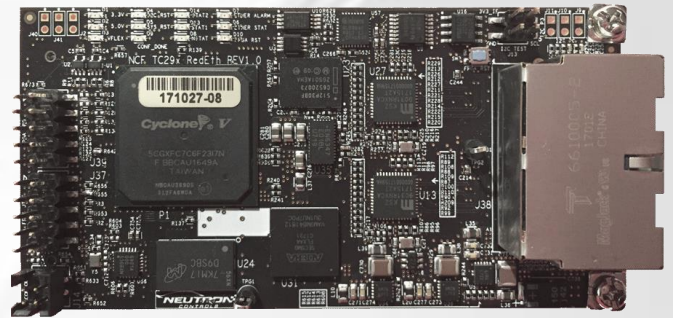




**Designed by Engineers for Engineers**

## 10BASE-T/100BASE-TX/1000BASE-T

Redundant Ethernet MODULE with dual 10BASE-T/100BASE-TX/1000BASE-T and RGMII/MII/RMII Host Interface



### Overview

- Specifically designed for Redundant Network connectivity development this Module is supplied with a complete software stack, allowing instant connection of AURIX™ or any other network enabled CPU to a network ring through RGMII (Reduced Gigabit Media-Independent Interface) or R/MII (Reduced/Media-Independent Interface).
- The Module is designed to support Safety Critical network ring topology with  $\mu$ s recovery time and no data loss in case of a single network connection failure.
- It is also Time-Sensitive Networking (TSN) protocol suite and hardware ready.
- The Module has an optional built-in 32-bit RISC or ARM Cortex-Ag CPU running Linux, with DDR2 and NOR flash memory.
- The Module generates all necessary clocks and auxiliary supplies needed to run it off a single supply rail and provides 125MHz reference clock output recovered from either of dual port MDI connections.
- Module software ports in and provides drivers for the LwIP stack, FreeRTOS and embedded MAC for all AURIX™ platforms supporting Ethernet.

### Features

- Integrated dual port triple-speed (10BASE-T/100BASE-TX/1000BASE-T) Ethernet physical layer for transmission and reception of data on standard CAT-5 unshielded twisted pair (UTP) cable
- Triple-port 1Gbps Ethernet Layer 2 switch with VLAN, QoS, wire-speed redundant packet generation and filtering, and 1588 v2 support
- Lowest packet latency with cut-through option
- Trusted Platform Module (TPM) allowing data encryption/decryption as well as secure key generation and storage
- Up to 1GB NOR flash and 256MB DDR2 on-board memory
- MDC/MDIO Management Interface for internal System Register access and PHY Register Configuration
- Interrupt (IRQ) driven or poll based PHY status update
- Energy-Detect Power-Down Mode and Power-Saving Modes
- On-board I<sup>2</sup>C EEPROM for system and user configuration storage
- Flexible System and alternative hardware reset control arrangement.