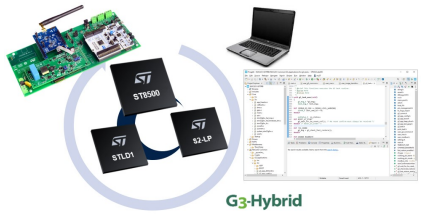
STSW-ST8500GH-2

Data brief

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



Product status link
STSW-ST8500GH-2

Related products
EVLKST8500GH-2
ST8500
NUCLEO-G070RB
NUCLEO-G474RE
STLD1
S2-LP
STM32G07RB

Features

- Complete software package for evaluation and application development based on STMicroelectronic's G3-Hybrid PLC&RF connectivity solution.
- Developed for the EVLKST8500GH-2 hybrid PLC&RF connectivity development kit based on ST8500, STLD1 and S2-LP devices, as protocol controller, PLC line driver and RF transceiver, and STM32G07RB host controller (can be adapted to be retro-compatible with the previous ELVKST8500GH868, EVLKST8500GH915 kits).
- The package includes a single set of Protocol Engine and Real-Time Engine modem firmware images (binaries) for G3-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.
- Hardware compatibility with multiple NUCLEO boards: NUCLEO-G070RB (included in the ELVKST8500GH-2 kit), NUCLEO-G474RE, NUCLEO-L476RG

Applications

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

Description

The STSW-ST8500GH-2 package provides the software ecosystem for STMicroelectronic's G3-Hybrid PLC&RF connectivity technology evaluation, based on the kit that includes 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-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.

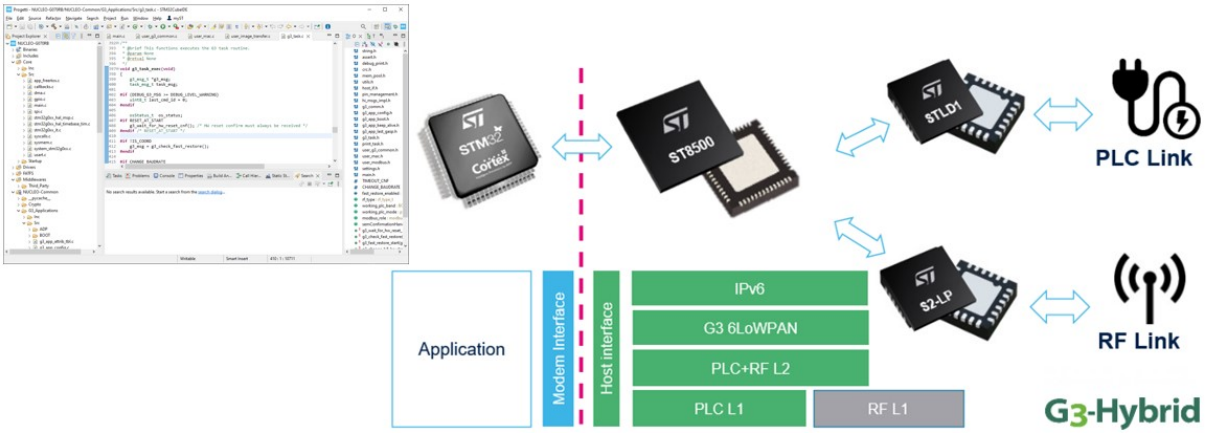
The STMicroelectronic's hybrid PLC&RF solution is based on open standards and enables seamless integration into existing G3-PLC networks and adoption in multiple applications and systems. For more information on the G3-Hybrid PLC&RF solution, visit the G3-Alliance website: https://g3-plc.com/g3-technologies/hybrid-plc-rf-2/.

Note that at least two EVLKST8500GH-2 kits must be ordered to test hybrid PLC&RF connectivity between two nodes.

The STSW-ST8500GH-2 package can also be adapted to be compatible with the previous **ELVKST8500GH868** and **EVLKST8500GH915** kits by re-mapping its pinout.

1 Block diagram

Figure 1. **Block diagram**



Revision history

Table 1. **Document revision history**

Date	Version	Changes
01-Sep-2023	1	Initial release.

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