

Marvell® AVB Switch

7-Port Unmanaged AVB Switch with Energy Efficient Ethernet

Overview

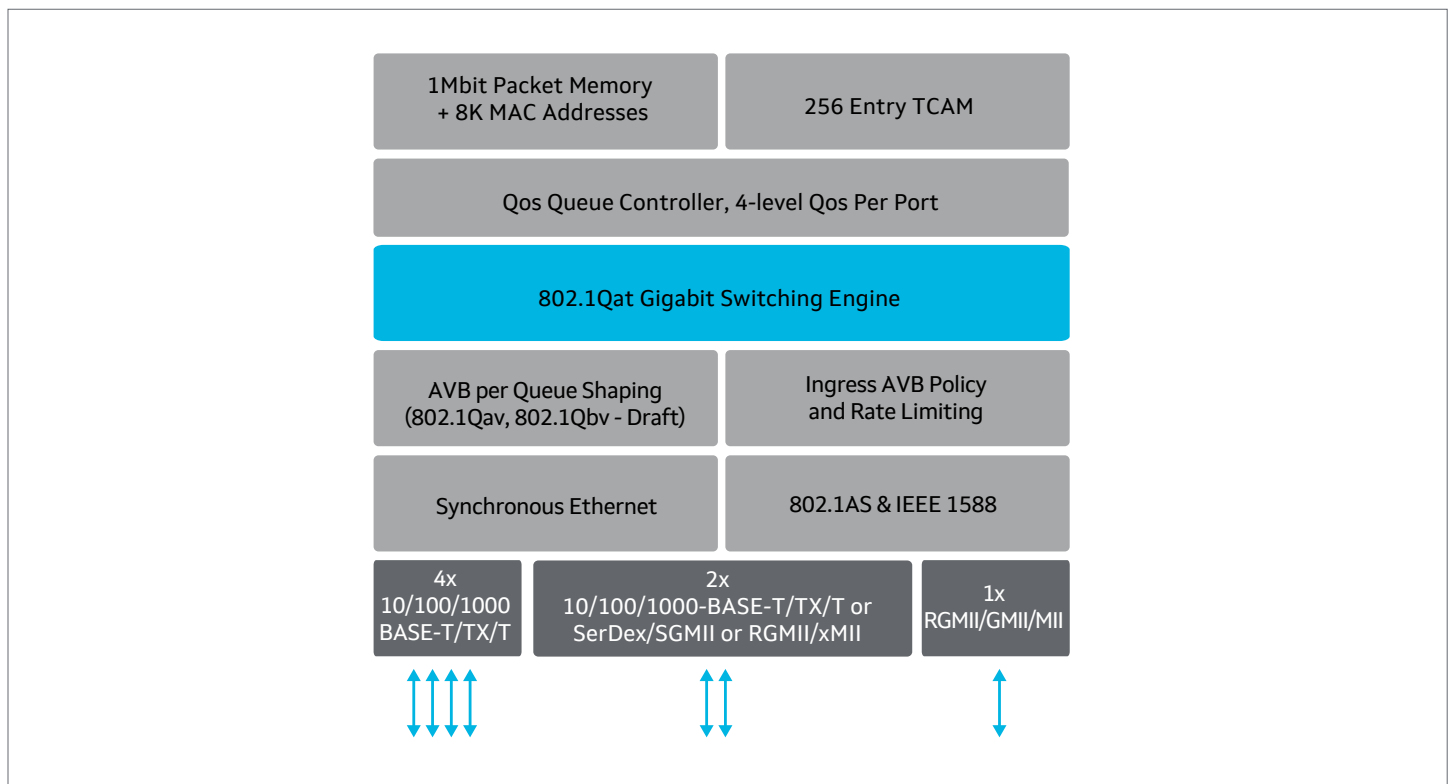
Marvell's first-generation automotive Ethernet switch, 88EA6352, is a 7-port Ethernet gigabit capacity switch with Audio/Video bridging capabilities as per IEEE802.1 AVB standards' supporting Energy Efficient Ethernet (EEE) for reduced power consumption.

The 7-port Ethernet switch offers 5 integrated IEEE 10/100/1000BASE-T/TX/T PHYs, 2x RGMII/MII/ RMII /GMII ports, and 1x SGMII or Serdes port. The switch offers local and remote management capabilities, providing easy access and configuration of the device.

This switch utilizes AVB technologies to identify and reserve network resources for AVB traffic streams and precise streaming capabilities to for time sensitive multimedia streams such as digital audio, video to be sent over Ethernet network with low latency and robust Quality of Service.

The device is optimized for ultra-low power performance with Energy Efficient Ethernet reducing the power by 50% during periods of low data activity. It also supports Wake-on-LAN and wake of Frame event detection allowing an attached CPU to enter sleep mode achieving even greater system power savings.

Block Diagram



Marvell 88EA6352 Automotive Ethernet Switch

Key Features

Features	Benefits
IO Interfaces	<ul style="list-style-type: none">• 5x IEEE 10/100/1000BASE-T/TX/T• 2x RGMII / MII/RMII/GMII• 1x SerDes/SGMII• MDI Interface• Configurable GPIOs• Single Dual color LED support• 25MHz External Clock source
Package Characteristics	<ul style="list-style-type: none">• 128-pin LQFP package, 0.4 mm pitch, 14mmx14mm
EEPROM	<ul style="list-style-type: none">• Supports 4-wire 93C56/93C66 or 2-wire 24C01/24C02/24C04 to configure attached EEPROMs and slave configurations

Key Features

- Support Audio/Video Bridging (AVB)
- AEC-Q100 Grade 3 qualified
- PHYs support Energy Efficient Ethernet (EEE) as per 802.3az
- TCAM-based Policy Control List (PCL) Engine
- Wake-on LAN and Wake on Frame detection
- MAC SA based 802.1X authentication

Target Applications

- Gateway
- In-Vehicle Infotainment
- Body Domain Controller



To deliver the data infrastructure technology that connects the world, we're building solutions on the most powerful foundation: our partnerships with our customers. Trusted by the world's leading technology companies for 25 years, we move, store, process and secure the world's data with semiconductor solutions designed for our customers' current needs and future ambitions. Through a process of deep collaboration and transparency, we're ultimately changing the way tomorrow's enterprise, cloud, automotive, and carrier architectures transform—for the better.

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