



# HT8010A

Vehicle 100BASE-T1 Ethernet physical layer transceiver

## Product introduction

The HT8010A is a single pair Ethernet physical Layer transceiver (PHY) that implements the Ethernet physical layer of the 100BASE-T1 standard defined by IEEE802.3bw. Suitable for a wide range of automotive applications, it is manufactured using a standard CMOS process to achieve the physical layer function of transmitting and receiving data on a single balanced twisted pair.

Based on advanced DSP technology, combined with adaptive equalizers, echo cancelers, analog-to-digital conversions, PLL, line drivers, encoders/decoders and all other required 100Mbps data rate circuits, achieve robust performance and exceed interference (EMI) requirements in automotive electromagnetic noise environments with very low power consumption.

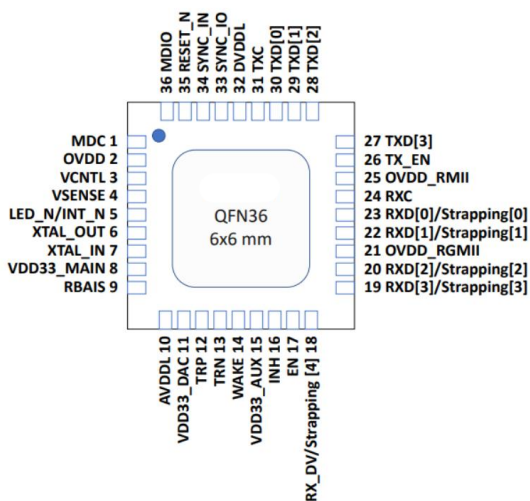
The HT8010A is designed to comply with RGMII, RMII, and MII interface specifications and is compatible with industry-standard Ethernet Media Access Controller Compatible (MAC) cpus and switching controllers.

The HT8010A provides a comprehensive range of automotive technology solutions required by Oems and Tier 1 suppliers in the automotive industry, compliant with AEC-Q100 Tier 1 temperature standards.

## Application field

- Automotive infotainment system
- Automobile diagnosis
- Advanced driver assistance system
- Body control electronics

## Foot tube



## Main function

- 100BASE-T1 Transceiver
- 100BASE-T1 IEEE 802.3bw standard
- Full duplex
- Rapid linkup
- Support auto cable detection and working mode selection.
- MII/RMII/RGMII support
- RMII/RGMII interface EMI enhancement
- Support latency accommodation of RGMII clock
- Support IEEE 802.1AS
- Support Remote Wake up 3.3V analog supply.
- Advanced low-power management with local wake-up support
- Automotive Cable Diagnostics support
- Integrated LDO regulator allowing a single supply
- Internal/external/remote loopback mode for diagnosis
- Jumbo frame supports up to 16 kB
- Polarity detection and auto/manual correction
- Integrated twisted-pair termination resistors
- AEC-Q100 Grade 1 (-40~125°C)
- Trace matched output impedance
- Integrated low-pass filter
- Robust cable ESD tolerance
- Package QFN 36, 6x6mm