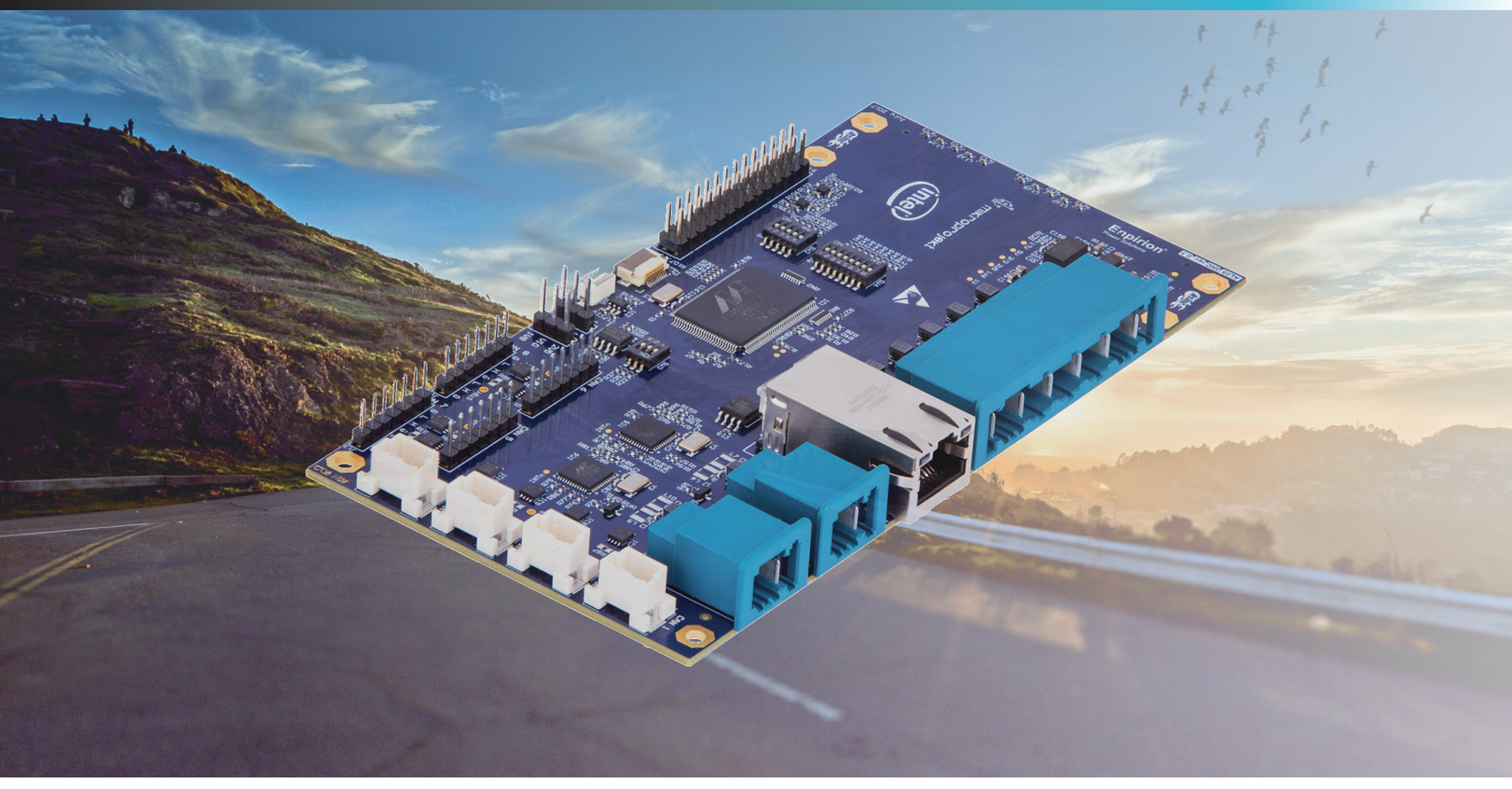
mikroprojekt
AUTOMOTIVE SOLUTIONS

MAGIC
Mikroprojekt Automotive Gateway Intel Card



The Automotive Gateway HSMC Card

Excellent solution for automotive system developers providing high bandwidth automotive Ethernet and CAN FD interfaces.

