

Motorcomm YT8543 Product Brief

YT8543C/YT8543H is a highly integrated Ethernet transceiver with dual 1GbE ports, which complies with 10Base-Te, 100Base-TX, and 1000Base-T IEEE 802.3 standards.

Overview

YT8543C/YT8543H provides all the necessary physical layer functions to transmit and receive Ethernet packets over CAT.5 UTP cable.

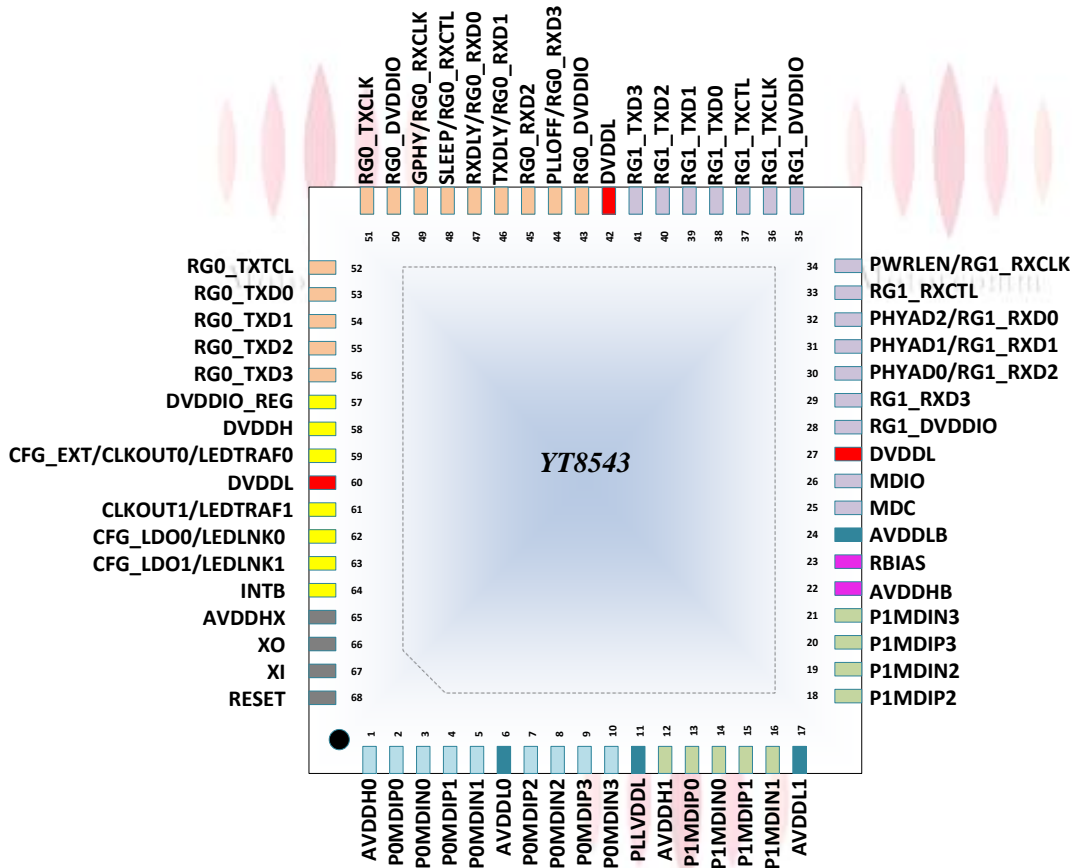
The YT8543C/YT8543H uses state-of-the-art DSP technology and an Analog Front End (AFE) to enable high-speed data transmission and reception over UTP cable. Functions such as Crossover Detection & Auto-Correction, polarity correction, adaptive equalization, cross-talk cancellation, echo cancellation, timing recovery, and error correction are implemented in the YT8543C/YT8543H to provide robust transmission and reception capabilities at 10Mbps, 100Mbps, or 1000Mbps.

Data transfer between MAC and PHY is via the Reduced Gigabit Media Independent Interface (RGMII) for 1000Base-T, 10Base-T, and 100Base-TX.

The YT8543C/YT8543H supports various RGMII signaling voltages, including 3.3V, 2.5V, 1.8V, 1.5V.

YT8543H supports industrial grade operation temperature(-40°C~+85°C).

PIN Assignment



Application Diagram



Key Features

- 1000BASE-T IEEE 802.3ab Compliant
- 100BASE-TX IEEE 802.3u Compliant
- 10BASE-T_e IEEE 802.3 Compliant
- Support dual Ethernet ports
- Supports IEEE 802.3az-2010 (Energy Efficient Ethernet)
- Supports Synchronous Ethernet (Sync-E)
- Built-in Wake-on-LAN (WOL) over UTP
- Supports interrupt function over UTP
- Supports Parallel Detection
- Crossover Detection & Auto-Correction
- Automatic polarity correction
- Baseline Wander Correction
- Supports 140m for CAT.5E cable in 1000BASE-T
- Selectable 3.3V/2.5V/1.8V/1.5V signaling for two RGMII MAC interfaces.
- Supports 25MHz external crystal or OSC
- Provides 25MHz/125MHz clock source for MAC
- Provides 2 network status LEDs per port
- Supports Link Down Power Saving (Sleep Mode)
- Supports 18k bytes jumbo frame for 1000BASE-T and 100BASE-TX, and 10k bytes for 10BASE-T_e
- Built-in LDO for RGMII IO power 2.5V/1.8V/1.5V
- 3.3V and 1.1V power supply
- 68-pin QFN Green Package

Target Applications

- LED Wall
- DTV (Digital TV)
- MAU (Media Access Unit)
- CNR (Communication and Network Riser)
- Game Console
- Printer and Office Machine
- DVD Player and Recorder
- Ethernet Hub
- Ethernet Switch
- Base Stations and Controllers



- Routers, DSLAMs, PON Equipment
- Test and Measurement Systems
- Industrial and Factory Automation Equipment
- Multimedia synchronization and Real Time Networking
- Any embedded system with an Ethernet MAC that needs a UTP physical connection.

