

QUALCOMM®

# QCA7000

HomePlug® Green PHY  
Single Chip Solution



# QCA7000

## HomePlug Green PHY Single Chip Solution

### Qualcomm® AMP™

This old house has a few new tricks. With connectivity utilizing existing infrastructure, we've got performance wired-in.



The demands of connectivity are growing, but the house is ready to rock thanks to Powerline technology from Qualcomm. Copper power wiring provides the most flexible and scalable spectrum available, capable of reaching virtually any location in any house. Powerline taps this hidden resource to access today's high performance applications and devices, so everyone can experience the magic. And every home can be a digital home. Qualcomm AMP. Performance is in the house.

### Solution Highlights

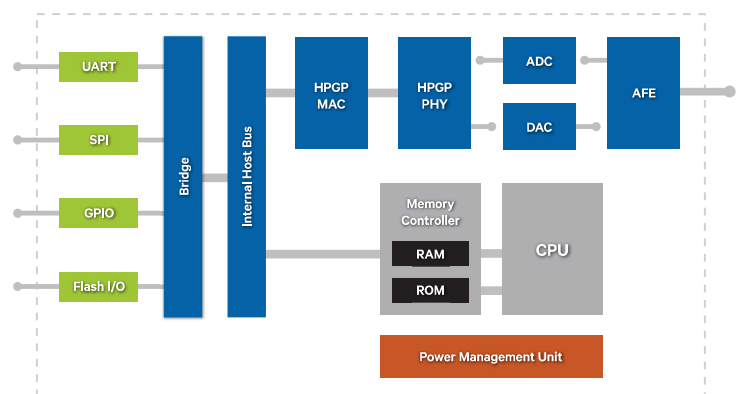
- Compliant with HomePlug Green PHY 1.1 specification
- Interoperable with HomePlug AV specification and IEEE 1901 Standard
- Operates on 240 VAC, 120 VAC, 24 VAC, and DC power lines
- Single chip solution with integrated analog front end and line driver
- Lower cost and power consumption than existing HPAV solutions – ideal for Smart Grid applications
- Extended temperature range for industrial, and smart meter applications
- Host interfaces: SPI (slave) and UART
- Boot from host or external FLASH memory
- Dedicated FLASH memory port (SPI master)
- Supports Robust OFDM (ROBO) mode modulation: 4 Mbps – 10 Mbps PHY rates
- Powered from single 3.3 VDC rail with integrated Power Management Unit
- Supports large 32 node unicast networks - up to 254 broadcast mode devices per AVLN with up to 16 overlapping AVLNs
- SLAC protocol complies with ISO/IEC 15118 requirements

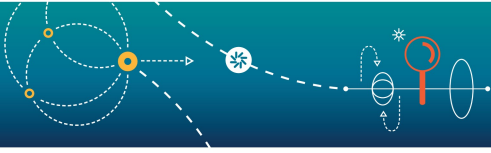
### Product Overview

The QCA7000/7005 is the latest addition to the Powerline Communications (PLC) portfolio of communication ICs from Qualcomm. It is fully compliant with the HomePlug Green PHY (HPGP) specification. HomePlug's Green PHY specification was developed specifically for energy management applications. The QCA7000/7005 has the same range and reliability as the other members of the Qualcomm family of HomePlug compliant IC's. However, the QCA7000/7005 has been designed to meet specific industry requirements for a HomePlug AV interoperable device that offered lower power consumption, lower product complexity and reduced BOM costs.

The QCA7000/7005 is fully interoperable with HomePlug AV and IEEE 1901 compliant products. The QCA7000/7005 features HomePlug Green PHY Distributed Bandwidth Control to ensure effective coexistence with HPAV equipment operating in close proximity on the same power line infrastructure. The IC also supports HPGP Power Save Mode, which enables the IC to enter and exit a low power state on a scheduled basis to maintain network synchronization. The SLAC Protocol is also supported to enable use of the IC in electric transportation applications.

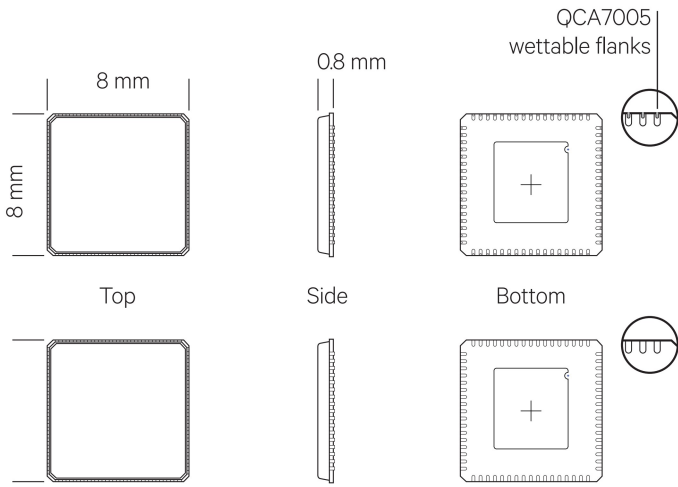
### QCA7000/7005 System Architecture





# QCA7000

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### QCA7000 Specifications

The QCA7000/7005 is available in three pin-compatible variants:

Part Number	Description
QCA7000-AL3C	0 to +70°C, QFN68 package
QCA7000-AL3B	-40 to +85°C, QFN68 package
QCA7005-AL33	-40 to +85°C, QFN68 package Extended environmental qual, wetable flanks

Qualcomm Atheros is a wholly owned subsidiary of Qualcomm Technologies, Inc. and a leading provider of wireless and wired technologies for the mobile, networking, computing and consumer electronics markets. We're focused on inventing technologies that connect and empower people in ways that are elegant and accessible to all.

Our broad connectivity portfolio allows us to offer our global customer base high-performance, end-to-end solutions, featuring Wi-Fi®, GPS, Bluetooth®, FM, Ethernet, HomePlug™ Powerline and PON technologies. By leveraging substantial expertise in RF, signal processing, software and networking we can deliver highly-integrated, low-power, system-level solutions that enable developers to create high-performance, differentiated products.

For more information, please visit us online @ [qca.qualcomm.com](http://qca.qualcomm.com)



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