

GigaX

Jump
between Ethernet & PL at
200 Mbps



A software API for Zynq® PS that Enables
High-speed **GigaE-PL Data Transfer** & Frames Management

Key Features

- Full Duplex GigaE-PL Link
- Data Rate up to 200Mbps
- Optimised DMA Implementation
- Ethernet Data Caching
- TCP/UDP Headers Management
- IP Address Filtering
- Easy to Install and Use

Applications

- Ethernet Bridge
- Programmable Network Node
- Hardware Acceleration
- Network Offloader
- Ethernet Data Processing
- Software Defined Radio

Real-time processing of Gigabit Ethernet data in Programmable Logic (PL) is a time-consuming challenge that requires optimised drivers and interface management. System-on-Chip (SoC) devices provide hardware resources that allow this communication, but they lack general purpose software applications to implement it.

GigaX is a lwIP-based API for Xilinx Zynq® SoC that establishes a high-speed communication channel between the GigaE Processing System (PS) port and the PL. Running in one of the Zynq® ARM cores, GigaX processes network and transport headers, and manages SDRAM, Ethernet DMA, and AXI interfaces to setup a robust full duplex data link through the PS at 200Mbps.

The software API also implements IP filtering and TCP/UDP headers management to allow using your device as an Ethernet Bridge, Programmable Network Node, Hardware Accelerator, or Network Offloader.

