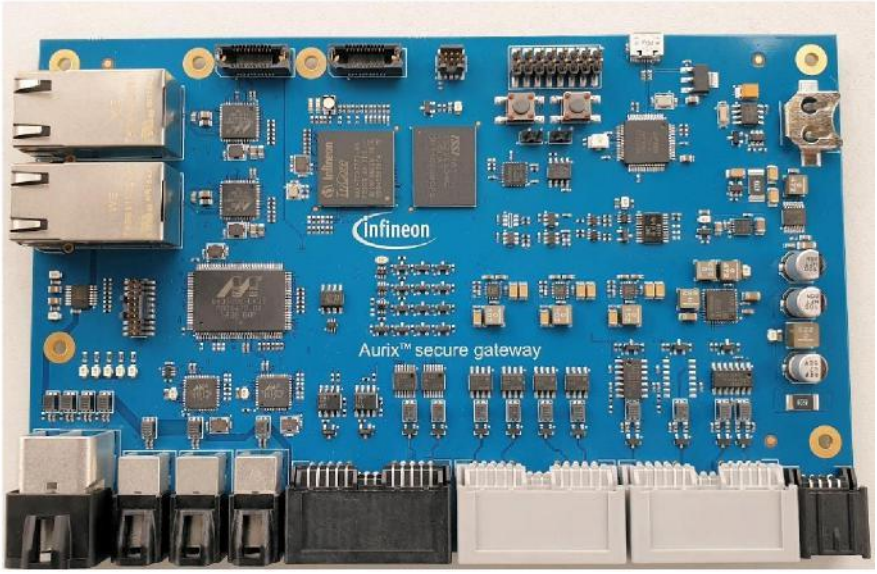
Product brief

Automotive Secure Gateway

Automotive Ethernet gateway evaluation board

AURIX™ TC3xx sets a new standard in scalability and inter compatibility within the family. This enables system suppliers to offer platform ranging from cost effective to high performance solutions while minimizing R&D efforts and time to market. As a host controller in gateway and telematics applications, AURIX™ TC3xx microcontrollers support the latest communications interfaces and features up to 2x Gigabit Ethernet interface, up to 20 ISO 11898-1 compliant CAN FD channels and, up to 24 LIN channels. An additional eMMC interface for external flash interfacing enables local data storage supporting software over-the-air update concepts.

Marvell's secure automotive Ethernet switch, 88Q5050, is an 8-port Ethernet gigabit capacity switch that is fully compliant with IEEE802.3 automotive standard and utilizes advanced security features to guard against hacking and denial of service (DoS) attacks. The 8-port Ethernet switch offers 4 fixed IEEE 100BASE-T1 ports, and a configurable selection of an additional 4 ports from 1x IEEE 100BASE-T1 port, 1x IEEE 100BASE-TX, 2x MII/RMII/RGMII ports,1 GMII port, and 1 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 Marvell'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.



Key features

AURIX™ – TC3xx family

> AURIX™ TC377TX
> Up to 3 CPUs at 300 MHz
> Up to 6 MB internal Flash/4 MB internal SRAM
> 2x Gbit Ethernet QoS MAC with 8 Tx and 8 Rx DMA channel/queues
> Support of Ethernet standards IEEE 802.1AS-2011 and 802.1-Qav-2009, 802.1AS – IEEE 1588-2008
> A standby controller to support low power modes

Marvell 88Q5050 8-port Ethernet Switch

> 4 fixed 100Base-T1 ports, 1 x 100Base-T1 and 1 x 1000Base-T1, one RGMII port to AURIX™
> Trusted Boot functionality
> Deep packet inspection (DPI)
> AEC-Q100 Grade 2 qualified
> Integrated ARM Cortex-M7 CPU, 250 MHz