This card enables high performance automotive solutions on Intel FPGAs, and helps automotive system developers to easily develop Automotive Control, Gateway and interface and bridge between multiple automotive networks and buses.

It simplifies development and rapidly shortens design time.

HSMC card interfaces with a wide range of Intel FPGA development boards (Cyclone V, Cyclone 10, Max 10). Arria V and Arria 10 development boards are supported over FMC-to-HSMC adapter.

The onboard **Marvell 80Q2112 PHYs** enable 1000base-T1 communication directly to the FPGA or to the onboard switch.

The **Marvell 80Q5050 Automotive Ethernet** switch enables managed switch functionality for Automotive BroadR-Reach 100base-T1 and 1000base-T1 Ethernet networks, as well as media conversion functionality to 100base-Tx Gigabit Ethernet.

The board has **8 independent CAN FD** interfaces, of which 4 have dedicated connectors and 4 passthrough pins with 8 Mbps performance.

It enables interfacing with multiple CAN buses for Automotive Gateway applications and interface bridging.

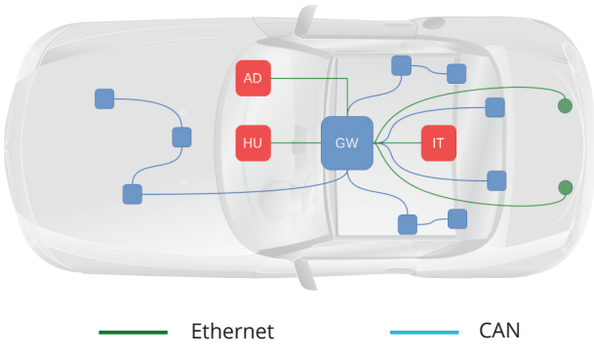
Additional **GPIO and I2C** pins are provided for system integration, as well as a full onboard automotive-qualified Intel Enpirion power tree.

