

PLC stamp micro2

Introduction

The PLC (PowerLine Communication) module gives your application access to powerline communication based on the HomePlug® Green PHY™ Chip QCA7000 / QCA7005. You can realize point-to-point and multi-point connections depending on your application. The data will be transmitted as Ethernet packets over the power line. This gives you the opportunity to use TCP/IP or whatever network protocols you wish to use. You can freely select the galvanic isolation from the powerline and the power supply so that it perfectly meets the requirements for your application. The QCA7000 / QCA7005 by Qualcomm Atheros ensures compatibility with many other commercial powerline devices. The main difference between the QCA7000 and QCA7005 is the chip package. The QCA7000 has a traditional QFN package, whilst the QCA7005 has a modified QFN for better optical inspection that is intended for use in automotive applications with highest quality requirements. The default option for these modules is the QCA7000.

Key Features

- ISO 15118/3 compliant
- SPI Interface up to 12MHz
- low Power consumption
- Smallest PLC Module

Application

- interconnecting household appliances to the Smart Grid

- connecting smart meters to Smart Meter Gateways and/or LAN/WAN/WiFi
- connecting sensors and photovoltaic equipment
- connecting heating and air conditioning system
- coupling machines and measurement devices
- forwarding digital signals (remote I/O)
- coupling of RF cells for home automation

Interfaces

- Powerline: 230 V AC, 110 V AC, DC, dead-wire 2-wire-connections
- Serial interfaces: UART or SPI (order option)

Operational

Parameter	Value
Power supply	3.3 V
Power consumption	0.5 W
Data rate	max. 10 MBit/s
Reach	max. 300 m via Powerline
Temperature range	-40 °C - 85 °C (industrial) / 0 °C - 70 °C (commercial)
Outline dimension	22 x 22 x 4.5 mm
Weight	3.3 g
RoHS / REACH	Compliant

