



QCA8829

1G EPON ONU SOC
for FTTB and FTTH
applications



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Qualcomm® PON

1G EPON ONU SOC that supports IEEE, CTC, China State Grid and DPoE specifications for FTTB and FTTH applications



Product Overview

The Qualcomm QCA8829 is the industry's smallest, most integrated, ultra-low power 1 Gigabit (1G) Ethernet passive optical networking (EPON) chip solution optimized to enable next-generation optical broadband access to homes and businesses. The QCA8829 is a first-of-its-kind system-on-chip (SOC) that advances the development of fiber-to-the-home (FTTH) by supporting multiple standards, including those supporting cable operators' optical broadband in North America, provisioning for smart grid applications over PON in China, and EPON infrastructures in markets worldwide.

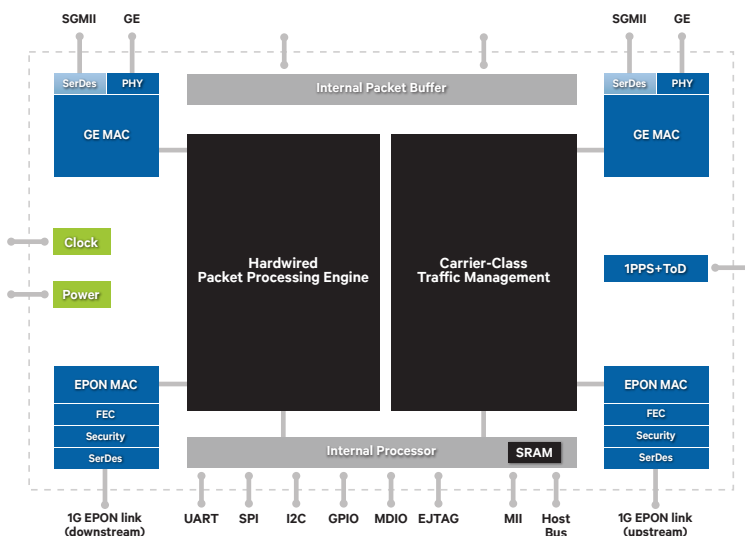
Solution Highlights

- Supports IEEE 802.3ah and CTC EPON specifications
- Supports North America CableLabs DPoE specification 1.0
- Supports China State Grid EPON specifications
- Ultra low power dissipation of <200 mW when running smart grid applications (GE PHY sleep mode enabled)
- Ultra low power dissipation of <600 mW when running full throughput at 1 Gbps with GE PHY activated
- Extreme small package of 9x9 mm using QFN76
- Hardwired, high performance, low latency packet engine that enables carrier-class traffic management and QoS
- High level of integration including SerDes and GE PHY

As the second generation EPON optical networking unit (ONU) within the Qualcomm PON device family, the QCA8829 is designed to fully implement IEEE 802.3ah requirements and is compliant to the North American Data Over Cable Service Interface Specification (DOCSIS®) Provisioning of Ethernet (DPoE) 1.0 specification, the China State Grid EPON specification, and the China Telecom (CTC) EPON specification. The chip solution is specifically tailored to meet the evolving needs of telecom carriers, cable operators and utility providers.

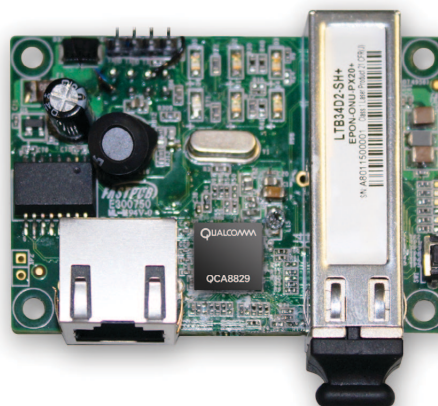
The QCA8829 chip connects to the customer premises equipment through one Gigabit Ethernet (GE) PHY interface for packet data and links with the optical module through serial input and output interfaces, which transmit and receive data to and from a passive optical network. Compared to the first generation ONU SOC, the QCA8829 provides a more enhanced feature set. QCA8829 integrates more advanced functionalities into the functional blocks of CPU, PON MAC, packet processing engine, traffic management, and advanced power management, as well as packet buffer and GE PHY/SGMII. The QCA8829 is a highly integrated and cost effective solution for EPON system manufacturers.

QCA8829 System Architecture

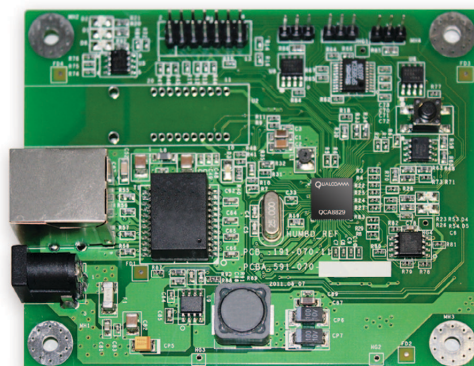




RDK for smart grid applications



RDK for EPON applications



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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.

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