

# FPGA ENGINEERING SERVICES

Low Cost | Efficient | Secure

## Trends

FPGA adoption is mainly attributed to its Low power, high performance computing and re-programmability which makes it cost effective. Key technologies fueling the growth of this market include the increase in the global adoption of AI and IoT.

Ease of re-programming and faster time-to-market makes FPGA more effective than ASIC solution.

### For example

- Applications that must reach the market quickly or require customization, such as those for prototyping new Deep Learning applications.
- Products requiring design change even after deployment
- Applications demanding demand extensive computing capability
- Cloud computing and data processing in data centers

## Opportunities

- Automotive
- 5G
- Data Centres
- Industrial Applications
- AI applications

The automotive industry is one of the major contributors to the market demand. ADAS designers prefer FPGAs for vision processing applications that require high-level processing and fine-grained parallelism.

Adaptable acceleration in data centers and highly efficient servers are projected to drive the market growth. FPGA offers low-latency connection and customized high bandwidth for network and storage systems.

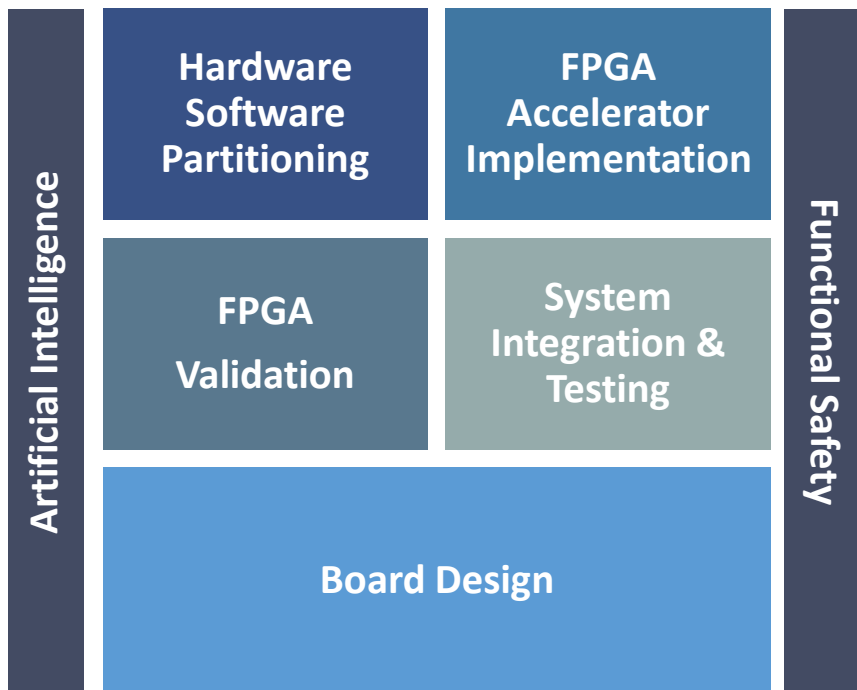
Europe is largely focusing on industry 4.0 technology to increase the manufacturing process and productivity. This will positively influence the demand for FPGA in the region.



## Consumer benefits

- Accelerate development cycle of complex systems
- Ideal for application in time-critical systems
- Massive parallel processing ability
- Programmable for platform agnostic
- Faster product prototypes ability
- Low power & high performance

# FPGA SERVICE OVERVIEW

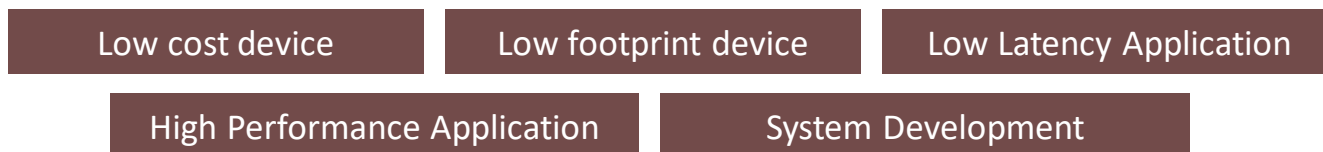


## IP Solutions

- H.264 Codec
- H.265 Codec

## Tools and frameworks

- Mentor Graphics: Questa Sim
- Cadence: nC Sim
- Aldec: Riviera Pro
- Signal Tap II Analyzer
- In System Memory Content Editor
- In System Probe Analyzer
- Chip Scope Analyzer



## Differentiators

- Video & Image processing low latency architecture
- Edge AI model optimization on low power and low footprint devices
- Optimization of AI frame works, deep learning libraries and tools
- Strong pool of certified Functional Safety engineers

## Sample cases

### Broadcast

- Low Latency Ultra HD codec for broadcast

### Automotive

- Edge Analytics solution for Object detection on low cost FPGA

### Edge AI on FPGA

- Edge Analytics solution for Object detection on low cost FPGA

### Functional safety

- ISO 26262 compliance validation for Automotive SoC
- ISO262 (ASIL-B) compliant IEEE 1588 implementation for IR camera