



STCOMET

Future-proof smart grid solutions



Explore and benefit from all the capabilities of the SoC smart grid powerline communication platform

The STCOMET platform embeds all the functions required to build high performance electricity meters for smart grid applications. Its multi-core architecture enables communication and metrology firmware to be handled independently to ensure legal separation.

STCOMET devices a complete powerline communication module with programmable modem, complete RX-TX analog front end and power amplifier for direct connection to the external coupling network as well as a complete three-channel metrology analog front end and hard-wired DSP for high accuracy energy measurement.

The STCOMET platform is fully supported with hardware, software and firmware modules to ensure a fast time-to-market.

KEY FEATURES

- Integrated, high-performing, re-programmable powerline modem compatible with narrowband PLC standards such as ITU G.9903/PLC-G3, ITU G.9904/PRIME v1.3.6 and PRIME v1.4, Meters and More
- Fully integrated smart powerline driver with extended 500 kHz bandwidth for CENELEC, ARIB, FCC frequency ranges
- Optional three-channel analog front end and hard-wired DSP for turnkey class 0.2 meters
- State-of-the-art application core based on ARM® 32-bit Cortex® M4F CPU for application management
- Up to 1 Mbyte embedded Flash memory
- Secure connectivity based on future-proof AES 128/256 encryption engine, secret key management and optional smartcard interface
- -40 to +85°C operating temperature range
- 144-lead, 20 x 20 mm TQFP ECOPACK® package

KEY APPLICATIONS

- Smart metering and smart grids
- Street lighting control
- Smart energy management
- Home/building automation



STRAIGHT INTO YOUR DESIGN

STCOMET platform comes with a complete suite of hardware tools, including evaluation and development boards and reference design, certified powerline communication protocol stack firmware libraries and a software integration toolchain to ensure the shortest path from evaluation to prototyping and certification to mass production.

HARDWARE TOOLS

- Single-phase meter development boards
 - Schematics
 - Gerber files
 - Bill of materials (BOM)
 - Firmware / Software / GUI
- Compact smart meter reference design
- Digital connector for 3-phase metering
- PRIME 1.3.6 and G3-PLC certified
- PRIME 1.4 ready

SOFTWARE INTEGRATION TOOLCHAIN

- IAR embedded workbench
- Peripheral drivers
- Metrology management software
- Memory protection unit management
- Legal firmware separation example
- Remote firmware upgrade example
- Free RTOS integration examples for PRIME and G3
- Software/firmware documentation
- Network emulator test bench

DESIGN SUPPORT RESOURCES

- Design documentation
 - Datasheets
 - User manuals
 - Programming manuals
 - Application notes



PLC PROTOCOL STACK FIRMWARE LIBRARIES

- G1-S-FSK and IEC 61334-5-1
 - PHY and MAC
- PLC-G3 certified
 - PHY, MAC and 6LowPan
 - Coherent modes
 - Full CENELEC and FCC bands support
- PRIME 1.3.6 certified and 1.4
 - PHY, MAC and IEC 61334-4-32
 - Full CENELEC and FCC bands support

PRODUCT TABLE

Order code	Embedded Flash Size	Metrology Section
STCOMET10	1024 Kbytes	Yes
STCOMET05	512 Kbytes	Yes
STCOM10	1024 Kbytes	No
STCOM05	512 Kbytes	No



Scan this QR-code to visit our website
www.st.com/powerline

