

## PRIME-PLC Powerline Transceiver

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### General Description:

The HT8910 is a Power Line Communications (PLC) System-on-Chip (SoC) that implements a full OFDM PLC Modem compatible to the latest PRIME specifications (Powerline Intelligent Metering Evolution), the first in China. It includes an MCU based on an enhanced 8051 CPU, hardware support units for the Medium Access Controller (MAC) and a Modem circuit for Power Line medium.

The inherent reliability of OFDM technology provides substantial improvement in PLC network and communication performance over other low-cost communication methods. The HT8910 is the ideal basic communications element for a wide variety of PLC networking applications.

The HT8910 integrates an enhanced 8051 core, large data SRAM, and embedded Flash sufficient to support PRIME MAC, PRIME CL432 Convergence Layer and IEC 61334-4-32 LLC Layers. In addition to the SoC, Hitrend offers optimized PRIME software stacks and development kits as well as implementation support.

The HT8910 comes with LQFP64 package and its ambient operating temperature range is  $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$  ideal for industrial applications.

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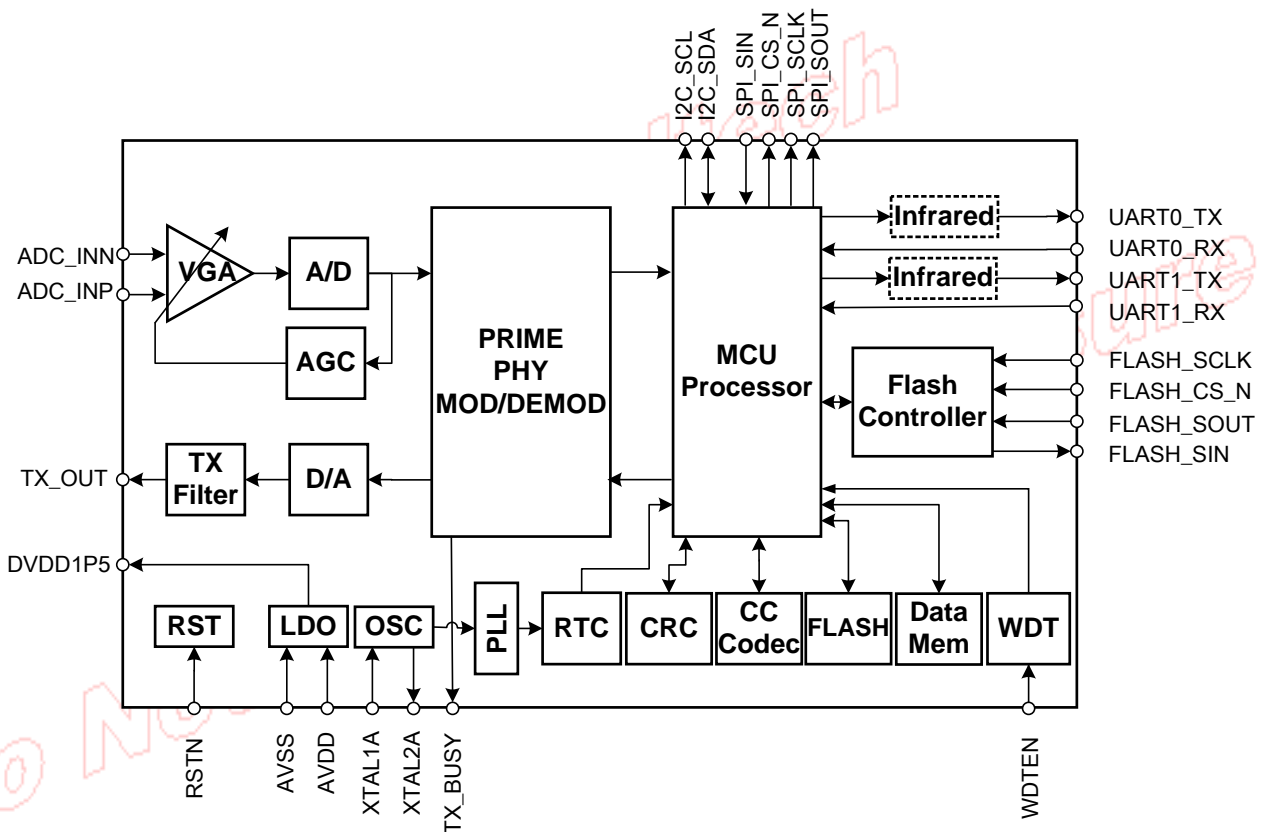
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### Features:

- Modulation: 97 OFDM sub-carriers in DBPSK, DQPSK, D8PSK
- Carrier frequencies: 42kHz to 88kHz
- Bit rate: 21400 to 128600 bps
- Convolutional encoding and Viterbi decoding
- CRC error detection in hardware
- Enhanced 8051 core
- AES-128 encryption hardware engine
- Automatic Gain Control
- Automatic Level control
- Multiple UART ,SPI and I2C peripheral interfaces
- Multiple DMA threads
- In-application programming (IAP) of Flash to support firmware update over PLC
- Receive Sensitivity < 10dBuV
- Static Power < 15mA
- Power Supply 3.3V / 5V
- Ambient Temperature Range: -40°C to 85°C
- LQFP64 10x10 Package

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## Block Diagram:



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## PIN Assignment:

