

# IS32CG5317 Software Development Kit (SDK)



The Software Development Kit (SDK) is a set of code, documentation and examples provided as part of the Lumissil CG5317 HomePlug Green PHY system solution to ease software developers' integration effort. The SDK includes libraries, APIs, documentation, source code and application samples.

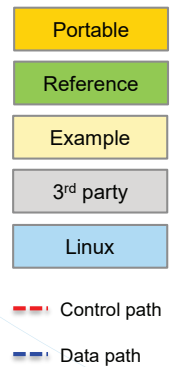
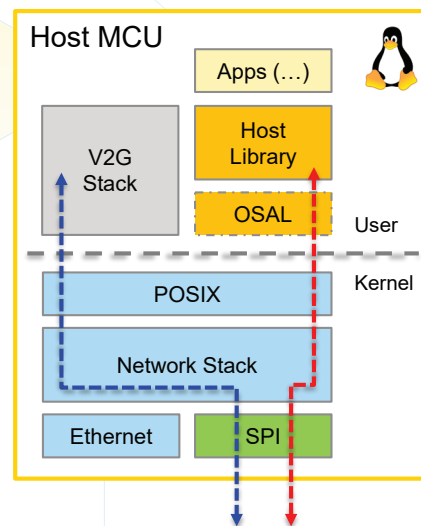
## HOST LIBRARY (PROVIDED AS SOURCE CODE)

**Service Access Point H1** - Supports HomePlug Green PHY (GP) specification H1 SAPs, and other CG5317-specific capabilities (e.g. Host-loading Application); of portable coding suitable for embedded systems, written above an OS Abstraction Layer (OSAL).

**Applications** - The following applications are provided in the Host library:

- **Host-loading Application** - The Host Loading application (service) loads CG5317 with Firmware (FW) and/or the configuration binary files through its Host interface.
- **Programming Application** - The Programming Application loads the FW and the configuration binary files to the FLASH memory connected to CG5317 (if the design utilizes a dedicated FLASH device)
- **Management Application** - This application provides a selection of useful APCM/NSCM (Access Point Control Message / Non-Standard Control Message) used during the evaluation and production phases of development.

## Linux-based realization (simplified)



**SPI Driver** - The SPI driver is written as a Linux Kernel SPI driver; emulating an Ethernet-like interface (Ethernet over SPI). It's a self-contained module planned for released as Open-Source Software (OSS) into mainline Linux.

**MII Driver** - The MII driver provided by the host processor should be used. Lumissil reference design board uses host processor, STM32MP157A.

## PRODUCTION LIBRARY (PROVIDED AS SOURCE CODE)

The Production Library tools are installable on the user's PC. It includes pre-processing APIs and configuration files.

The Production Tools are required in the following use cases:

- HW development (board bring up): testing a CG5317 prototype board's functionality
- Production: Running production tests on the PCB manufacturing assembly line.

The production library contains the follow tools:

- General Purpose PLC configuration
- Amplitude Map
- Noise Floor
- SNR (SNR, Channel, Noise)

## CG5317 FW (PROVIDED AS BINARY FILE)

The CG5317 FW binary is implemented for two host interfaces, namely:

- MII 10/100Mbps Full duplex Ethernet IEEE 802.3 PHY
- SPI based host interface

## ORDERING INFORMATION

Part No.	Package
IS32CG5317SDK	Electronic compressed archive file



The CG5317 SDK can be purchased:

- as a standalone electronic package or
- provided along with the Evaluation Kit (EVK) purchase. Please reference CG5317 EVK product brief for more details.

After purchase, goto the Lumissil CG5317 product webpage, and complete a download request questionnaire. Once approved, download link will be emailed to the requestor.

Note: Executed NDA and SLA (Software License Agreement) are required for SDK access. Please contact your Lumissil Sales Representative for assistance.