ETHERNOVIA®

Product Brief

ENT11025

Single Port Automotive 2.5G / 1G BASE-T1 PHY

Overview

The Ethernovia ENT11025 Automotive single port Ethernet PHY supports full duplex communication over a single twisted pair of cable to distances exceeding 15m. The PHY supports 4 speeds and can be configured to operate in 2.5G BASE-T1 and 1000BASE-T1 modes as specified by the IEEE 802.3bp / 802.3ch standards.

The ENT11025 is manufactured in an advanced 7nm process geometry and integrates class defining features that provide the lowest power with highest automotive safety in the industry.

To connect to an Automotive SoC, CPU or other Ethernet compliant devices, the ENT11025 supports a number of industry standard MAC interfaces. 2.5G 2500BASE-X, 2.5G OCSGMII and 1G SGMII modes are supported and can be configured based on the T1 line speed requirements.

The PHY was developed according to ISO26262 and exceeds the rigorous automotive requirements for functional safety that is required in today's automotive networks where mission critical information is transported.

The ENT11025 has a number of advanced features that provide design margin above and beyond the automotive industries requirements for Electromagnetic Interferface (EMI) covering both emissions and susceptibility.

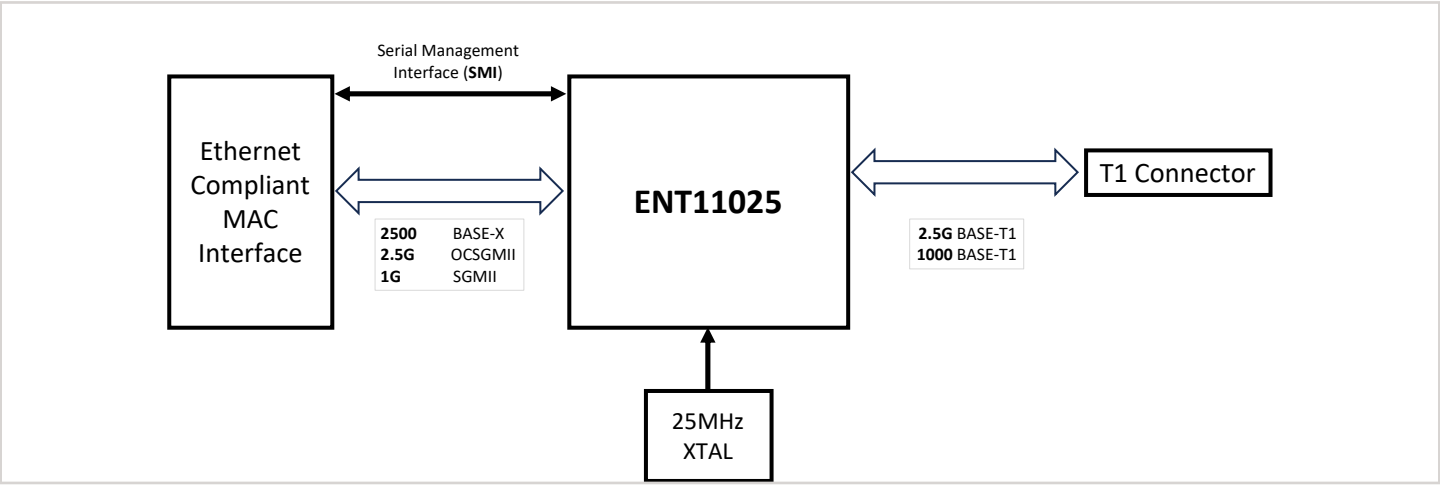
Applications

- Advanced Driver Assist Systems (ADAS)
- Telematics connectivity
- In-Vehicle backbone and zone connectivity
- Infotainment
- Central gateway

Features

- IEEE802.3ch 10G/5G/2.5G BASE-T1 compliant
- IEEE802.3bp 1000BASE-T1 compliant
- Footprint & software compatible with ENT11100 single port 10G/5G/2.5G/1G BASE-T1 PHY
- Exceeds automotive EMI requirements
- 2.5G 2500BASE-X, SGMII host interfaces
- Energy detect wake / sleep (TC10)
- ISO26262 ASIL B compliant
- Functional safety error detection, correction, reporting modes
- Automotive AEC-Q100 qualified
- Automotive Grade 2 operation (-40°C to 105°C)
- Automotive 100pin, 9 x 9mm, 0.8mm pitch BGA package

Block Diagram



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