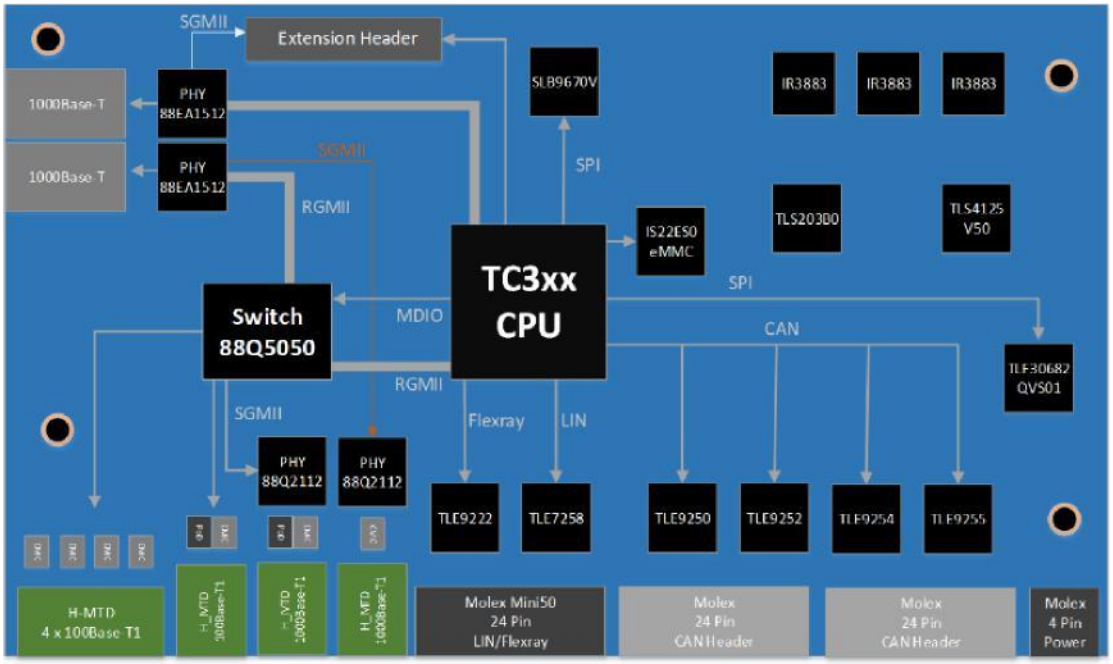
Rosenberger H-MTD® connector

> Modular and scalable connection system for automotive Ethernet
> High performance 100 Mbps and 1 Gbps according to IEEE 100Base-T1/1000Base-T1 with Standard 1000Base-T1 / 100Base-T1 quad-connector

https://www.infineon.com/securegateway

Automotive Secure gateway

Automotive Ethernet gateway evaluation board



The Secure Gateway-V1.0 offers a huge range of Application use cases. With the AURIX™ TC377TX in combination with Marvell's 88Q5050 Switch and 88Q2112 1000Base-T1 PHY future In Vehicle Networks can be addressed and evaluated. The TC377 featured with two Gigabit Ethernet Ports is connected with a 1Gbps RGMII port to the Ethernet Switch for data transfer. The second Ethernet port of the TC377 is connected to a 1000Base-T PHY from Marvell. The 88Q5050 provide five 100Base-T1 Ports together with the Rosenberger H-MTD® connector. Two 1000Base-T1 PHYs from Marvell in addition provide the right feature set to connect the Secure Gateway-V1.0 to an In Vehicle Network. 12 CAN-FD connections with various kinds of Infineon's CAN transceiver, 2 LIN and 2 FlexRay channels allow bridging of different network topologies. And extension header allow to connect additional components to the board via a 1Gb SGMII Ethernet connection. The TC377 provides the HSSL interface, a QSPI and I^2C channel on this connector.

Infineon Technologies AG	Marvell Semiconductor, Inc.	Rosenberger
Infineon Technologies AG Am Campeon 1-15 85579 Neubiberg, Germany Contact:: http://www.infineon.com/productsupport	Marvell Semiconductor, Inc. - Santa Clara United States Headquarters 5488 Marvell Lane Santa Clara, CA 95054 Mail : info@marvell.com	Rosenberger Hochfrequenztechnik GmbH & Co. KG Hauptstrasse 1 83413 Fridolfing Germany – Germany Mail : info@rosenberger.com
	https://www.marvell.com/company.html	

Published by
Infineon Technologies AG
81726 Munich, Germany

Order Number: B158-I0536-V2-7600-EU-EC-P
Date: 2 / 2020