



## Company Profile

[www.ethernitynet.com](http://www.ethernitynet.com)

*We believe in creating truly programmable platforms for the future of telecom networks.*

### **About Us:**

A leading provider of data processing solutions and technology for high-end Carrier Ethernet applications across the fixed and mobile telecom, security, and data center markets

### **Founded:**

2004

### **Publicly Traded:**

London Stock Exchange (AIM)  
ENET.L

### **Offering:**

By populating its programmable ENET Flow Processor on FPGAs within OEM networking platforms and Ethernity's SmartNICs and NID platforms, and by adding robust networking application software, Ethernity Networks offers comprehensive solutions that include powerful data plane offloading and hardware acceleration, improving performance and reducing power consumption and latency.

### **Market Potential**

The telecom industry is undergoing a fundamental revolution from hardware-based proprietary network processing ASICs to open, agile, programmable platforms. FPGA-based solutions, which represented a market of \$6B in 2017 with expected CAGR of 8.6% through 2023 (Mordor Intelligence, April 2018), provide ideal hardware programmability with deterministic performance, low power consumption, and minimal space requirements. FPGA-based hardware offloading is especially effective in the \$5.9B SDN/NFV market with expected CAGR of 30% through 2021 (IHS, December 2017), accelerating CPU-intensive pure software solutions and adding significant efficiency to the network.

"FPGAs offer a unique combination of speed, programmability, and flexibility ideal for delivering cutting-edge performance and keeping pace with rapid innovation. FPGAs... deliver efficiency and performance without the cost, complexity, and risk of developing custom ASICs."

Microsoft Project Catapult

### **Customer Challenges**

Operators and telecom equipment manufacturers are finding it hard to cope with the ever-growing demand to support different networking scenarios and topologies, high bandwidth, and low latency within today's communications networks, which require operators to provide uninterrupted service for streaming video, VR/AR, IoT, AI, and Big Data. Customers expect high performance, security, and service agility at a reasonable price, yet the total cost of ownership for service providers is increasing. While the transition to programmable networks through SDN and NFV provides improved service agility and better network efficiency than proprietary hardware platforms, it is not economically viable when supporting a large number of users. By introducing programmable hardware platforms that can accelerate the data path and offload networking functions from the CPU, operators can maintain the same level of performance, programmability, scalability, and flexibility at a fraction of the cost.



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### Key Management:

*David Levi* –  
CEO & Co-Founder

*Shavit Baruch* –  
VP R&D & Co-Founder

*Mark Reichenberg* –  
CFO

*Barak Perlman* –  
CTO

*Eugene Zetserov* –  
VP Products

*Rob O'Hara* –  
VP Worldwide Sales

*Critz Chan* –  
VP Sales, APAC

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### The Technology

Ethernity's ENET Flow Processor employs a unique patented technology to achieve an incredible 80% reduction in die size compared to similar networking hardware, thereby enabling an affordable data processing solution on FPGA. This facilitates complete programmability compared with the more rigid offering of an ASIC. The ENET technology patents that correlate to the reduced die size include search matching through DRAM, multi-port MAC, traffic management, channel bonding, and frame protocol interworking.

### Products and Solutions

As part of its goal to deliver end-to-end networking solutions, Ethernity offers its OEM and system integrator customers high-performance solutions that include both the company's patented ENET Flow Processor firmware and diverse Carrier Ethernet software applications, removing the barriers to entry, reducing the effort for telecom and enterprise vendors, and accelerating time-to-market for network core and edge applications, including broadband gateway (BNG), CESR aggregation, wireless and broadband access, and other Carrier Ethernet appliances.

Ethernity also offers a wide portfolio of FPGA-based products for Telco networks, including its family of programmable ACE-NIC intelligent network adapters (SmartNICs) for accelerating network functions such as vCPE, vEPC, OVS offload, and IPsec tunneling, and scalable networking SoCs targeted to serve the cell-site router (CSR), Distribution Point Unit (DPU), network co-processor, and general Carrier Ethernet markets.

### Value Proposition

- Comprehensive networking solutions that provide robust Carrier Ethernet application and management software on top of FPGA-based flow processing, data path offload, and traffic acceleration
- Fully programmable platforms for any server and for any application at a competitive price-per-performance ratio
- Available as a customized vASSP SoC, turnkey module/card, or as complete SmartNIC and NID products
- Rich feature set designed for both mobile and fixed networks
- Scalable to millions of flows, with per-flow traffic handling
- Complete SDK and ENET software acceleration package, including customization assistance
- FPGA-based solutions offer lower power consumption, smaller space requirements, deterministic performance, and simpler development cycle compared to multicore SoCs