F104S8A Four-port Gigabit Ethernet Copper PHY
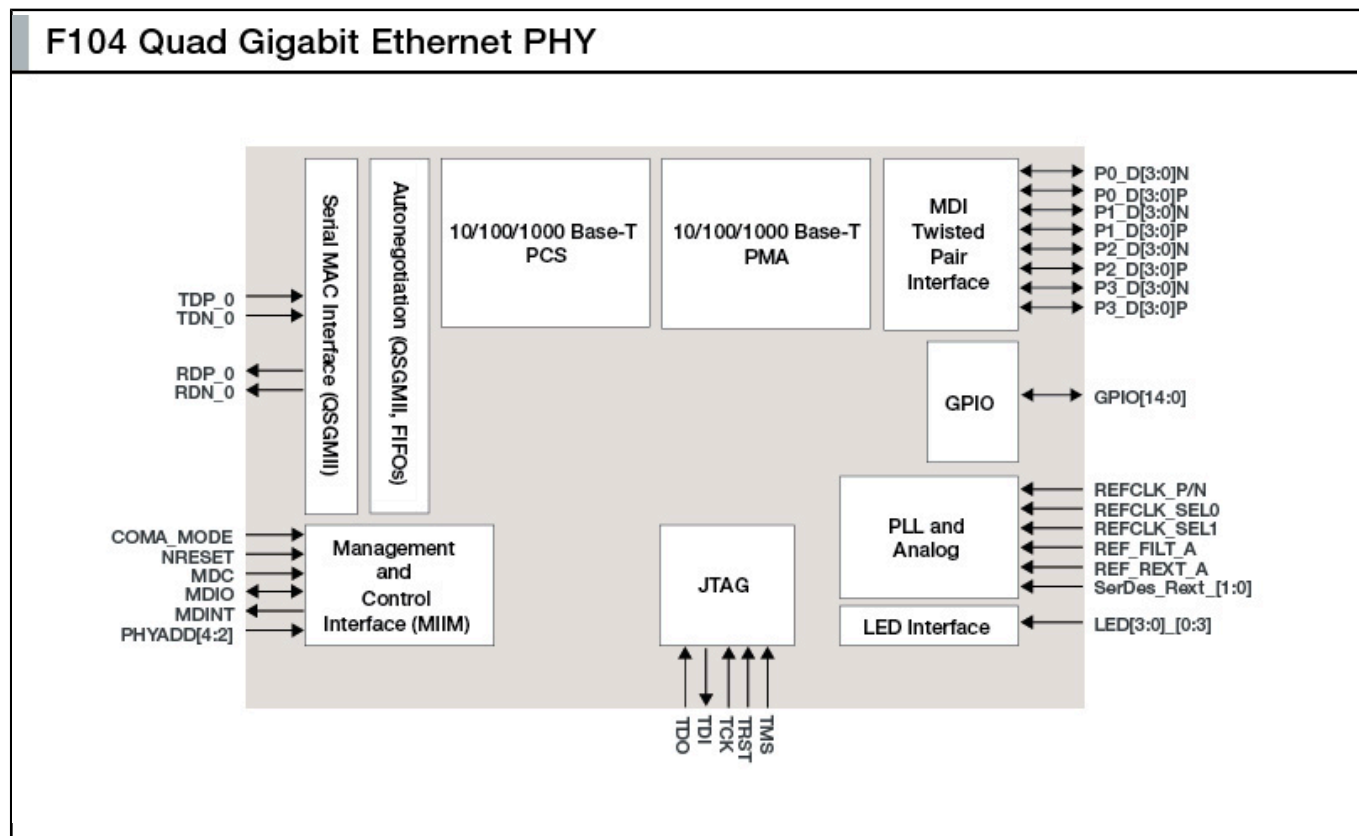
F104S8A

Last Updated: Mar 4, 2025

F104S8A features Vitesse's innovative EcoEthernet 2.0 technology that supports Energy Efficient Ethernet (EEE), ActiPHY™ automatic link power down and PerfectReach™, an intelligent algorithm that adjusts power based on cable length. The F104S8A device optimizes power consumption in all link operating speeds. Adjustable LED brightness control further reduces power consumption for end users. The device is compliant to IEEE 802.3 standards for 10BASE-T, 10BASE-Te, 100BASE-TX and 1000BASE-T.

The F104S8A is available as a companion device to the following QorIQ® Communications Processors:

- LS1043A/LS1023A
- LS2085A/LS2045A
- T1024/T1014
- T1040/T1020
- T4240/T4160/T4080

Layerscape processors are part of the NXP's EdgeVerse™ edge computing platform.

F104S8A BD Block Diagram

F104 Quad Gigabit Ethernet PHY

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                 Serial MAC Interface (QSGMII)
                          Autonegotiation (QSGMII, FIFOs)

                                  10/100/1000 Base-T      10/100/1000 Base-T       MDI           P0_D[3:0]N
                                         PCS                     PMA             Twisted         P0_D[3:0]P
                                                                                  Pair           P1_D[3:0]N
  TDP_0  →                                                                      Interface        P1_D[3:0]P
  TDN_0  →                                                                                       P2_D[3:0]N
                                                                                                 P2_D[3:0]P
  RDP_0  ←                                                                                       P3_D[3:0]N
  RDN_0  ←                                                                                       P3_D[3:0]P

                                                                                  GPIO          GPIO[14:0]

                                                                                               REFCLK_P/N
  COMA_MODE  →                                                                   PLL and        REFCLK_SEL0
  NRESET     →        Management                                                 Analog         REFCLK_SEL1
  MDC        →            and                        JTAG                                       REF_FILT_A
  MDIO       ↔         Control                                                                  REF_REXT_A
  MDINT      ←      Interface (MIIM)                                                             SerDes_Rext_[1:0]
  PHYADD[4:2] →                                                                LED Interface    LED[3:0]_[0:3]

                                                    TDO TDI TCK TRST TMS
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View additional information for F104S8A Four-port Gigabit Ethernet Copper PHY.

Note: The information on this document is subject to change without notice.