NetFPGA
Open Source Network Hardware

The NetFPGA project, an NSF funded collaboration with Stanford University, provides a flexible teaching and research tool – permitting instrumentation and prototyping of real router functionality at real network speeds.

- Put a NetFPGA into a PC to build hardware-accelerated, gigabit-speed network appliance.

- Features:
  - Wire-speed packet processing
  - Cost-Effective
  - Can be programmed as:
    - Any-protocol Router, Ethernet Switch, NIC, etc.

- Interfaces:
  - Four 10G Ethernet ports
  - PCIe x8 Gen2 host interface

- Building the NetFPGA follows Cambridge Computer Laboratory tradition of working with both hardware and software.

- Past networking projects have included the:
  - original Cambridge Ring
  - Cambridge Fast Ring
  - Fairisle ATM switch
  - Desk Area Network
  - Home Area Network

- Programmable network hardware allows students and researchers to do practical prototyping at real-world line-speeds.

An open network hardware platform implemented with Field Programmable Gate Array (FPGA) logic.

Support for the NetFPGA project has been provided by the following companies and institutions:

- Cisco
- Xilinx
- HUAWEI
- Juniper
- NetLogic
- Cypress
- Agilent Technologies
- DIGILENT
- Symplicity
- Micron
- Google

Neelakandan.Manihatty-Bojan@cl.cam.ac.uk
Georgina.Kalogeridou@cl.cam.ac.uk
Andrew.Moore@cl.cam.ac.uk