

# Marvell® AQRATE GEN3 Ethernet PHYs

5GBASE-T/2.5GBASE-T/1000BASE-T/100BASE-TX Ethernet PHYs

## Overview

The Marvell® AQRate GEN3 PHYs are low-power, full-reach, Multi-Gig (5GBASE-T/2.5GBASE-T/1000BASE-T/100BASE-TX) Ethernet PHY transceivers. These high-performance devices AQRate enable the broad-based market adoption of Multi-Gig network connectivity through existing Cat 5e and Cat 6 cabling infrastructure. AQRate PHYs are compatible with the IEEE 802.3bz standard PHY Specification to perform all the physical layer functions that are required to implement 5GBASE-T/2.5GBASE-T/1000BASE-T/100BASE-TX transmission over more than 100 meters of twisted pair cabling.

AQRate GEN3 devices are designed to support the introduction of higher-speed wired connectivity solutions for enterprise, data center, SMB/SOHO carrier and industrial/scientific/medical markets (ISM). The AQRate GEN3 PHY family integrates such

features as Energy Efficient Ethernet (EEE), Synchronous Ethernet (Sync-E), Precision Time Protocol (PTP)/1588v2, supports all PoE standards up to 100W, and supports jumbo packets up to 16KB in all operating modes.

### AQRate GEN3 Features

- 5GBASE-T, 2.5GBASE-T: over 100 meters of Cat 5e or better cabling
- Energy-Efficient Ethernet (EEE)
- MACsec (IEEE 802.1ae, MAC security standard)
- Integrated Wake-on-LAN (WoL) Support
- Built-in Thermal Management
- Advanced Cable Diagnostics

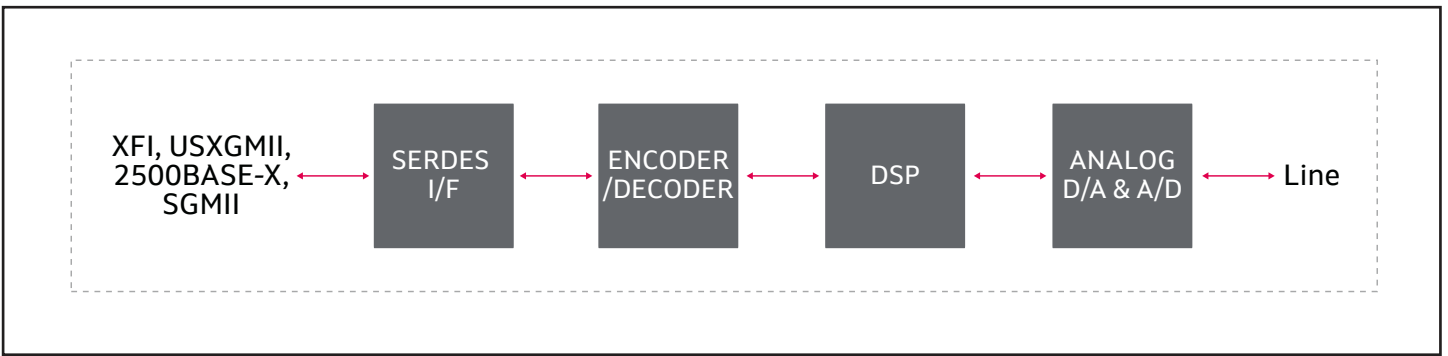
## Ordering Codes

Part Number	Speed	Package
AQR 411C	Quad-port, 5Gbps	14 x 12 mm
AQR412C	Quad-port, 2.5Gbps	14 x 12 mm
AQR111C	Single-port, 5Gbps	7 x 7 mm
AQR111	Single-port, 5Gbps	7 x 11 mm
AQR112C	Single-port, 2.5Gbps	7 x 7 mm
AQR112	Single-port, 2.5Gbps	7 x 11 mm

## Target Applications

- Switches
- Enterprise access points
- Carrier premises equipment
- Home Gateway

## Block Diagram



Marvell first revolutionized the digital storage industry by moving information at speeds never thought possible. Today, that same breakthrough innovation remains at the heart of the company's storage, networking and connectivity solutions. With leading intellectual property and deep system-level knowledge, Marvell semiconductor solutions continue to transform the enterprise, cloud, automotive, industrial, and consumer markets. For more information, visit [www.marvell.com](http://www.marvell.com).

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