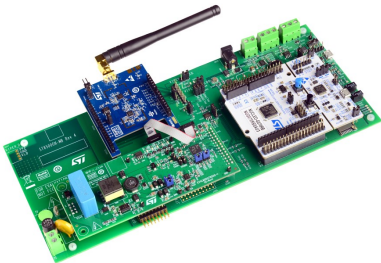


ST8500 hybrid PLC&RF connectivity development kit



Product status link

[EVLKST8500GH-2](#)

Related products

[STSW-ST8500GH-2](#)

[NUCLEO-G070RB](#)

[NUCLEO-G474RE](#)

[NUCLEO-L476RG](#)

[ST8500](#)

[S2-LP](#)

[STLD1](#)

[STM32G070RB](#)

[L6981](#)

Features

- Hybrid PLC&RF connectivity development kit based on STMicroelectronic's market-proven and widely used connectivity chipsets [ST8500](#), [STLD1](#) and [S2-LP](#), respectively, as protocol controller, PLC line driver and RF transceiver.
- Modular board architecture:
 - [EVALMODST8500-1](#), full-feature PLC module based on the [ST8500](#) and [STLD1](#).
 - [EVALS2915A2](#), Sub-1 GHz (860-940 MHz) RF expansion board based on [S2-LP](#) radio.
 - [NUCLEO-G070RB](#) with [STM32G070RB](#) microcontroller as programmable application controller with onboard ST-LINK acting also as USB virtual COM port.
 - [ST8500GH-MB](#) connectivity motherboard including USB-to-dual-UART converter to [ST8500](#), 3V3 supply based on [L6981](#), plus additional features for STM32 application development such as RS485 and CAN transceivers, SD card connector, and SPI FLASH for FW storage.
- 12 V, 1 A universal DC adapter included for easy start and usage.
- Easy expansion of the application functionalities through the STM32 Nucleo Open Development Environment, with a wide choice of specialized shields to be connected to the [NUCLEO-G070RB](#).
- Hardware compatibility with multiple NUCLEO boards: [NUCLEO-G070RB](#), [NUCLEO-G474RE](#), [NUCLEO-L476RG](#).

Applications

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

Description

The EVLKST8500GH-2 hybrid connectivity solution for the ST8500 SoC platform combines the advantages of both PLC and RF technologies to enable applications with the best coverage in any network conditions and topologies.

The user can easily explore features and benefits of the STMicroelectronic's hybrid PLC&RF solution using the EVLKST8500GH-2 kit together with the [STSW-ST8500GH-2](#) firmware and documentation package.

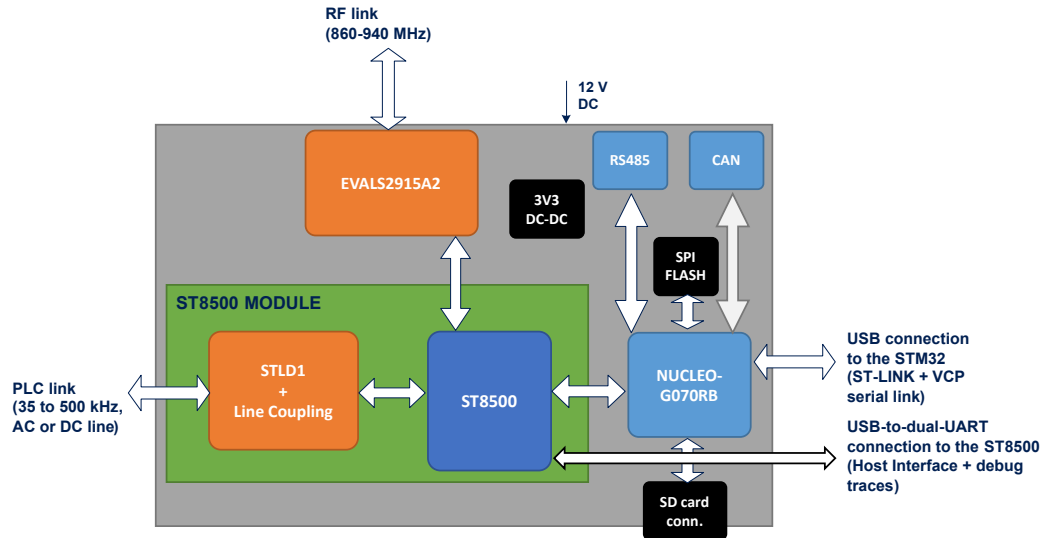
Messages between two nodes in the PLC&RF hybrid network are sent over the best available medium: PLC or RF. The media selection for each link in the network is done automatically and adjusted dynamically, enabling highly efficient hybrid mesh networking.

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.

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

1 Block diagram

Figure 1. Block diagram



Revision history

Table 1. Document revision history

Date	Version	Changes
25-Aug-2023	1	Initial release.



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