PRODUCT BRIEF

BRIGHTLANE™ low-port count managed switch

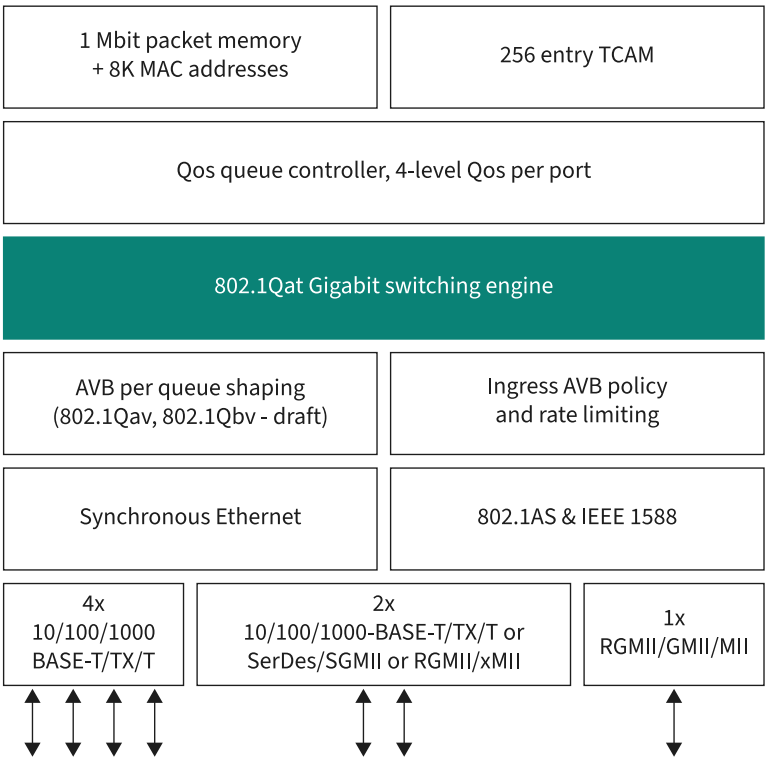
5-port automotive Ethernet switch with pin compatibility to 88Q5050

Infineon's second generation secure BRIGHTLANE™ Ethernet switch, 88Q5030, is a 5-port Ethernet gigabit capacity managed switch that is fully compliant with IEEE802.3 automotive standard with integrated Arm® M7 core and secure boot functionality.

The 5-port Ethernet switch offers 3x IEEE 100BASE-T1 ports, 1x IEEE 100BASE-T1 port, 2x MII/RMII/RGMII or GMII port, and 1x SerDes or SGMII port. The switch offers local and remote management capabilities, providing easy access and configuration of the device.

This switch employs the highest hardware security features that are designed at the root source of Infineon's secure automotive Ethernet switch to prevent malicious attacks or compromises to the data streamed in the vehicle. This advanced switch employs Deep Packet Inspection (DPI) techniques and trusted boot functionality to deliver industries most secure automotive Ethernet switch. The switch supports both blacklisting and whitelisting addresses on all its Ethernet ports to further enhance its security.

BRIGHTLANE™ 88Q5030 automotive Ethernet switch



PRODUCT BRIEF

Key features

Features	Benefits
Processor	– Integrated Arm® Cortex®-M7 CPU, 250 MHz

I/O interfaces	– 3 IEEE 100BASE-T1
	– 1 MII/RMII/RGMII port or 1 GMII port
	– 1 SGMII or SerDes port
	– 2 SMI
	  – Master interface to connect to external PHYs or additional switches
	  – Slave interface to manage the switch
	– Configurable GPIOs
	– QSPI with configurable frequencies (19.2–83.3 MHz)
	– TWSI Master interface
	– JTAG

Package characteristics	– 128-pin LQFP package, 0.5 mm pitch, 14 x 20 mm
EEPROM	– Slave interface with loader to configure the switch (32 kb–512 kb)

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
– Advanced Driver Assistance Systems (ADAS)

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