

STarGRID™ ST7590T SoC PRIME-certified powerline communication development kit

Data brief

Features

- PRIME-certified powerline communication development kit based on STarGRID™ ST7590T PLC SoC
- Complete and certified EN50065 compliant reference design for modular and integrated PRIME-based application development
- Onboard STM32F103RG microcontroller for system management and application host controller
- AC power supply based on the ALTAIR04-900 quasi-resonant current mode SMPS controller
- RS232 / RS485 host interface to STM32F103RG microcontroller with opto-couplers for double insulation
- Intuitive graphical user interface (GUI)
- Suitable for CENELEC EN50065 and FCC part 15 compliant applications



industrial implementation and customization, as well as to provide ready and customizable solutions for any special, low-volume application.

Description

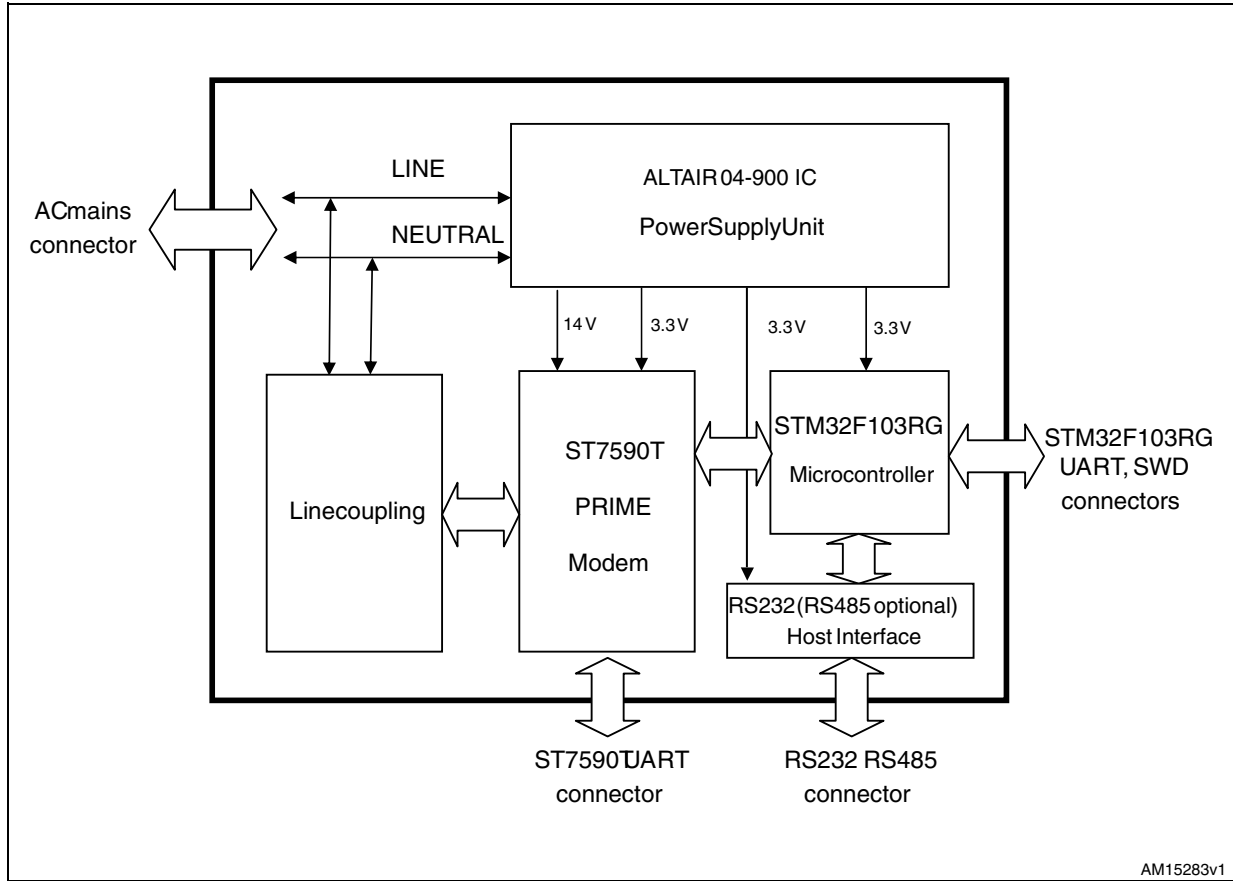
Based on the ST7590 powerline communication system-on-chip, the EVALST7590T-2 development kit embeds all the functions required for a turnkey powerline communication network: the PLC node is based on the ST7590T device, the AC power supply is based on the ALTAIR4-900 SMPS controller and the STM32F103RG microcontroller, to either control the system as a standalone application or to connect the EVALST7590T-2 to an external host.

The EVALST7590T-2 embeds ST's full PRIME-compliant protocol stack and provides a complete reference for PRIME-based applications such as smart meters or concentrators, and is an ideal standalone tool for in-field PRIME network tests.

The EVALST7590T-2 kit supports DLMS/COSEM libraries and has been jointly developed by ST and Fideltronik to accelerate high-volume

1 Schematic diagram

Figure 1. EVALST7590T-2 block diagram



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
19-Nov-2012	1	Initial release.

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