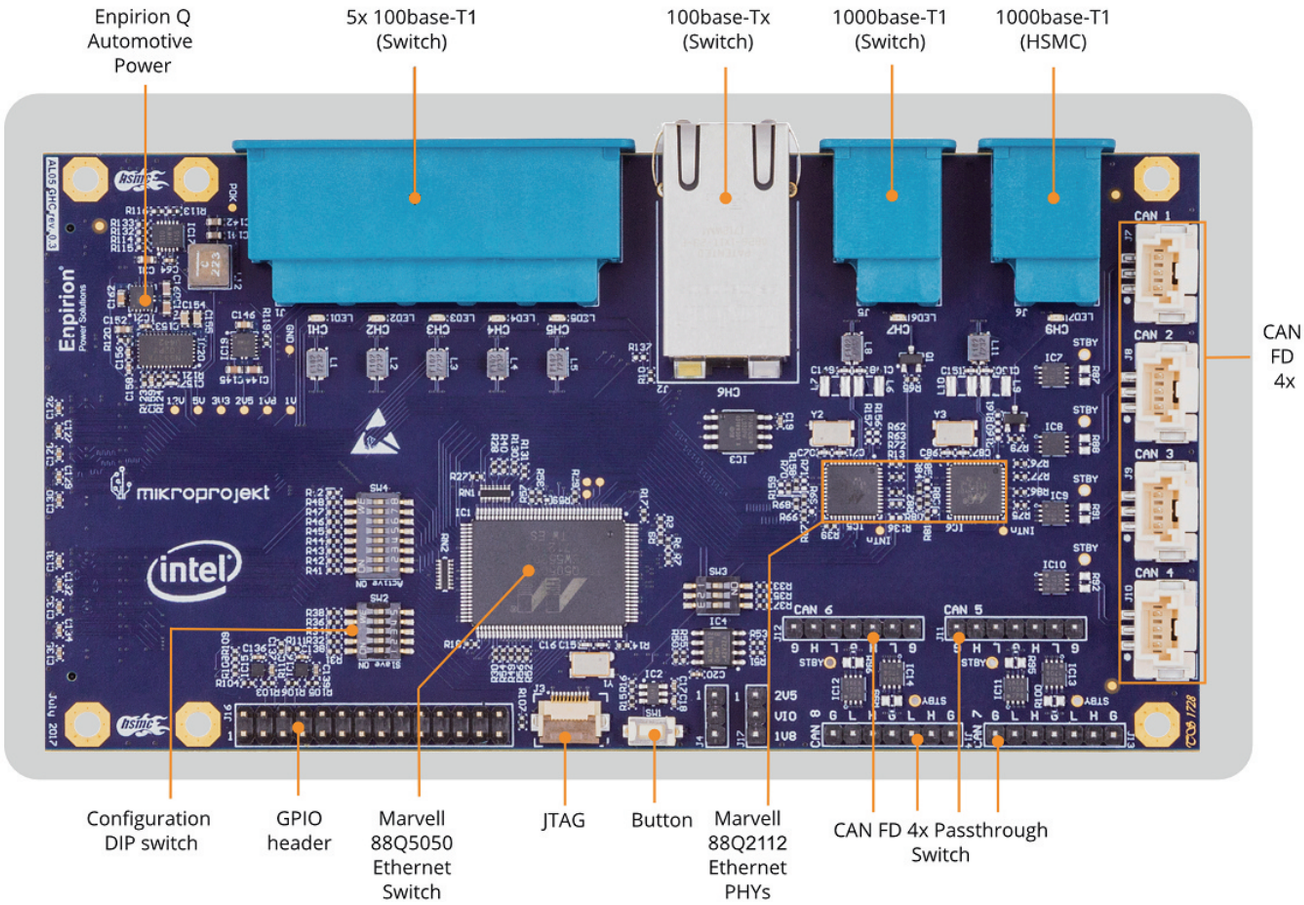
Advantages

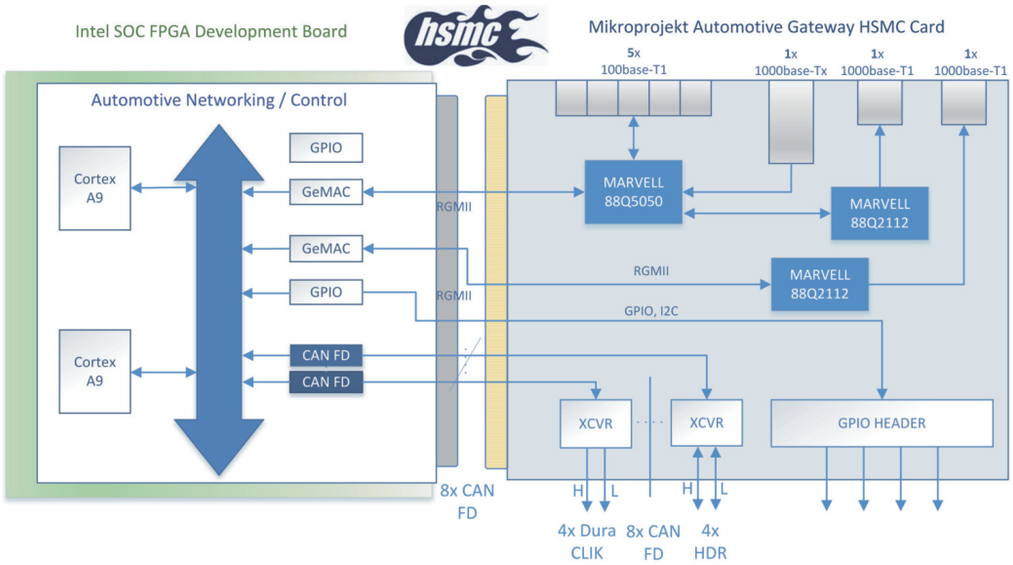
- Simplifies development
- High performance
- HSMC interface standard
- Shortens time to market

Target applications

- Automotive gateways
- Media converters
- Autonomous vehicles
- Vehicle control & diagnostic







Features

- Managed Automotive Ethernet Switch
  - ***5x*** *100base-T1*
  - ***1x*** *1000base-T1*
  - *1x 100base-Tx*
- GPIO and I2C pins
- FPGA Automotive Ethernet interface
  - *1000base-T1*
- CAN FD bus
  - ***8x*** *CAN FD interfaces*
  - *Performance up to 8Mbps*

Product code: HW-MAGIC-01

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R&D, design and production of electronic and computing system

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