Company Profile

www.ethernitynet.com

We create truly programmable platforms for the future of telecom networks

About Us:
Leading provider of innovative, comprehensive networking and security solutions on programmable hardware for accelerating telco/cloud networks

Founded:
2004

Publicly Traded:
London Stock Exchange (AIM)
ENET.L

Offering:
Ethernity's FPGA logic offers complete Carrier Ethernet Switch Router data plane processing and control software with a rich set of networking features, robust security, and a wide range of virtual function accelerations to optimize telecommunications networks. Ethernity's complete solutions quickly adapt to customers' changing needs, improving time-to-market and facilitating the deployment of 5G, edge computing, and NFV.

Our Technology

Ethernity's incorporates its unique patented ENET Flow Processor on programmable hardware to enable maximum networking features in minimal FPGA space, achieving high performance with an incredible 80% reduction in required logic compared to similar networking hardware.

Our Market

As telecom operators have begun considering alternatives to the traditional single-vendor closed architecture of previous generations, they are turning to Open Radio Access Networks (Open RAN), which introduces disaggregation such that operators can choose the best solution for each device or node of the network. *Ethernity's FPGA-based products are ideal for Open RAN because they offer interoperability, flexibility, and full programmability, making them futureproof.* Unlike the monolithic proprietary hardware operators have relied on in the past, Ethernity's SmartNICs and networking platforms can be repurposed or reprogrammed while deployed in the field to handle new protocols or security algorithms as new technology develops. The company has a solid customer base, which includes Tier-1 OEMs in the telecommunications and defense industries.

FPGA as the Ideal Platform for Disaggregated Networking

Ethernity's products and solutions are based on Field Programmable Gate Arrays (FPGAs), which are programmable hardware optimized to handle networking and security traffic and which can be incorporated into a white box edge device by way of a system-on-chip (SoC) or smart network interface card (SmartNIC). Many networking and security functions are highly CPU-intensive, burning through CPU cores with varying levels of performance. When the data functions are offloaded from CPUs to FPGAs, performance not only improves; it also stabilizes and is more deterministic, and it enables the CPU to serve as a co-processor, saving cores for the compute and control functions they were meant to handle. FPGAs are an ideal platform for truly disaggregating hardware at the network edge, perfectly addressing concerns about using proprietary ASIC-based hardware platforms and avoiding vendor lock-in, while also optimizing performance and futureproofing the network. This saves on long-term operating expenses and reduces total cost of ownership.

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Management:

David Levi –
CEO & Co-Founder

Shavit Baruch –
VP R&D & Co-Founder

Mark Reichenberg –
CFO

Oded Bergman –
VP Products & Business Dev

Brian Klaff –
VP Marketing

Israel Ferber –
Sr. Director of OEM Sales

Contact:
info@ethernitynet.com

Headquarters –
Tel. +972-3-748-9846

Value Proposition

- **Accelerating Telco/Cloud Networking:**
  Our solutions provide deterministic high performance with low power and low latency, an optimal combination for the network edge.
- **Stop Burning CPU Cores:**
  When networking and security data flows are offloaded to FPGA, the reclaimed CPU cores can be allocated to other functions.
- **Open and Futureproof:**
  Our fully-programmable solutions can be ported onto FPGAs from any vendor and use standard DPDK acceleration.
- **Affordable and Cost Saving:**
  Our patented technology dramatically reduces required logic, enabling the use of smaller FPGAs, for more affordable solutions.

Products and Solutions

Ethernity Networks offers our customers high-performance system solutions based on our patented ENET Flow Processor firmware, which is deployed in more than 800K systems worldwide. Our portfolio includes:

- **Customized FPGA Systems-on-Chip (SoCs):**
  Our ENET Flow Processor firmware and routing software stack are embedded onto an FPGA to create a system-on-chip that supports various capacity and port configurations. Then we add the specific networking and security features required to best address the customer's target market, including xPON OLT/ONU MAC, MACSec, IPSec, compression, bonding, and reordering engine. We have SoCs designed for mobile infrastructure, such as base stations with EPC data plane, fixed wireless, and indoor/outdoor wireless backhaul units; Carrier Ethernet; Broadband access; and many other industries, including industrial and aviation.
- **FPGA SmartNICs for Forwarding Offload and Acceleration:**
  We develop FPGA-based network interface cards that accelerate essential 5G network virtualization functions, including UPF, DU routing offload and sync, and virtual CU security, to deliver improved performance, monitoring, load balancing, fault management, and security capabilities at a fraction of the CPU overhead.
- **Programmable 5G Networking Platforms:**
  Our networking appliances come pre-loaded with our routing software stack and offer 60Gbps of CESR capacity in a single core with unparalleled programmability and flexibility in their array of available networking and security features. Our patented Wireless Bonding feature offers load balancing of a single flow's traffic over multiple ports and supports reordering to compensate for differentiated delay. This improves performance and throughput by dynamically distributing data along links of various speeds and technologies, overcoming interruptions in transmission due to inclement weather.