Synthara
Enabling edge intelligence

Company Overview
Synthara is focussed on delivering server-class, rapidly-customizable AI accelerators for the next-generation of edge inference applications. Synthara was spun-off from the Institute of Neuroinformatics (University of Zürich and ETH Zürich) in 2019 and its technology is built on the founders' doctoral research in the field of artificial intelligence. The company is partnering with CSEM, a Swiss center of excellence in microelectronics, towards the development of a new AdaptiveStorm chip that will be available for sampling in Q3 2022. The company has recently launched the Adaptiva Early Adopter Program (Adaptiva EAP) to engage with customers that require complex AI models in their edge products.

Problem
Phones, fitness monitors, watches, hearing aids, cameras, and alarm systems have become "smart" because of tiny computers embedded within them over the past decade. However, these devices are very limited when compared to what we imagine they would look like in the future - A fitness monitor that can double up as a coach, a true voice assistant like Jarvis from Iron Man, hearing aids and prosthetics that are better than human senses, and so on... With modern AI algorithms, we are close to creating this future now. The limitation is that the processors used in tiny edge devices cannot handle computationally intensive algorithms.

Solution
Our solution, Adaptiva, is a fully-programmable edge-AI co-processor that delivers up to 100 TOP/s/W of energy-efficiency. We also have the ability to generate custom configurations of Adaptiva that are specific for each use case using our Adaptiva-AutoGen toolchain. We also offer a cloud-based emulation of the accelerator for our early adopter customers.
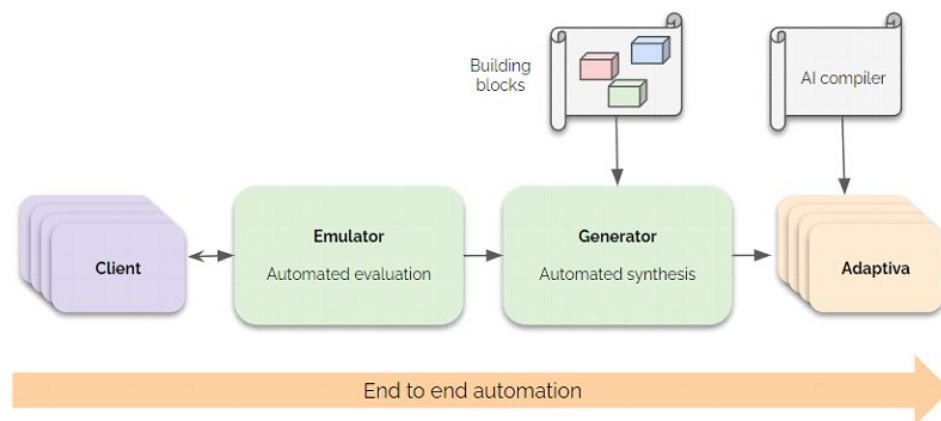
- Emulator: For fast and easy customer evaluation
- Generator: For automated hardware customization
- AI compiler: Supports AI models developed using standard tools like PyTorch and Tensorflow.

Market Size
Edge AI chips licensing market USD 3 to 5 billion by 2030

Business Model
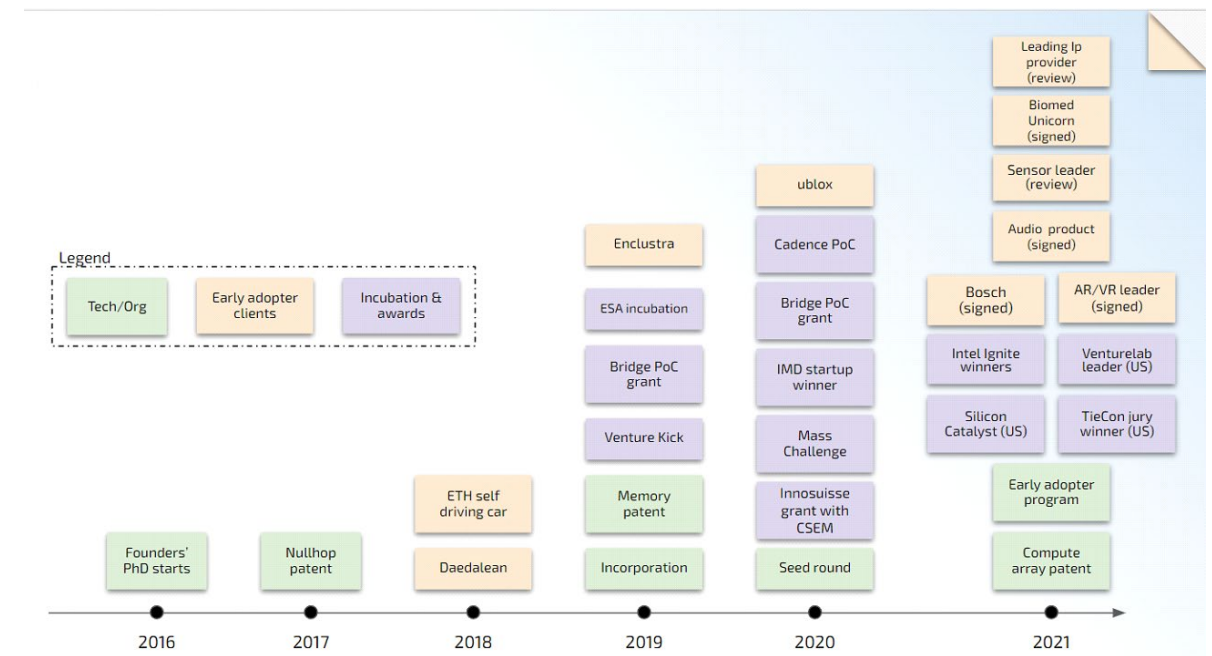Semiconductor IP licensing model.

Customer Traction
Early adopters have ordered samples for different use cases:
- Audio DSP - High end audio maker, Bosch
- Enhanced image sensing - European image sensor maker
- Unknown use case - Mindmaze, Big 5 tech

Competition
- Incumbents: Synopsys, CEVA, Verisilicon,
- Startups: Mythic, Syntiant

Milestones

Team
- **Alessandro Aimar** (Founder/CTO) - PhD, Institute of Neuroinformatics, UZH - ETH Zurich. Past - Imagination Technologies
- **Manu V Nair** (Founder/CEO) - PhD, Institute of Neuroinformatics, UZH - ETH Zurich, Past - Analog Devices, Apical Imagining
- **Sandeep Raju** (Chairman) - Entrepreneur and private investor, Venture incubation, investments and M&A experience
- **Ali Pourkeramati** (Board member) - C-level or Founder roles at Ferroelectric Memory, Spansion, Azalea
- **Sean Mitchell** (Board member) - Founder at Movidius (acquired by Intel for $400M), Former VP at Parthus.

Ask
- Early adopter customers who are interested in deploying complex edge AI technologies
- Investors to participate in our USD 5M Pre-series A round

Contact www.synthara.ai