flexibility to be configured in any of the available bandplans for both PLC (CEN-A, CEN-B or FCC) and RF (according to the RF Sub-GHz module selection).
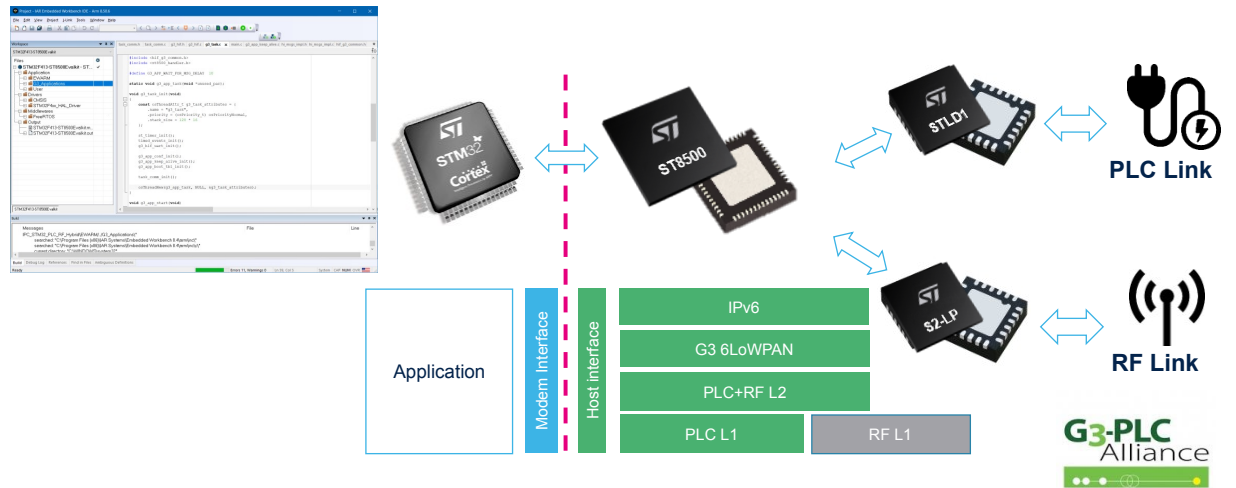
Messages between two nodes in the PLC&RF hybrid network are sent over the best available medium: PLC or RF. The media selection for each link in the network is done automatically and adjusted dynamically, enabling highly efficient hybrid mesh networking.

The ST hybrid PLC&RF solution is based on open standards and enables seamless integration into existing G3-PLC networks and adoption in multiple applications and systems. For more information on the G3-PLC hybrid PLC&RF solution, please visit the G3-PLC Alliance website: https://www.g3-plc.com/what-is-g3-plc/g3-plc-hybrid-plcrf/

Note that at least two EVLKST8500GH868 or EVLKST8500GH915 kits must be ordered to test hybrid PLC&RF connectivity between two nodes.

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For further information contact your local STMicroelectronics sales office.

www.st.com

1   Block diagram

Figure 1. **Block diagram**

Revision history

Table 1. Document revision history

Date	Version	Changes
16-Nov-2020	1	Initial release.

Contents

IMPORTANT NOTICE – PLEASE READ CAREFULLY