

# **Missing Link Electronics (MLE)**

We are a Silicon Valley based technology company with offices in Germany. We are partner to leading electronic device and solution providers and have been enabling key innovators in the automotive, defense, industrial, medical, test & measurement markets with FPGA-based subsystems and systems.

#### Mission

Our mission is to develop, support and market **Domain-Specific Architectures for High-Performance Compute and Embedded Systems** by accelerating and offloading open-source (Linux) software with FPGA.

#### **Expertise**

Our expertise is "packets" which means Data-in-Motion systems with high-speed I/O connectivity and acceleration of data communication protocols as they are, for example, used in networking, storage and audio/video processing. We have been opening up FPGA technology for high-speed analog applications, and have been driving the integration and optimization of Open Source Linux and Android software stacks on modern heterogeneous processing architectures. This is complemented by expertise in Functional Safety and Security / Trusted Execution (OP-TEE).

### **FPGA Design Services**

Many times we have been deploying FPGA Technology to realize software-rich systems where the FPGA is an offloading companion to the CPUs or where the FPGA becomes the System-on-Chip. To de-risk and to accelerate such developments, we support our customers in all design phases from PoC, system architecture exploration, design & verification, integration, test to documentation & in-field maintenance. Our team speaks VHDL, Verilog HDL, SystemC as well as C/C++ for Linux Kernel drivers, user software, or for High-Level Synthesis.

# **High-speed I/O Connectivity**

We integrate in-house and 3rd party IP Cores and have optimized the underlying Multi-Gigabit Transceivers for reliable implementation of high-speed I/O connectivity such as: PCI Express up to Gen 5, NVM Express, LVDS, UFS, 10/25/50/100 Gig Ethernet, TCP/UDP/IP, AVB/TSN, SATA-3G/6G, SAS-6G/12G, ADC and DAC with JESD204B/C, HDMI, DisplayPort, SDI-3G/6G/12G, MIPI CSI-2, GMSL, FPD-III, Aurora, IRIG, HaveQuick.

# **Key Technology Partners**

Our key technology partners are the Fraunhofer Gesellschaft, Intel (Gold Member), Xilinx (Premier), MicroSemi (Premier). We are a member of PCI-SIG and OpenPOWER and have long relationships with many IP Core vendors and Electronic Manufacturing Service providers to deliver turnkey solutions.

# **Past Projects**

Include TCP/IP Acceleration, Pseudo-Noise Digital Radar, NVMe Stream Recording, HDMI/SDI video processing, PCIe Tunneling, ADAS image processing, TSN Ethernet in automotive Zonal Architectures.

#### **Facts**

- Founded 2010, employee owned
- HQ in Silicon Valley, San Jose, CA
- R&D offices in Berlin & Neu-Ulm, Germany
- Headcount 22 with 15 certified FPGA designers
- 5 US Patents issued

#### **Contact Information**

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