

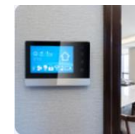
## Overview

WQ3011 is the first HPLC chip developed based on the open source RISC-V architecture and achieved mass production in China. Adopting the OFDM technology, WQ3011 supports the latest communication protocols of the State Grid Corporation of China and the China Southern Power Grid, and is compatible with mainstream international standards. The chip operates in frequency bands in the range of 0.1~30 MHz, and supports data transmission on existing power lines, with the features of high transmission rate, good anti-interference performance and fast networking.

## Functions

- Built-in AFEs (LineDriver, LNA, and BandpassFilter).
- Adopts dual-core 32-bit RISC-V CPU in high performance (up to 480 MIPS).
- Supports the self-developed multi-mode PLC PHY with outstanding anti-interference performance.
- Provides six high-speed ADCs in high precision.
- Provides various SPIs, UARTs, and PWMs for IoT peripherals.
- Provides large memories and Flash to support customized development.
- First four-in-one chip in the industry (HPLC, International/China national encryption security, AFE, RISC-V dual core CPU).

## Applications



All-in-one smart home



Lighting management



Centralized electricity meter reading



Power management system

## Block Diagram

