

Gigabit Ethernet Controller

PCB V1.4

PCB Overview

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Using this Document

This document is intended for the software and hardware engineer’s reference and provides overview about the PCB of the Gigabit Ethernet Controller. Though every effort has been made to ensure that this document is current and accurate, more information may have become available subsequent to the production of this guide. In that event, please contact ByteStudio (bytestudio@bytestudio.hu) for additional information that may help in the development process.

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1. PCB Overview

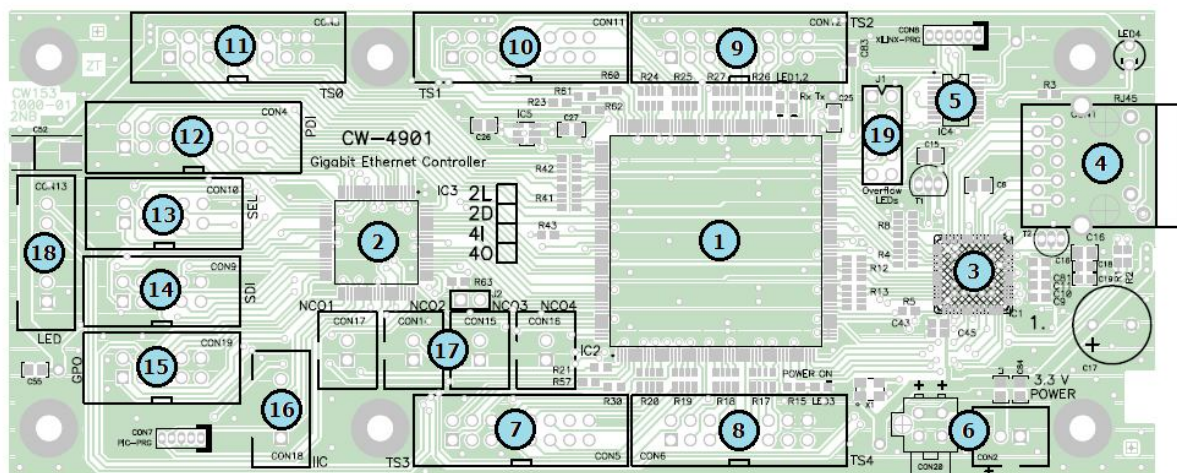


Figure 1. PCB top side

Integrated Circuit	Description
1	Xilinx Spartan-3 FPGA (XC3S400, PQ208 package)
2	Microchip PIC microcontroller (PIC18LF8722, TQFP-80 package)
3	Realtek 10/100 Base-T PHY (RTL8211B, QFN-64 package) connected to the FPGA
4	RJ45 LAN Connector of the PHY
5	FPGA Boot PROM (XCF02S)
6	3.3 V power connectors
7-11	16-pin TS connectors connected to the FPGA
12	16-pin connector for the parallel port connected to the microcontroller
13	10-pin connector for the selector port connected to the microcontroller
14	10-pin connector for the serial port connected to the microcontroller
15	10-pin connector for the GPO connected to the microcontroller
16	4-pin connector for the IIC bus connected to the microcontroller
17	4 x 2-pin clock output connectors connected to the FPGA
18	6-pin LED port
19	8-pin jumper connected to the FPGA

2. Layer stackup

The PCB of the Gigabit Ethernet Controller has 2 layers. There are no special requirements about the board, any standard PCB stackup is suitable.